

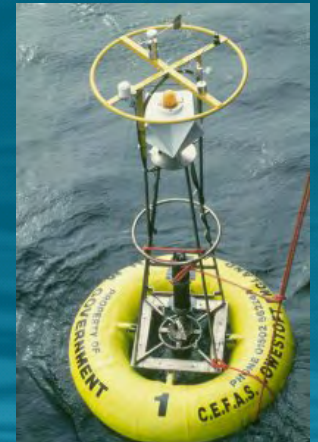
# Cefas survey activity in U.K. coastal waters

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(Group Manager - Monitoring and  
Applied Science)

# The Centre for Environment, Fisheries and Aquaculture science (Cefas)

- **Existed as an organisation since 1902**
- **Executive agency of Defra (Previously MAFF) since 1997**
- **Approx 500 staff based at 2 main locations**
- **Laboratory, tank and field survey equipment**
- **Annual turnover of ~£50 million**
- **Ocean-going research vessel**



# What do we do?

- **Provide scientific advice and support to U.K. government on environment protection, fisheries management and aquaculture**
- **Conduct scientific research in a broad range of disciplines**
- **Service a wide commercial client base in the UK and abroad**



# Survey platforms



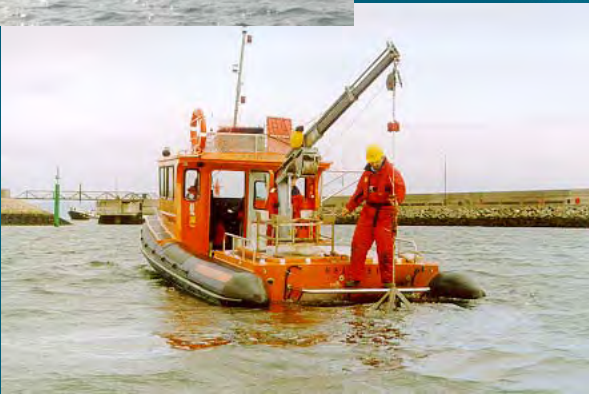
- Cefas Endeavour



- Offshore charter vessels



- Commercial fishing vessels

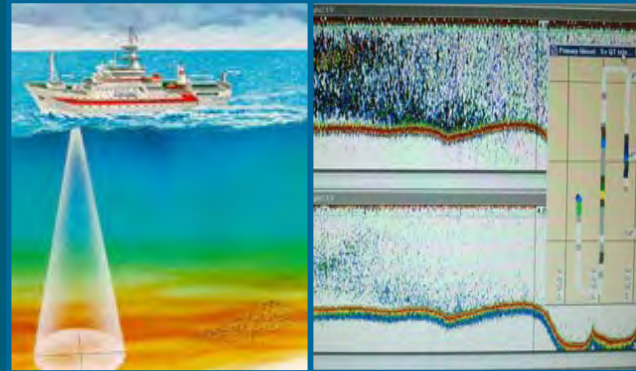


- Coastal and estuarine vessels

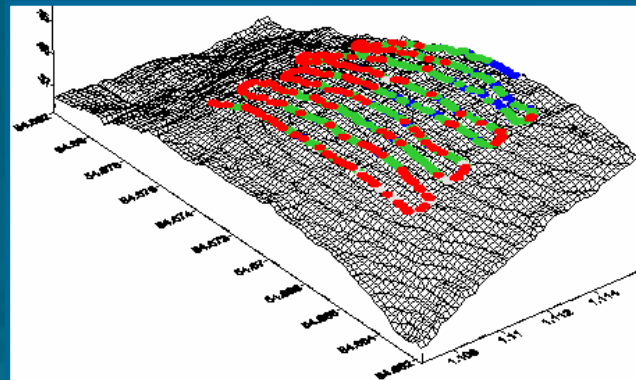
# Endeavour system capability

## Specifications

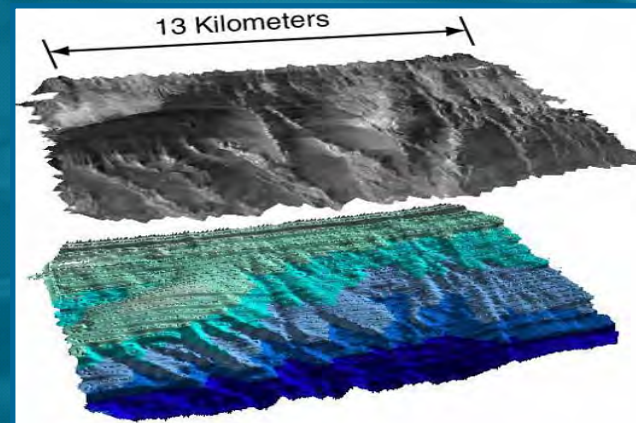
- Simrad SH80 tracking sonar, multi-frequency around 100 kHz
- Simrad EK60 and EK500 fisheries split-beam echosounder: 38 and 120 kHz
- Simrad EM3002D multibeam swathe sonar
- Simrad EA600 single beam hydrographic echosounder: 12, 50 and 200 kHz
- Benthos dual frequency SIS-1624 sidescan sonar
- QTC View ground discrimination system
- HiPaP 500 USBL
- Scanmar trawl mensuration
- UW TV platforms
- Commercial and scientific trawling
- Grabs and corers
- ADCP



