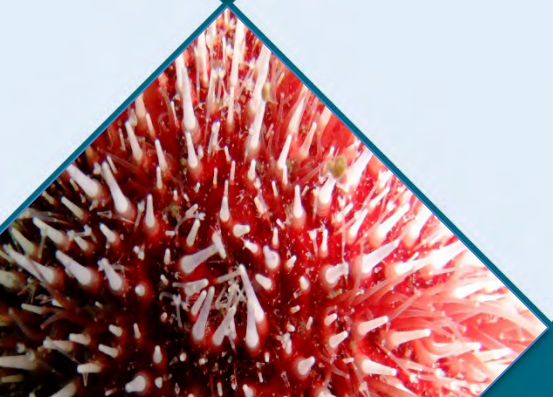


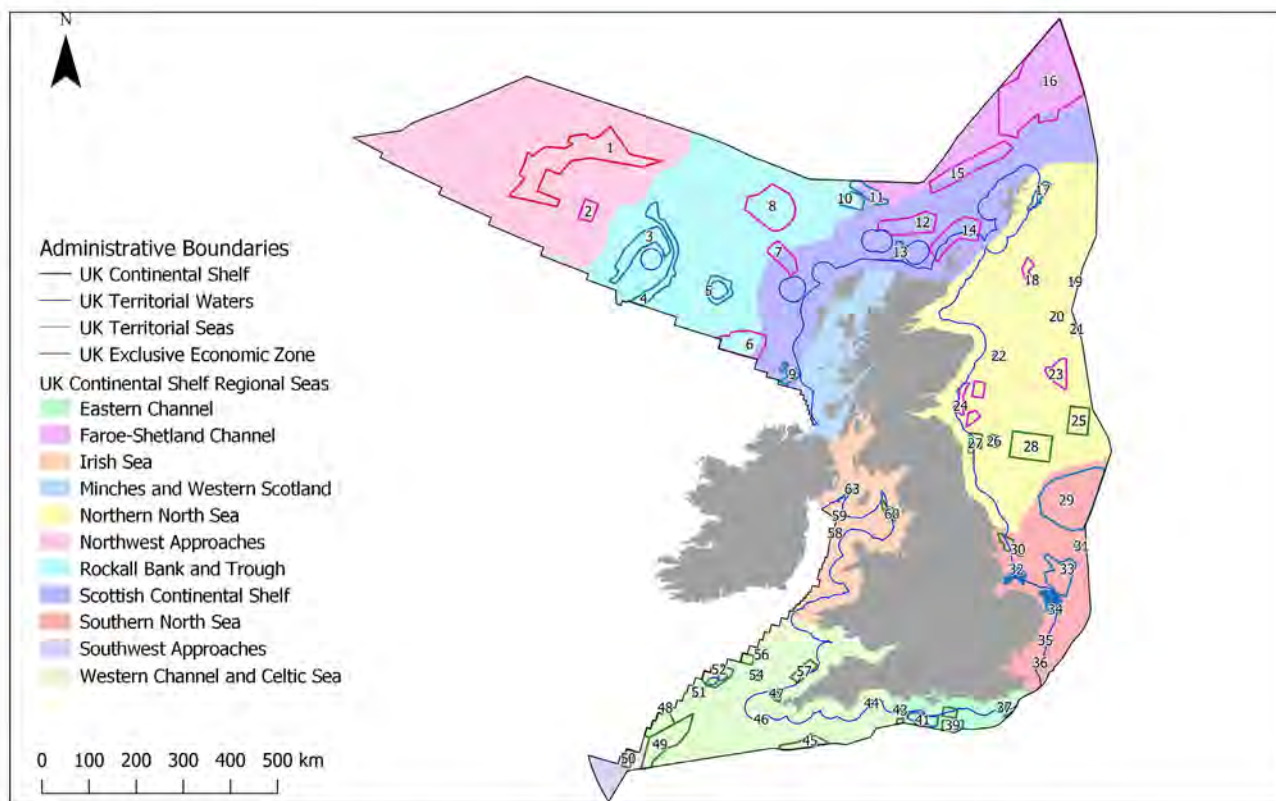


 **JNCC**

Offshore MPAs with stony reef

Fionnuala McBreen





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 UK Exclusive Economic Zone © Crown copyright. The exact limits of the EEZ are set out in The Exclusive Economic Zone Order 2013.
 World Vector Shoreline © US Defence Mapping Agency. Not to be used for navigation.

Numbered guide to MPAs

- | | | | |
|--|--|---|---|
| 1. Hatton Bank | 16. North-east Faroe-Shetland Channel | 33. North Norfolk Sandbanks and Saturn Reef | 50. The Canyons |
| 2. Hatton-Rockall Basin | 17. Pobie Bank Reef | 34. Haisborough, Hammond and Winterton | 51. North-West of Jones Bank |
| 3. North West Rockall Bank | 18. Central Fladen | 35. Orford Inshore | 52. Greater Haig Fras |
| 4. East Rockall Bank | 19. Braemar Pockmarks | 36. Kentish Knock East | 53. Haig Fras |
| 5. Anton Dohrn Seamount | 20. Scanner Pockmark | 37. Inner Bank | 54. East of Haig Fras |
| 6. The Barra Fan and Hebrides Terrace Seamount | 21. Norwegian Boundary Sediment Plain | 38. Bassurelle Sandbank | 55. North-East of Haig Fras |
| 7. Geikie Slide and Hebridean Slope | 22. Turbot Bank | 39. Offshore Brighton | 56. South of Celtic Deep |
| 8. Rosemary Bank Seamount | 23. East of Gannet and Montrose Fields | 40. Offshore Overfalls | 57. South West Approaches Bristol Channel |
| 9. Stanton Banks | 24. Firth of Forth Banks Complex | 41. Wight-Barfleur Reef | 58. Croker Carbonate Slabs |
| 10. Darwin Mounds | 25. Fulmar | 42. West of Wight-Barfleur | 59. Queenie Corner |
| 11. Wyville Thomson Ridge | 26. North East of Farnes Deep | 43. South Dorset | 60. West of Walney |
| 12. West Shetland Shelf | 27. Farnes East | 44. East of Start Point | 61. West of Copeland |
| 13. Solan Bank Reef | 28. Swallow Sand | 45. Western Channel | 62. Pisces Reef Complex |
| 14. North-west Orkney | 29. Dogger Bank | 46. South of the Isles of Scilly | 63. South Rigg |
| 15. Faroe-Shetland Sponge Belt | 30. Holderness Offshore | 47. Cape Bank | |
| | 31. Markham's Triangle | 48. South-West Deep (West) | |
| | 32. Inner Dowsing, Race Bank and North Ridge | 49. South-West Deep (East) | |

