

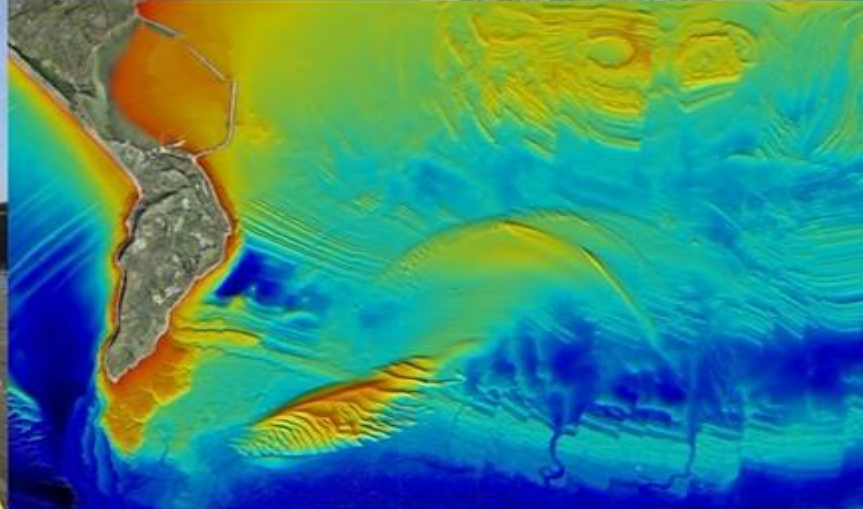
Channel Coastal Observatory

Travis Mason
&
Sarah Geijsels

www.channelcoast.org
www.coastalmonitoring.org



National Network of Regional Coastal Monitoring Programmes



South West Regional Coastal Monitoring Programme

ANNUAL SURVEY REPORT

Land's End to Hartland Point

2014

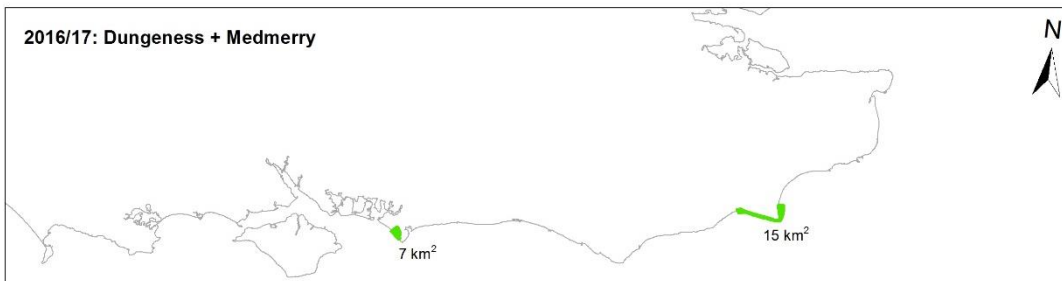
AR 43



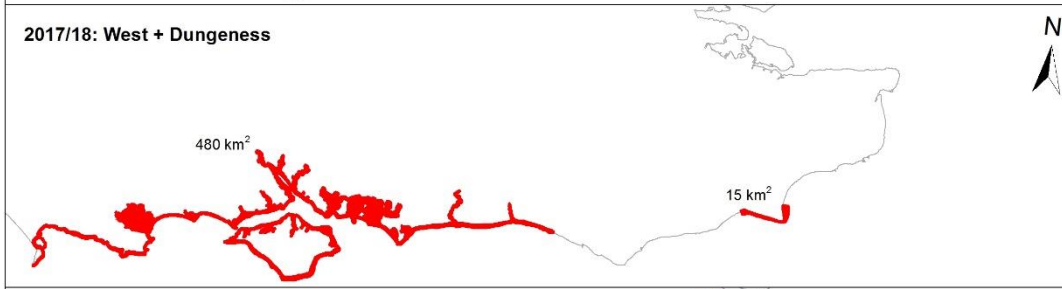
National Network of Regional Coastal Monitoring Programmes

- **Northeast**
- **East Riding of Yorkshire**
- **Anglian**
- **Southeast**
- **Southwest**
- **Northwest**

