

#### The Arch-Manche Project

*Archaeology, Art and Coastal Heritage - tools to support coastal management and climate change planning across the Channel Regional Sea.*

*This project aims to demonstrate how archaeology, art and maritime coastal heritage can be used to show long-term patterns of coastal change and the impact on human settlement. Study of this data allows understanding and modelling of past reactions to climate change to help with planning for the future. The results are important for 'Integrated Coastal Zone Management' (ICZM) and will inform sustainable policies for adapting to coastal climate change. This project is timely due to predicted increases in erosion, flooding and instability affecting Channel coasts. The project will both benefit from and contribute to developing practice in the study of submerged and intertidal archaeology, palaeoenvironment and intertidal coastal features.*



The Arch-Manche team visited the drowned landscape of Saeftinghe in March. Image Courtesy of the HWTMA

Welcome to the second newsletter of the Arch-Manche project. Over the last few months the partners from the UK, France, Belgium and the Netherlands have been analysing archaeological, palaeoenvironmental, and coastal heritage data, along with artistic representations of the coast.

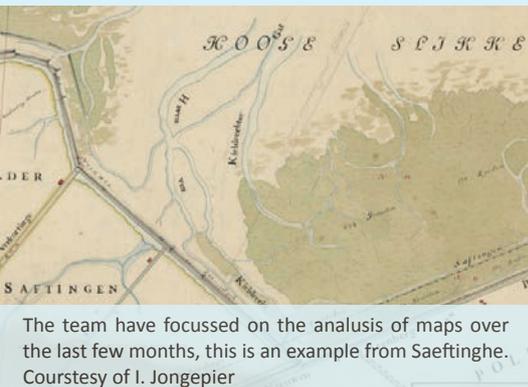
After a season of fieldwork in 2012 all the partners had a large amount of information to analyse and interpret, from ancient fishtraps, to submerged prehistoric landscapes. Alongside desk based research, this information is now being assessed for its potential to inform on coastal change. In order to do this a heritage ranking system has been developed, this scores the data based on the information it can tell us, such as sea-level change or environmental change.

The team have also continued to collect images, including paintings, historic maps and charts, historic photos and postcards. Ranking systems are being developed by the project partners in order to evaluate these resources based on reliability and how much they can tell us about coastal change.

Working with partners from the four nations has allowed not only a large geographical coverage but also the sharing of expertise and best practice. All partners met in Ghent recently in order to discuss the project progress with the Steering Committee, the partners also carried out a field study day at the case study sites being investigated by the teams from Belgium and the Netherlands in order to share techniques and best practice.

This newsletter will cover some of the work carried out over the last few months, further information and past newsletters can be found on the project website;

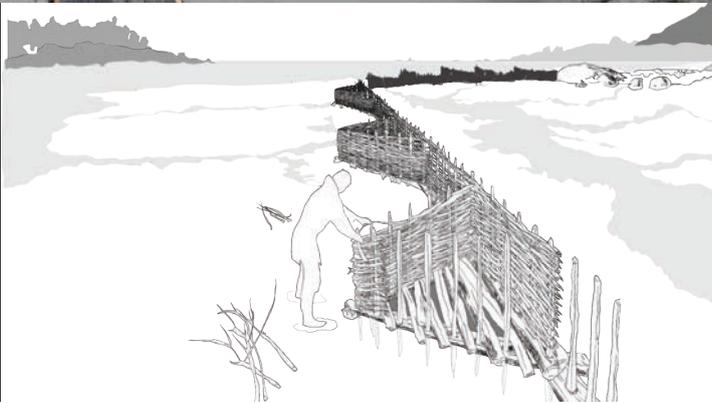
[www.archmanche.hwtma.org.uk](http://www.archmanche.hwtma.org.uk)



The team have focussed on the analysis of maps over the last few months, this is an example from Saeftinghe. Courtesy of I. Jongepier



The French partners have begun analysing and interpreting the material from the Serval, Lannion fishtrap. Below is a photo of a mat of fern discovered and an artist's interpretation of how the site may have looked. (All images Courtesy of V Bernard, CNRS)



Since the last newsletter the partners have been analysing the data collected during the 2012 fieldwork seasons as part of Activity One.

Samples from the UK sites in Langstone Harbour have been sent off for Radiocarbon dating. This will allow the dating of one of the wooden structures recorded on the west coast of Hayling Island, along with dating of a peat sample recovered off Long Island from the auger survey. Surveys from the Western Solent are being processed in order to understand the rate of erosion along the underwater site of Bouldnor Cliff, and information from Tanners Hard and Pitt's Deep is being analysed in order to inform targeted surveys for 2013 of this submerged landscape.

In France, much of the data recovered from the 2012 fieldwork on the Serval fishtrap has been processed, the images above show the amazing preservation of organic material, and an artist's impression of how this ancient fishtrap may have looked. The team have also been processing material from the Mesolithic site at Quiberon, the oldest Mesolithic shell midden in Brittany. Much of this work was achieved through the post-excavation training course held in Rennes where volunteers were able to aid in the sorting and identification of the many finds.

The Belgian team have continued their work at Raversijde where a combination of marine and terrestrial geophysics along with hand cores and cone penetration tests have been used. This has demonstrated possible remains of a medieval house as well as a complex palaeochannel system. Results from the Doelpolder case study areas have also been analysed in order to understand the impact of sea level changes on the palaeolandscape and human occupation, from prehistory to recent times.

