

## DORSET AND EAST DEVON COAST WORLD HERITAGE SITE

### TOWARDS A RESEARCH STRATEGY

#### 1. INTRODUCTION

- 1.1 Up until now the main activity of the World Heritage Site earth science team has focussed on dissemination of information about the site and the establishment of a monitoring system which will provide the basis for future reporting to the UK Government and UNESCO on the state of the Site. A Geodiversity Action Plan has been established for the County of Dorset as a whole. The overall management of the Site is carried out through a Management Plan overseen by the World Heritage Site Steering Group.
- 1.2 The Vision for the Site and the Framework for Action emphasise the central role of earth science research. They are given below in Boxes 1 and 2

**DORSET AND EAST DEVON COAST WORLD HERITAGE SITE**

**VISION**

**Our fundamental vision is that World Heritage Status in Dorset and East Devon will inspire people to **celebrate, appreciate and enjoy** the World Heritage Site, and to **safeguard** it for future generations in the best possible condition. We wish to ensure World Heritage Status becomes a vibrant strand of the life of Dorset and East Devon, benefiting local people, visitors and the environment throughout the area.**

**We will take a lead to secure the World Heritage Site as a place where:**

- **Globally important geology and geomorphology is recognised and conserved, for science, education, and public enjoyment;**
- **First class facilities are provided to enable local people and visitors to understand and learn about its special qualities in accessible, innovative and interesting ways;**
- **Research is actively encouraged and science is advanced;**
- **The public profile for the earth sciences is raised, and their relevance to today's world is demonstrated;**

*We aspire to be the leading regional and national example of how achieving the **conservation, understanding, enjoyment and sustainable use of the environment can also lead to economic and social development.***

- 1.3 For the avoidance of confusion, “the Site” refers throughout this document to the area inscribed by UNESCO in 2001 as a World Heritage Site. The entirety of this area is protected by UK statutory conservation designations.
- 1.4 A monitoring programme and database have been put in place with support from English Nature and the Joint Nature Conservation Committee (JNCC). Analysis of the changes or otherwise recorded in the database is now required to assess their implications for the integrity and sustainability of the Site.
- 1.5 The main priority now is to establish a Research Strategy for the Site. There are a number of reasons why this is appropriate now:
- a. the monitoring database is operational

- b. a Memorandum of Understanding has been agreed with the Natural History Museum
- c. the Channel Coast Observatory has extended its shoreline monitoring programme westwards into the Site and
- d. a wider strategic monitoring programme for the SW Peninsula Coast has been funded
- e. the launch of Phase 2 of the Shoreline Management Plans (at Studland on 14<sup>th</sup> March 2006).

In addition, there has been substantial investment by external agencies such as SWRDA in the wider economic and social multipliers from the designation as a World Heritage Site. Dorset is also a key county within the DEFRA/ODPM Pathfinder programmes developing scenarios, etc, within the context of the UK ICZM Strategy Development.

- 1.6 A number of Site-wide strategies have been developed, for example for Arts and for Education. These also need an enhanced research base upon which to understand and evaluate their role in sustaining the integrity of the Site itself.

The Framework for Action sets out prioritised actions to be pursued for the Dorset and East Devon Coast, which was awarded World Heritage Site Status in December 2001. It identifies a range of measures that relate to the World Heritage Site (WHS - which comprises undeveloped cliffs and beaches), and the wider 'World Heritage Coast' (WHC) which includes the towns, villages and countryside which provide the essential infrastructure and services for the local people who live on the coast and the people who visit it.

The overall aim is to manage the Site and this wider area, the World Heritage Coast, in a cohesive way, that recognises it as an 'attractor' for visitors (including local people), and leads to increased understanding, appreciation and support for conservation of the World Heritage Site, and to tangible benefits for the quality of life of local people and visitors.

The Framework for Action develops the policies of the World Heritage Management Plan, which was prepared for the Site alone as part of the submission to UNESCO. This included the following objectives for the Site:

**World Heritage Site Objective 1: to conserve the geology and geomorphology of the Site by:**

- a) ensuring that there is minimal disturbance to natural coastal processes due to human activities
- b) ensuring that human activities do not significantly reduce the quality of coastal exposures of geology within the Site
- c) promoting responsible collection of fossils and other geological specimens.

**World Heritage Site Objective 2: to conserve, and enhance where appropriate, the quality of the landscape and seascape of the Site.**

**World Heritage Site Objective 3: to welcome local people and visitors to the Site at levels which it can sustain, by encouraging those with responsibilities to:**

- c) ensure that provision of public access and information helps to match visitor numbers to the capacity of the Site, and maintains the tranquillity of remote areas

**World Heritage Site Objective 4: to encourage safe use of the Site by educational groups of all ages, and to provide a high quality range of educational information and services about the Site.**

**World Heritage Site Objective 5: to foster the gathering and dissemination of scientific information about the Site.**

- 1.7 The quality and history of research carried out in the Site was a key justification for Inscription and continued research is a key objective of the World Heritage Management Plan (Box 2).
- 1.8 Research carried out in the Site may well provide guidance for research programmes and improved research capability in other earth science World Heritage Sites where these are less well-developed.
- 1.9 This paper outlines the basis for a Research Strategy for the Dorset and East Devon Coast World Heritage Site.