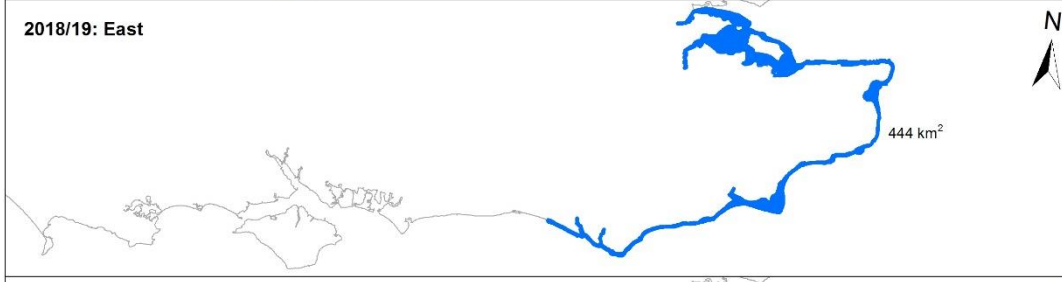
2016/17: Dungeness + Medmerry



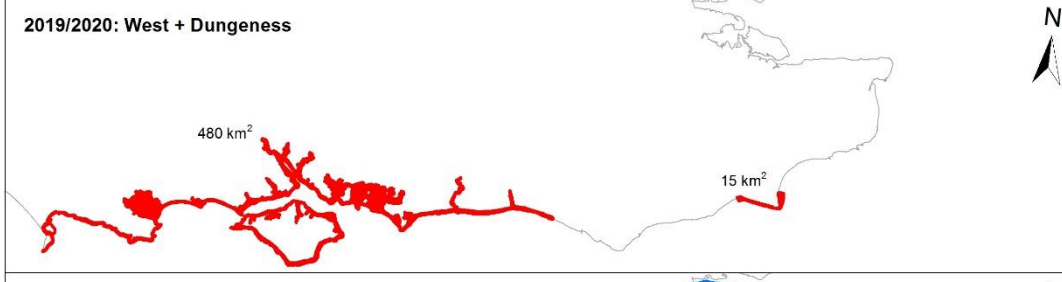
2017/18: West + Dungeness



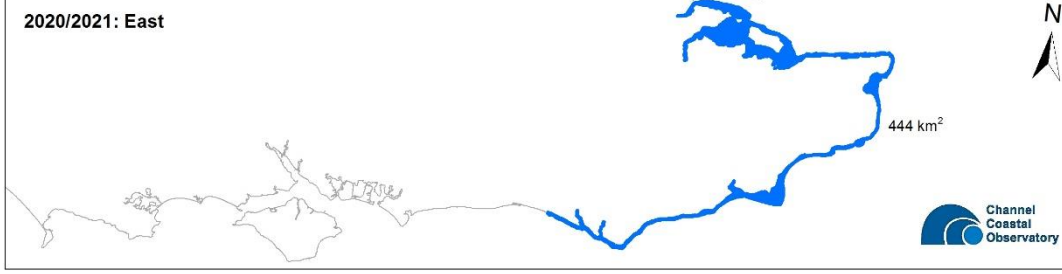
2018/19: East



2019/2020: West + Dungeness



2020/2021: East

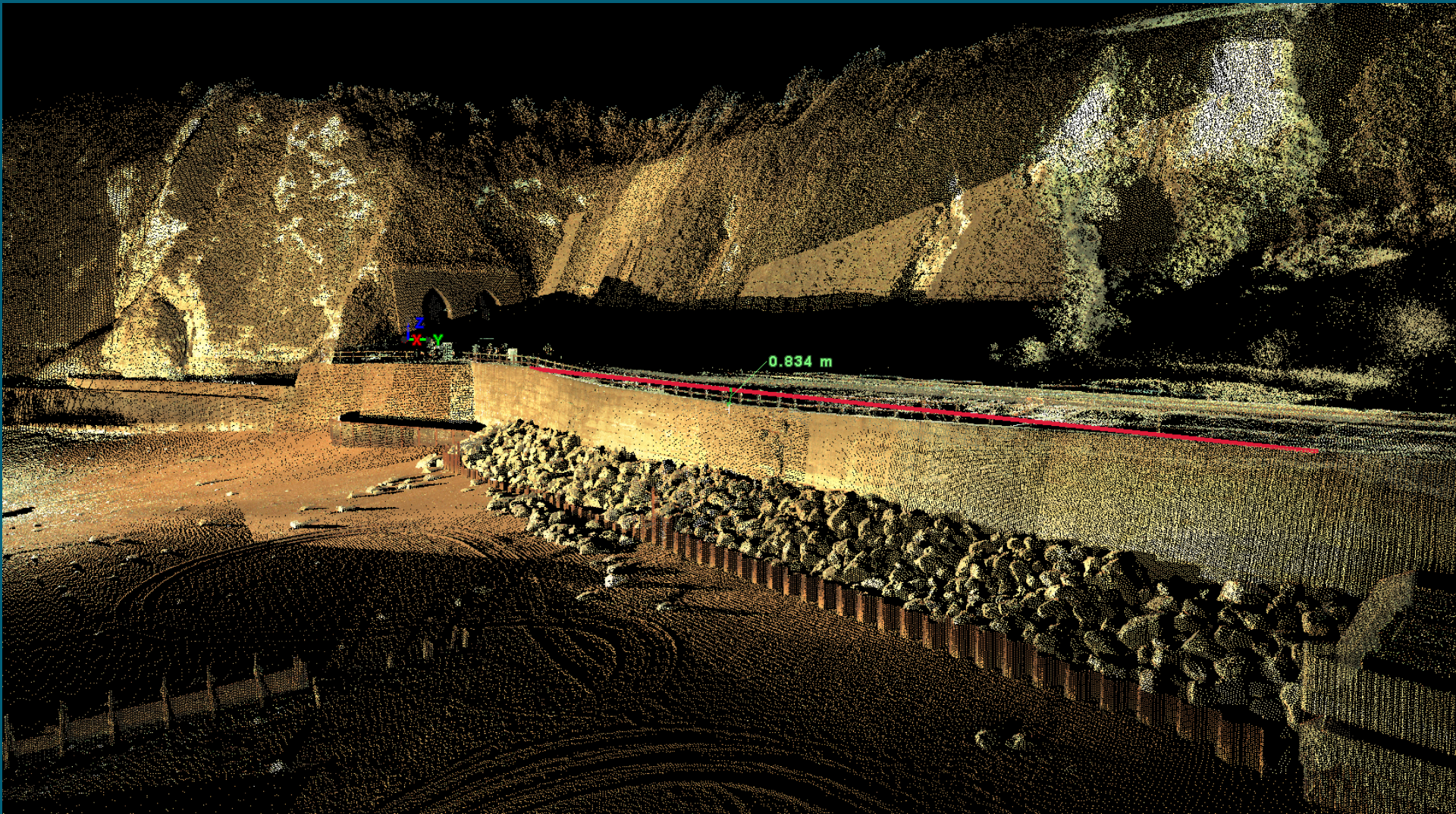


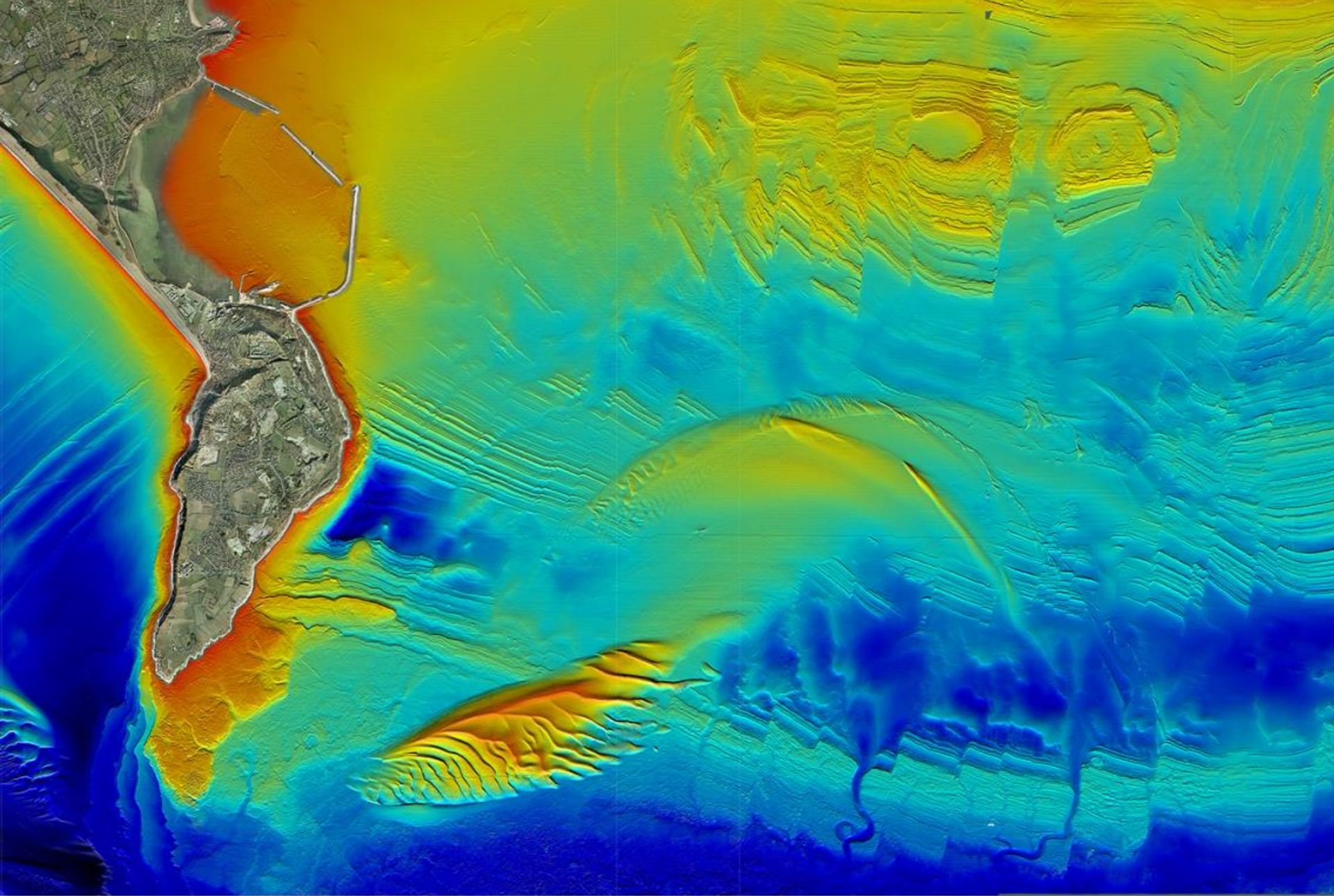
5-year lidar programme (Southeast)