## Activity One:

*This Activity involves the study of archaeology, palaeoenvironmental data and coastal heritage features to demonstrate coastal change. Since the project started several weeks of fieldwork have been carried out by the English, French and Belgian partners.*

*This Activity aims to produce a database with ranked examples that can be integrated using GIS with the results from Activity Two, to show their potential to add to understanding of coastal climate change across the 2-Seas region. The case studies will apply, test and review methods of investigating coastal climate change, and the results will be used within the project best practice guide to show how archaeological sites can be used to support the management of coastal risks and develop policies to manage coastal change.*



The Belgian partners have carried out groundtruthing using cores and cone penetration tests at the site of Raversijde. (Image: Courtesy of T.Missiaen).



## Activity Two:

*This Activity involves studying a range of art works from across the 2 Seas region. Artistic representations of the coast are being reviewed to identify depictions of geology geomorphology and coastal heritage features which can help demonstrate change over time.*

*The project will consult a range of sources including maps, charts, historic photographs, and postcards. All partners are contributing to this Activity and gathering images which can be assessed and scored for their potential to provide data on coastal change, this information will then be added to the project database. Deltares are also focusing on creating palaeogeographic reconstructions of the South-West Netherlands, to show landscape change over time. A selection of these images are on the website.*



Painting by W. Daniell 'View from Portsdown Hill' 1824. (Image courtesy of R. McInnes)

The Arch-Manche team have continued their research into paintings, maps, charts and photographs. A major focus has been on the development of a uniform evaluation methodology for historic maps and charts. The aim has been to assess this resource in terms of accuracy and usefulness for coastal research. The approach will look at topographical, geometrical and chronometric accuracy and the results will be incorporated into the project database. This process is being led by the Belgian partners with the help of PhD student Iason Jongepier.

Alongside the analysis of historic maps the project has also been looking at evolution mapping and the flooding history of the Southwestern Netherlands, working closely with the Belgian partners has meant that the case study areas can be extended and now overlap across the Scheldt estuary.

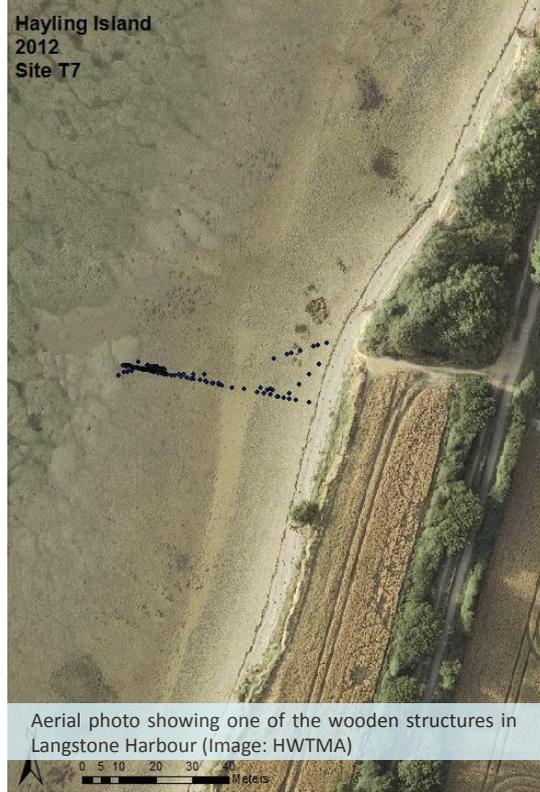
The methodology for assessing artwork has now been finalised and the team are currently working to complete a methodology for assessing historic photos. All of which will then be incorporated into the project database. A wide range of images are being collected as part of Activity Two which have the ability to inform us about coastal change and aid our understanding of the case study areas across the 2 Seas region.

In order to manage this a project database has been set up which allows the partners to enter information about the different images and score these images using the ranking systems which are being developed.



Historic Photo showing a prehistoric standing stone. (Image courtesy of CNRS)





Aerial photo showing one of the wooden structures in Langstone Harbour (Image: HWTMA)

In March all partners met at the University of Ghent to discuss the project progress, this was combined with the first Steering Committee meeting. The Steering Committee was set up to provide advice and guidance in relation to the project progress, methods and outputs. The Steering Committee members of the Arch-Manche project are;

UK - Dr Samantha Cope - SCOPAC research chair, senior coastal process scientists working for the New Forest District Council, based at the Channel Coastal Observatory.

UK - Peter Murphy - Historic Environment Intelligence officer (Climate Change), English Heritage.

France - Yves-Marie Paulet - Marine biologist, professor at the University of Western Brittany (UBO) and Director of the Institute of Marine Studies (IUEM).

France - Olivia Hulot - DRASSM (Département des recherches archéologiques subaquatiques et sous marines), Ministère de la Culture.

Belgium - Dr Marnix Pieters - Flanders Heritage Agency

Belgium - Kathy Belpaeme - Coördinatiepunt Duurzaam Kustbeheer

The Netherlands - Hans Peeters - GIA-Groningen

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## What's Next?

The summer of 2013 is set to be another busy fieldwork season with the UK, French and Belgian partners continuing research into their case study sites for Activity One.

After input from the Steering Committee the partners will also begin to draft the project outputs which will include a Best Practice Guide.

The dissemination of this work will remain a key objective, with partners talking at conferences and seminars and updating the project website.

Keep an eye on the website for all the latest Arch-Manche news!

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The team after a day of survey in Langstone Harbour. (Image: HWTMA).

