

MAPPING OF NEARSHORE CURRENT CIRCULATION AROUND VENTNOR HAVEN ENTRANCE

Location: Ventnor Haven, UK

Project Dates: December 2016-February 2017

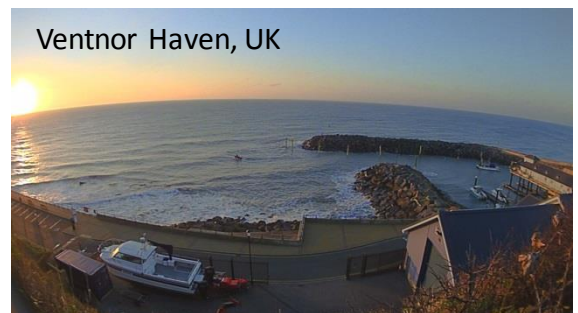
Clients: Royal HaskoningDHV

Scope of work:

- GPS drifter study of nearshore currents
- Analysis of contrasting wave and tide conditions
- Quantification of current speed and flow direction
- Data provided to help validate a numerical model

PROJECT DESCRIPTION

A combination of wave- and tide-driven currents are believed to be responsible for the build up of seaweed within Ventnor Haven on the Isle of Wight. To help explore the principle drivers of this behaviour CMAR were contracted to undertake GPS-drifter deployments in and around the harbour mouth. Measurements were taken during contrasting south-east and south-west wind and wave conditions, over a range of tidal states. The processed dataset will be used by Royal HaskoningDHV to help validate ongoing numerical modelling of the harbour. The field results suggest south-easterly waves during flood tides are the primary drivers of seaweed transport into the harbour. Rapid mobilisation and flexibility to capture the right conditions ensured a successful project delivered to specification and on time.



Opposite: Sunrise at Ventnor Haven and RV Cody our inshore survey vessel with GPS drifters

Below: Aerial image of Ventnor Haven with bathymetric contours and drifter tracks overlaid. Track colour indicate drifter speed and the insert figure highlights the tide window presented. Local wave data are also listed for the corresponding time.