Leica C10 laser scanner



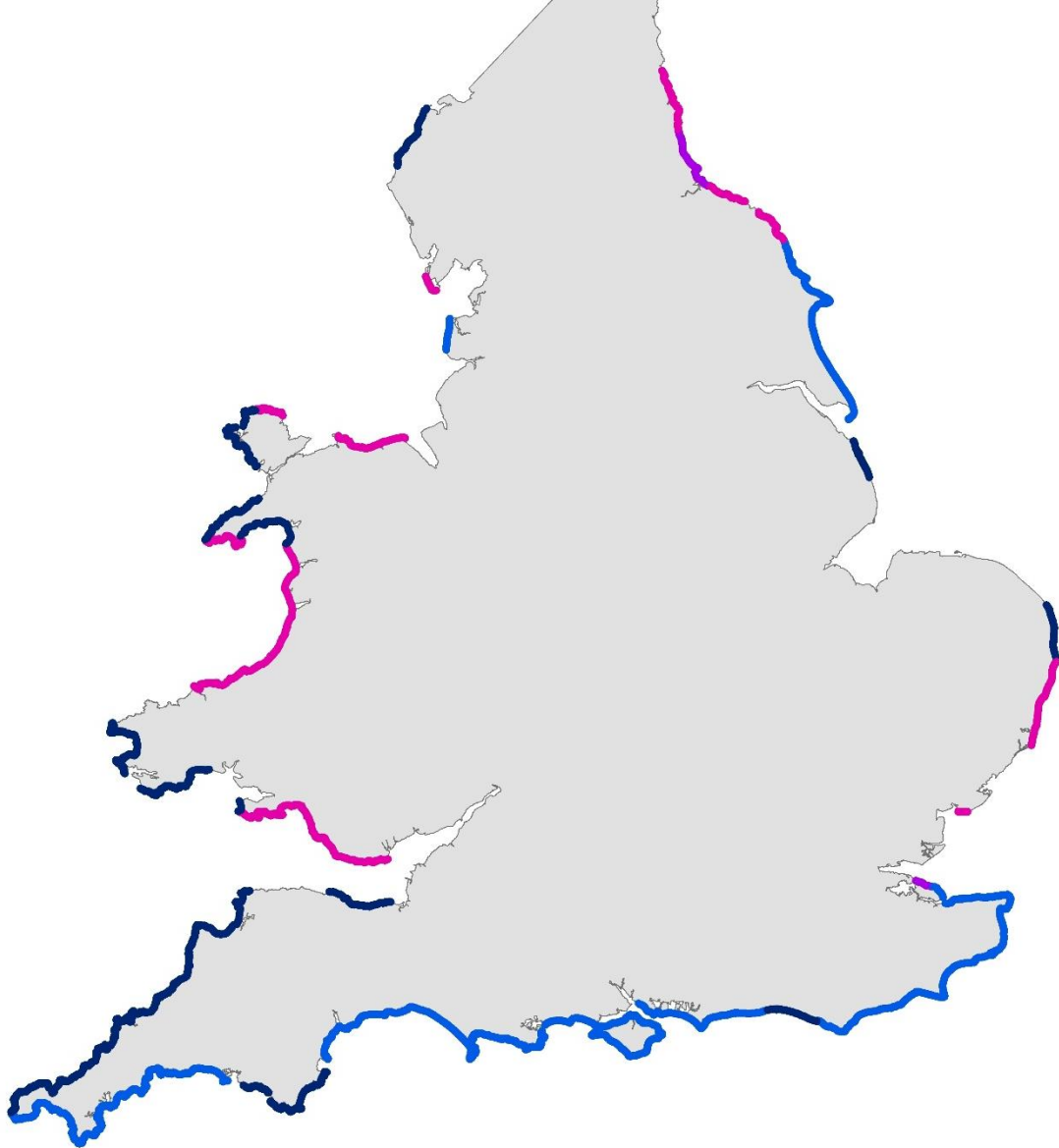
Laser scan of Folkestone seawall





CHP and Coastal Monitoring Programmes

~70% of English and Welsh coastline will have Order 1a swath bathymetry



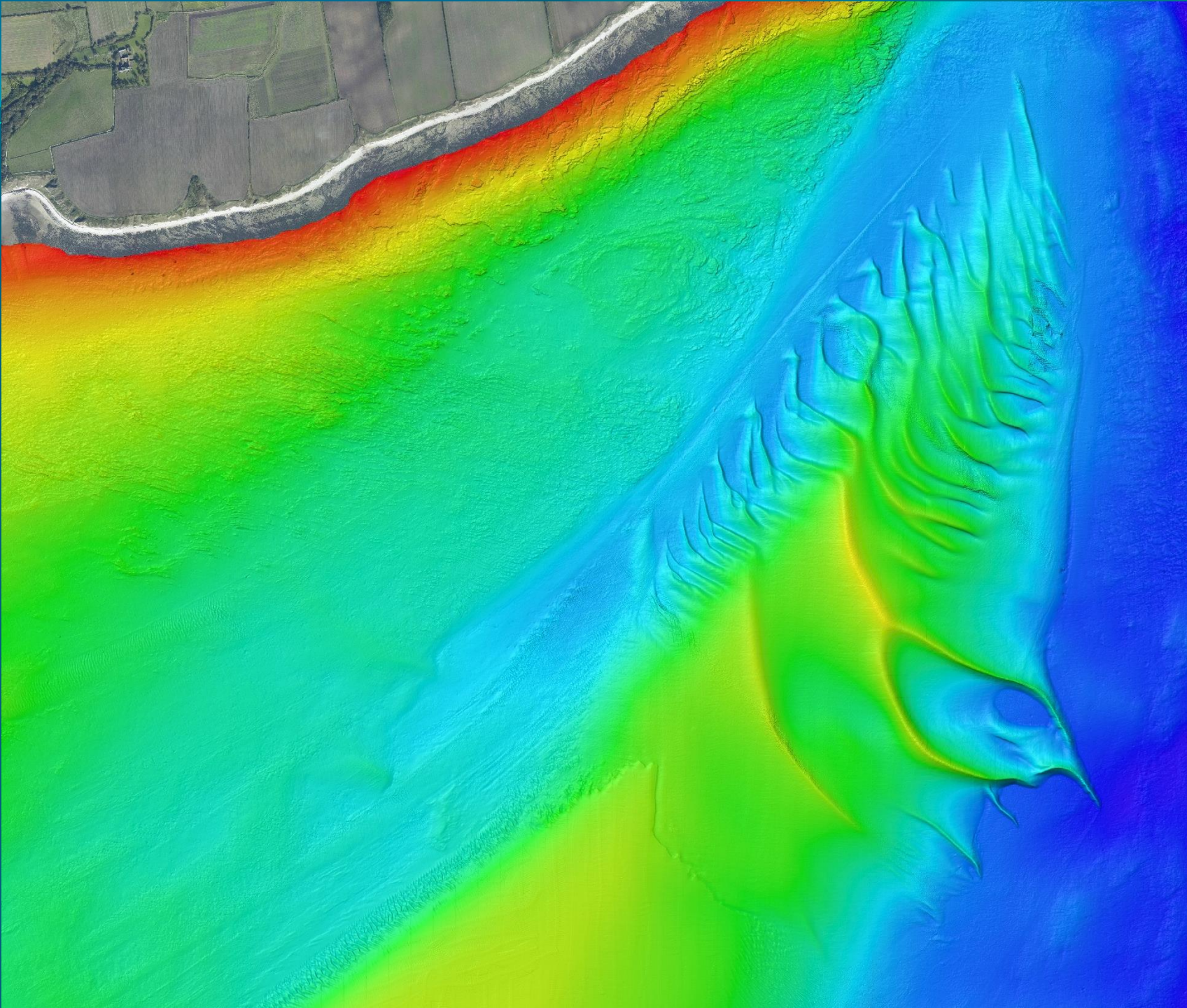
Maritime &
Coastguard
Agency

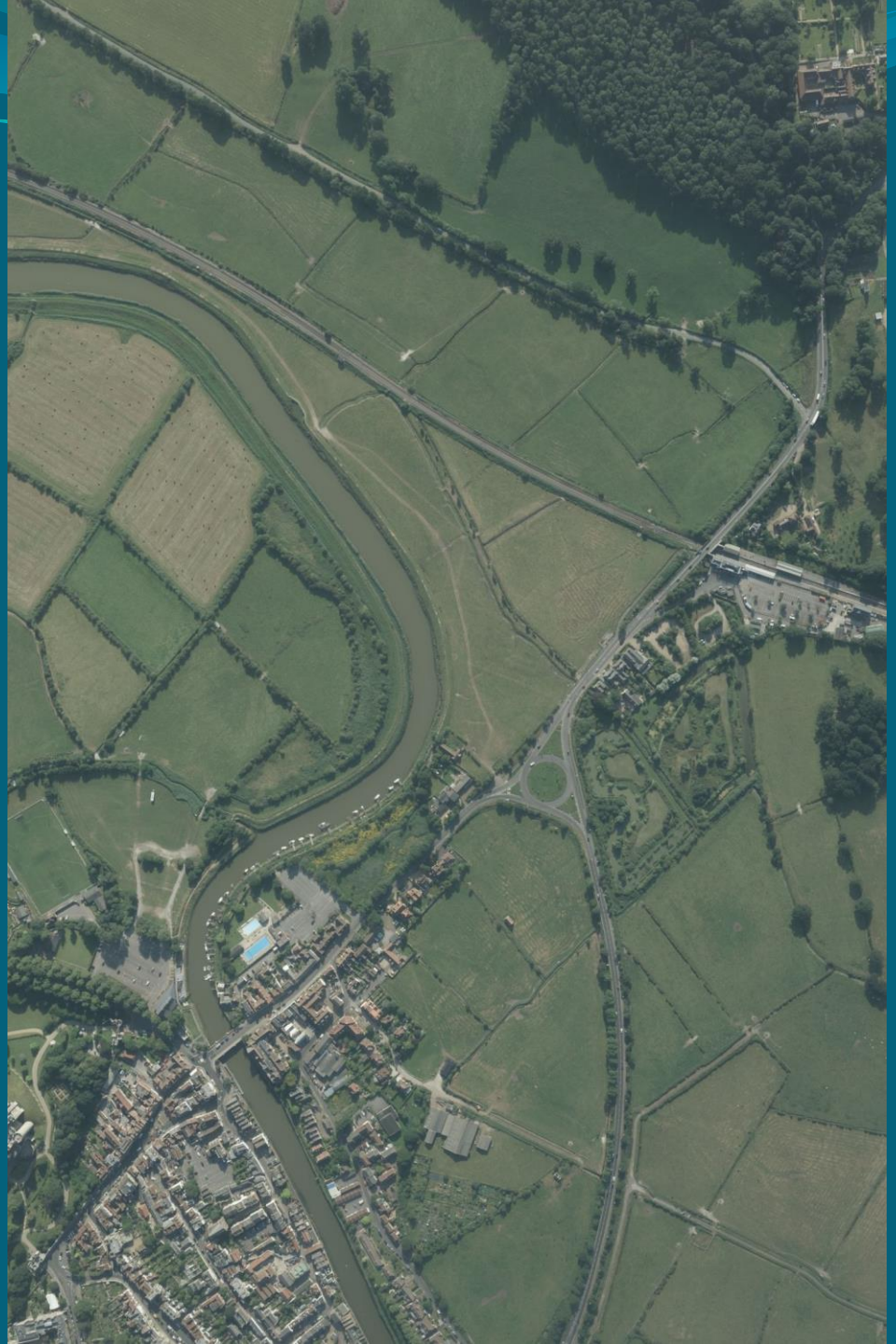
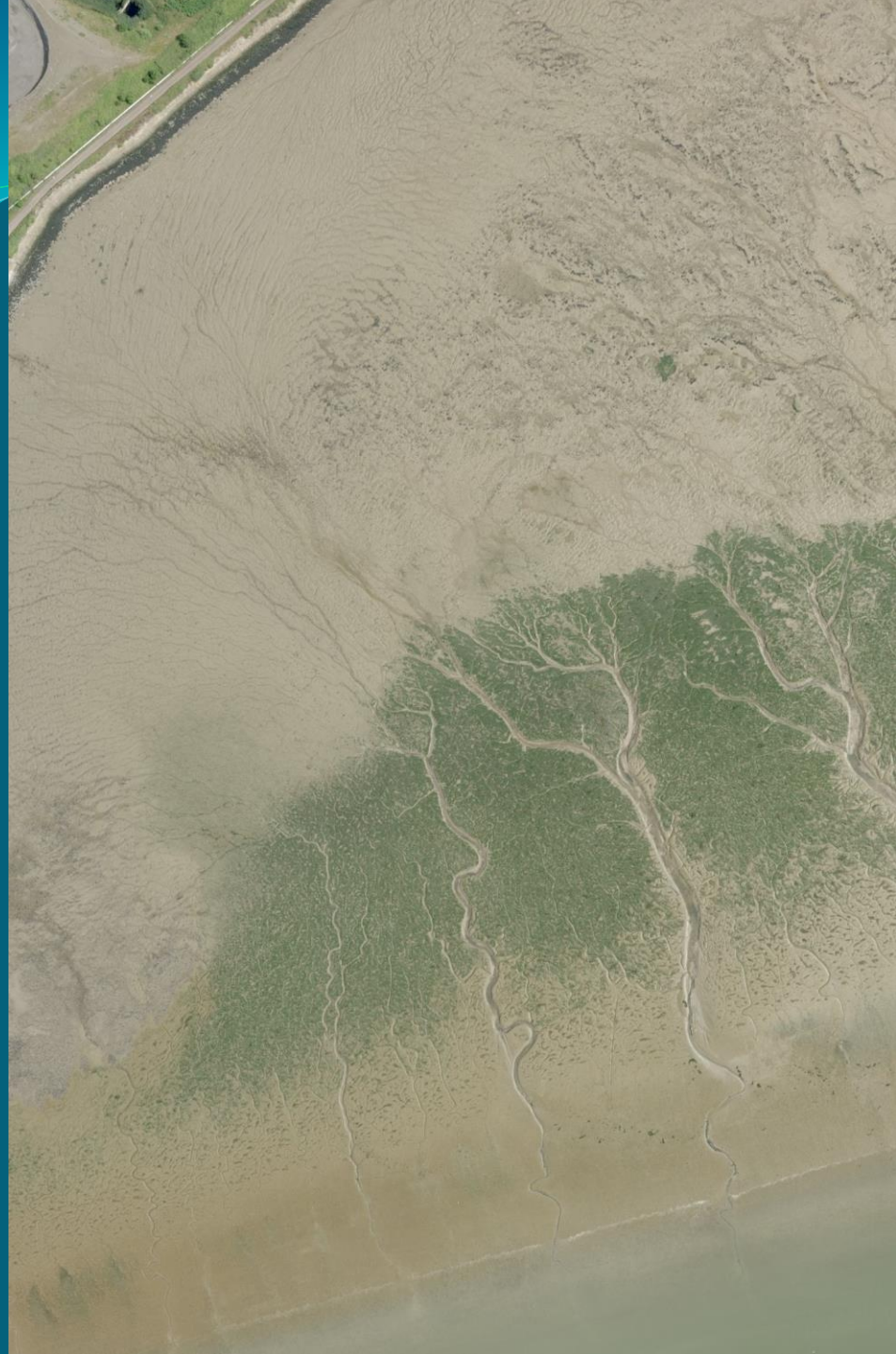
Legend

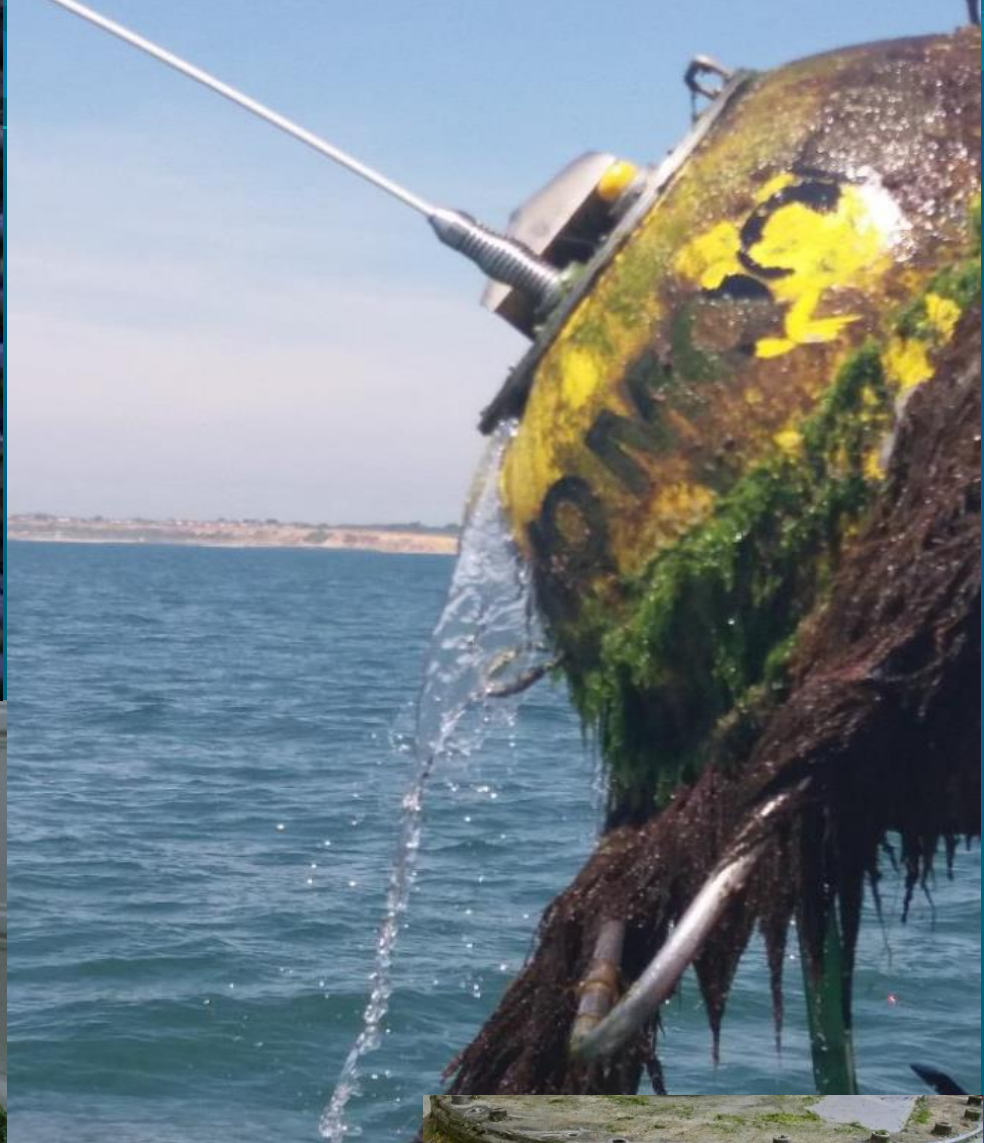
- MCA Completed
- MCA Proposed
- CMP Completed
- CMP Proposed



