



NORTH WEST REGIONAL MONITORING PROGRAMME NEWSLETTER

Introduction

Welcome to the January issue of our biannual newsletter for the North West Regional Monitoring Programme. We hope to provide news on progress of the programme, spotlight specific issues and provide an outline programme of upcoming monitoring, reporting and events across the region.

What is the North West Regional monitoring programme?

The programme is funded by the Environment Agency although from 2016 all regions will see their allocation cut. The North West can expect to see an estimated 10% reduction in funding for the next round of the programme. The aim of the programme is to collect and analyse coastal data to inform sustainable management of coastal defences. In procuring data sets at a regional level the programme aims to deliver cost effective and consistent monitoring of coastal processes. Emphasis is placed on areas at higher risk of flooding or coastal erosion. DEFRA's Flood and Coastal Erosion Risk Management objectives are also delivered by this programme.

This monitoring ensures that good quality data is collected and securely stored, captured to national specifications and quality controlled. The programme aspires to make all

data collected freely available through an open government licence, once checked, data is made available online at ...

www.channelcoast.org

Who manages the programme?

The programme is delivered through the North West & North Wales Coastal Group, with Sefton Council undertaking the coordinating role. A steering group guides the operational activities of the programme. Group members include Local Authorities, the Environment Agency, Universities and Natural England. The programme maintains strong links with colleagues in North Wales and seeks opportunities to collaborate on projects where possible.



Data collection reports

As the CERMS coordinating body, Sefton are producing a set of data collection reports for each NW Local Authority which they hope to be able to distribute and publish on the Channel Coast website by February 2014. Each report will provide a catalogue of datasets available to date and to set the scope for future monitoring of our coastline.

Contacts

- **If you would like to know more about the North West Programme please contact: coastaldefence@sefton.gov.uk**
- **For the data web portal visit: www.channelcoast.org**

HIGHLIGHTS IN THIS ISSUE

- **New technologies – Laser scanning across the partnership**
- **North West and North Wales Coastal Group feedback from conference**
- **Upcoming monitoring data and reports**
- **2013 Aerial full colour and false colour infrared photography**
- **2013 Winter storms**



Wyre's Mythic Coast Artwork trail

LASER SCANNING ACROSS THE PARTNERSHIP

In June, Sefton Council surveyors met Chris Atherton from Wyre Council to laser scan a giant limestone sculpture in order to help work out its centre of gravity in preparation for being moved. The 2.5m high stone Sea Ogre is one of the items featured in a specially commissioned children's book, *The Sea Swallow*, as part of the Sea Change Regeneration Programme. The book combines local folklore, myth and legend about Wyre's coastline. In addition to the Sea Ogre, look out for *The Seashell* and *The Paddle*. The Sea Ogre is hiding somewhere along the beach at Cleveleys, it's rumoured you can discover him at the end of an extended groyne. The Sea Ogre was carved from limestone by Adrian Wright and weighs in at 12 tonnes. For more information about Wyre's mythic coast art works visit -

<http://www.wyre.gov.uk/mythiccoast> and <http://www.wyreway.org/mythic-coast/about>



On 20th June 2013, after scanning the Ogre, Wyre Council, who are responsible for monitoring Fleetwood, Cleveleys, Knott End, Pilling, St. Annes and Lytham beaches, attended a practical training course in the use of the Leica C10 laser scanner. The regional training, courtesy of Sefton's highly acclaimed C10 Scanning expert Lee Whittle is being carried out to bring the regional partners up to speed with the latest coastal monitoring technology. Chris Atherton, Engineering Assistant at Wyre has these words about the scanner. *"We were already impressed at Wyre with our technological upgrade from archaic total station to the hi-tech Leica Smart Station GPS kit and Leica Viva kit, when we got to grips with the Leica C10 Scanner however, we began to realise the true surveying potential of both our GPS in conjunction with the C10 scanner. What took me by surprise when first using the scanner was how unbelievably easy it was to operate. A windows based operating system with a very familiar window style menu on its side screen makes each scan extremely easy to navigate through and familiarise with. The software that comes with the scanner (Cyclone) is incredibly versatile and manipulation of the data gathered is going to prove very useful indeed."*



