



North West Regional Monitoring

OCTOBER
2016



Fort Perch Rock and New Brighton Lighthouse

NORTH WEST REGIONAL MONITORING PROGRAMME NEWSLETTER

Introduction

Welcome to the October issue of our NW newsletter. As you may know this is a biannual newsletter for the North West Regional Monitoring Programme. We aim to provide news on the programme, spotlight specific issues and provide an outline of upcoming monitoring, reporting and events across the region.

Programme update

Just a reminder - the North West and North Wales Coastal group changed the name of their website. Please remember to make a note of the new name and also pay the site a visit at; www.mycoastline.org.uk

2016–2020 CERMS Programme

Sefton received written confirmation of funding for the next CERMS programme in April 2016 however the funding was subject to a 35% reduction compared to the previous programme. The CERMS partners are working to absorb this reduction by increasing collaboration and partnership working and by looking at new ways of delivering the programme. Sefton have revised the survey programme and removed the least cost effective datasets. The project team continue to assist the Channel Coast Observatory, who are the national lead coordinating body.

Data collection reports

Sefton produce data collection reports for each NW Coastal Local Authority, these were first distributed at the

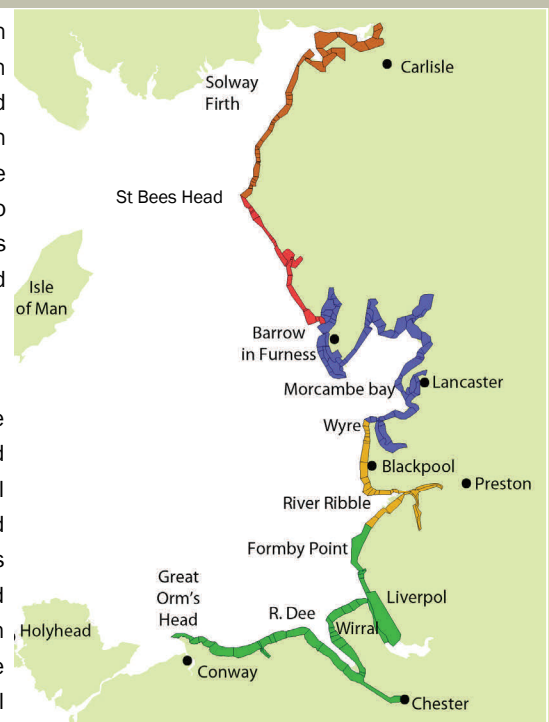
beginning of 2014 and updated in September 2015. These were again updated in Spring 2016 and distributed. Feedback has been positive, including some collaborative ideas and projects which we hope to hear more of. Each report catalogues the datasets and reports available and sets the scope for future monitoring.

The data we collect and why

Collaborating to deliver a programme of monitoring ensures that good quality data is captured to national specifications, quality controlled and stored securely. The programme's purpose is to make all data collected freely available through an open government licence. The data we collect is vital to enable coastal managers to make effective decisions. At a time when many Councils are downsizing, working together with other Authorities and the CERMS programme is more important than ever. A good starting point for those new to the role would be the Environment Agency's e-learning resource. <http://learning.environment-agency.gov.uk/capacitybuilding/> The next CERMS partnership meeting will be held in Sefton in November.

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.coastalmonitoring.org
- North West and North Wales Coastal Group visit: www.mycoastline.org.uk