0 25 50 100 km



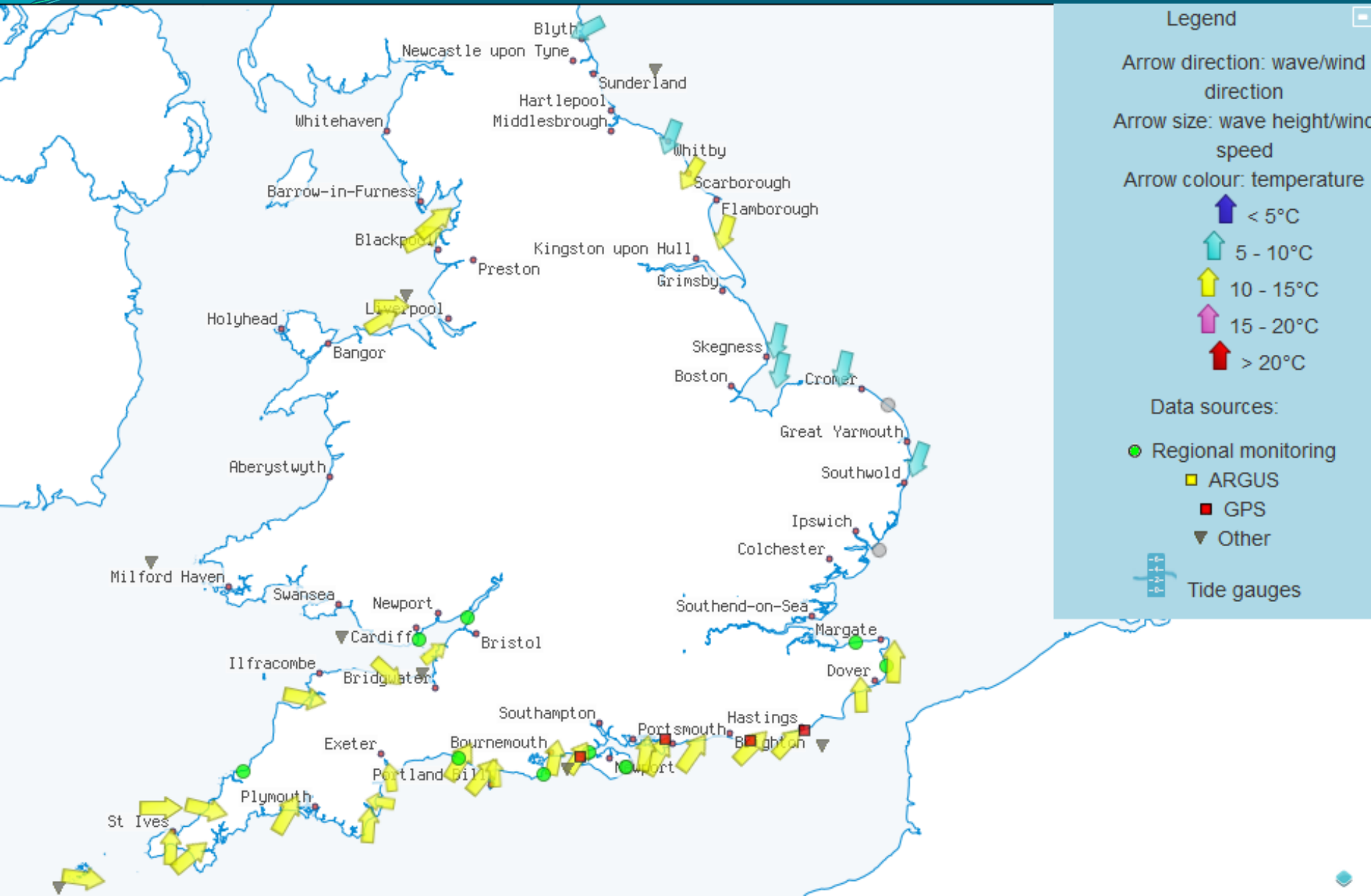


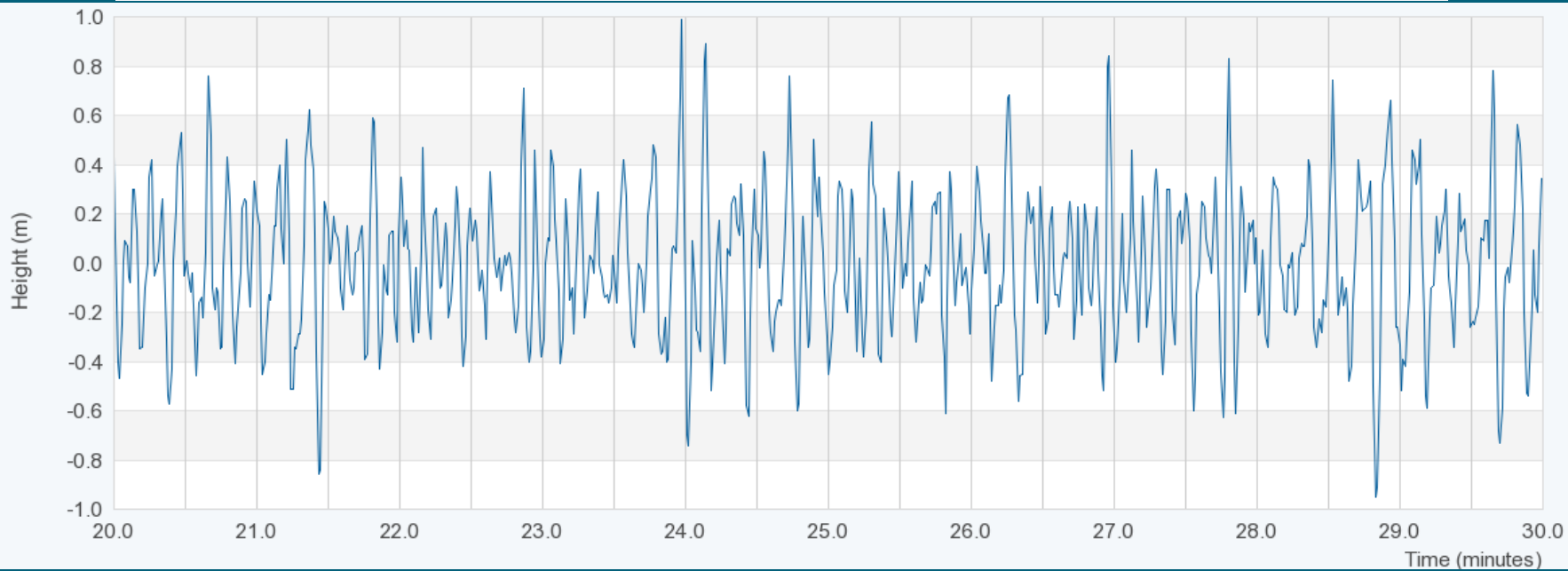
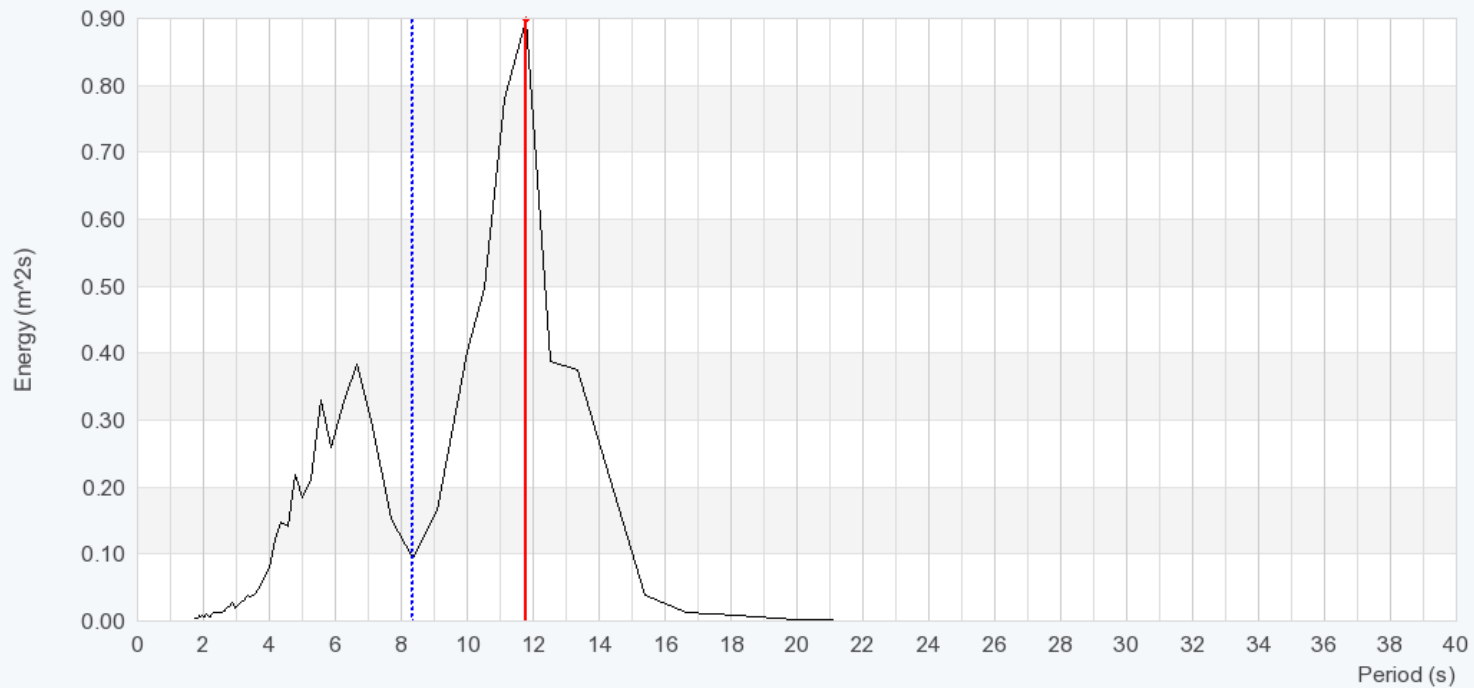


*Photos courtesy
of Fugro GB
Marine Ltd*



39 DWR sites, including 3 industry (RWE Innogy Ltd and Wave Hub Ltd)





Real time data – Welsh pages

REGIONAL COASTAL MONITORING PROGRAMMES



« Return to map for other wave, tide and met stations. - Note that these are real-time data and are not quality-controlled.