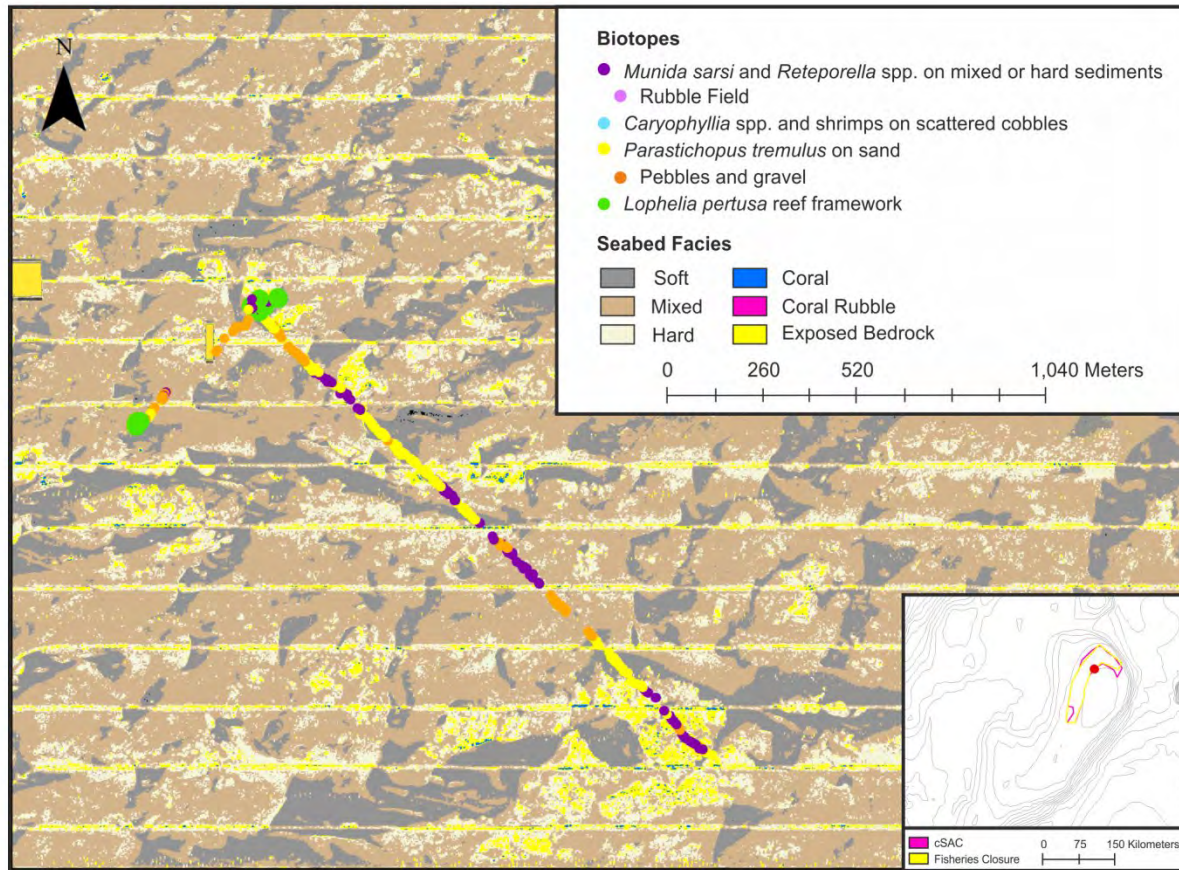
MPAs designated for stony reef

5	Deep Sea
4	12 – 200nm

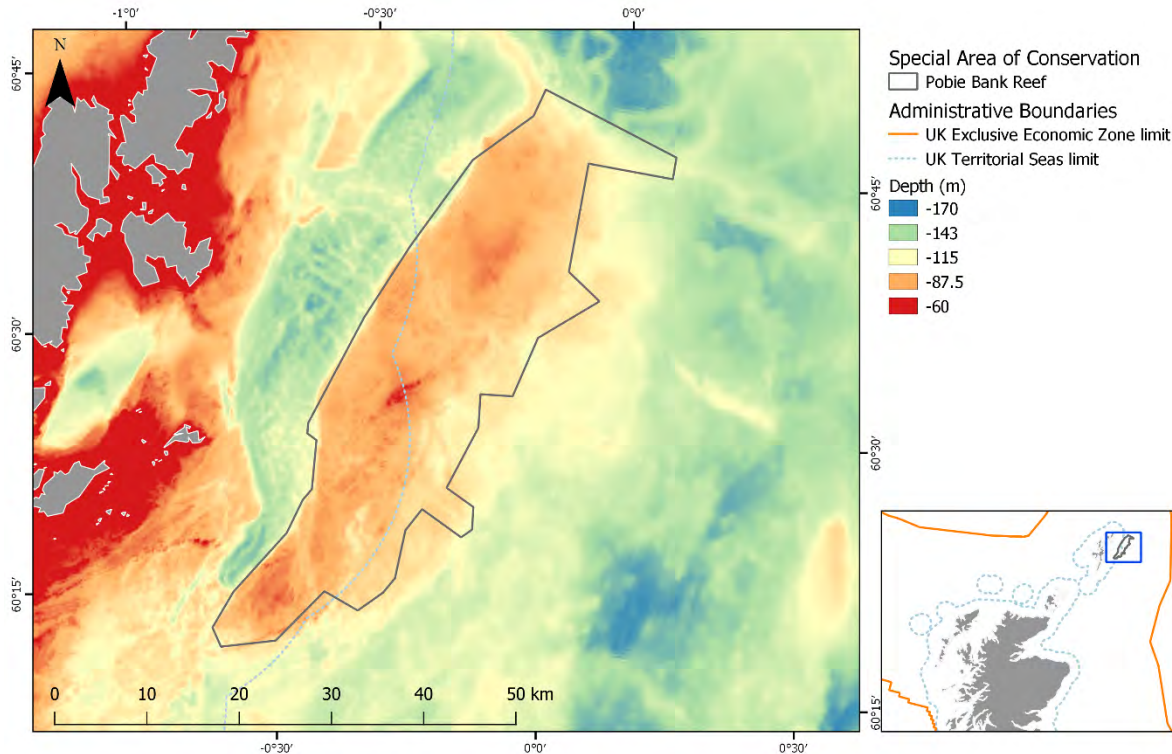
- Anton Dohrn
- East Rockall Bank
- Hatton Bank
- North West Rockall Bank
- Wyville Thomson Ridge