HIGHLIGHTS IN THIS ISSUE

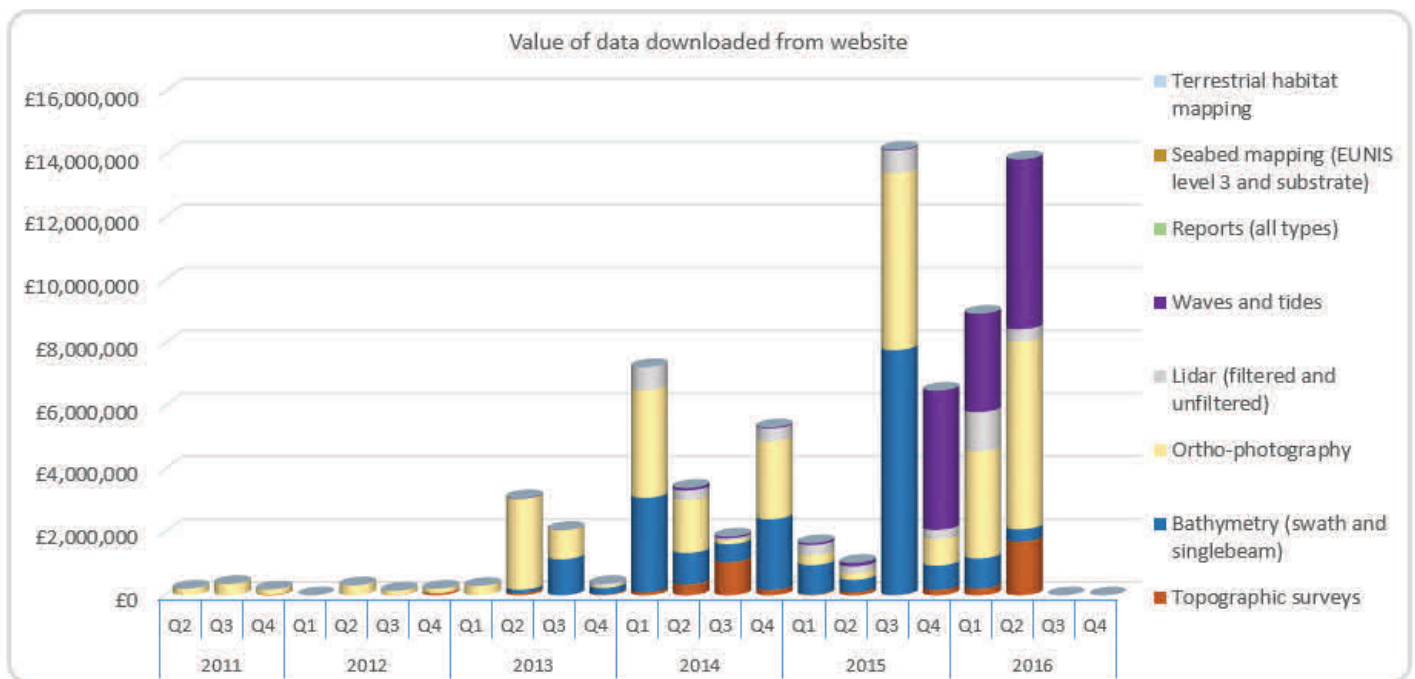
- CCO downloads update
- Examples of CERMS data
- Hilbre Island by Mark Wardle
- North West Coastal Forum Event
- CERMS Christmas Competition
- Coastal Monitoring using SANDS
- National Flood Resilience Review
- Post Grad Training

CERMS PROGRAMME DOWNLOADS FOR NORTH WEST

Latest web download figures from the web portal by data type

The appearance of the downloaded summary from the Channel Coast Observatory website has changed, to show more information, presented more attractively and also showing the financial value of being able to access the downloads in this way. The monetary value assigned to this shows the saving if the data had to be collected by a number of different organisations.

The range of data available is valuable, not just to coastal engineers, but to a much wider audience, including students and environmental organisations. Since the last newsletter, we can now see Q1 and Q2 in 2016. The wave and tide data has been in demand and the vertical aerial photography (ortho-photography) is always popular. We can also see a big increase in downloads since Q2v2015, with three out of the last 4 quarters the busiest we've seen. Remember the National Coastal Monitoring Portal have changed their web address to: www.coastalmonitoring.org



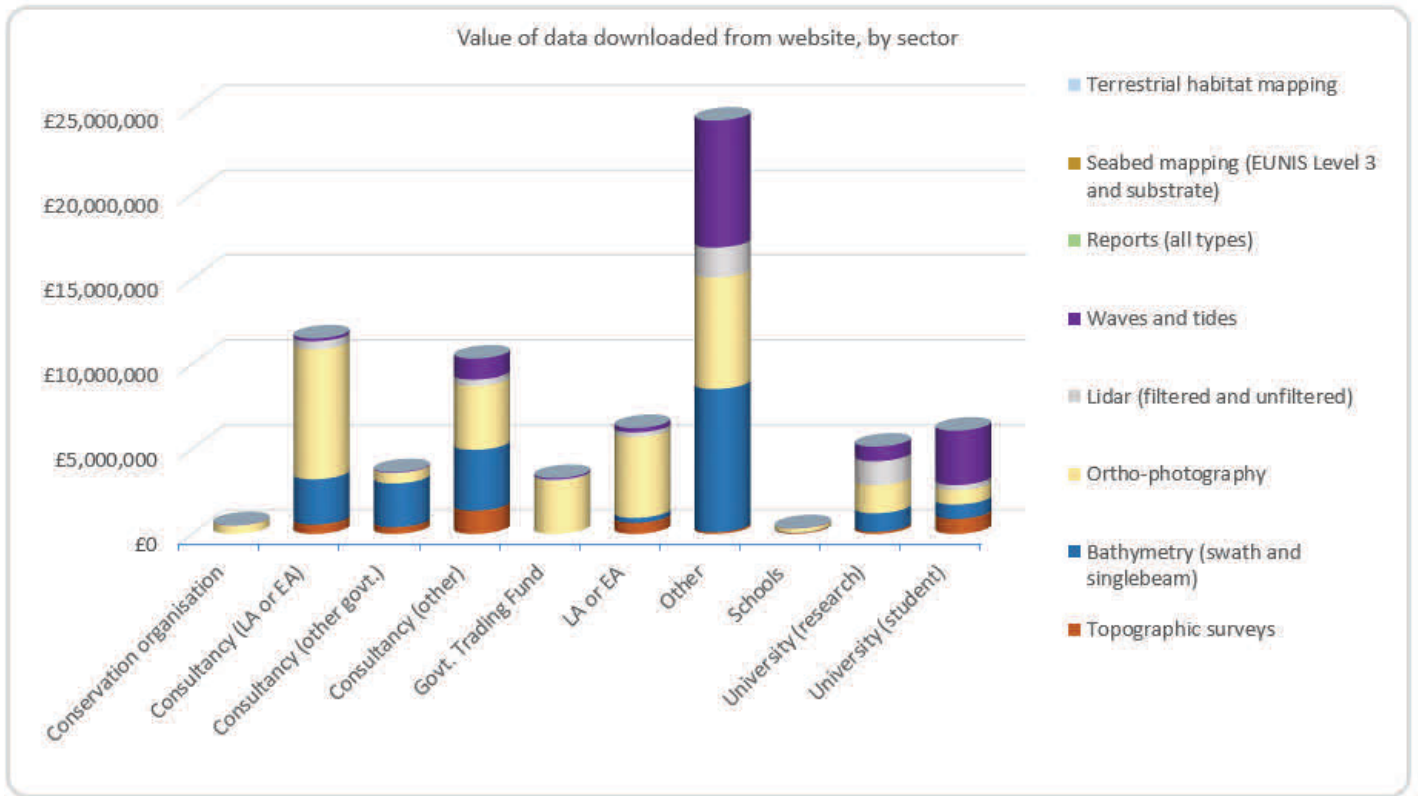
Region <input type="button" value="Anglia"/> <input type="button" value="East Riding"/> <input type="button" value="Northeast"/> <input checked="" type="button" value="Northwest"/> <input type="button" value="Southeast"/> <input type="button" value="Southwest"/>	Sector <input type="button" value="Conservation organisation"/> <input type="button" value="Consultancy (LA or EA)"/> <input type="button" value="Consultancy (other govt.)"/> <input type="button" value="Consultancy (other)"/> <input type="button" value="Govt. Trading Fund"/> <input type="button" value="LA or EA"/> <input type="button" value="Other"/> <input type="button" value="Schools"/> <input type="button" value="University (research)"/> <input type="button" value="University (student)"/>	Year <input type="button" value="2011"/> <input type="button" value="2012"/> <input type="button" value="2013"/> <input type="button" value="2014"/> <input type="button" value="2015"/> <input type="button" value="2016"/> <input type="button" value="2017"/>
Quarter <input type="button" value="Q1"/> <input type="button" value="Q2"/> <input type="button" value="Q3"/> <input type="button" value="Q4"/>		

The new graphs also provide the facility to view the amount of downloads by sector. This is useful information to know which industry and educational sectors are using CERMS data. Local Government and Environment Agency consultancy as well as private consultancies have been the highest users of data since 2011. This data is vital for Local Authorities to conduct coastal monitoring as in these times of cuts and reduced budgets it is unlikely they would be able to commission data collection independently.

University research and university students completing their dissertations are also high value users. Schools and Conservation organisations are much lower value users however this is important as they probably have the least money available to spend on data collection needed for project research and education. So the graphs prove that CERMS data is being increasingly used and is of great value across a range of sectors, including helping environmental students qualify to become next years environmental professionals.

All the data is available for legal and non commercial/profitable use under an Open Government Licence. The number of users describing themselves as "other" has actually reduced, these figures could include members of the public as well as users who don't fall into any of the stated categories.

CERMS PROGRAMME DOWNLOADS FOR NORTH WEST



Year

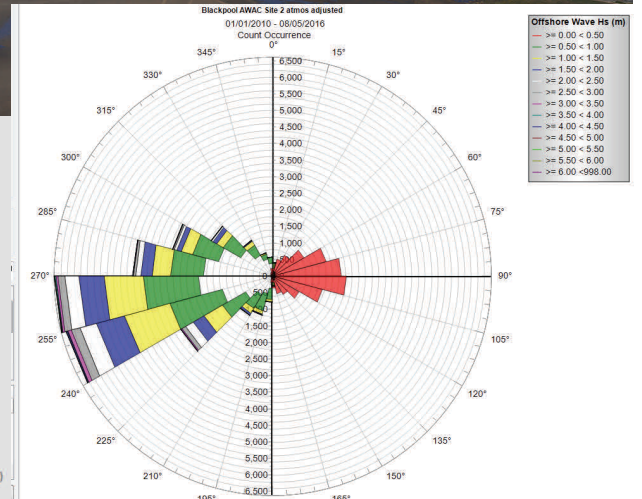
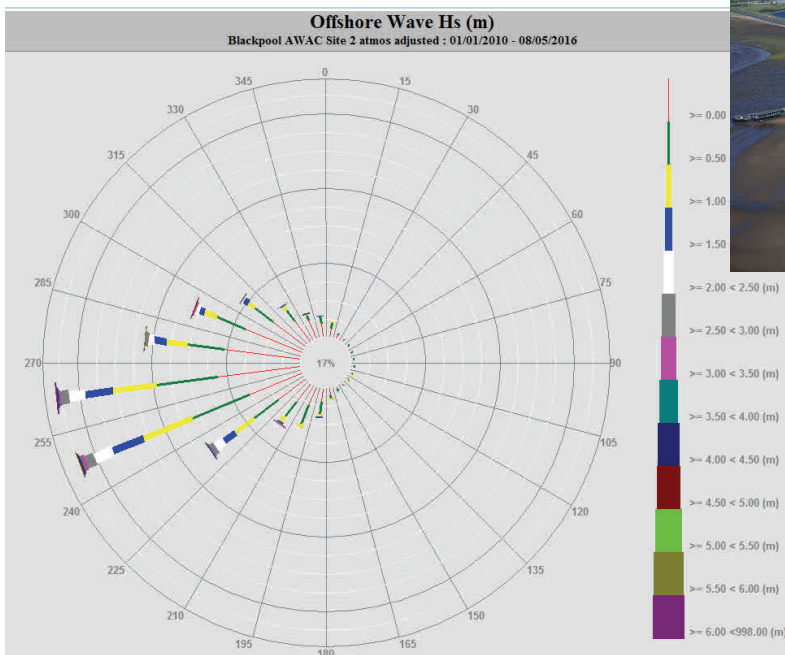
2011	2012	2013	2014
2015	2016	2017	

Region

Anglia	East Riding	Northeast
Northwest	Southeast	Southwest

Examples of CERMS data

In the last issue we included an example of water level data which we have acquired. Right is an example of high resolution oblique photography and a Wave rose and Wave Plot showing offshore wave height (HS) m, produced using the data from the Blackpool AWAC.





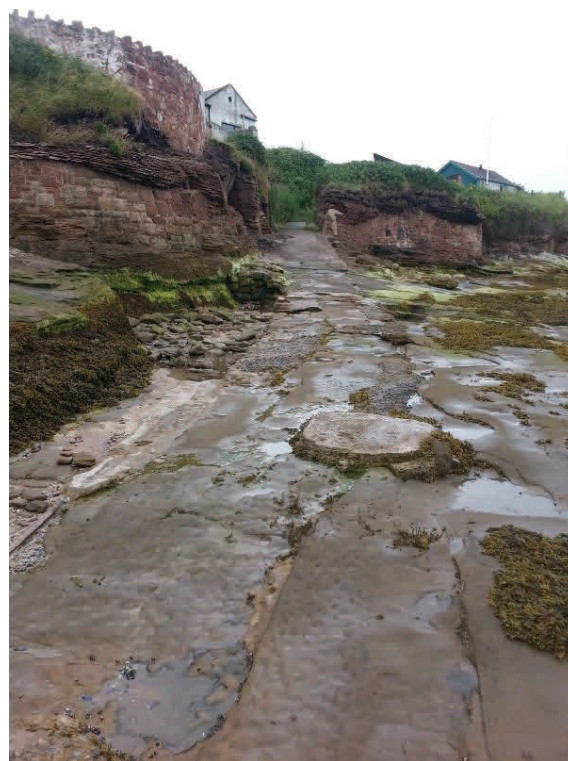
Hilbre Island is the northernmost outcrop of the Hilbre archipelago and lies off the north-west corner of the Wirral peninsula. The island attracts many visitors throughout the year, enjoying views across the estuary and the experience of watching grey seals and a variety of coastal birds in their natural environment, sitting as it does, within several environmental designations. Hilbre, whilst accessible at low water, becomes cut off from the mainland at high tide and is home to significant archaeological and historical heritage.

In recent times the island was owned by the Mersey Docks and Harbour Board who, sometime around the end of the 19th century, constructed linear defences at the north-west corner. These defences take the form of vertical masonry walls constructed within the Bunter sandstone rock cliffs, that protect the northernmost part of the island and the lifeboat station from erosion. The stone for the construction of the walls was quarried locally and the quarry pits are still evident at the rocky foreshore on the west side of the island.

In 1945 the island passed into the ownership of Hoylake Urban District Council and is currently owned and managed by Wirral Council.

Limited maintenance is carried out to the island's man-made defences and in past years Friends groups have coordinated and carried out reconstruction of some of the failed sections of masonry wall. Without regular maintenance and given the exposure conditions at the north-west corner of Hilbre Island, the condition of the masonry walls has deteriorated. Some areas of blockwork have been lost and openings have formed and enlarged at the interface between masonry and rock.

In the summer of 2016 Wirral Council commissioned Coastal Engineering UK to review the condition of the island's defences and advise on how best to manage the risks associated with them, in the context of Hilbre's environmental and heritage interests and its popularity with the general public.



Hilbre Island July 2016

HILBRE ISLAND By Mark Wardle Assistant Engineer, Highways Management - Coast Protection

The inspection, which was carried out on one of the wetter summer days, found that, in general, the condition of the defences was good with only minor maintenance operations being required. There were, however, some areas of concern around the island. The lifeboat slipway for example, which in 2004 had been overlaid with spray concrete to prevent its loss, is now exposed along its leading edge leaving the blockwork vulnerable to further damage.



Damaged Slipway 2000



Repaired Slipway 2004

The northwest corner of the island is exposed to regular wave and tide action, with that exposure decreasing further south as beach levels rise. Failures in the masonry walls in this area have led to undercutting of the cliffs, as can be seen below, risking destabilisation and loss of land on the cliff top.



Northwest corner 2004



Northwest corner 2016

Hilbre Island falls within numerous environmental designations relating to the Dee Estuary and any works carried out would be subject to various approvals and consents. Any proposed schemes to address the necessary works, would have to take into consideration the transport of required plant to the island. Foreshore levels make certain areas inaccessible except for short periods of time and the make-up of the foreshore in places can make it impassable for wheeled vehicles. The island also lacks a supply of fresh water.

Whatever the challenges however, it is fair to say that Hilbre makes for a picturesque working environment – especially when the sun shines!

Sandscapes - Celebrating the Natural & Cultural Capital of Coastal Landscapes

The Conference - 11 Oct 2016, 10:00 - 12 Oct 2016, 17:00

Registration is now open for the North West Coastal Forum's Biennial Coastal Conference, which this year is being run as a joint event with the Sefton Coast Landscape Partnership. This free-to-attend event includes a full day field trip to the Sefton coast on the 11th October, with a full day conference at Southport's flagship museum and gallery

The Atkinson – on 12th October in Southport.

Cultural and natural capital are increasingly being recognised as key drivers for economic growth and sustainable development. This is reflected in a range of policy and strategy coming forward both locally and nationally. Working in partnership at the landscape scale is recognised as a valuable approach to managing complex wide-scale issues. It shares many aspects of integrated coastal management and so can be particularly useful in a coastal setting where the dynamic nature of the coast and its natural processes pose particular challenges – and opportunities – for local communities, coastal managers and everyone who visits and enjoys the coast.

The Sefton Coast Landscape Partnership Scheme ran from 2011 to 2015 and was a great success, raising the profile of natural and cultural coastal assets and getting local people involved in exploring, recording and enjoying the richness of Sefton's coastal heritage.



The poster features a background image of a vast, flat, sandy beach under a dramatic, cloudy sky. The text is overlaid on this image. In the top left corner, there are logos for the Sefton Coast Landscape Partnership and Sefton Council. In the top right corner, there is the North West Coastal Forum logo. The main title 'Sandscapes: Celebrating the Natural and Cultural Capital of Coastal Landscapes' is centered in large white font. Below the title, the dates '11th & 12th October' and the location 'The Atkinson, Southport' are also centered in white. A line of text below that reads 'A Joint North West Coastal Forum & Sefton Coast Landscape Partnership Event'. The booking information 'Booking open at www.nwcoastalforum.org.uk' is highlighted in yellow. At the bottom, the name of the conference chair, Paul Nolan, and his title are listed in black, followed by the event's name: 'The North West's Biennial Coastal Conference Featuring the North West Awards for Coastal Excellence 2016'.

Sandscapes:
**Celebrating the Natural and Cultural Capital
of Coastal Landscapes**

11th & 12th October
The Atkinson, Southport

A Joint North West Coastal Forum & Sefton Coast Landscape Partnership Event

Booking open at www.nwcoastalforum.org.uk

Conference Chair: Paul Nolan
Director, Mersey Forest & Chair, Sefton Coast Landscape Partnership

**The North West's Biennial Coastal Conference Featuring the
North West Awards for Coastal Excellence 2016**



About the Forum

The North West Coastal Forum is a multi-sector partnership bringing together coastal stakeholders from across the North West to promote and deliver sustainable management and use of our coastline...

