

RESEARCH VESSEL SURVEY REPORT

RV CEFAS ENDEAVOUR
Survey: C END 6X - 2017.

STAFF:

Name	Role
Andy Lawler	SIC
Karen Vanstaen	SIC2
Joanna Usyczek	Shellfish scientist
Rosana Ourens	Shellfish scientist
Hayden Close	Technician
Andrew Bodle	Technician

DURATION:

Saturday May 06, 2017 departing from Falmouth (2000hrs, GMT) until Thursday May 11, 2017, demobbing in Lowestoft.

LOCATION:

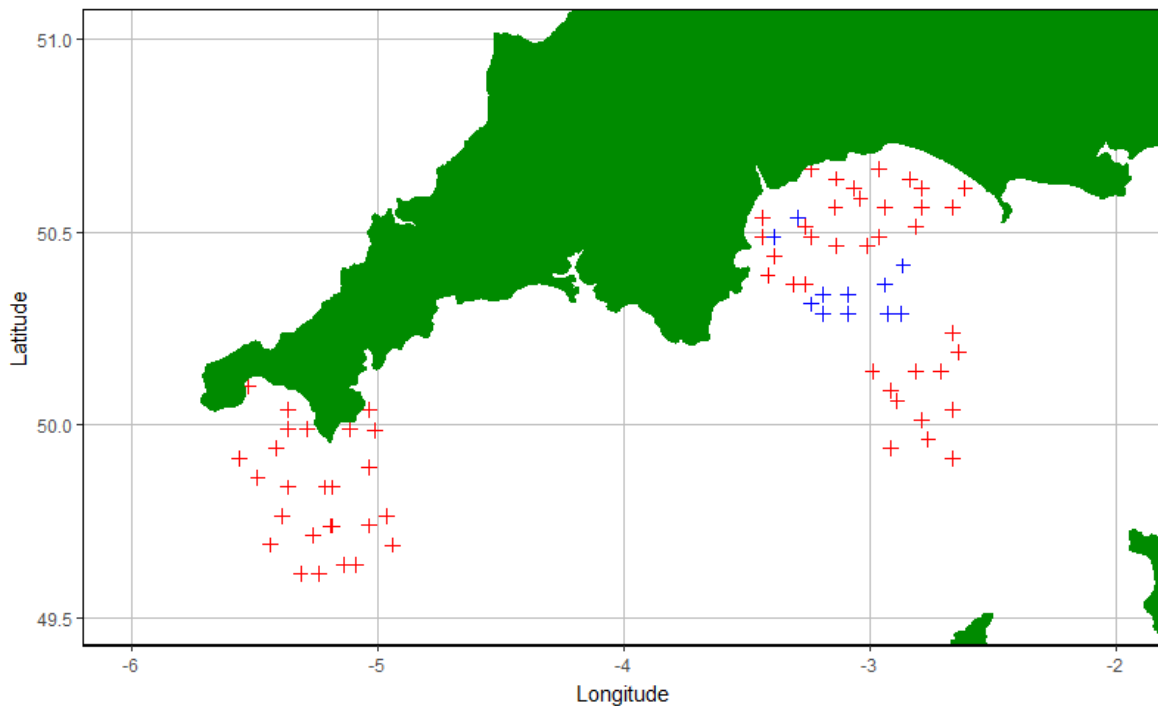


Figure 1. Location of Western English Channel underwater TV scallop survey positions.

AIMS:

To investigate the distribution and abundance of king scallop (*Pecten maximus*) in areas inaccessible to fishing gear using underwater TV. As part of a wider project to determine the stock status of scallop in the English Channel, underwater TV will be used to compliment scallop dredge surveys taking place in May (Western English Channel) and September (Eastern English Channel). Those areas which are accessible to scallop dredges will be surveyed as part of the dredge surveys but selected areas that are inaccessible due to gear conflicts, incompatible substrate types or conservation measures will be assessed during this survey.

NARRATIVE:

Scientific staff joined the vessel by 1430hrs (GMT) Saturday 7th May and the vessel sailed from Falmouth at 2000hrs, arriving at the first station position at 2320hrs (Survey area 1, Cornwall SW).

Inshore Survey areas where static gear concentrations were expected were to be surveyed during daylight hours only, so the first station was carried out 12nm from the coast.

The STR SeaSpyder drop frame was used throughout the survey and was deployed with an HD video and stills camera and EMS2 logger (CTDF profiler). Eleven minutes of HD video and HD photo images were recorded at each station.

