



**DEFRA**  
**CEFAS LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND, UK.**  
**2017 RESEARCH VESSEL REPORT**  
**RV CEFAS ENDEAVOUR : CRUISE CEND 03/17**

**STAFF:**

<b>Name</b>	<b>Role</b>	<b>Cabin</b>	<b>Shift</b>
Dave Sivyer	SIC	SIC	Not specified
Neil Needham	Moorings	C3	Not specified
Tom Hull		C4	15:00 - 24:00
Eric Fitton		C1	06:00 - 15:00
Dave Pearce	Moorings	C2	Not specified
Pip Simpson (NOCS)		C7	06:00 - 15:00
Malgorzata Wilczynska		C6	06:00 - 15:00
Tegan Hartley (NRW)		C5	15:00 - 24:00
Laura Rutland		B1	06:00 - 15:00
Sophie Hare		D5	15:00 - 24:00
Alfie Howat		D4	15:00 - 24:00
James Waggitt	Observer	D2	
Alexandra Dodds	Observer	D3	

**DURATION:** 22<sup>nd</sup> Feb to 4th March 2017  
**MOBILISE:** Lowestoft Cefas quay  
**DEMOBILISE:** Swansea  
**OPERATION AREAS:** North Sea, English Channel, Celtic Sea,  
Bristol Channel

**AIMS:**

1. Service SmartBuoys at Liverpool Bay, Dowsing, Warp and West Gabbard (SLA25G – 2 day).
2. Zooplankton nets at West Gabbard.
3. Service waverider buoys at Dowsing, South Knock, Hastings, Poole, Scillies, Scarweather, Hinkley, Liverpool Bay, Pembs possibly (C6029A – 4 days).
4. Nutrient mapping (SLA25G – 4 days).
5. Recover passive samplers from Dowsing SB.
6. Deploy trial nitrate analyser on Warp SB.
7. Bird and mammal observations throughout.

## CRUISE PLAN - All times in GMT

Endeavour sailed at 17:30 on 22/2/17 and deployed the CTD rosette as soon as the pilot had disembarked. It failed after a few minutes at the bottom. Two hours fault-finding later and a loose connection in the Aanderaa optode cable was discovered and removed. The CTD worked after that and Endeavour proceeded north overnight into the Wash. On the morning of the 23<sup>rd</sup> Feb two CTD profiles were collected at 'Inner Wash' and 'Wash' before going north again as Storm Doris raged on. It was hoped to get to the 'Off Tees' site before returning south but this was not possible. Endeavour arrived at the Dowsing for 06:00 collecting water samples and successfully servicing both the SmartBuoy and waverider. The SmartBuoy was re-deployed with a mid-tether frame. A weather window presented an opportunity to get West Gabbard 2 done so we steamed full speed to arrive at around 19:00. The West Gabbard 2 SmartBuoy was serviced and all water sampling completed by 21:00 before the Endeavour headed into the relative calm of the Warp. The Warp SmartBuoy was picked up easily and re-deployed at a new site agreed with the PLA. After a somewhat circuitous route we arrived at South Knock at 14:30 to service the waverider. The Warp SmartBuoy was deployed with a trial nitrate analyser from NOCS (Pip Simpson) and the last of the passive samplers was recovered here. We went south and into the English Channel where it was rather uncomfortable and forecast to get worse. After a CTD at 'South Varne' shelter was sought behind Dungeness. In the morning of the 26<sup>th</sup> we attempted to recover the Hastings waverider but the wind and tide together defeated us. The recovery was re-attempted after the tide turned at around 13:00 and the waverider was picked up and replaced without incident. After a 60 mile steam the 'Selsey' CTD site was sampled before moving further west to a timed arrival at Poole waverider at 06:30 on the 27<sup>th</sup>. Wind and tide once again proved an issue, but we were able to turn around and recover stern into the weather. Then followed a rather uncomfortable day punching west, staying as close in as possible to reach Falmouth Bay in the early hours of the 28<sup>th</sup>. As a series of gales blew through, Sevenstones picked up to over 5.5m, we stayed inside and prepared ourselves for the passage around Lands End and up through the Scillies TSS towards Celtic Deep and West Pembro waverider... Leaving shelter at around 23:00 the ship was soon rolling badly and progress was initially slow with one CTD station at 'Celtic Deep' before arriving at the West of Pembrokeshire waverider site after lunch on the 1<sup>st</sup> March. The new wave buoy was deployed to the north of the guard buoy before moving into Cardigan Bay for another CTD at 'Cardigan Bay'. Moving further north that evening around Anglesey and then along the N Wales coast to arrive at 'Liverpool Bay' before breakfast on the 2<sup>nd</sup>. After one CTD we continued to the SmartBuoy and Wavenet site. Unfortunately, the combination of wind and tide together once again meant we couldn't hold the ship on DP to recover anything. We waited 4.5hrs and tried again without success so decided to deploy the SmartBuoy anyway. After another hour the tide slacked away and it was possible to recover the old SmartBuoy. As time was now against us it was considered too time-consuming to service the waverider and we left immediately hoping that a weather window 30hrs ahead would manifest at the Scillies Wavenet site. This proved a forlorn hope and we were forced to abort the attempt only a couple of hours short as the wave height was already over 3.4m and rising. We went north once again making a timed arrival at Hinkley Point for 09:00 on 4<sup>th</sup> March. The waverider was successfully serviced in the morning, followed by a CTD at 'Nash Point' the waverider at Scarweather and finally a trial multibeam line. The ship was cleared, cleaned and prepped for docking at Swansea at 21:00. The team were de-mobbed and away by 09:30 on 5<sup>th</sup> March, arriving safely in Lowestoft to unload the van by 16:00.

A separate report has been received from the observers. Available on request.

Dave Sivyler  
04/03/17