Penarth

- Waves
- Tides**
- Weather
- Latest
- Information
- Statistics

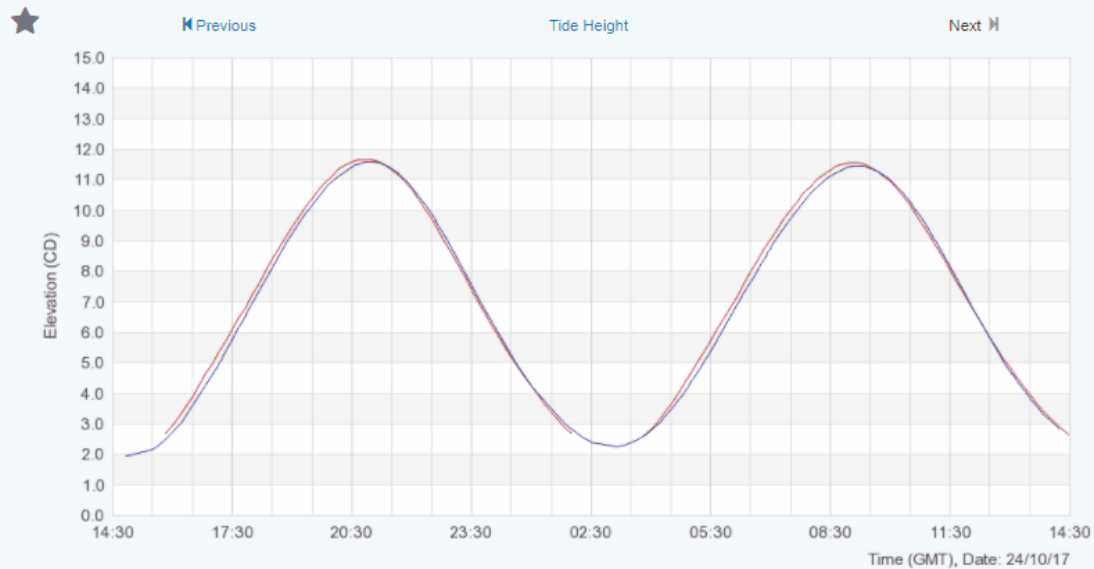
▼ Data Selection (click to expand) >

▼ Data Display & Download (click to expand) >

★ Latest Tide Data

Time (GMT)	Elevation	Residual	Next HW	Next LW	Date	Highest 2017	Date	Lowest 2017
24-10-2017 14:30	2.63	0.03	21:21, 11.14	15:16, 2.27	30-03	13.26m	15-03	2.48m

Select Datum:
Chart Datum ▼





5 x Rosemount
WaveRadar REX



4 x Etrometa step gauge

Environment Agency

National Standard Contract and Specification
For Surveying Services

STANDARD TECHNICAL SPECIFICATION

Version: 3.2
Date: 1 May 2013



Maritime &
Coastguard
Agency

UK Civil Hydrography

Survey Specification

Civil Hydrography Services in England

August 2013

RICS Practice Standards, UK

GN 61/2010

Vertical aerial photography and digital imagery

5th edition, guidance note



RICS

the mark of
property
professionals
worldwide

SPECIFICATION FOR TERRESTRIAL ECOLOGICAL MONITORING

1. PURPOSE OF MAPPING

Habitat mapping is undertaken to provide coastal and terrestrial data for the Environment Agency and Natural England to comply with requirements for Natura 2000 sites (designated by the EU) and Biodiversity Action Plans (resulting from the Convention of Biological Diversity) and Scientific Interest (designated under the Countryside and Rights of Access Act 2000).

The principal objectives are to provide priority habitat¹ extent data for:

- Identification and quantification of regional coastal change
- Assessing losses and gains for the Environment Agency
- Identification and strategic consideration of coastal flood risk
- Assisting development of Biodiversity Action Plans (BAPs)
- Providing contextual information to support Appraisal, Flood and Coastal Defence Strategies and Flood Risk Management Plans

Provision is made for:

- Mapping the extent of all coastal and terrestrial priority habitats
- Data management at local Biodiversity Record Centres

The output from the mapping will be freely available on the 'Monitoring Programmes' website (www.coastalmonitoring.org.uk)

2. GENERAL

2.1 Performance monitoring arrangement

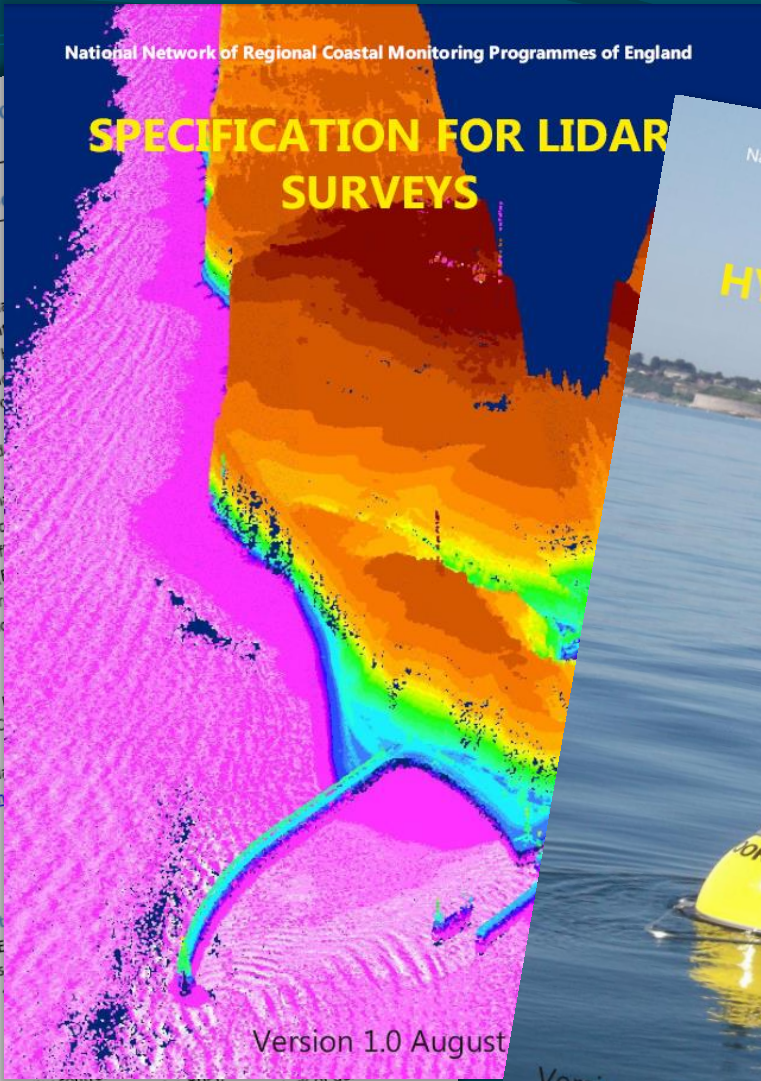
A quarterly review will be undertaken by the Environment Agency during the contract period. If the Consultant is unable to meet the standards and requirements of the Specification or Brief, the Environment Agency may terminate the contract.

2.2 Quality control of data

The Consultant is responsible for undertaking quality control checks on the Consultant's data within 6 weeks of delivery of each Block of data. The Consultant must ensure that the data meets the standards and requirements of the Specification and the Brief.

¹ Formerly known as BAP Priority Habitats, they are now referred to as "priority habitats", as listed in Section 41 of the Natural Environment and Rural Communities Act (2006)

SPECIFICATION FOR LIDAR SURVEYS



Version 1.0 August 2015

SPECIFICATION FOR HYDRODYNAMIC SERVICES



Version 1.0 August 2015

National Network of Regional Coastal Monitoring Programmes of England

Quality Control of Water Quality

2016



Version 1.0 March 2017

National Network of Regional Coastal Monitoring Programmes of England

Quality Control of Lidar Data

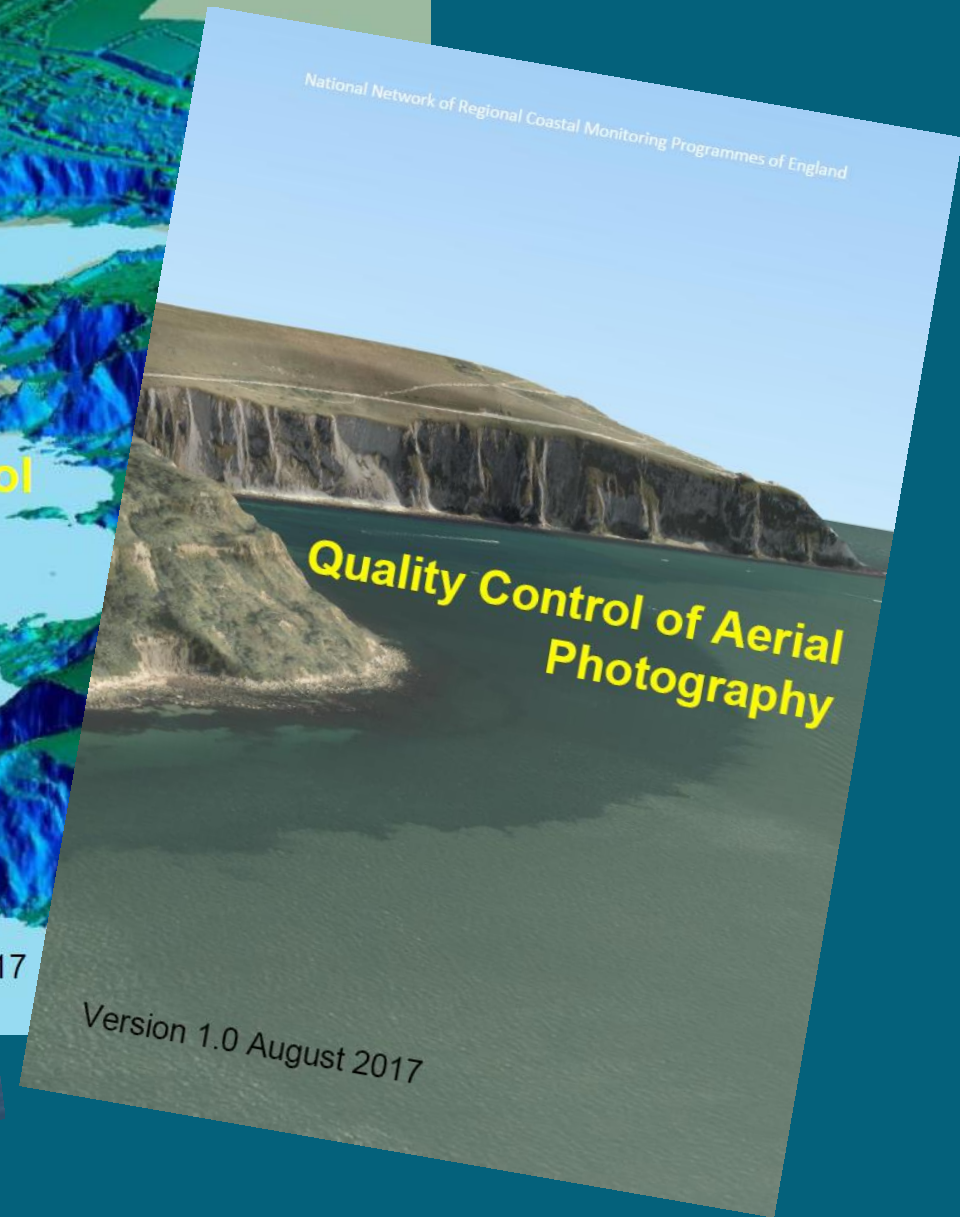
Version 1.0 August 2017



National Network of Regional Coastal Monitoring Programmes of England

Quality Control of Aerial Photography

Version 1.0 August 2017





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A The National Archives

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Map Viewer/Data Catalogue



Realtime Data



Map Viewer & Catalogue



Reports



Gallery



Shingle-B

iCOASST ▾

Feedback

Regions ▾ About ▾ General ▾

Search

REGIONAL COASTAL MONITORING PROGRAMMES

Welcome

Welcome to the website for the National Network of Regional Coastal Monitoring Programmes of England.

The Network comprises 6 Regional Programmes, collecting coastal monitoring data in a co-ordinated and systematic manner to serve the needs of coastal engineering and management.

For regional information, click on one of the highlighted regions on the map.

For data, click on one of the top buttons.



Aerial Photography

Summary of results ⓘ

Reference Map ⓘ

Base layers ⓘ

[Deselect all]

- BGS (onshore)
- BGS (offshore)

Data layers

Ortho-rectified photography

- 2016
- 2015
- 2014
- 2013
- 2012
- 2011
- 2010
- 2009
- 2008
- 2007
- 2006
- 2005
- 2003
- 2002
- 2001

False colour infrared photography

Non-rectified photography

Lidar data

Topographic data

Bathymetry

Photogrammetric data

Habitat Mapping

Seabed Mapping

Waves/Tides

Wave buoys ⓘ

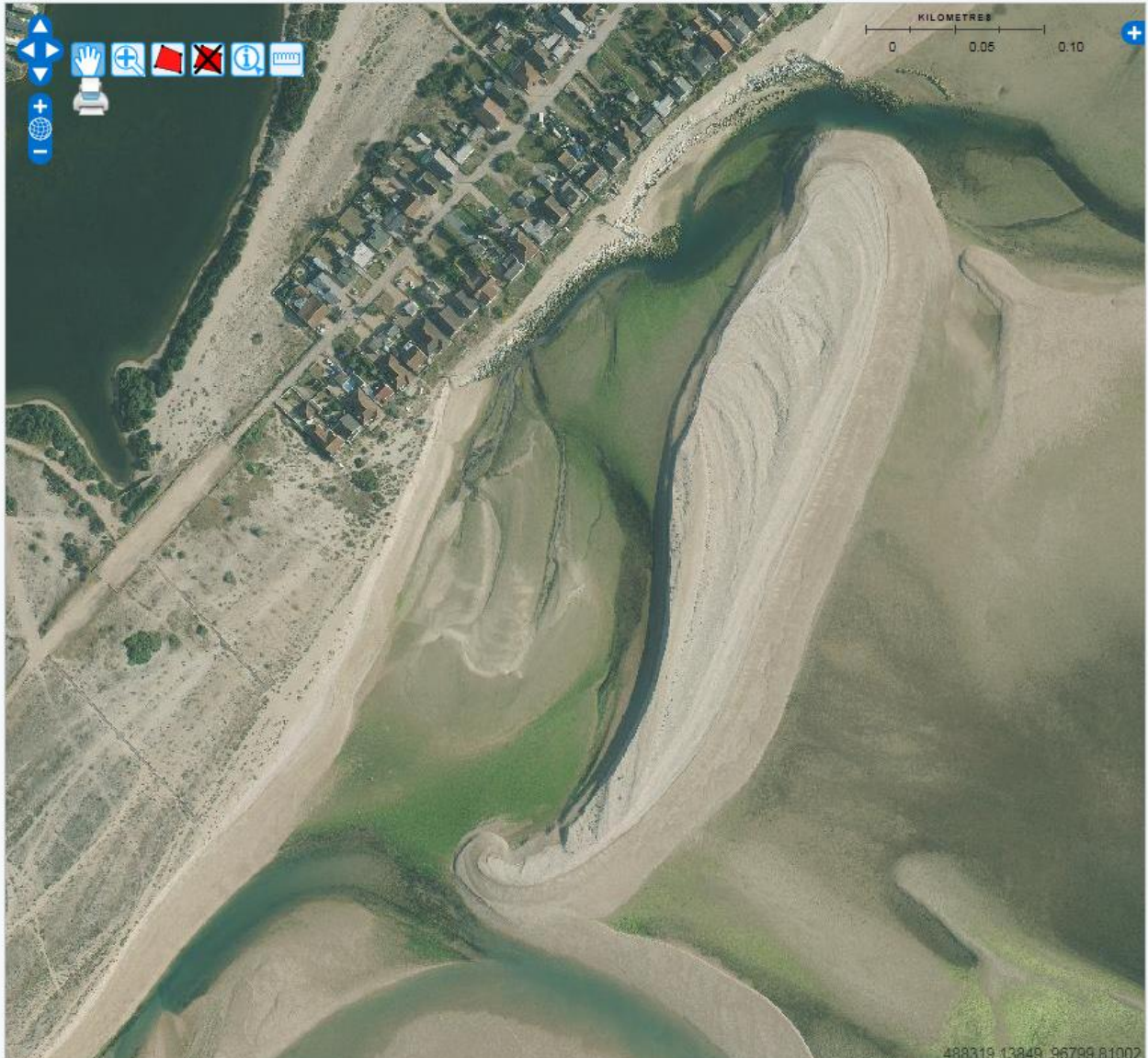
Tide gauges ⓘ

Other

- GPS control points ⓘ

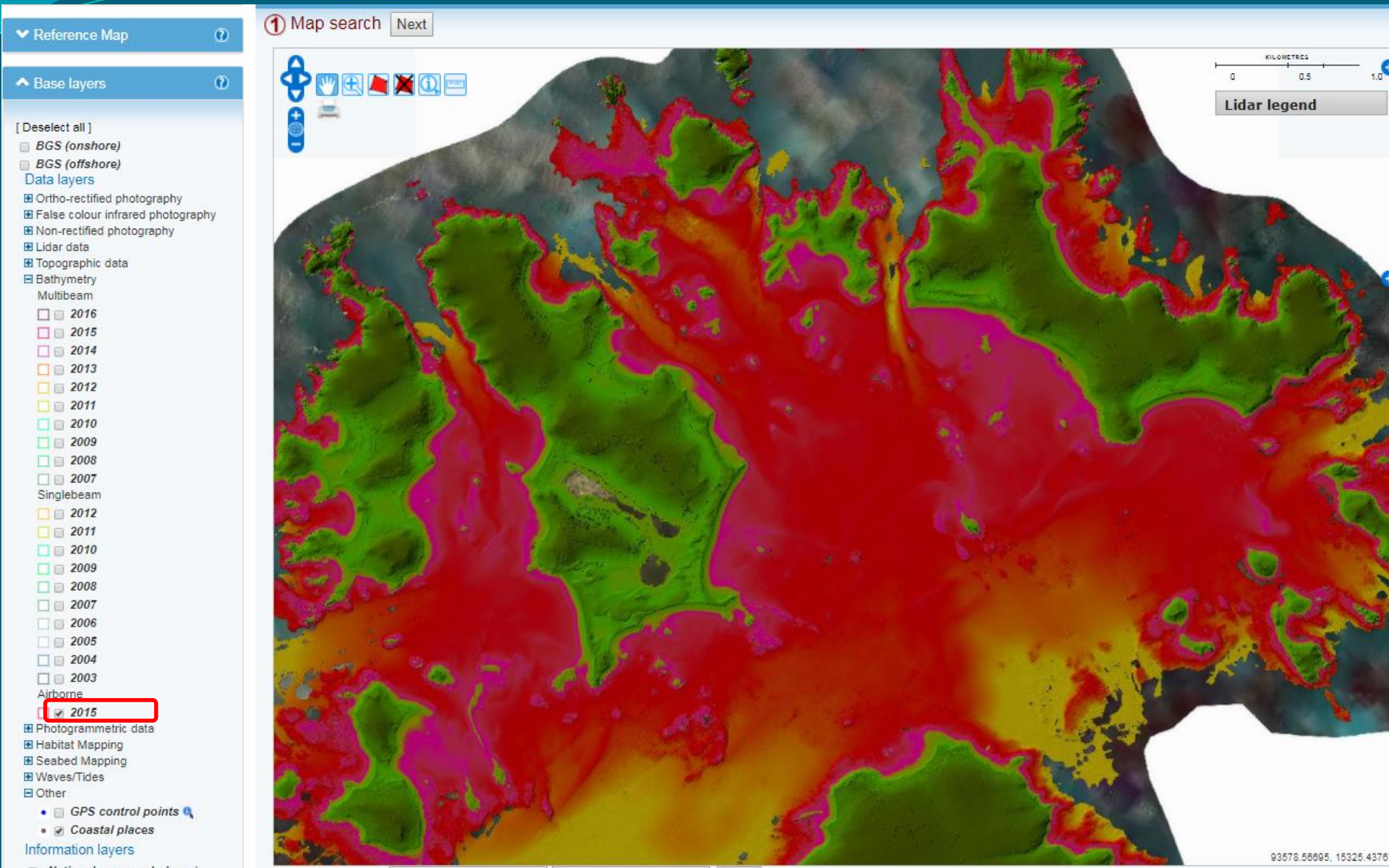
MAP VIEWER & DATA SEARCH Quick Start ⓘ

1 Map search



488319.13849; 96799.81002

Airborne bathymetry



Summary of results



Reference Map



Base layers



[Deselect all]



BGS (onshore)

Not visible at current zoom level

BGS (offshore)

Data layers

 Ortho-rectified photography False colour infrared photography Non-rectified photography Lidar data Topographic data Bathymetry

Multibeam

 2016 2015 2014 2013 2012 2011 2010 2009 2008 2007

Singlebeam

 2012 2011 2010 2009 2008 2007 2006 2005 2004 2003

Airborne

 2015 Photogrammetric data Habitat Mapping Seabed Mapping Waves/Tides Wave buoys Tide gauges Other

MAP VIEWER & DATA SEARCH

1 Map search

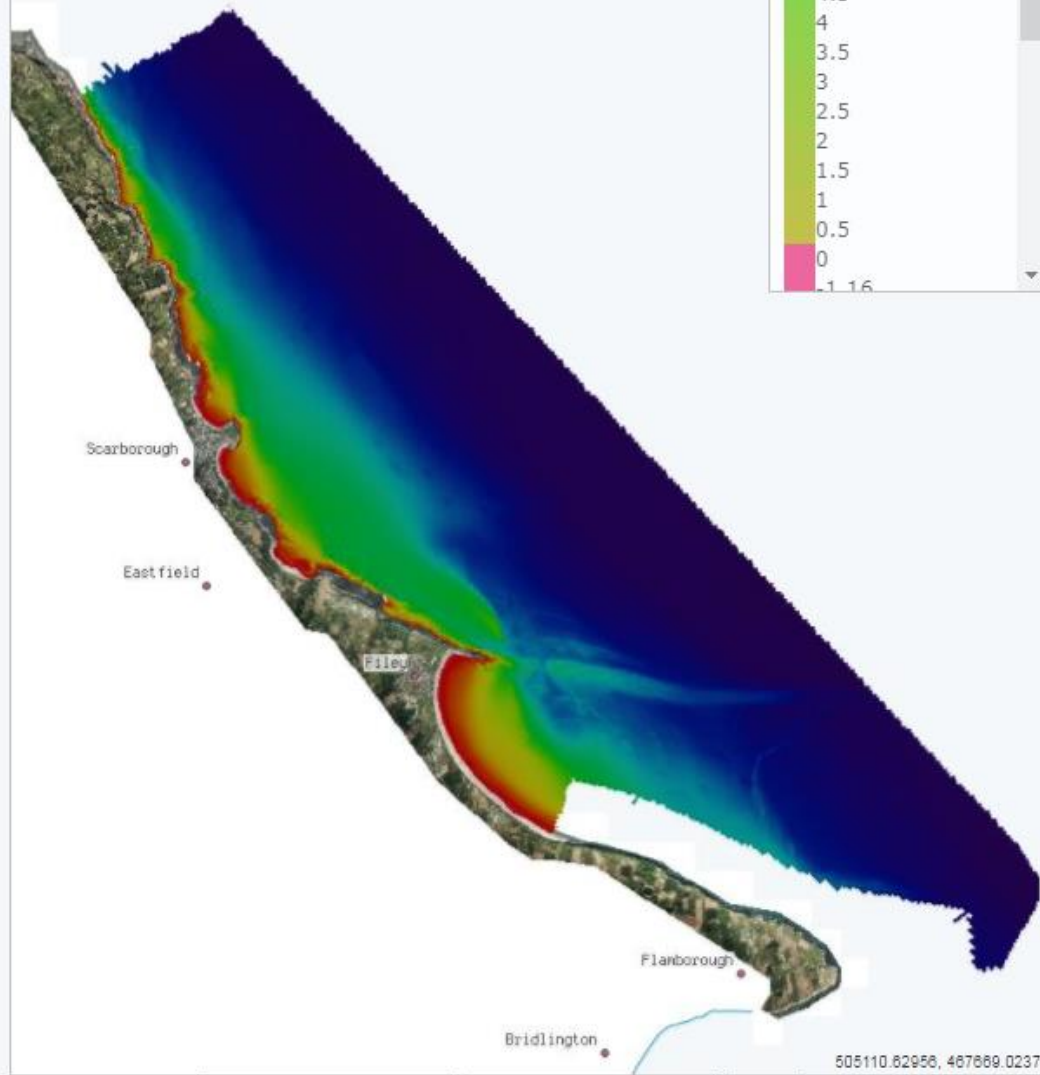
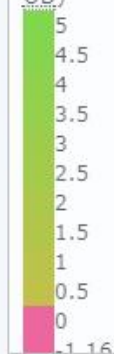
Next