The vessel proceeded to transit between the 25 station positions in survey area 1 to enable drop frame deployments at each. This first survey area was completed by 0500hrs 8th May and the vessel transited to the high priority survey area 4 (Devon offshore) arriving at 1400hrs. Thirteen station deployments were carried out in this area which was completed by 0200hrs 9th May. The vessel steamed North to the eastern end of area 3 (Lyme Bay) and operations started here at 0410hrs 9th May. Drop frame deployments were carried out at 27 station positions in area 3, including 2 stations which will also form part of a scallop dredge survey to follow. This survey area was completed at 0335hrs 10th May.

From 0420hrs an additional 9 stations, between survey areas 3 and 4, and to be surveyed on the forthcoming dredge survey using a chartered fishing vessel.

At 1400hrs the vessel steamed east up the English Channel arriving at a site SW off Beachy Head at 2300hrs and where high densities of scallop were found during an earlier scallop dredge survey. A 1-hour video transect was carried out before the vessel left this area at 0015hrs 11th May on route for Lowestoft via the West Gabbard buoy where a water sample was taken. The vessel returned to Lowestoft at 2000hrs 11th May.

RESULTS:

HD video and numerous still photo images were recorded for 11 minute transects (min) at 73 positions (77 stations, 4 repeats due to visibility or technical issues). An 11 minute transect equates to an observed area of approximately 140m².

Twenty-five stations were carried out in both areas 1 and 3 and 13 stations in area 4. In addition, 9 stations were carried out between areas 3 and 4 and another in the Eastern Channel for comparative studies (TV and scallop dredge derived density estimates).

Area 2 (lower priority site, South Start Point) was not attempted as there was insufficient time to complete the grid without jeopardising higher priority areas.

Scallops (*Pecten*) were present in 33 video transects and in low numbers or absent from 44 of the remaining stations. The highest provisional count in the Western English Channel was observed in survey area 1 and was 13 scallop per 11 min transect (approx. 1 scallop every 10m²).

This is the first time the SeaSpyder drop frame has been used specifically to determine scallop density by Cefas shellfish team. Several deployment methods were trialed during this survey to determine best practise, including fitment of the tail fin and a makeshift drogue and towing with and against the tide. Specific configuration and deployment options for scallop surveys have been determined.