Morecambe Bay’s Headlands to Headspace is still running and is another great North West example of this kind of partnership working, and there are other great examples elsewhere such as Touching the Tide in Suffolk. Accordingly this conference and its associated field trip are designed to demonstrate the benefits of working at the landscape scale and in partnership by showcasing the work and achievements of coastal Landscape Partnerships

- The Sefton Coast Landscape Partnership
- Headlands to Headspace – Morecambe Bay’s Landscape Partnership
- Touching the Tide – Suffolk Coast Area of Outstanding Natural Beauty’s Landscape Partnership

Discussion is also to explore the value of the natural and cultural assets of the coast and their links to growth, prosperity and wellbeing, explaining the concept of natural and cultural capital and ecosystem services and how these can be used.

Celebrate the achievements of individuals, community groups and organisations/businesses with the North West Awards for Coastal Excellence – categories include Coastal Champion, Coastal Community Action and Coastal Best Practice

The event is designed to help you gain a greater understanding of the value of working in partnership at the landscape scale and the concepts of natural and cultural capital and ecosystems services. We hope you will be inspired by the work of the partnerships and what they have achieved, and by the work and commitment of the NW ACE winners. On Tuesday the 11th October there will be an optional field trip to the Sefton coast to see the coastal landscape and its assets and challenges, and discuss the SCLP achievements with the project staff and partner organisations, in particular the National Trust who are hosting a guided walk. There will also be an informal networking dinner. To register your place at the conference go to <http://www.nwcoastalforum.org.uk/events/>



CERMS Christmas card competition

Yes seriously! This year I thought it would be a nice touch to send a Christmas card to all our CERMS partners and it would also be a nice way of welcoming any new staff or volunteers. I know this ruins the surprise but I’m throwing it open to everyone to provide a cover photo or illustration for the card. It could be a snowy coastal scene from your area or something completely different but it must have a “Christmas” feel to it.

Your artistic efforts will be rewarded with an acknowledgement and lots of compliments from your admiring colleagues. The deadline for entries is the 30th November. The judges decision is final and no correspondence will be entered into regarding the merits of the winning image.

CERMS MONITORING PROGRAMME

Cross Section Analysis

Whilst recently working on some local and regional analysis, Sefton Technical staff experimented with using some of the functions for analysing cross sections using SANDS. This is relatively easy to do by selecting the beach profiles you want to analyse and then creating a process unit. SANDS then creates a number of outputs based on comparable data. It is also possible to refine the data used in the analysis by improving the choice of comparable datasets before running the analysis. Doing this analysis post survey would quickly identify if there were any issues that needed further investigation. This analysis is available to partners for their areas to help inform their coastal management decisions.

Below is an example of the results for a process unit, each set of data for each location is compared with the baseline. The colour key along the bottom makes it easy to quickly visually assess the rate of erosion.

Formby Golf Course Data based on change from Sept 1996 Baseline to 2010														
	1996 to 1997	1996 to 1998	1996 to 1999	1996 to 2000	1996 to 2001	1996 to 2002	1996 to 2003	1996 to 2004	1996 to 2005	1996 to 2006	1996 to 2007	1996 to 2008	1996 to 2009	1996 to 2010
Locations	% Change	% Change	% Change	% Change	% Change	% Change	% Change	% Change	% Change	% Change	% Change	% Change	% Change	% Change
11A02427	9.13	6.94	10.25	16.16	-13.09	2.96	-11.21	-18.96	-4.88	-4.05	-6.14	-7.95	-10.99	-9.08
11A02439	-10.54	-7.16	-4.58	-7.35	0.51	2.16	-3.01	-11.99	-3.41	-6.45	-9.33	-2.7	-6.72	-7.74
11A02448														
11A02462	-3.69	1.67	4.43	0.79	-14.62	-0.54	0.25	-6.86	-3.3	-5	-	-11.2	-6.62	-10.61
11A02469														
11A02476														