Chris Atherton getting to grips with the C10 laser scanner

WYRE LASER SCANNING SURVEYS

Wyre Council carry out a number of coastal surveys on behalf of Fylde Council including their profile surveys and coastal defence inspections. One of the most recent dune surveys they undertook utilised the new C10 Scanner. Fylde Council, in partnership with Blackpool Council, Lancashire Wildlife Trust and the EA are currently undertaking a sand dune management project to increase the dunes dimensions. The project is a 5 year project which began in April 2013 and due to previous erosion of the sand dunes, regular monitoring to measure the subsequent accretion or depletion of the dune system is essential.

Chris says -*"The C10 scanner is perfect for the project here at Lytham, it means we can get an extremely detailed and dense topographic survey of every nook and cranny within the sand dune system, and in a*

relatively short period of time. Over a number of scheduled scans, we can then see in great detail the most successful areas of the dune management project so future adjustments can be made to allow the project to be work more efficiently."

Wyre have also carried out a number of other scans within Fylde including surveys of the sand dune system at Fleetwood and a complete survey scan of Fleetwood Ferry dock to allow for various measurements to be taken from the office. This will provide a detailed topographic survey for future construction works and extensions to the dock area.



LASER SCANNER HAS A DAY OUT IN FYLDE

On November 15th two Sefton staff travelled to the Fylde Coast at Lytham to carry out laser scanning of the dune restoration work and sandtrap fencing which has been carried out to bring forward the line of the dunes, creating a stronger natural sea defence. The scans will help Fylde assess how successful the scheme proves over time as well as providing a volumetric measurement of the sand accreted. Sefton retrieved the scanner and at present are using it for conducting some post storm surveys.



Sandtrap fencing at Lytham



Lee Whittle conducting a survey



The laser scan of sandtrap fencing captured with the CERMS C10 scanner

LATEST NEWS ON L2 DEEP WATER RIVER CONTAINER TERMINAL

How much is 1 million cubic metres?

Answer: a cube with each side measuring 100m

Latest news on the new L2 facility is the start, this summer of the first phase of dredging and construction. A dredging operation to remove one million cubic metres of material from the seabed was launched by Sir Bobby Charlton and Kenny Dalglish to mark the start of the project. The two footballing legends were invited to symbolise the benefits that Liverpool 2, along with Peel Ports' investments in facilities along the Manchester Ship Canal, will bring to Liverpool and Manchester.

The new terminal is being constructed on reclaimed land in the Mersey, known as the Seaforth Triangle. The dredging operations will form a 16.5 metre-deep berthing pocket creating the necessary water clearance to allow some of the world's largest container vessels to use the new terminal. The reclamation works will be carried out using dredged material where possible. *So how much material is 1 million cubic metres?*

Its about the volume of the Taipei 101 building in China. The building ranked officially as the worlds tallest from 2004 until the opening of the Buri Khalifa in Dubai in 2010. The Taipei 101 was the first building in the world to break the half-kilometre mark in height.

For more information about the L2 project, dredging deposit sites and limiting the impact on the marine environment go to...

<http://www.liverpool2.com/delivering-liverpool-2b/environmental-management>



FEEDBACK FROM COASTAL CONFERENCE JULY

The North West & North Wales Coastal Conference held in Fleetwood

Thanks to everyone who attended the first annual conference, we hope you enjoyed the event and got a lot out of it. The event was well attended with 75 delegates participating over the 2 days and 33 joining the field trip to visit the sites of new schemes along the Fylde coast, looking at existing sea defences and the problems that prompted the new scheme bids for these 2 areas. The programme was based around implementation and delivery of the Shoreline Management Plan. It included views on the regional and national importance of coastal flooding and erosion risk management; an exploration of coastal risk by looking at monitoring and the application of data and a review of some of the new schemes. Feedback from the event was generally very positive with a combined 92% responding that they felt the content of the conference was excellent or good and many looking forward to next year's event. Below are a selection of the written comments received.



"Thanks again for helping to bring together a very informative conference. From my perspective it would seem/feel that the Coastal Group is in safe hands if the atmosphere on the day was anything to go by".

I hope the rest of the conference went well. You had an excellent group of people attending and ideal weather to see the sites! Just let me know if I can help in the future.

A well organised conference with informative speakers and presentations on coastal engineering on a strategic level.

I did really enjoy the conference. I feel that the content could be broadened to consider other aspects of flood and coastal risk management. I also feel the workshops could have been explained more and the questions more targeted.

Just a quick email to congratulate you on a well organised conference. The programme was well organised and presented by the respective speakers. It was also great to see so many familiar faces and catch up over a few drinks late into the evening. Once a format has been agreed MWA would be more than willing to present at the next conference. Well done again!

Attending delegates by type were as follows:

61% Target audience made up of 46 delegates, breakdown as follows:

- 16 North West & North Wales from 7 authorities (1 Wales, 6 England)
- 23 Government Agencies (Natural Resources Wales, Natural England, Environment Agency, Marine Management Organisation)
- 2 RFCC/ National Coastal Chairs
- 2 National coastal monitoring bodies
- 3 Transport infrastructure (Ports / Rail)

5% NGOs: 4 delegates

11% Academics: 8 delegates

23% Consultancies: 17 delegates

The event was so successful, we are looking at holding another similar event in 2015. If you have any ideas for themes please forward them to us at the email below.

2012/2013 AERIAL PHOTOGRAPHY

FULL COLOUR AND FALSE COLOUR INFRA RED

The 2012/2013 aerial photography survey of the North West coast covering the whole of Cell 11 is now available for download from the web portal at www.channelcoast.org.

The false colour infra red artificially colours the images using a fourth band of data collected in the near infra red band of the electromagnetic spectrum. The band is particularly useful for picking up characteristics of vegetation as they reflect more light in the infra red spectrum. This data will be used to deliver the ecological mapping exercise within the monitoring programme.



WINTER 2013 STORM EVENTS

The North West experienced two extreme events during the 2013 Winter. Both events were the result of high Spring tides coinciding with storm events that had both low pressure and strong winds. The events impacted on different areas in the North West primarily due to the wind direction. The first, more severe event on the 5th December had predominately westerly/north westerly winds with up to 61mph gusts. This event impacted on Whitehaven Harbour, Whalney Island, Fylde Peninsular, Sefton, Wirral and North Wales. A number of properties across the region were flooded during this event. The second event on the 3rd January had predominately southern winds that reduced the impact of the waves on the shore resulting in less flooding.

In response to the events a number of post storm surveys and inspections have been carried out, including beach profiles and topographic surveys, laser scanning and oblique aerial photography.



Erosion to the coastline adjoining Whitehaven harbour. The harbour walls were also damaged during the event.



An example of Sefton's oblique photography commissioned as a post-storm survey following the December 5th event. It was flown on the 16th of December and still clearly shows the steep cliffing that has occurred to many of the duned areas and the smoothed, featureless looking beach. The dark dots are blocks of tobacco waste that was buried in the dunes in the 60's and is now being eroded.

SURVEY PROGRAMME UPDATE

Incoming Data

The winter LIDAR survey is currently in progress which covers the high risk areas of Wirral, Sefton and Fylde Peninsular. Estuarine bathymetry surveys for the Lune and Solway are also underway to fill in gaps not collected in recent surveys, the Ribble has just been completed. A number of post storm surveys are due in shortly.

Planned Surveys 2014

In 2014 there will be further coastal bathymetric surveys and the usual Spring and Autumn topographic surveys. Early in the new year 2014 will see deployment of 3 AWACs at St Bees Head, Cumbria.



Exposed remains of Lifeboat Station at Fornby, previously completely buried.

PRODUCED BY SEFTON COUNCIL

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