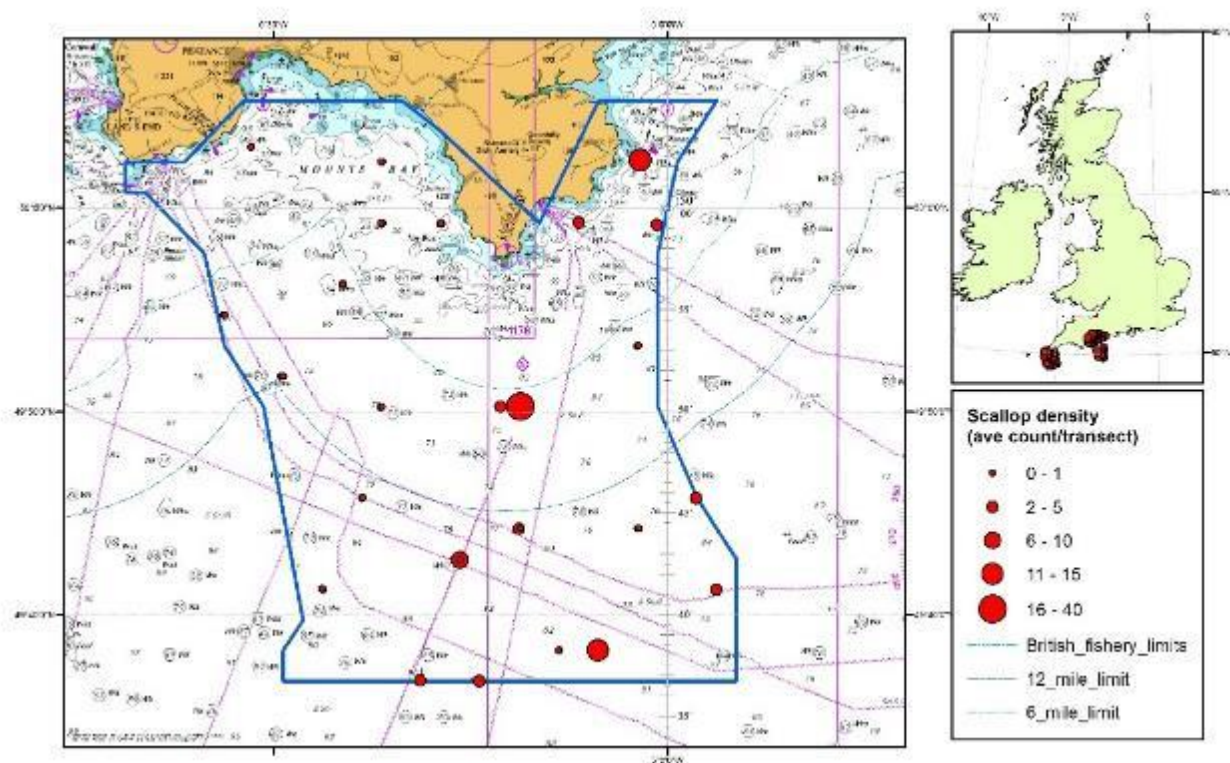


Figure 2. Western Channel Scallop underwater TV survey – Area 1 provisional scallop counts

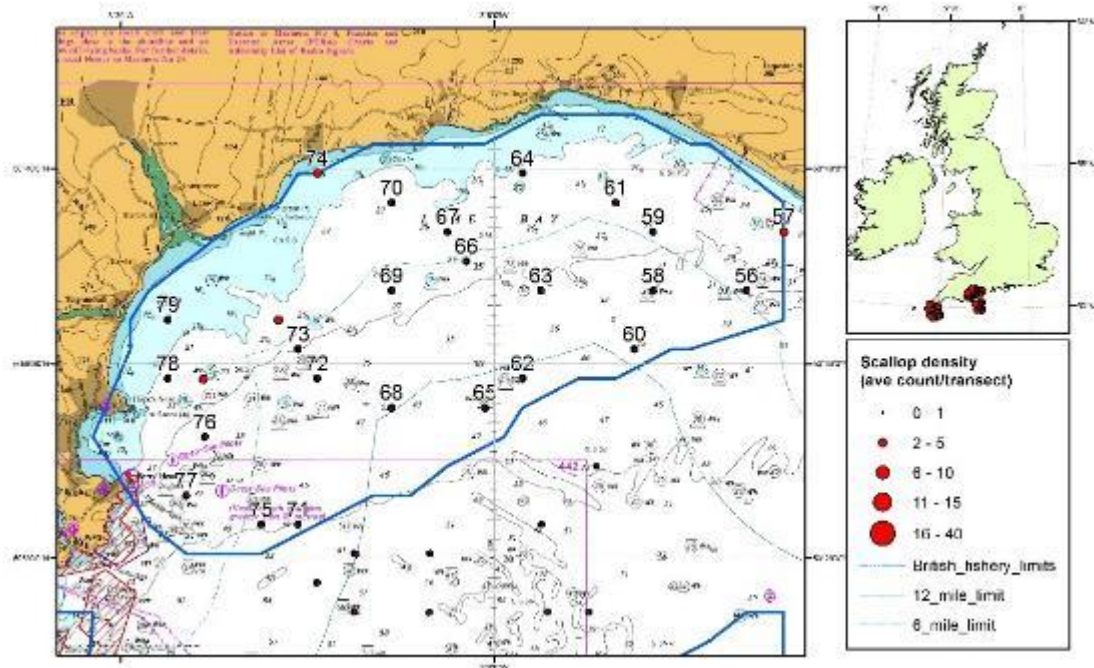


Figure 3. Western Channel Scallop underwater TV survey – Area 3 provisional scallop counts