Hydrographic legend

Elevation (meters

OD)



605110.62956, 467669.02372

Swath Bathymetry

Seabed Mapping

Summary of results

Reference Map

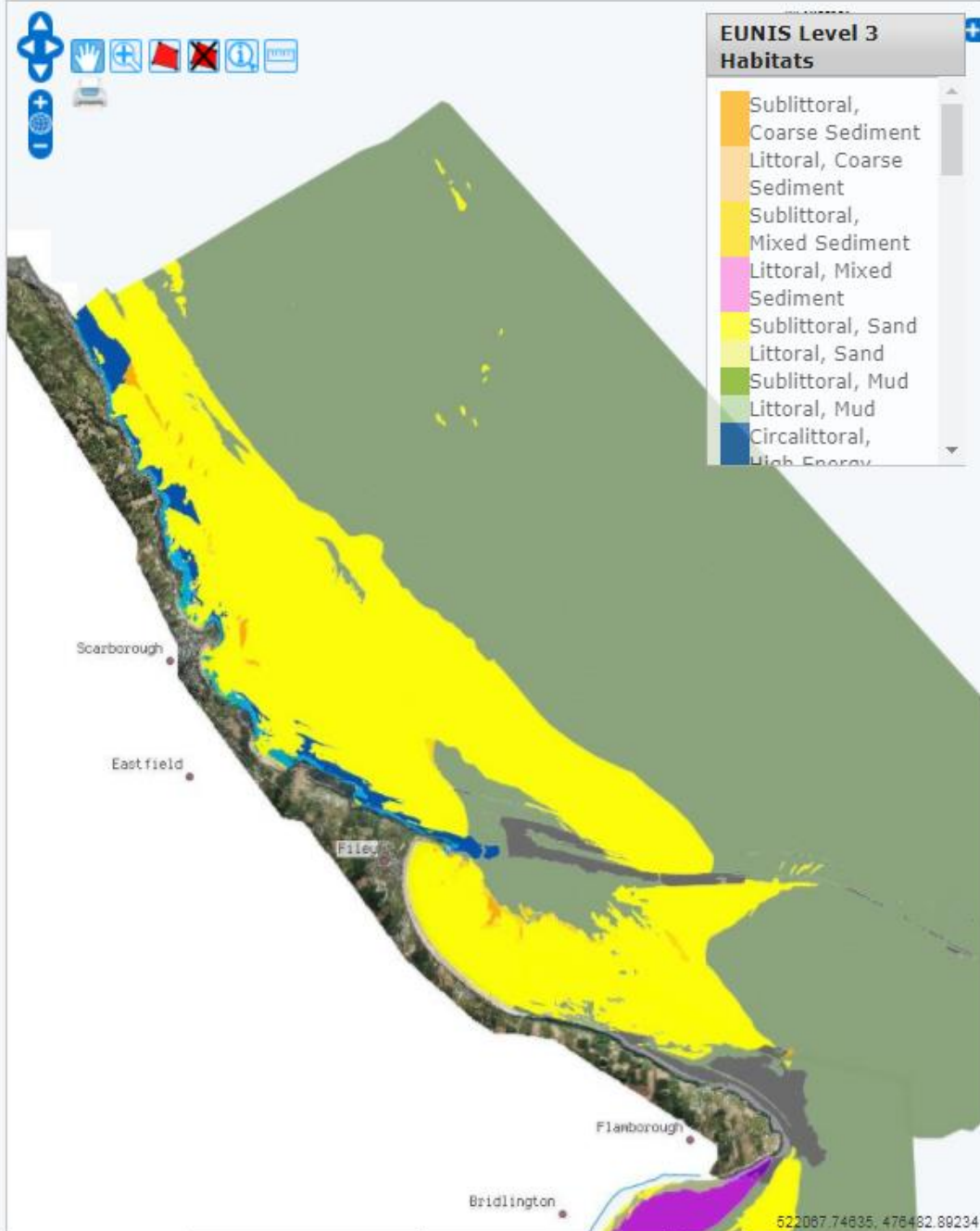
Base layers

[Deselect all]

- BGS (onshore)
Not visible at current zoom level
- BGS (offshore)
- Data layers
 - Ortho-rectified photography
 - False colour infrared photography
 - Non-rectified photography
 - Lidar data
 - Topographic data
 - Bathymetry
 - Photogrammetric data
 - Habitat Mapping
 - Seabed Mapping
 - EUNIS Level 3 Habitats**
 - Substrate Type
 - Waves/Tides
 - Wave buoys
 - Tide gauges
 - Other
 - GPS control points
 - Coastal places
- Information layers
 - National geomorphology / defences
 - iCOAST mapping
 - OSGB grid
 - Sediment distribution data
 - 5-year difference models
 - Cliff Lines
 - Survey units

[Deselect all]

1 Map search Next



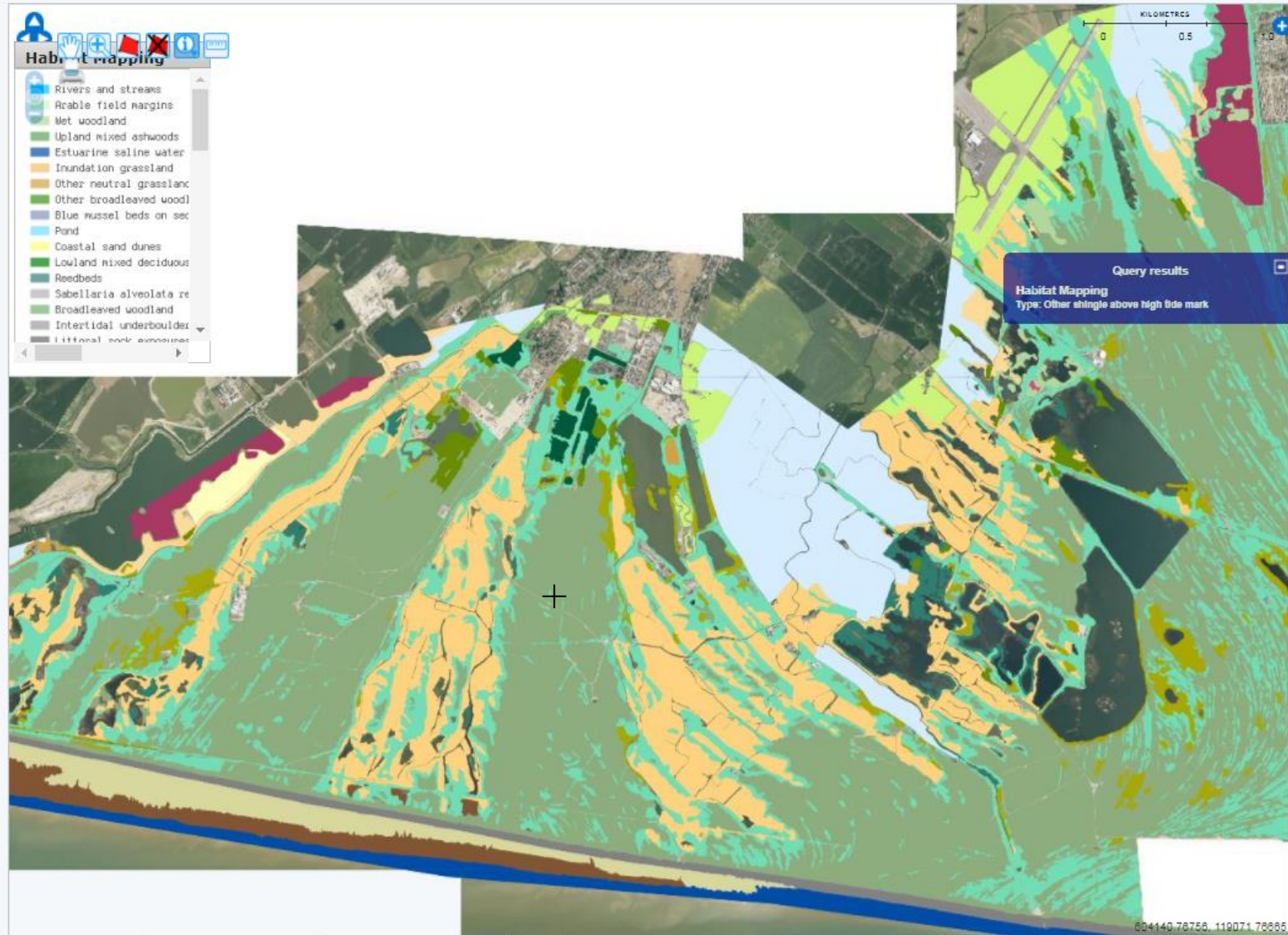
Habitat Mapping

Reference Map

Base layers

- [Deselect all]
- BGS (onshore)
- BGS (offshore)
- Data layers
- Ortho-rectified photography
- False colour infrared photography
- Non-rectified photography
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- OSGB grid
- Sediment distribution data
- 5-year difference models
- Cliff Lines
- Survey units
- [Deselect all]

Map search Next



New section – Resources



Realtime Data

Map Viewer & Catalogue

Reports

Gallery

Resources

iCOASST Feedback

Regions About General

Search My Dashboard

REGIONAL COASTAL MONITORING PROGRAMMES

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Resources – WMS

Channel Coastal Observatory | Realtime Data | Map Viewer & Catalogue | Reports | Gallery | Resources | iCOASST - Feedback

Regions - About - General - Search - My Dashboard

REGIONAL COASTAL MONITORING PROGRAMMES

Resources

- » Procurement**

A Multi-Supplier Dynamic Purchasing System is available to the National Network of Regional Coastal Monitoring Programmes for the Provision of Coastal Monitoring Services.


- » Useful shapefiles**

This page has a collection of useful shapefiles available for download such as defences, survey unit boundaries, profile lines etc. They can be downloaded and used under the [Open Government Licence](#).


- » WMS**

A number of map viewer layers are made available as a Web Map Service (WMS) in various software packages. This page explains how to access the WMS layers in ArcMap and QGIS. A sample project file for use in QGIS with the main layers pre-loaded can be downloaded from this page too.



Resources – API

The screenshot shows the Channel Coastal Observatory website. The top navigation bar includes links for Channel Coastal Observatory, Realtime Data, Map Viewer & Catalogue, Reports, Gallery, Resources, iCOASST, and Feedback. Below the navigation bar, there are dropdown menus for Regions, About, and General, along with a search bar and a My Dashboard link. The main content area is titled "REGIONAL COASTAL MONITORING PROGRAMMES" and features a "Resources" section. This section contains three items:

- » API**
It is possible to access real-time data via an open Application Programming Interface (API). This page has instructions on how to obtain a key and how to request data.
- » Dorset Coast Digital Archive**
The DCDA is an extensive archive, hosting a great diversity of photographs, newspaper articles, aerial images and historical maps of the Dorset coast as far back as 1740. This work is a centrepiece for knowledge exchange on how areas have developed over time through a visual representation.
- » CoastalTools**
A toolbox to support the analysis of coastal data. Professor Ian Townend, University of Southampton has kindly made available this software package which can import waves, tide and beach profile data downloaded from the website. Beach dynamics, spatial and temporal coastal change, storminess and the influence of clustering are just some of the aspects which can be examined.

Resources – API



Automatic closing of shutters

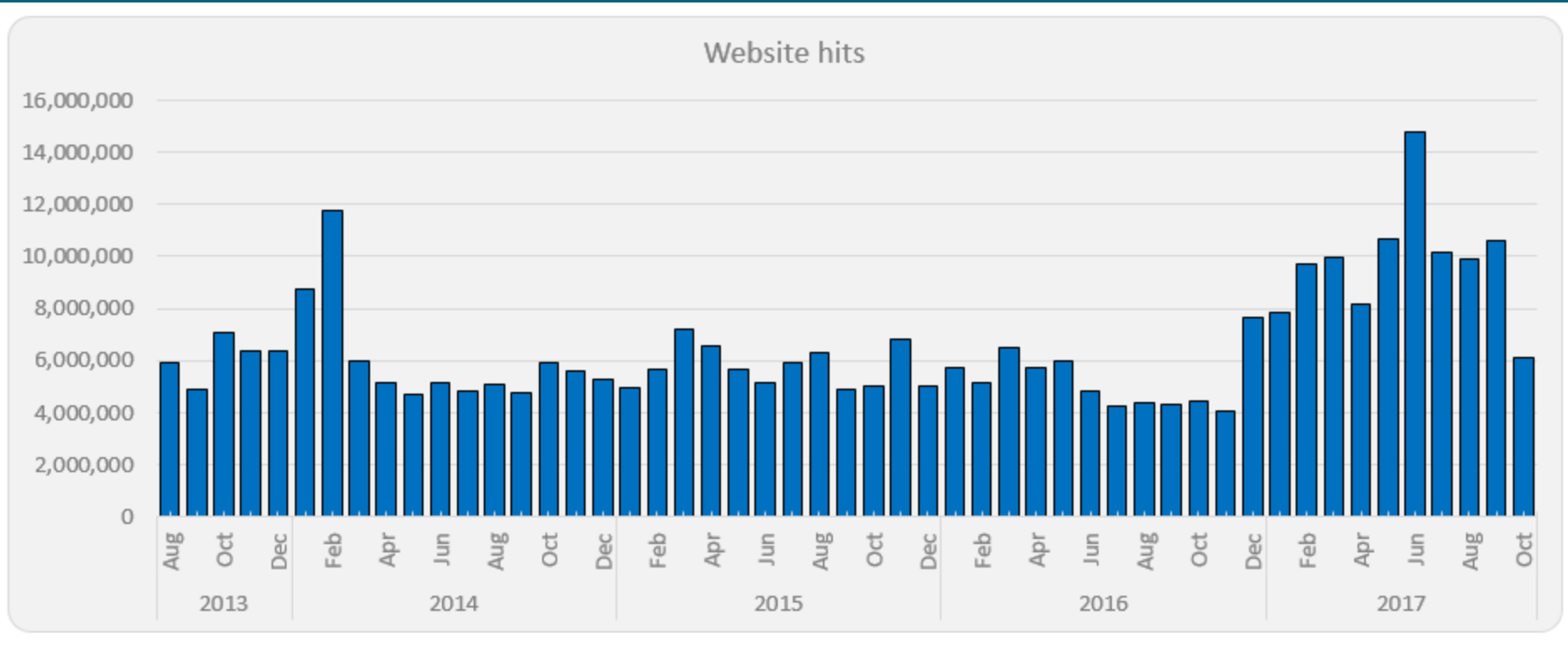
photo courtesy of Nick Lansley

Future use:

ABP

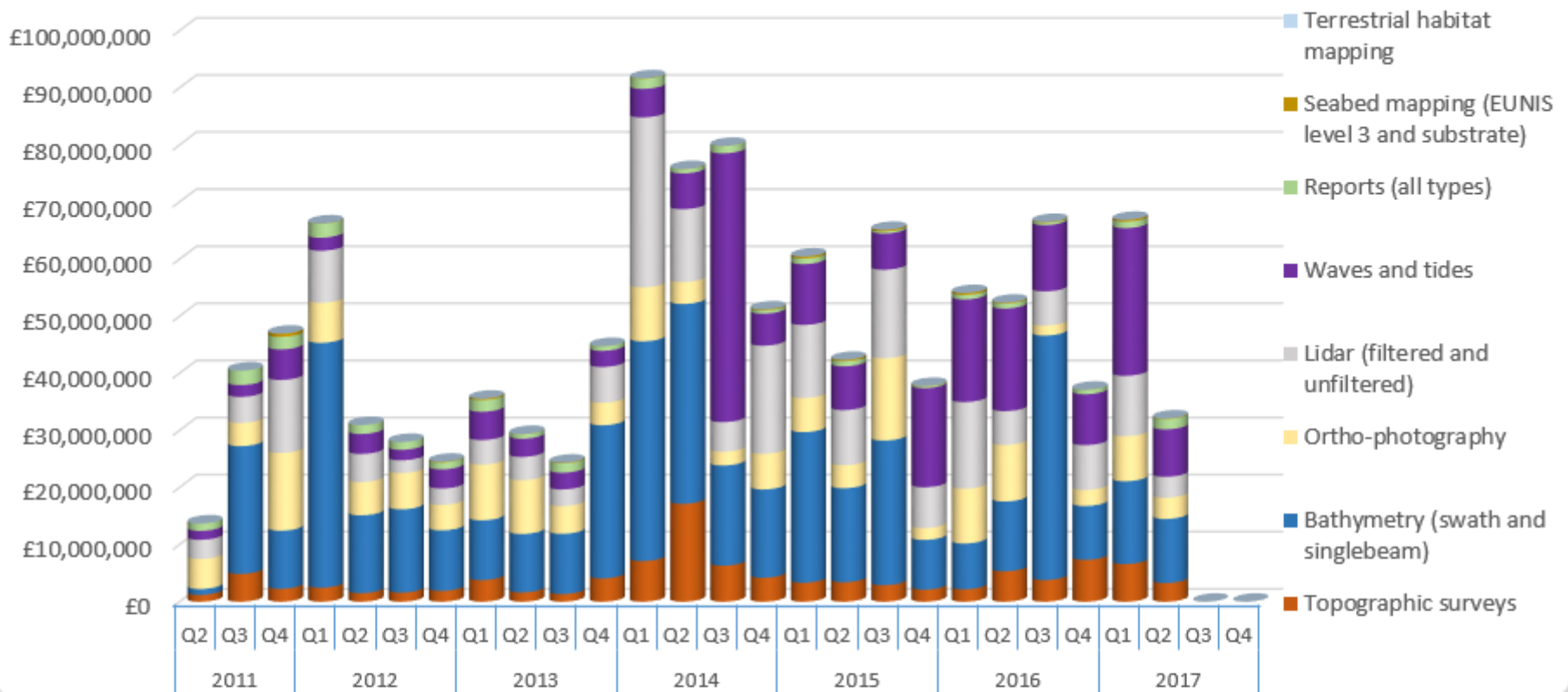
Looking at live conditions to make decisions about vessel transport

Monthly website hits



Quarterly downloads from website

Value of data downloaded from website



Region

- Anglia
- East Riding
- Northeast
- Northwest
- Southeast
- Southwest

Sector

- Conservation organisation
- Consultancy (LA or EA)
- Consultancy (other govt.)
- Consultancy (other)
- Govt. Trading Fund
- LA or EA
- Other
- Schools
- University (research)
- University (student)

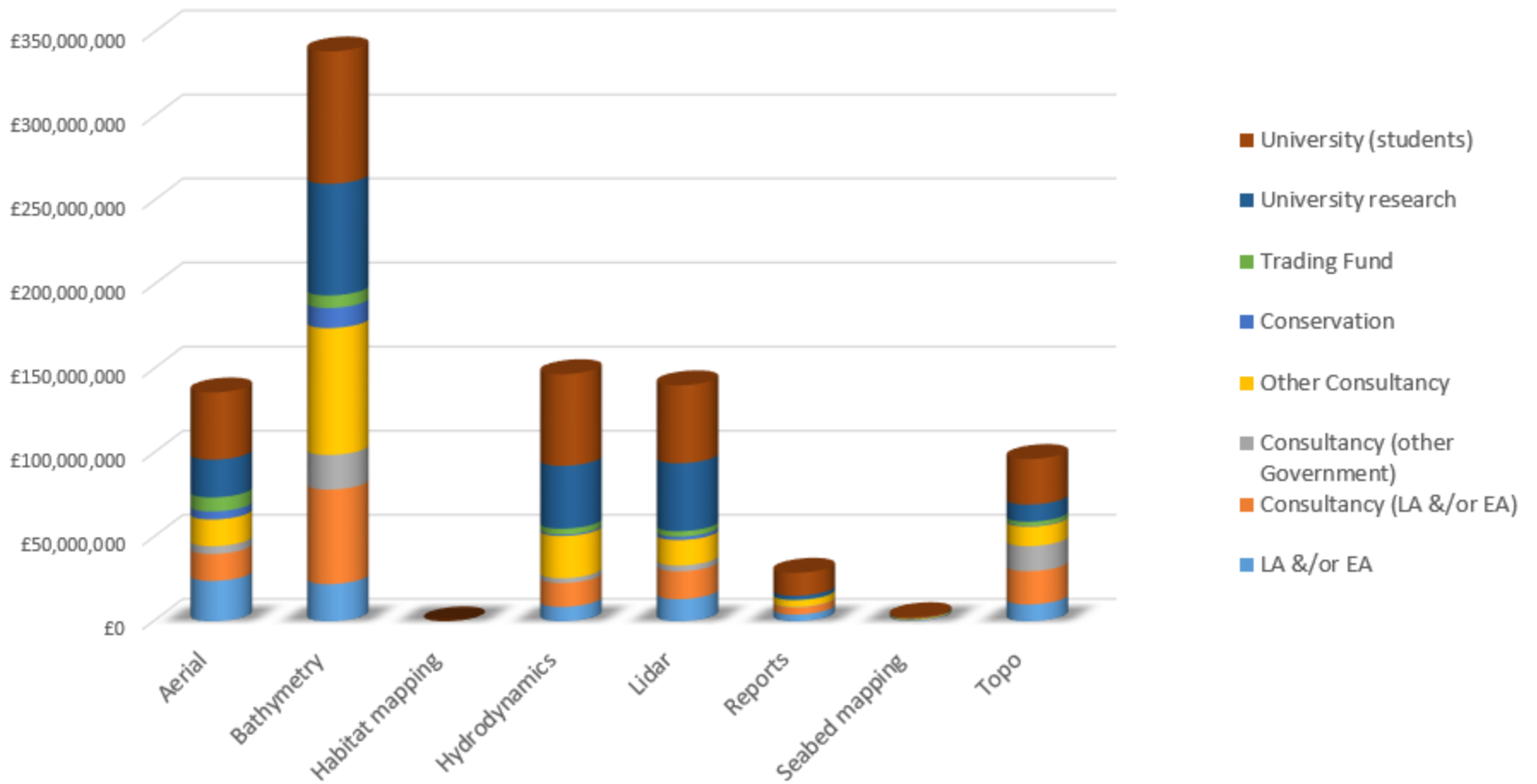
Year

- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017

Quarter

- Q1
- Q2
- Q3
- Q4

Value of data downloaded from website, by service



Year

- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017

Region

- Anglia
- East Riding
- Northeast
- Northwest
- Southeast
- Southwest



Seaford Head UAV Survey

- Tricky area to normally access but actually quite easy to fly
- One day, four flights



