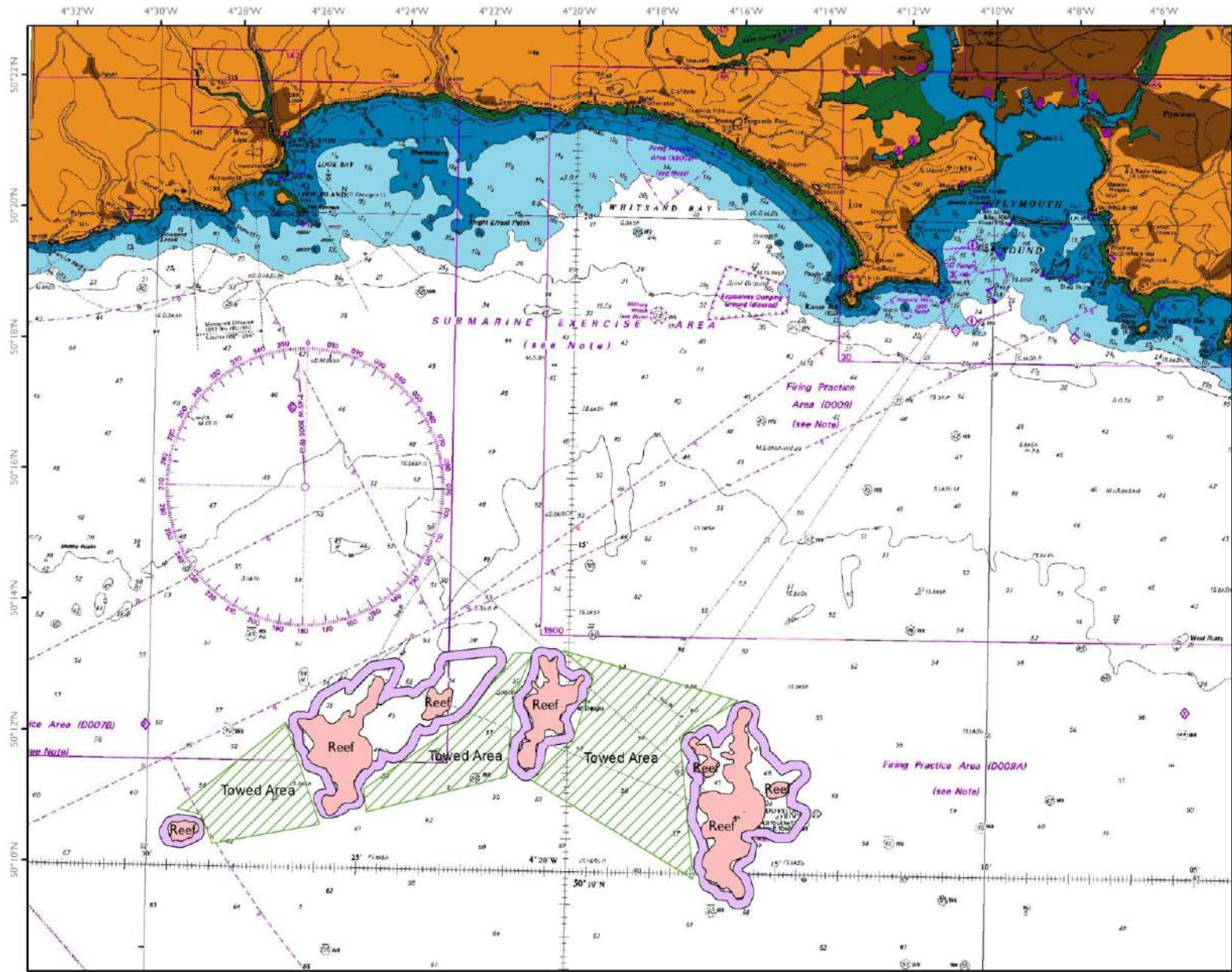


# Collaborative monitoring of the Eddystone SAC

**Dr Matthew J. Witt & Dr Stephen K. Pikesley,  
Colin Trundle and Dr Jean-Luc Solandt**

University of Exeter, Cornwall IFCA and the Marine  
Conservation Society





# BACKGROUND

- In 2014 measures introduced to prohibit bottom-towed trawling
- Protection to reef physical structure, habitats and ecosystems
- Newly established measures should be monitored to assess their efficacy
- Opportunity to share with stakeholders the improvements in habitats that may come from relief of fishing pressure



# HABITATS & SPECIES



20140619\_Box\_2\_1\_019 common starfish  
(*Asterias rubens*)



20140731\_Box\_2\_2\_005 seven armed starfish  
(*Luidia ciliaris*)



20140731\_Box\_1\_2\_004 burrowing anemone  
(no spid)



20140731\_Box\_1\_1\_011 burrowing anemone  
(*Peachia cylindrica*)



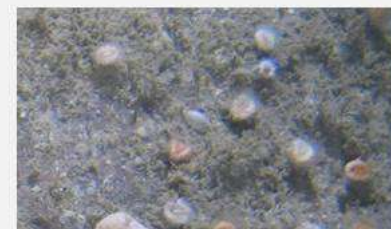
20140731\_Box\_1\_5\_019 rosy feather star  
(*Antedon bifida*)



20140731\_Box\_1\_5\_018 common sea urchin  
(*Echinus esculentus*)



20140731\_Box\_1\_1\_018 anemone: sandy  
creeplet (*Epizoanthus couchii*)



20140731\_Box\_1\_5\_017 cup coral (*Caryophyllia  
smithii*)



20140619\_Box\_2\_6\_013 king scallop (*Pecten  
maximus*)



20140731\_Box\_2\_1\_009 queen scallop  
(*Aequipecten opercularis*)



20140731\_Box\_2\_1\_004 anemone hermit crab  
(*Pagurus prideaux*) with cloak anemone (*Adamsia  
cariniapados*) (also inset)



20140731\_Box\_1\_1\_0013 fan worm: sand  
mason (*Lonicia conchilega*)



20140619\_Box\_2\_6\_012 painted top-shell  
(*Calliostoma zizyphinum*)



20140731\_Box\_1\_2\_017 limpet: white  
tortoiseshell (*Tectura virginea*)



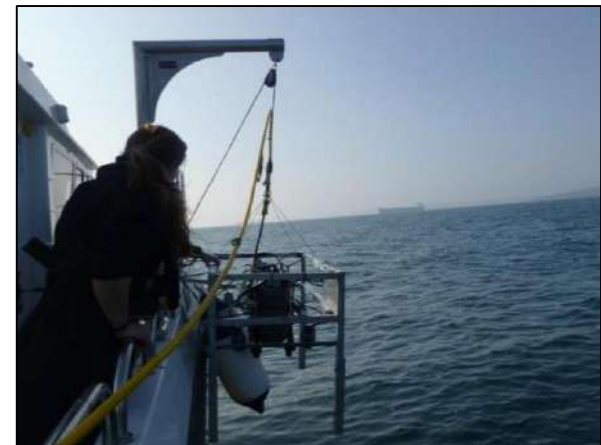
20140619\_Box\_2\_1\_024 common hermit crab  
(*Pagurus bernhardus*)



20140619\_Box\_2\_1\_017 harbour crab  
(*Liocarcinus depurator*)

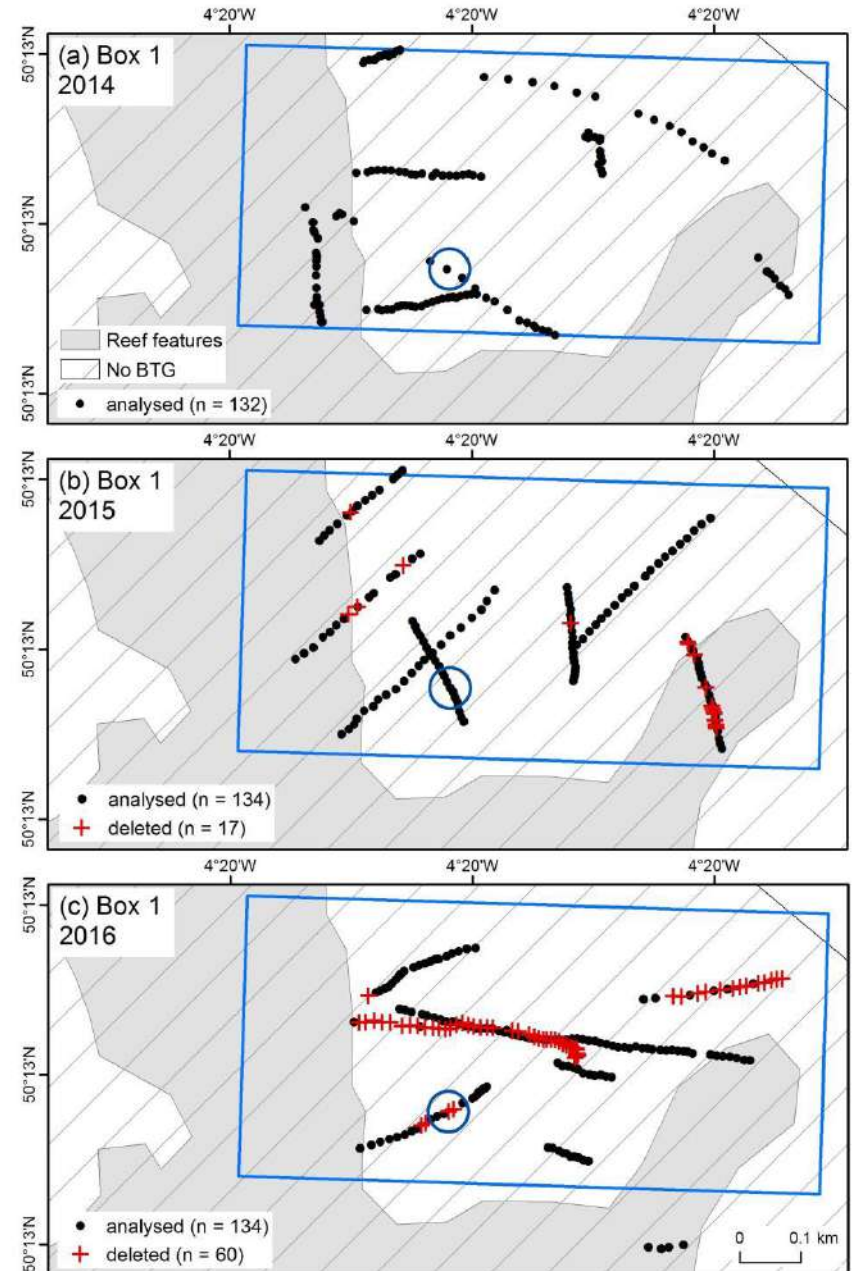
# THE PROJECT

- Assessing change in habitats is technically, financial and scientifically challenging
- Best likely scenario to achieve this is to incorporate expertise in a collaborative working environment
- CIFCA, MCS and UoE joined forces to deliver science that describes site change through time
- Funded by the Pig Shed Trust and Princess Yachts (2014 to 2020)



# THE METHOD

- Annual line-transect drop-down camera surveys each year
- Structured survey boxes:  
(Box1) treatment  
(Box2) no treatment  
(Box3) distant reference
- Simple biodiversity indices, abundance by group, by indicator species and as data builds multivariate analysis for communities



# RESULTS TO DATE

- Site characterisation in 2014
- Annual time series gathered in 2015 and 2016 (then 2017-2019)
- **More than 1000 images gathered from across 3 boxes**
- Each image quantified. Selected independent validation of species assignment
- Length of project represents probable times scale over which we might anticipate change (+/- across a range of species groups)



20140716\_Box\_1\_1\_004 finger bryozoa/sea chevril (*Alcyonidium diaphanum*)



20140731\_Box\_1\_1\_004 spiral bryozoa (*Bugula* sp.)



20140731\_Box\_1\_1\_008 monkey puzzle bryozoa (*Omalosecosa ramulosa*)



20140731\_Box\_1\_3\_013 bryozoa: ross coral (*Pentapora foliacea*)



20140731\_Box\_1\_3\_015 bryozoa: ross coral (*Pentapora foliacea*) with mixed bryozoa turf (no sp id)



20140731\_Box\_1\_5\_014 encrusting bryozoa (no sp id)



20140716\_Box\_1\_3\_003 pink seafans (*Eunicella verrucosa*)



20140731\_Box\_1\_5\_014 dead men's fingers (*Alcyonium digitatum*)

# THE FUTURE (to 2020)