*Fisheries assessment using advanced post-processing*



*QTC ground discrimination and bathymetric profile*

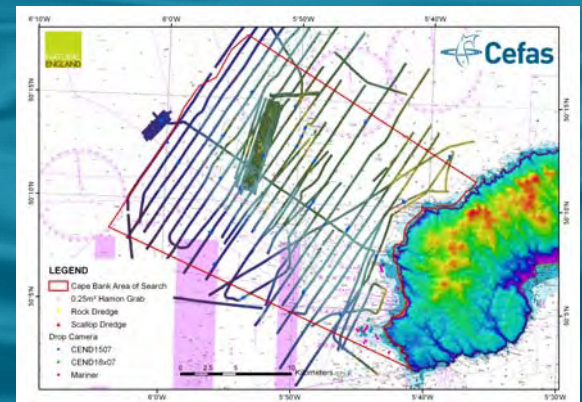
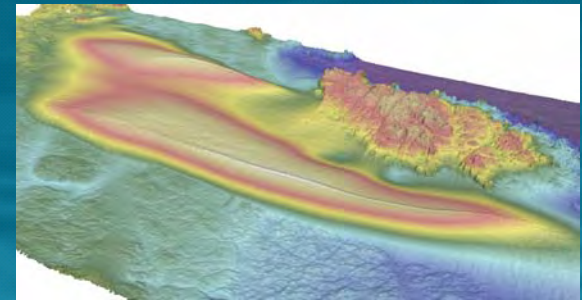
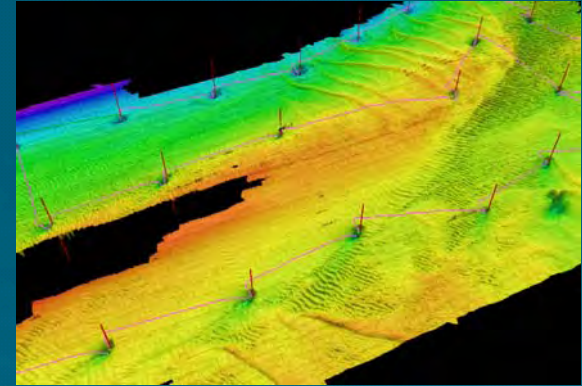


*Side-scan backscatter and multi-beam bathymetry*



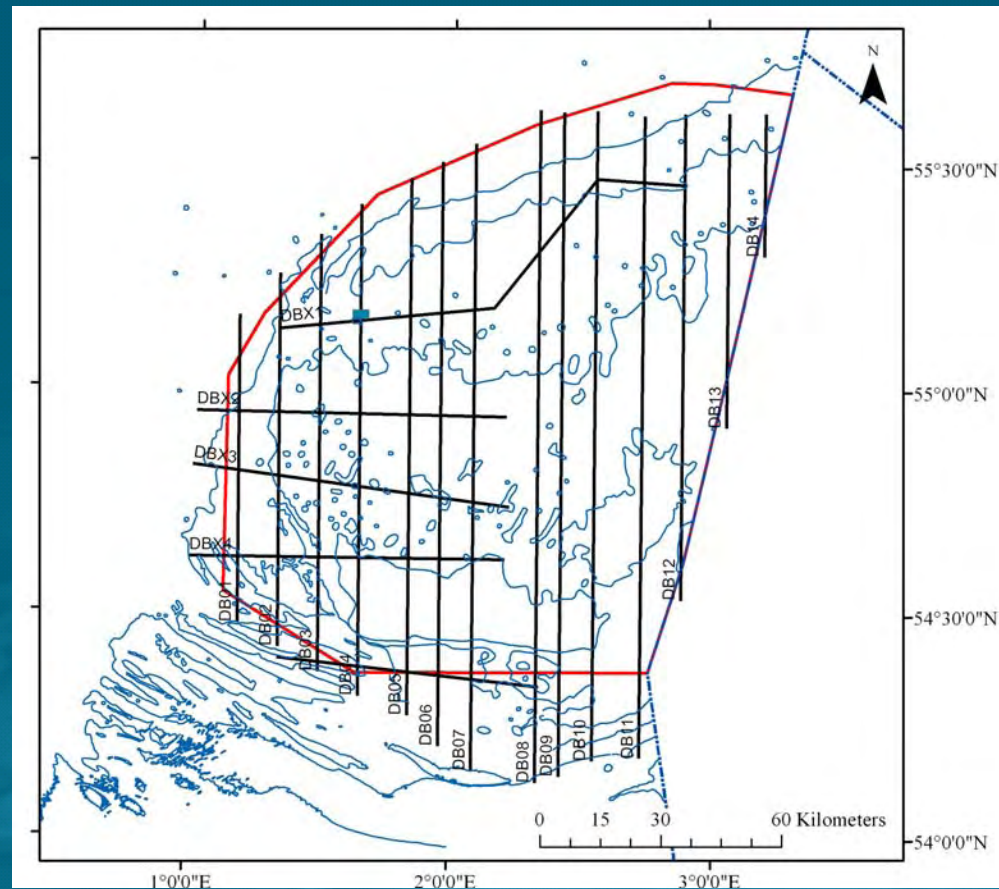
# Example strategies for collection of seabed data

- Small scale, high resolution (e.g. dredged material disposal sites, aggregate extraction sites, windfarms)
- Large scale, high resolution (site specific habitat mapping)
- Large scale, low resolution (e.g. regional environmental characterisation, fisheries, various others)
- Navigational (IHO Order 1)



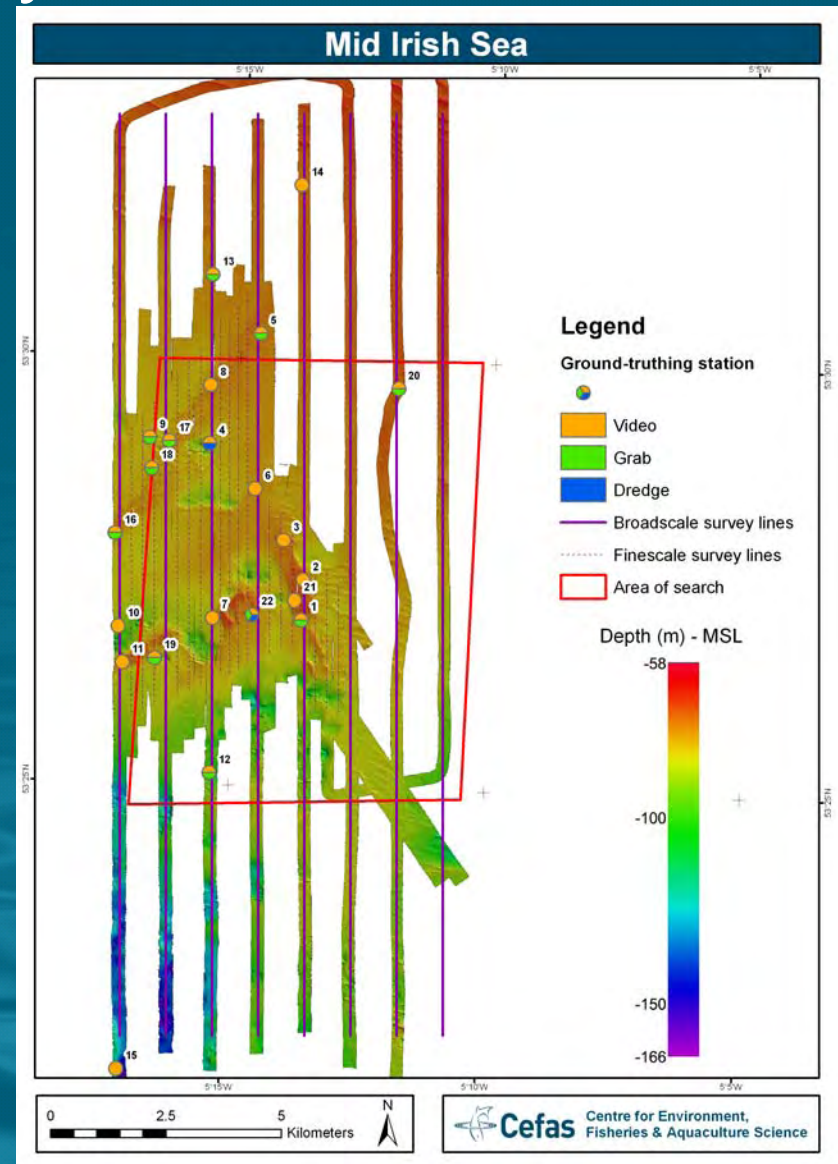
# Dogger Bank SAC site characterisation for JNCC – April 2008

- 2,200km acoustic data (sidescan, multibeam AGDS)
- 50 video tows
- 60 Hamon grab samples



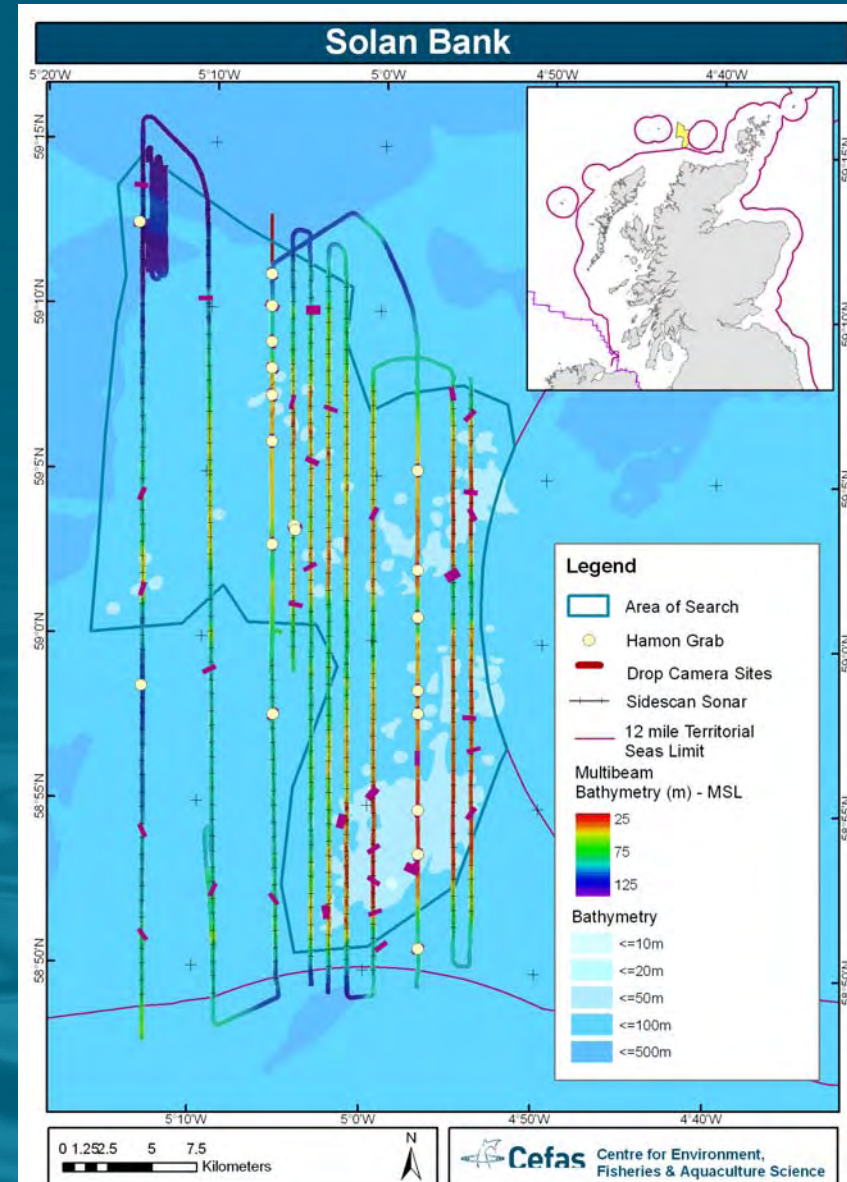
# Mid Irish Sea SAC site characterisation survey – for JNCC May/June 2008

- 150km multibeam, sidescan, AGDS
- 18 Hamon grabs
- 22 Camera tows



# Solan Bank SAC site characterisation survey for JNCC – May/June 2008

- 420km multibeam, sidescan sonar and AGDS
- 28 Camera tows
- 5 Hamon grabs



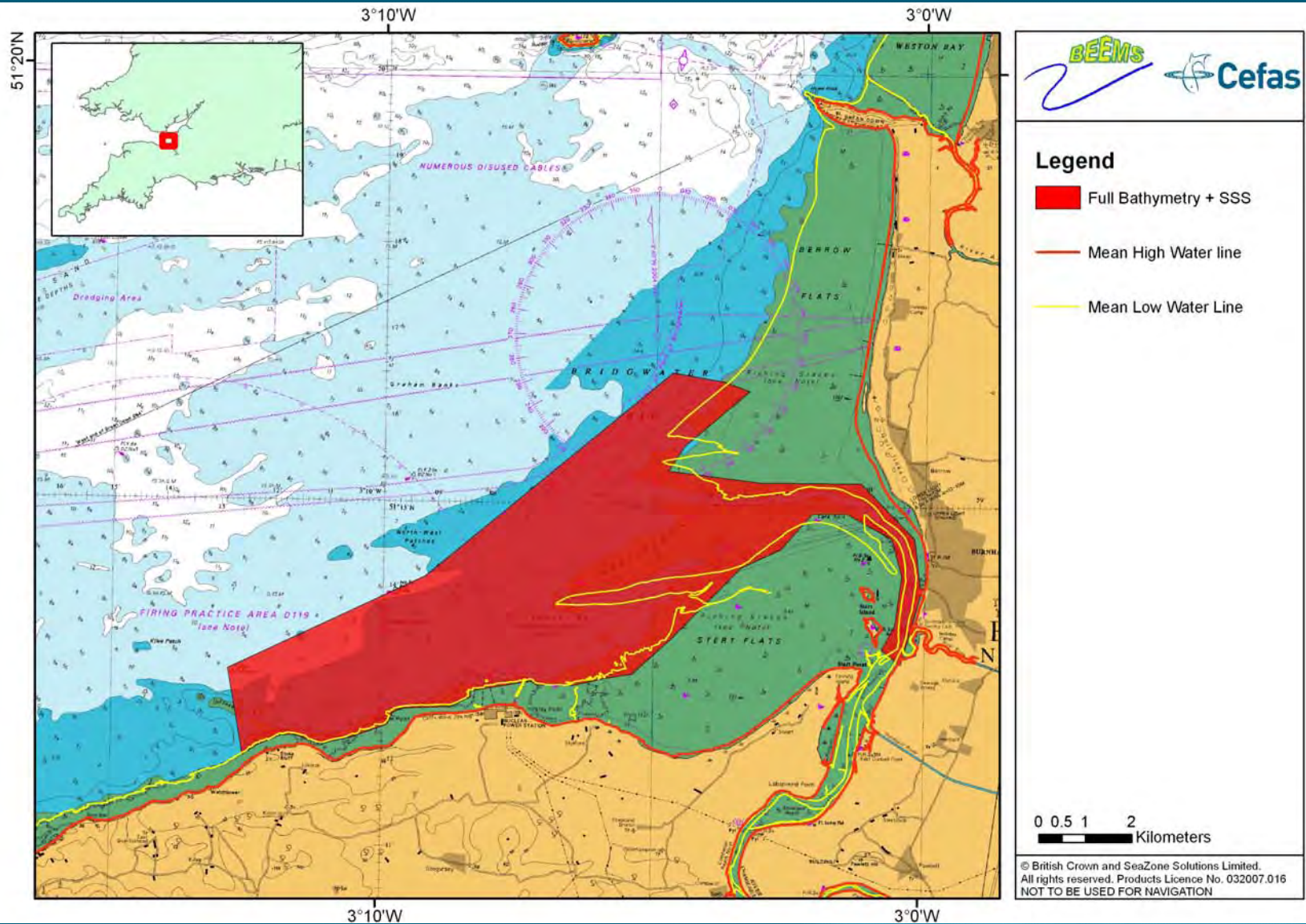
# British Energy – coastal surveys

- To collect seabed *bathymetry* data required for hydrodynamic modelling
- To map the distribution of *physical and benthic habitats* in the local and sub-regional area

# Hinkley Point

- Approximately 40km<sup>2</sup>
- August 2008 – October 2008
- Bathymetry: GeoSwath Plus
- Backscatter: Edgetech FS4200 sidescan sonar

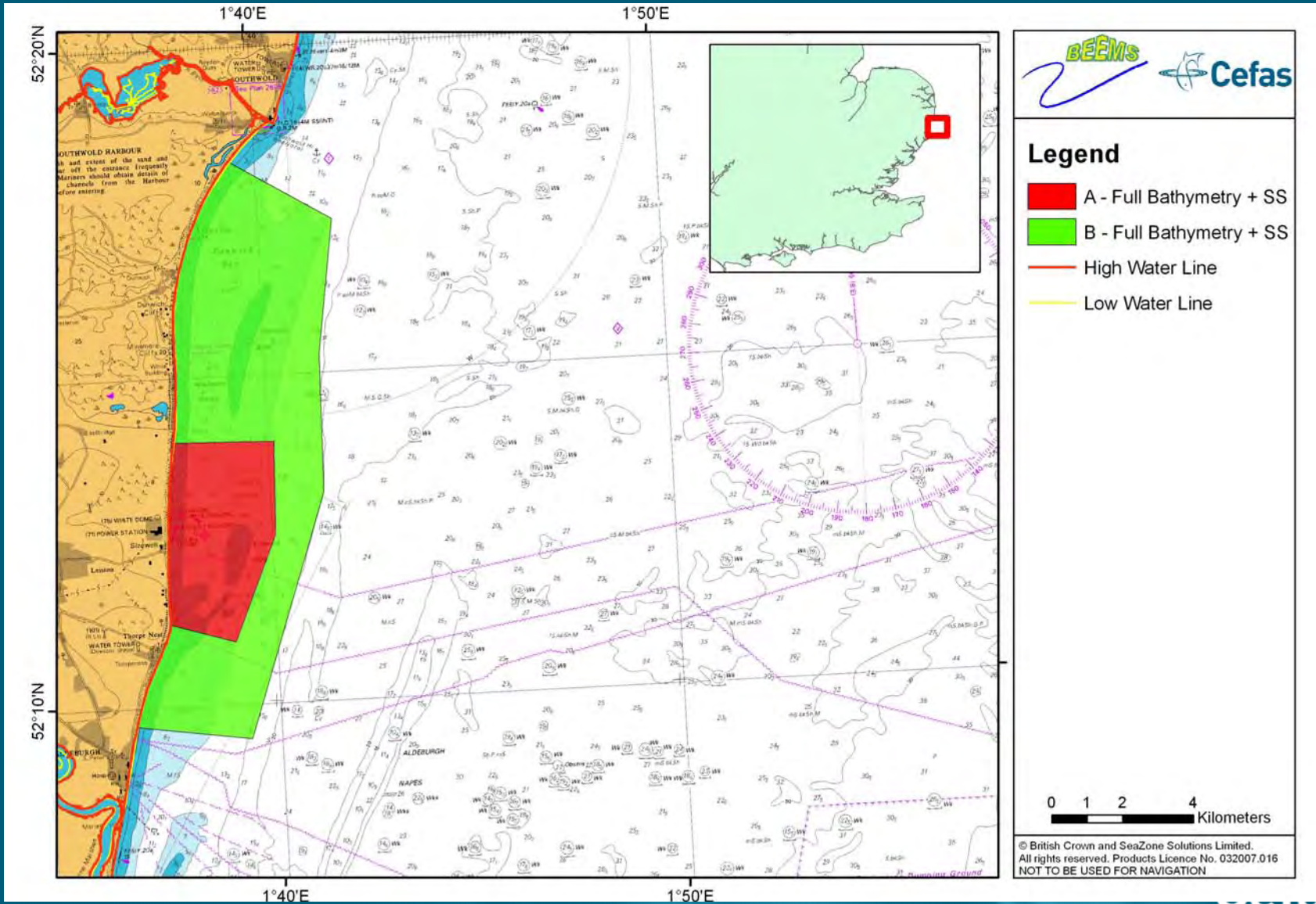
# Hinkley Point, Bristol Channel



# Sizewell

- Approximately 60km<sup>2</sup>
- Phase 1: August 2008 – September 2008
- Phase 2: December 2008 – January 2009
- Bathymetry: GeoSwath Plus
- Backscatter: GeoSwath Plus with GeoTexture processing

# Sizewell, East Anglia



# MEPF East Coast REC - Geophysical survey Oct 2008

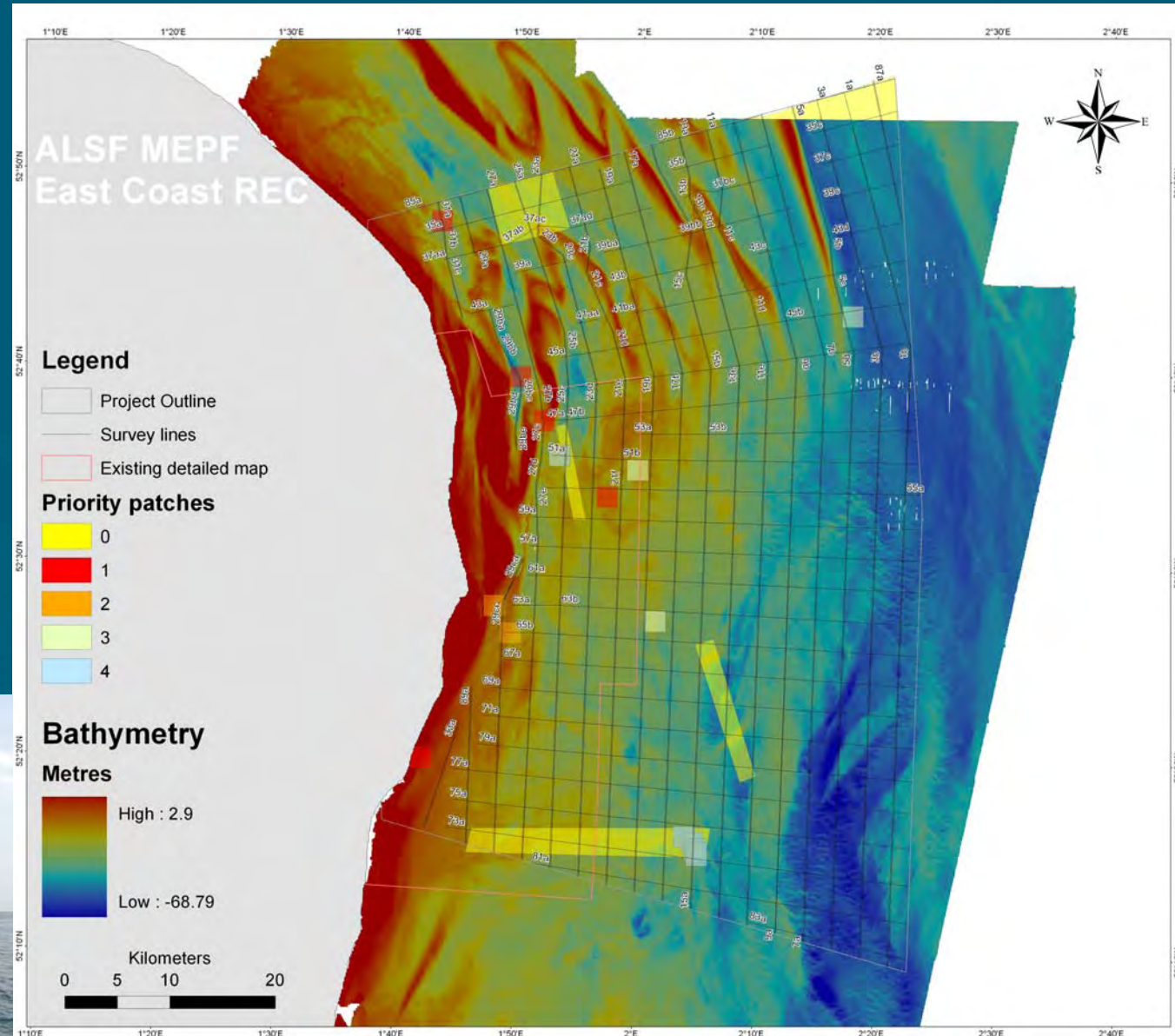
26<sup>th</sup> Sept – 30<sup>th</sup> Oct 2008

Cefas Endeavour

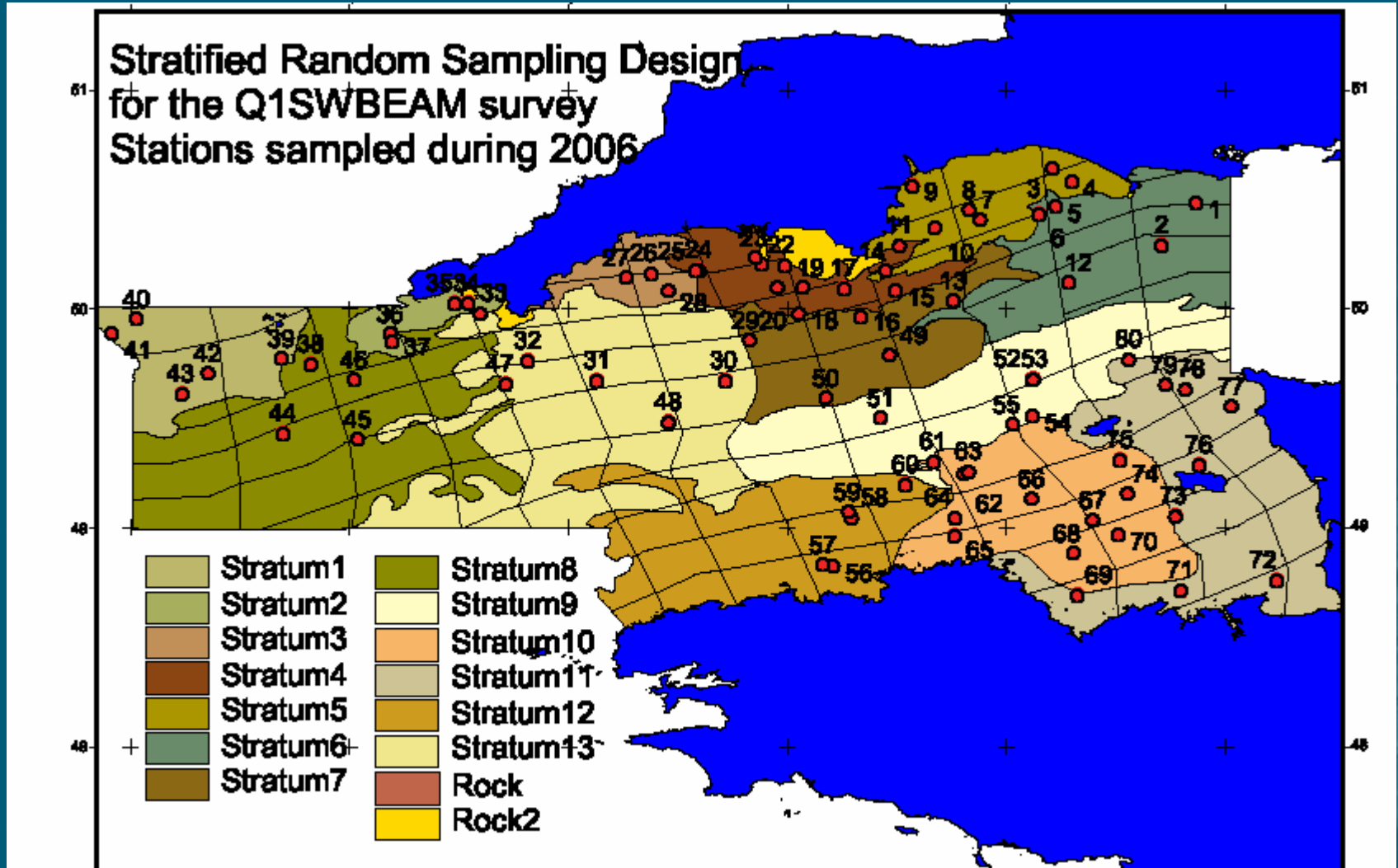
Sidescan, Boomer,  
Multibeam, Magnetometer,  
AGDS

2,307 km of survey lines

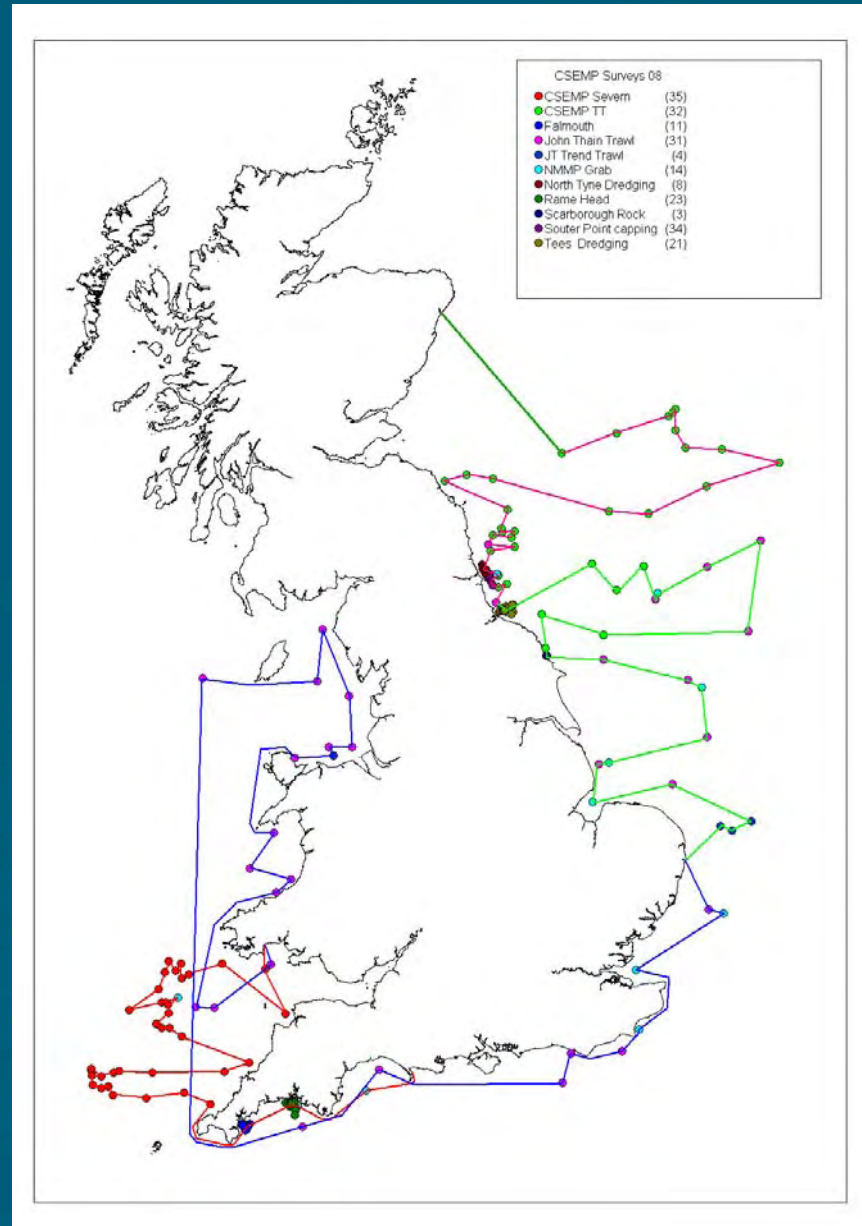
Cefas, BGS, Wessex,  
Envision, MESL



# South West Beam Trawl Survey (March 09)



# CSEMP survey (June - July 09)





# North Sea Groundfish survey (August – Sept 09)

