



# Bees Project Brief Outline

## 1 Introduction

The project comprises three parts; Part I is an interpretation strategy which will be a 'celebration' of the vegetated soft cliffs and chines (coastal valleys) of the Isle of Wight particularly focusing on their extraordinary wildlife (especially bare-ground insects such as bees); Part II, an investigation of the management and monitoring of cliff top buffer zones focusing in particular on their value to invertebrates (including nectaring for bees) and Part III, a longer term project researching and modelling the impacts of climate change on the sustainability of the Isle of Wight chines and therefore also their future role in providing these essential coastal bare-ground habitats. The vegetated soft cliffs of the Isle of Wight are internationally important for biodiversity. Most are notified as SSSI and a significant proportion of the resource is included in the European South Wight Maritime Special Area of Conservation.

## 2 An interpretation strategy

The Environment Agency along with Island 2000, the National Trust and the Island's AONB Partnership have worked to protect the contribution that soft cliffs and chines make to the nationally important landscape and Heritage Coast of the Island. This work has actively encouraged tourism and recreation and the sustainable public enjoyment of these special places.

The objectives of this element of the project are:

- To help in the well-planned interpretation of the soft cliffs and chines and their cultural, ecological and geological heritage.
- To provide a benchmark approach to the celebration of the Island's soft cliff/ chine/heritage coast interpretation which can continue to influence and guide interpretation projects well into the future.
- To draw on local stories, local knowledge and the participation of local residents and visitors in the project as a whole in order to develop strong and enthusiastic 'ownership' of its ideas.
- To focus on the importance of these fragile habitats for rare wildlife and in particular bees.

## 3 Management and monitoring of buffer zones

The Review of Consents (RoC) undertaken by the Environment Agency in accordance with the Habitat Regulations identified a number of impacts on the geomorphology and hence ecological structure and function of these cliffs and chines. The review recommended actions including the improved management and monitoring of the buffer zone landward of the cliff top.

This project will investigate the importance of these cliff top land uses and will focus on plant communities, invertebrates (particularly bees) and breeding birds. The results will provide important information to help target agri-environment schemes and other conservation projects across the Island. Of particular importance will be guidance on how best to manage these cliff top strips as nectaring 'banquets' for bees and other insects.

#### **4                    Impacts of Climate Change**

The Environment Agency has been developing management plans to preserve the processes that create and sustain Chine habitats based on the findings of previous Agency co-sponsored research undertaken at the University of Southampton. This research has highlighted the fragile nature of the Chines. In particular, there is a delicate balance between the rate of sea-cliff erosion (which reduces Chine extent) and storm-runoff driven headwards erosion processes, which acts to increase the extent of the Chines. No research has yet identified the likely future trajectories of the geomorphology (i.e. the physical habitat) of the Chines over the next 50-100 yrs. The proposed research will therefore use data from Regional Climate Models (RCMs) and sea-level rise projections to produce models of Chine evolution and the results will be used to design long-term management recommendations to secure these important habitats for all wildlife in the future.