- Pobie Bank
- Solan Bank
- Wight Barfleur Reef
- Pisces Reef

North-West Rockall Bank (NOC AUV data)



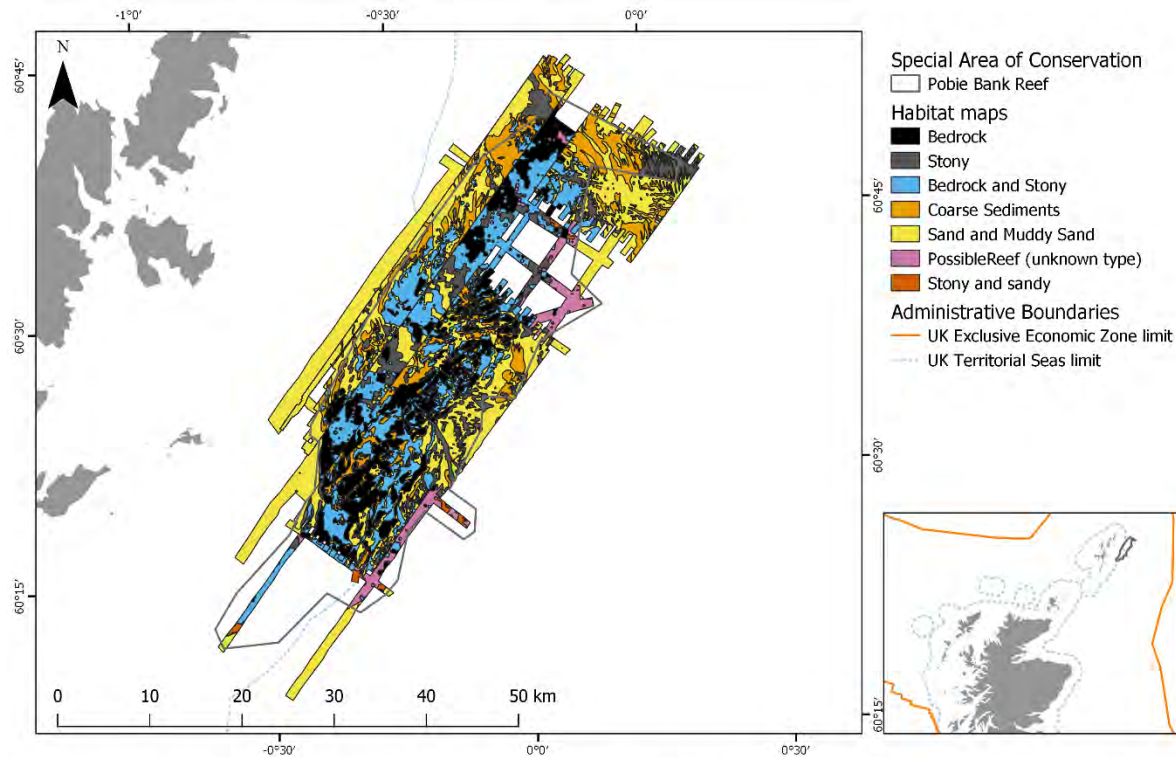
Pobie Bank Reef (2013)



Projection: Europe Lambert Conformal Conic (EPSG: 102014); © JNCC 2020; UK Territorial Sea Limit. Contains UKHO data © Crown copyright. All rights reserved. UK Exclusive Economic Zone © Crown copyright. The exact limits of the EEZ are set out in The Exclusive Economic Zone Order 2013; Shoreline © GSHHG 2.2.2. GEBCO Compilation Group (2019) GEBCO 2019 Grid (doi:10.5285/836f016a-33bc-6ddc-e053-6c86abc0788e). Defra Astrum Bathymetry. Contains public sector information licensed under the Open Government Licence v3.0.

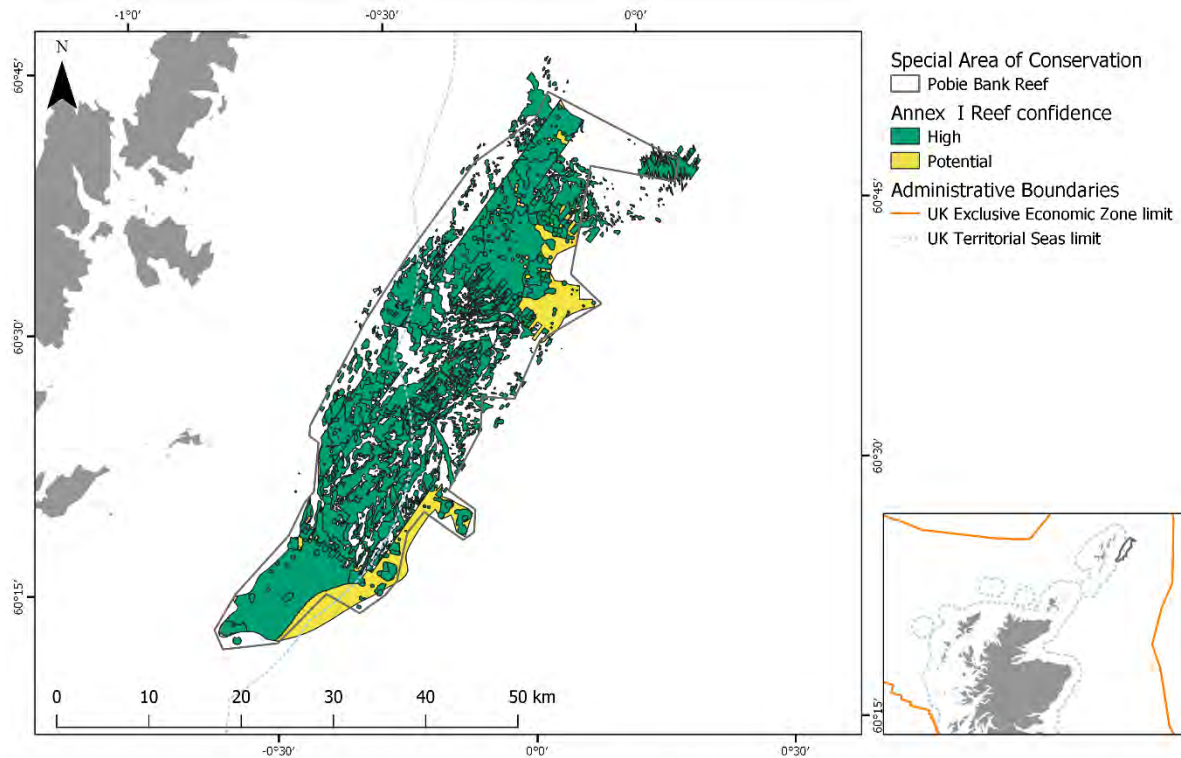
- 70 – 100m
- 966km²
- Plan to revisit in 2020

Pobie Bank Reef

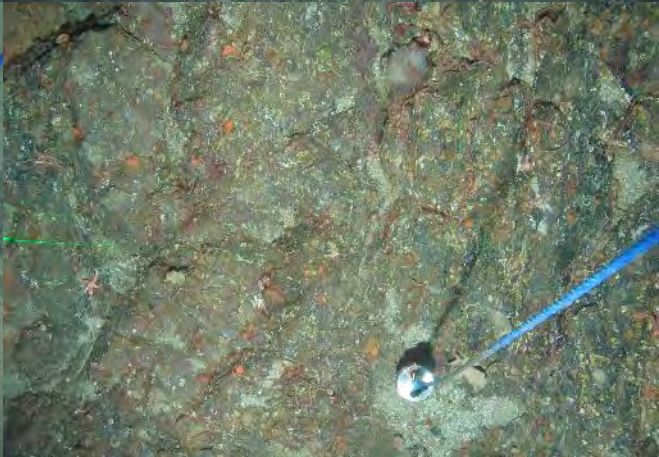
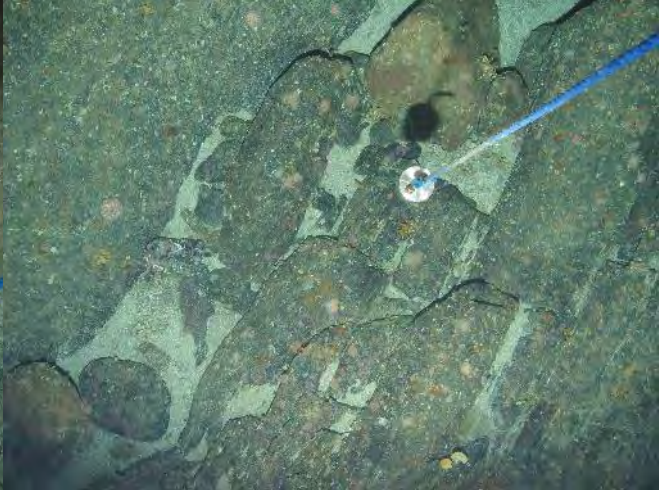


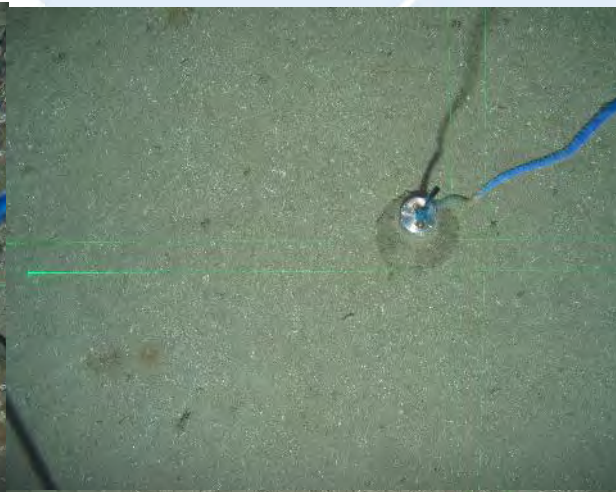
Projection: Europe Lambert Conformal Conic (EPSG: 102014); © JNCC 2020; UK Territorial Sea Limit. Contains UKHO data © Crown copyright. All rights reserved. UK Exclusive Economic Zone © Crown copyright. The exact limits of the EEZ are set out in The Exclusive Economic Zone Order 2013; Shoreline © GSIHG 2.2.2.

Pobie Bank Reef



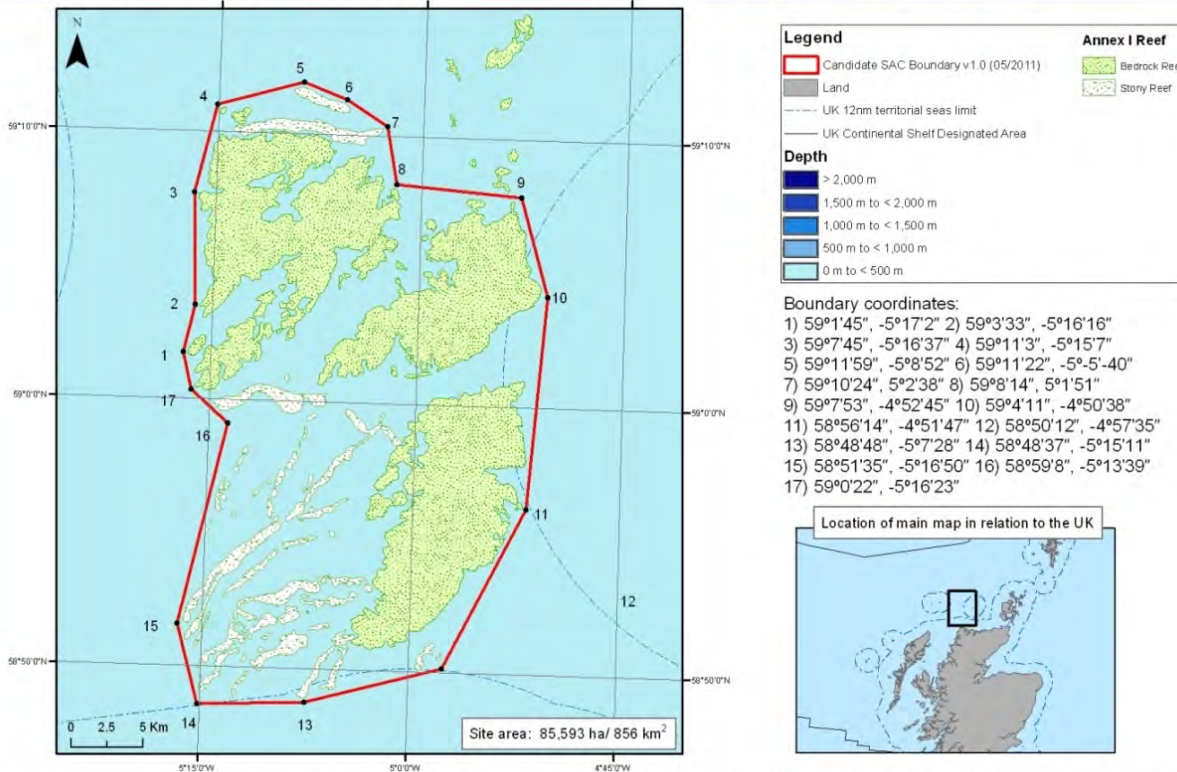
Projection: Europe Lambert Conformal Conic (EPSG: 102014); © JNCC 2020; UK Territorial Sea Limit. Contains UKHO data © Crown copyright. All rights reserved. UK Exclusive Economic Zone © Crown copyright. The exact limits of the EEZ are set out in The Exclusive Economic Zone Order 2013; Shoreline © GSHHG 2.2.2; Annex I Reef in UK offshore waters v8. Contains JNCC data © copyright and database right 2019.





Solan Bank Reef (2014)

Offshore Special Area of Conservation Site Map: Solan Bank Reef



- 20 – 90m

- 856km²

Map projected in UTM (Zone 30N, WGS84 datum). World Vector Shoreline © US Defense Mapping Agency. NOT TO BE USED FOR NAVIGATION. The exact limits of the UK Continental Shelf are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown Copyright). Map version number 1.2 (20/09/2012). Created by DB. Map copyright JNCC, 2012.

**Annex I
subtype**

Confirmed

Potential

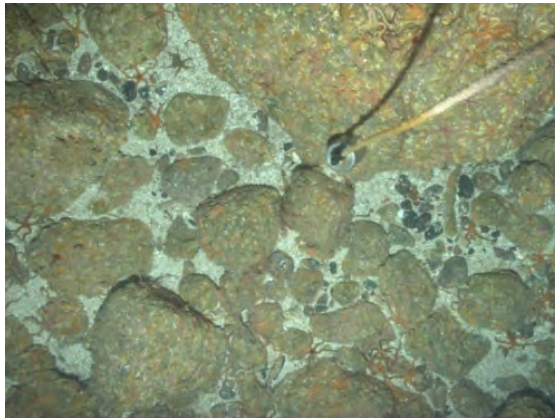
Stony



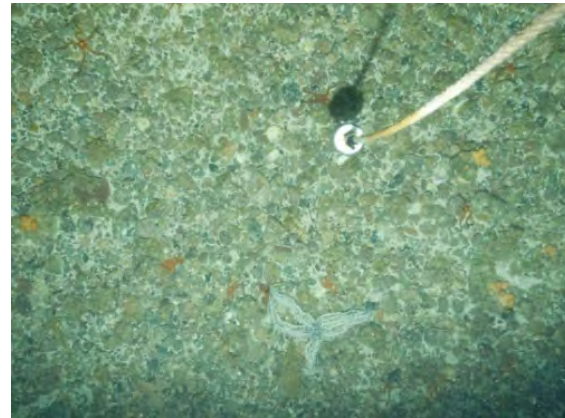
1714S_SBR_RSS90_S171_P29



1714S_SBR_RSS90_S171_P17



1714S_SBR_TS52_S35_IMG_01



1714S_SBR_RSS78_S168_IMG_09

**Annex I
subtype**

Confirmed

Potential

Bedrock



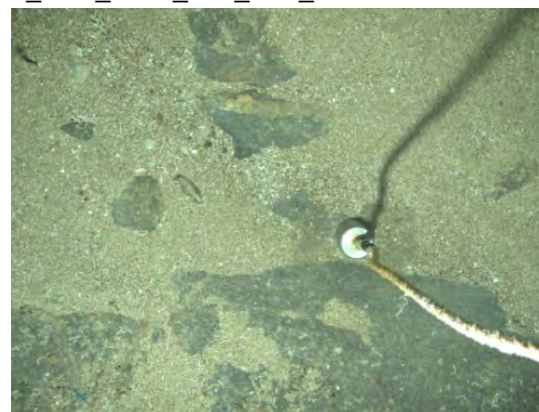
1714S_SBR_RSS76_S169_IMG_04



1714S_SBR_TS19_S14_IMG_09

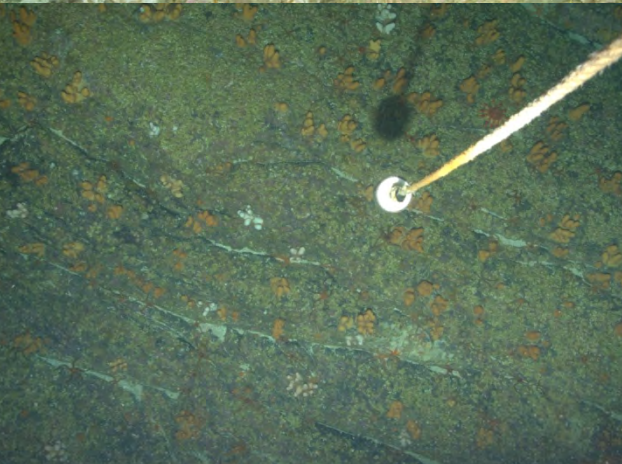
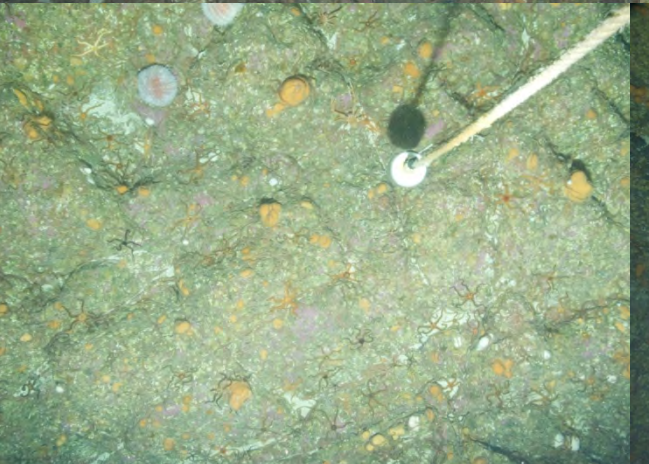


1714S_SBR_TS17_S12_IMG_25



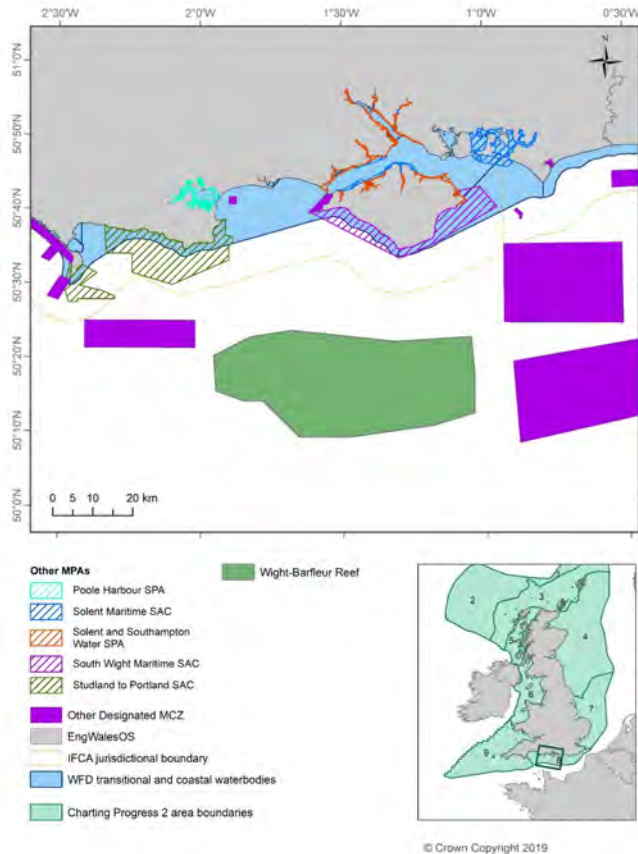
1714S_SBR_TS17_S12_IMG_12





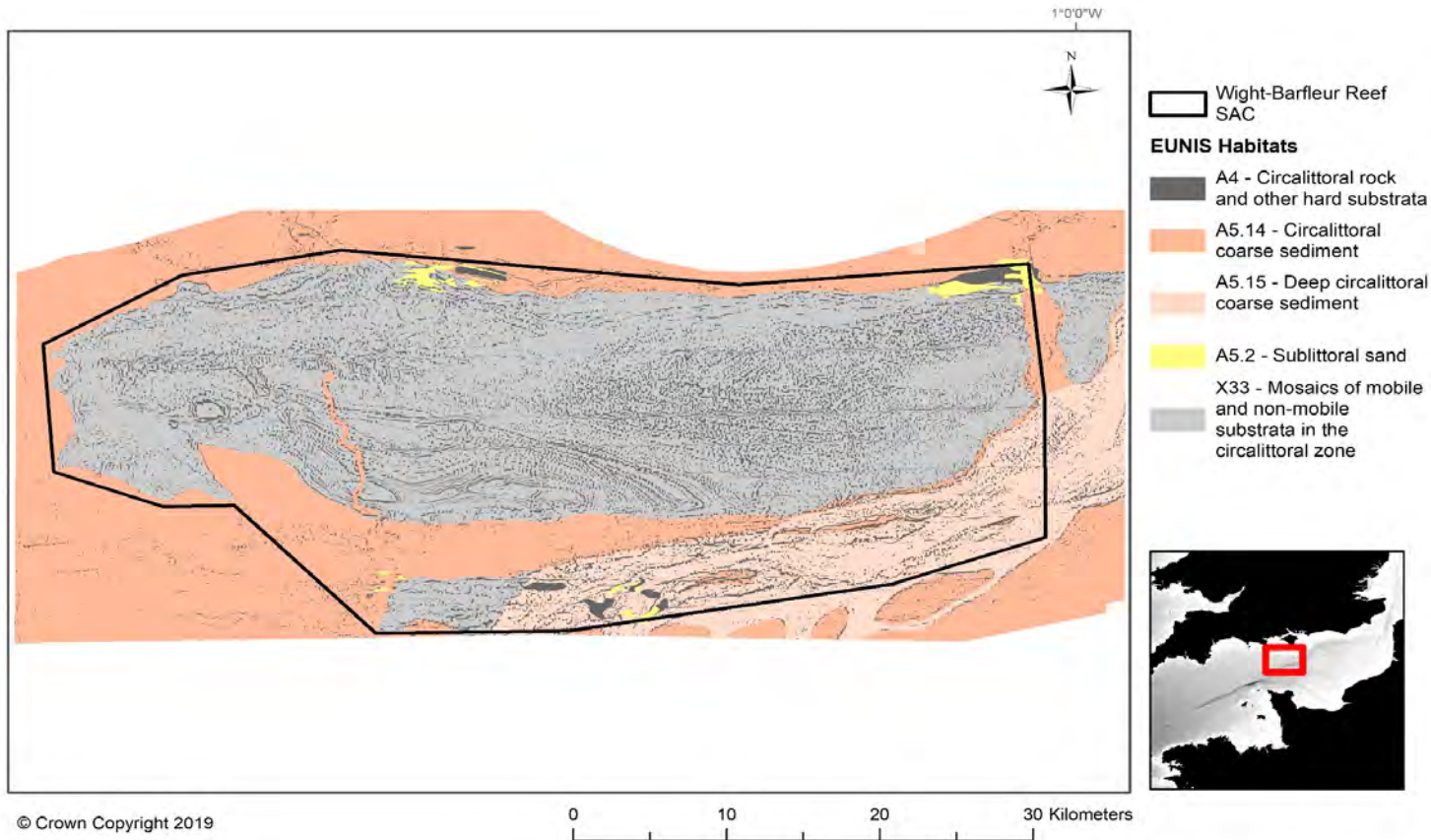


Wight Barfleur Reef (2017)

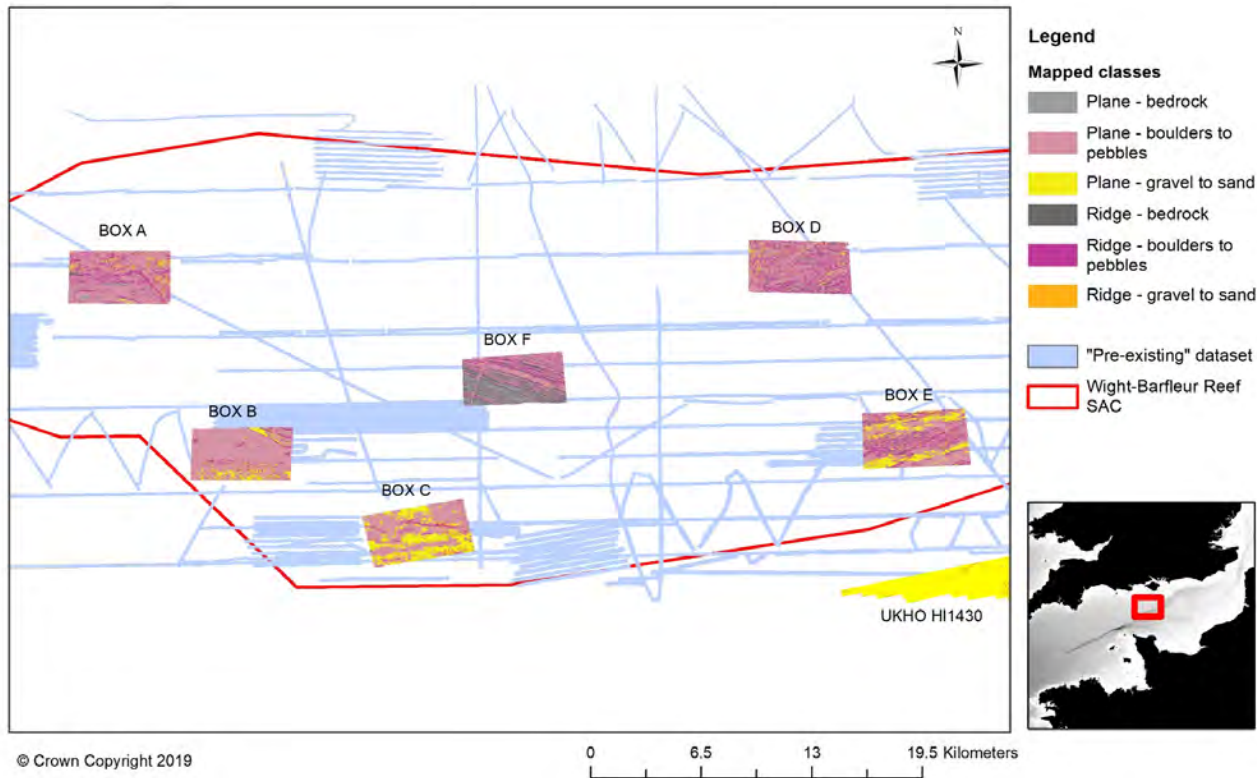


- 25 – 100m deep
- 1,373km²
- CATAMI

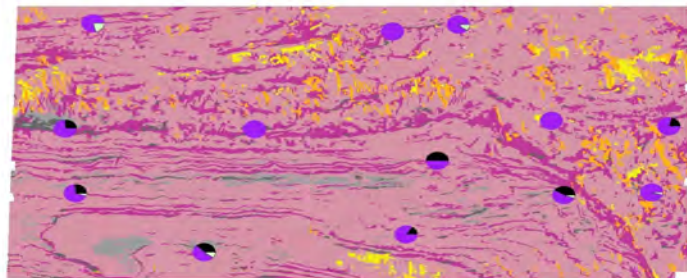
Wight Barfleur Reef



Wight Barfleur Reef



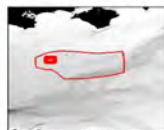
BOX A



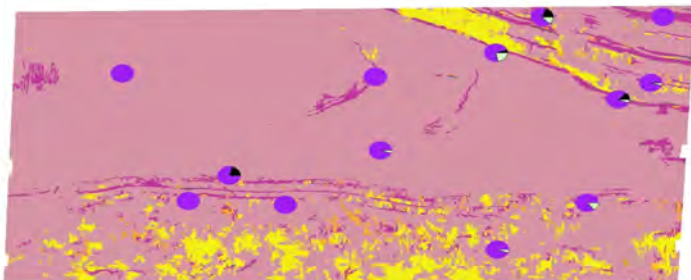
© Crown Copyright 2019

0 0.8 1.6 2.4 Kilometers

Video tow reef proportion



BOX B



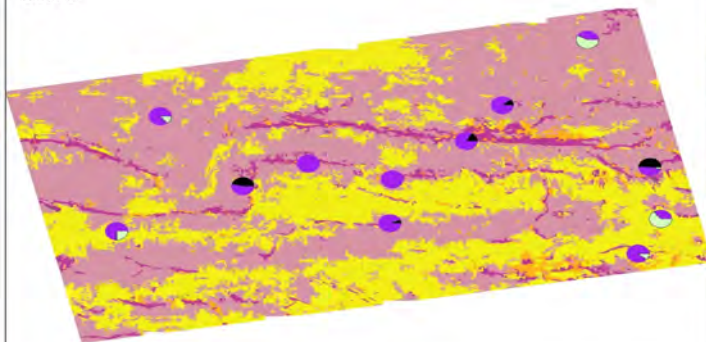
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0 0.8 1.6 2.4 Kilometers