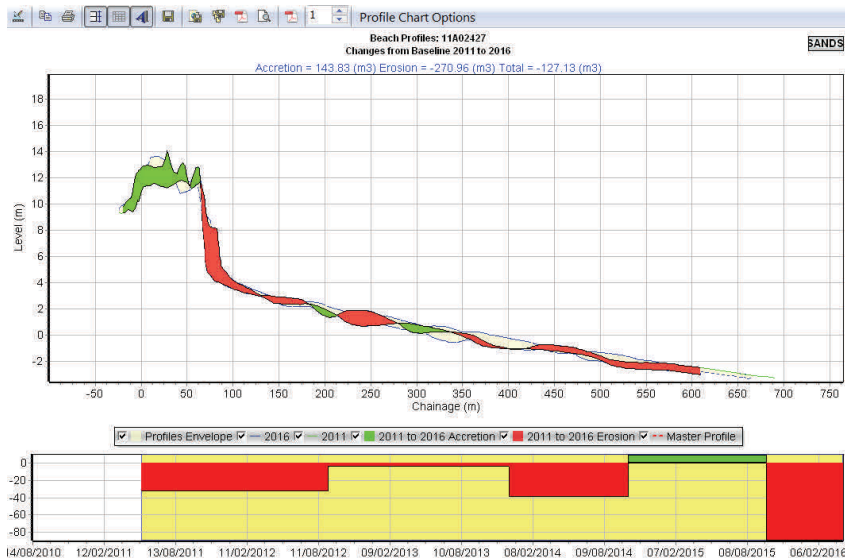
% Change key: Accretion > 30% Accretion 15-30% Accretion 5-15% No Change < 5% Erosion 5-15% Erosion 15-30% Erosion > 30%

Comparison can also be done between surveys, as shown in the table on the right.

Below is an example of another form of chart option. This analysis tool can be run for each profile and shows the results within the profile envelope. It also calculates a value for Accretion and Erosion and provides a total showing either a positive or negative value. See below chart.

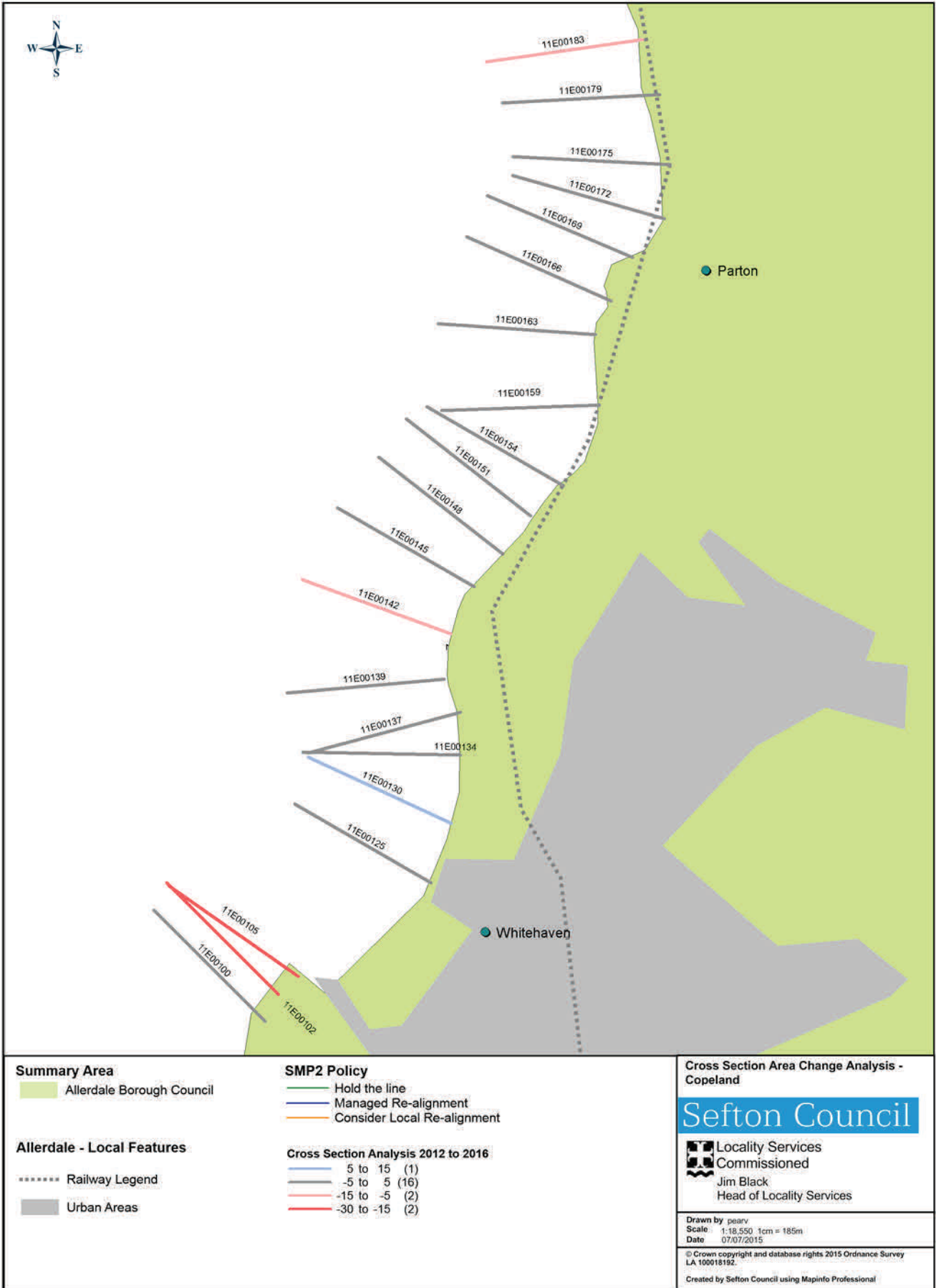
Cross-Sectional Areas		
CSA Changes	CSA Changes GIS Export	CSA Base
erdale 1 2011 to 2016 - CSA Changes Survey To Surv		
2015 - W15 to 2016 - W15		
Locations	CSA Diff (m2)	% Change
11E00100	6.18	0.73
11E00102	-24.01	-4.66
11E00105	4.53	0.83
11E00125	-25.9	-8.18
11E00130	23.11	9.4
11E00134	-2.85	-1.07
11E00137	-21.35	-7.71
11E00139	-1.06	-0.73
11E00142	-8.64	-4.26
11E00145	-8.5	-3.76
11E00148	-4.9	-2.47
11E00151	2.37	1.22
11E00154	-7.81	-3.59
11E00159	-7.97	-2.08
11E00163	-4.51	-1.15
11E00166	-4.12	-0.83
11E00169	-0.8	-0.12
11E00172	-20.37	-2.59
11E00175	-39.51	-4.46
11E00179	-3.69	-0.35
11E00183	-35.19	-5.24
Av=-8.81		Av=-1.96%
Min=-39.51		Min=-8.18%
Max=23.11		Max=9.40%

% Change key: Accretion > 30% Accretion 15-30% Accretion 5-15%



Beach Profiles: 11A02427
Changes from Baseline 2011 to 2016

Accretion = 143.83 (m3) Erosion = -270.96 (m3) Total = -127.13 (m3)



Cross Sectional Area Change Analysis

Above is an example using the analysis techniques we have been trying in SANDS and exported to create a map presentation of the results. This analysis can be done comparing back to a baseline or as a year on year change analysis. We now have long enough data sets for nearly all areas to be able to produce meaningful results,

POST GRADUATE QUALIFICATIONS AND CPD TRAINING OPPORTUNITY

Lancaster University in partnership with JBA Consulting are providing a range of postgraduate qualifications and CPD training in Flood and Coastal Risk Management.

- Learn how to apply practical skills and best practice techniques for modelling, understanding and managing risk
- Flexible delivery enabling you to continue working whilst studying
- Start at any time throughout the year
- Gain technical skills and knowledge that can be directly applied to a wide range of roles and disciplines in the water, environment and flood risk management sector.

Leads to a Postgraduate Certificate with options to progress to a Postgraduate Diploma or an MSc. As part of their remit to build capacity and knowledge in flood risk management, **JBA Trust are fully funding two places on the Postgraduate Certificate in Flood and Coastal Risk Management!!!**

This support is designed to help recipients bring benefits to communities through third sector or public sector organisations. Previous recipients included professionals working for North Yorkshire CC, Vale of Glamorgan CC and Pennine Prospects.



National Flood Resilience Review – Published 8 September 2016

Of interest to all coastal Authorities the Governments awaited Review of how we assess flood risk, reduce the likelihood of flooding, and make the country as resilient as possible to flooding has recently been published. This review has looked at how we:

- understand the risks of river and coastal flooding from extreme weather over the next 10 years
- assess resilience of key local infrastructure (such as energy, water, transport and communications), and identify ways to protect it
- improve how we respond to flood incidents, including through new temporary flood defences

The review was set up in January 2016 to assess how the country can be better protected from future flooding and extreme weather events such as during December 2015. The review was chaired by the then Chancellor of the Duchy of Lancaster, with a team including Cabinet Office, Defra, the Environment Agency, the Met Office, and the government's Chief Scientist. Read the document which includes six pilot case studies at the link below.

<https://www.gov.uk/government/publications/national-flood-resilience-review>

If you have any quiz ideas, coastal news or projects or any CERMS related stuff you would like to be in the newsletter, please send it through. We are always looking for news and articles from around the NW so please send me your stories or information about the latest scheme, staff or projects. Please send them to Viv.Pearson@sefton.gov.uk

AND Don't forget about the CERMS2 Christmas card competition !

Thanks to everyone who contributed to this newsletter, The next NW CERMS Newsletter will be published in April 2017.

**PRODUCED BY SEFTON
COUNCIL**

**Flood and Coastal Erosion Risk
Management**

Investment Programmes & Infrastructure

Department of Built Environment

Magdalen House

Trinity Road

Bootle

L20 3NJ

CoastalDefence@sefton.gov.uk