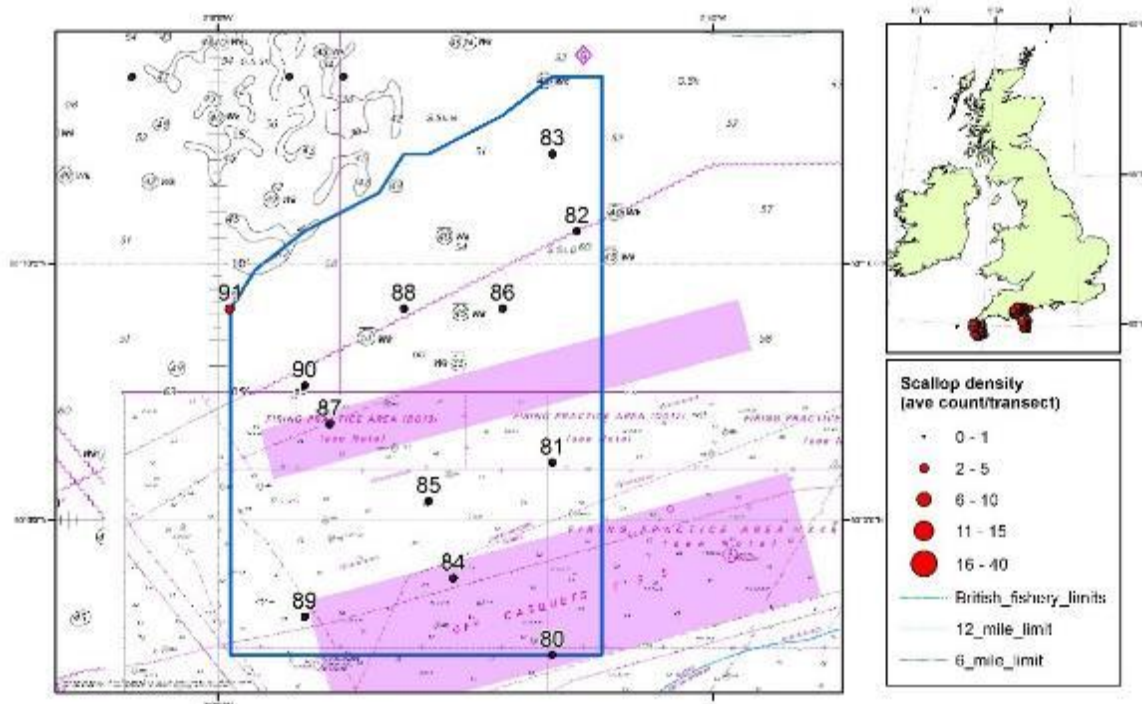


Figure 4. Western Channel Scallop underwater TV survey – Area 4 provisional scallop counts

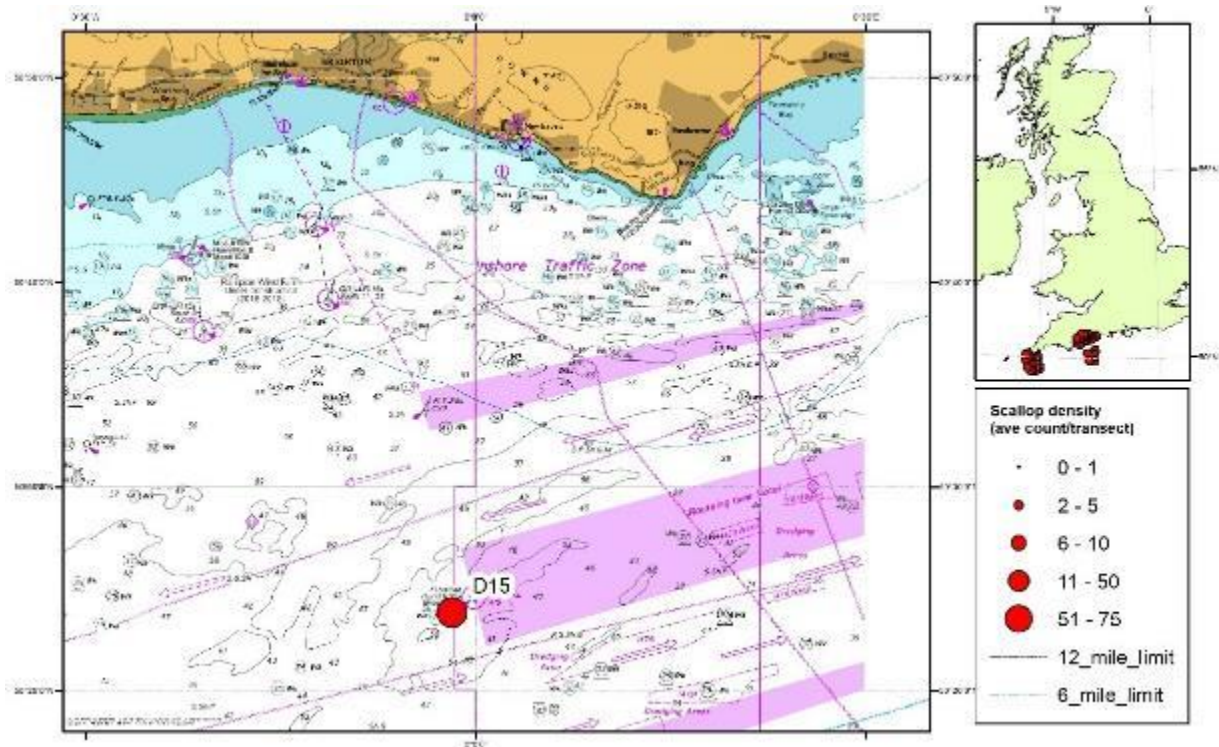


Figure 5. Eastern Channel underwater TV v dredge survey comparison station

Andy Lawler
 Scientist in Charge
 11th May 2017

SEEN IN DRAFT

Master:
 Senior Fishing Mate: