



PRESS RELEASE

1st February 2017

Jurassic Coast map drains the sea to reveal geology

Scientists from the British Geological Survey (BGS) and University of Southampton have published a seamless onshore-offshore bedrock geology map of the eastern half of the Jurassic Coast World Heritage Site. This is the first time a map of this resolution has been published for the seabed in this area, and it will undoubtedly play an important role in effectively managing this sensitive coastline.

The freely available online map is not only of research and public interest, but is also of value for coastal planners and engineers concerned with protecting coastlines. This kind of information will be vital to better understand and identify the most sensitive stretches of coastline including those that are prone to landslides or beach erosion.

The map was made with partners, including the University of Southampton (Ocean and Earth Science), under the Maritime Environmental Mapping Programme ([MAREMAP](#)). This wider programme of coastal research aims to integrate research from a variety of partners to inform practical applications such as marine planning, conservation and industry.

It was made possible through the use of the new generation of high-resolution, shallow water bathymetric mapping and aerial Lidar information. This has been collected, for example, as part of the Maritime & Coastguard Agency (MCA) UK Civil Hydrography Programme and the National Network of Regional Coastal Monitoring Programmes (coordinated by the Channel Coastal Observatory). This information then provides the backdrop for detailed geological surveying.

Professor Dave Sanderson, from the University of Southampton, commented: *"This new approach to detailed, bedrock mapping clearly demonstrates that geology does not end at the coastline. Indeed, the extent of seabed exposure, along with the quality and resolution of the data has allowed us to fully re-interpret the geological history of this globally important site."*

Dr Travis Mason, Director of the Channel Coastal Observatory also commented: *"This release of a seamless coastal map by the BGS, which uses data provided by the Channel Coastal Observatory, is hugely valuable for the coastal monitoring community, exposing as it does the key cross-over region between land and sea which is the unseen buffer zone for our coastline."*

The new research highlights how little is known about the narrow strip of coastline just below the low-water mark, despite its proximity to the shore. The ultimate aim is to address this lack of knowledge around the UK coast with up-to-date geological mapping, not just of the bedrock, but also coastal landslides and mobile sediments. To achieve this, areas such as the Jurassic Coast are being used as a test bed for new digital mapping techniques which can then be rolled out in the future to support UK and International coastal and continental shelf research.

Ends



For further details or to arrange media interviews please contact:

Kirstin Lemon, BGS Press Office, Keyworth, Nottingham, NG12 5GG

Office: +44 (0)28 90520979 Mobile: +44 (0)7796931788

E-mail: klem@bgs.ac.uk Twitter: @rokmum

Notes for Editors

The following are available for interview:

- Dr Keith Westhead, British Geological Survey

For additional information go to 'A new seamless bedrock map of the Jurassic Coast' webpage:

<http://www.bgs.ac.uk/research/marine/DORIS.html>

The methods and science behind the mapping are explained in an accompanying peer-reviewed paper (Sanderson et al; 2017) in the Journal of the Geological Society, accessible here:

<http://jgs.lyellcollection.org/content/early/2017/01/04/jgs2016-070.abstract>

The British Geological Survey

The British Geological Survey (BGS), a component body of the Natural Environment Research Council (NERC), is the nation's principal supplier of objective, impartial and up-to-date geological expertise and information for decision making for governmental, commercial and individual users. The BGS maintains and develops the nation's understanding of its geology to improve policy making, enhance national wealth and reduce risk. It also collaborates with the national and international scientific community in carrying out research in strategic areas, including energy and natural resources, our vulnerability to environmental change and hazards, and our general knowledge of the Earth system. More about the BGS can be found at www.bgs.ac.uk.

The Natural Environment Research Council

The Natural Environment Research Council (NERC) is the UK's main agency for funding and managing world-class research, training and knowledge exchange in the environmental sciences. It coordinates some of the world's most exciting research projects, tackling major issues such as climate change, food security, environmental influences on human health, the genetic make-up of life on earth, and much more. NERC receives around £300 million a year from the government's science budget, which it uses to fund research and training in universities and its own research centres. www.nerc.ac.uk

Ocean and Earth Science, University of Southampton

Ocean and Earth Science at the University of Southampton has a well-established reputation for outstanding research and teaching. Our unique waterfront campus at the National Oceanography Centre Southampton (NOCS) attracts prominent researchers from around the world. Following publication of the national Research Excellence Framework (2014), OES was ranked second in the UK, for proportion of research recognised as world-leading (4*) in the Earth Systems and Environmental Sciences Unit of Assessment.

<http://www.southampton.ac.uk/oes/index.page>