## **2. A RESEARCH STRATEGY FOR THE DORSET AND EAST DEVON COAST WORLD HERITAGE SITE**

- 2.1 The overall **aim** of the Strategy is to identify and stimulate research which improves overall understanding of the Site, contributes to its sustainability and enhances its contribution to the earth sciences.
- 2.2 Research activities take place along a continuum from those needed to solve a very specific, localised problem to those of national/ international importance aimed at addressing generic “big questions”. A three-fold division of this continuum offers a practical research framework for use by the JCWHS as long as it is remembered that some overlap may occur between the levels. Each level might be expected to attract different types of funding.
- 2.3 *Research for the management of the site (and its setting)*  
Such research would include activities like gathering data for, and analysing data on, conservation monitoring, erosion rates, visitors and traffic. Although the costs of some such studies might principally be expected to be a JCWHS management cost, some studies are likely to be carried out by other agencies as part of their own work. External funding should be sought where possible.
- 2.4 *Generating knowledge about the site*  
Such research might enhance the visitor’s experience (e.g. help explain some feature or distribution of organisms along the site), provide data for a national study (e.g. bird or dolphin sightings), or contribute to an international database (e.g. a biostratigraphical one). Funding for such studies might come from JCWHS but would probably be mainly external (e.g. from the RSPB). Many studies at this ‘level’ might be small-scale and carried out as student projects (MRes or MSc). In addition, research carried out within and around the Site by industry has contributed to understanding of petroleum geology and this is expected to continue.
- 2.5 *Research on ‘big questions’ in earth sciences.*  
This may well include research into the effectiveness of management of this and other World Heritage Sites. This is likely to be hypothesis-driven research where the JCWHS provides the ‘natural’ laboratory for study. Such work might be funded by a UK research council, (e.g. of Mesozoic marine environments or basin inversion – NERC; or genetic diversity – BBSRC; or clay composition control on land slippage – EPSRC; or social demographics – ESRC; or – AHRC). JCWHS may be able to attract such research if it wanted, or provide infrastructural support, but is unlikely to be able to initiate such research which would be set in train by individual researchers or research groups.

### 3.0 GUIDING PRINCIPLES FOR THE RESEARCH STRATEGY

As a statement of intent/ guiding principle, JCWHS will

- 3.1 undertake and encourage research which is necessary for, or helps, the effective management of the Site, its conservation, use and enjoyment
- 3.2 promote the Site as an important scientific 'infrastructure' for researchers by coordinating access via the Web to, and where appropriate developing electronic sources of, data and information about the Site (e.g. collections in Museums etc, maps, seismic data, monitoring data, ongoing and past research studies undertaken on the site)
- 3.3 attract researchers at all levels to undertake projects along the coast by
  - 3.3.1 providing the electronic access referred to above,
  - 3.3.2 specifically seeking to attract small-scale studies (e.g. by Masters students)
  - 3.3.3 by 'publishing' the results of their studies electronically with linking material so as to make more of the whole than the sum of the parts, and
  - 3.3.4 holding topic-specific workshops concerned with research related to the JCWHS
- 3.4 promote ecological and other life science research, particularly that related to wildlife conservation and of public visitor interest, while focusing available resources on the geological and geomorphological raison d'être of the Site
- 3.5 encourage and promote research in the social sciences and education which evaluates
  - 3.5.1 the effectiveness of the management of the Site and its wider environment, and
  - 3.5.2 the dissemination of knowledge about the Site, for example in interpretation

### 4.0 GOALS OF THE RESEARCH PROGRAMME

- 4.1 The effective application of these principles will be indicated by achievement of the following goals:
  - ✓ Site condition of the Jurassic Coast is good and its features, exposures and processes are available for research in the best possible condition.
  - ✓ Site condition is known and proven based on effective monitoring and consultation with scientists and other key user groups
  - ✓ High quality site management is informed and improved by focussed research
  - ✓ There are increased partnerships between scientists, landowners, museums, collectors and other key groups and agencies.
  - ✓ The coast provides inspiration for existing and future scientists at all levels and of all ages
  - ✓ There is good and improving local infrastructure and services to support this (including museums etc.)
  - ✓ Information and knowledge held about the coast is highly accessible physically and intellectually on and off site, and is disseminated internationally.

- ✓ **Leading edge research** is being carried out on earth sciences, protected area management and the impacts and best practice management of World Heritage Site Status.
- ✓ The WHS, and its science and conservation programme makes an active contribution to **public and scientific debate** at national and international level, and be at the cutting edge of the public understanding of science. This should encompass key (and potentially controversial) issues for earth sciences (e.g. evolutionary studies, climate change, site management techniques and performance) and the impact and effectiveness of World Heritage Site and Protected Area management generally.

4.2 The regular reporting to UNESCO will include statements on the level of achievement of these goals and the evidence which supports them

## TOWARDS AN ACTION PLAN

Following a meeting with the Science and Conservation Advisory Network, the following broad actions were identified:

- To collate museum collections that contain specimens from the Site
- Updating bibliography for the site
- Clearer routes and sources of information; access, necessary permissions, contacts, on going research and researchers
- A major project on 'Access' in the widest sense....physical and intellectual that would also have a research programme associated with it. Could be in partnership with the Natural History Museum.
- Identify/list areas where improvements are required
- A project demonstrating how the Geological Conservation Review can be maintained and updated.
- List potential/useful research projects and present them to universities that host Masters students. Contact these universities and foster links with tutors.