Video tow reef proportion



BOX C



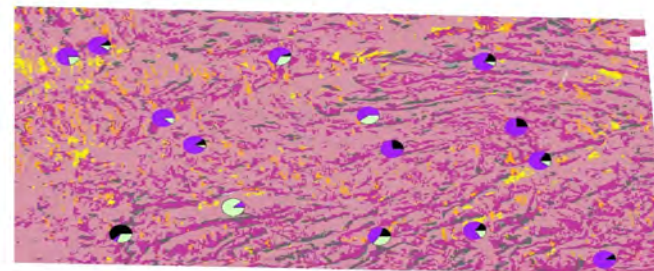
© Crown Copyright 2019

0 0.85 1.7 2.55 Kilometers

Video tow reef proportion



BOX D



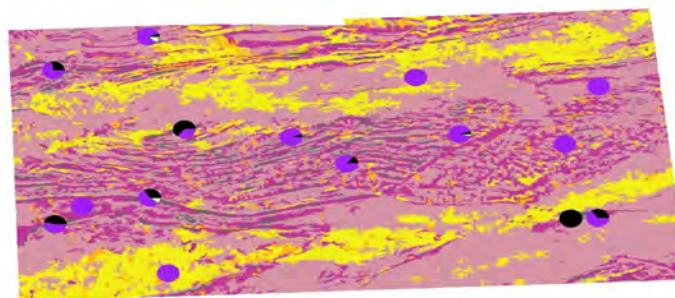
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0 0.8 1.6 2.4 Kilometers

Video tow reef proportion



BOX E

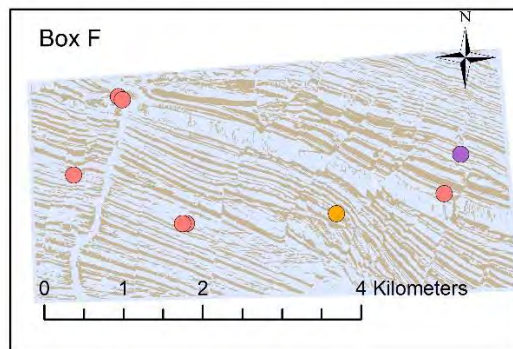
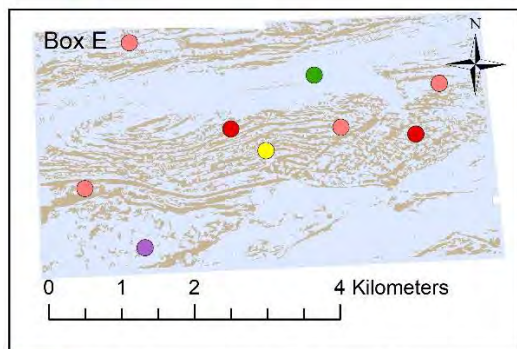
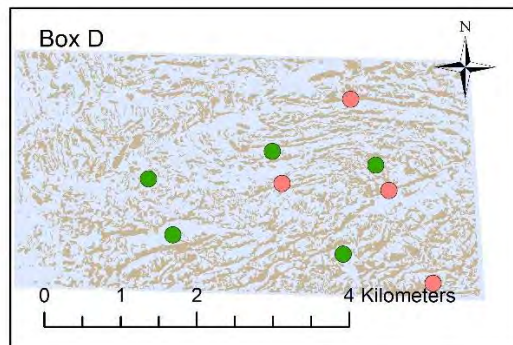
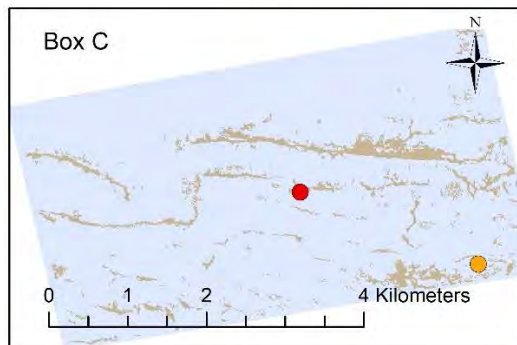
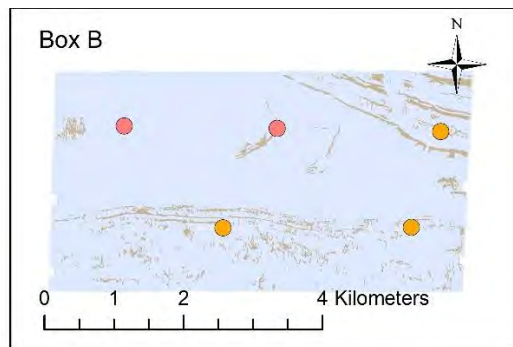
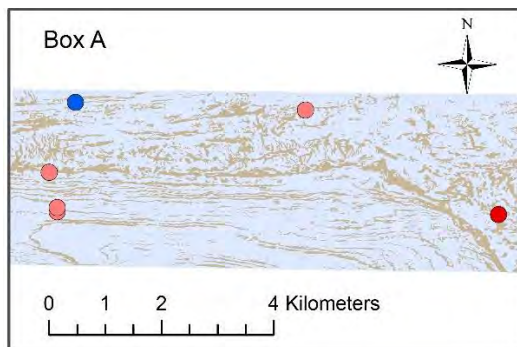


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0 0.8 1.6 2.4 Kilometers

Video tow reef proportion

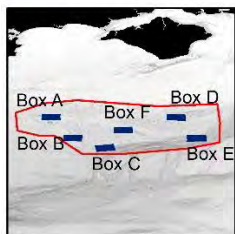




Potential Annex I reef
MBES coverage

Primer clusters

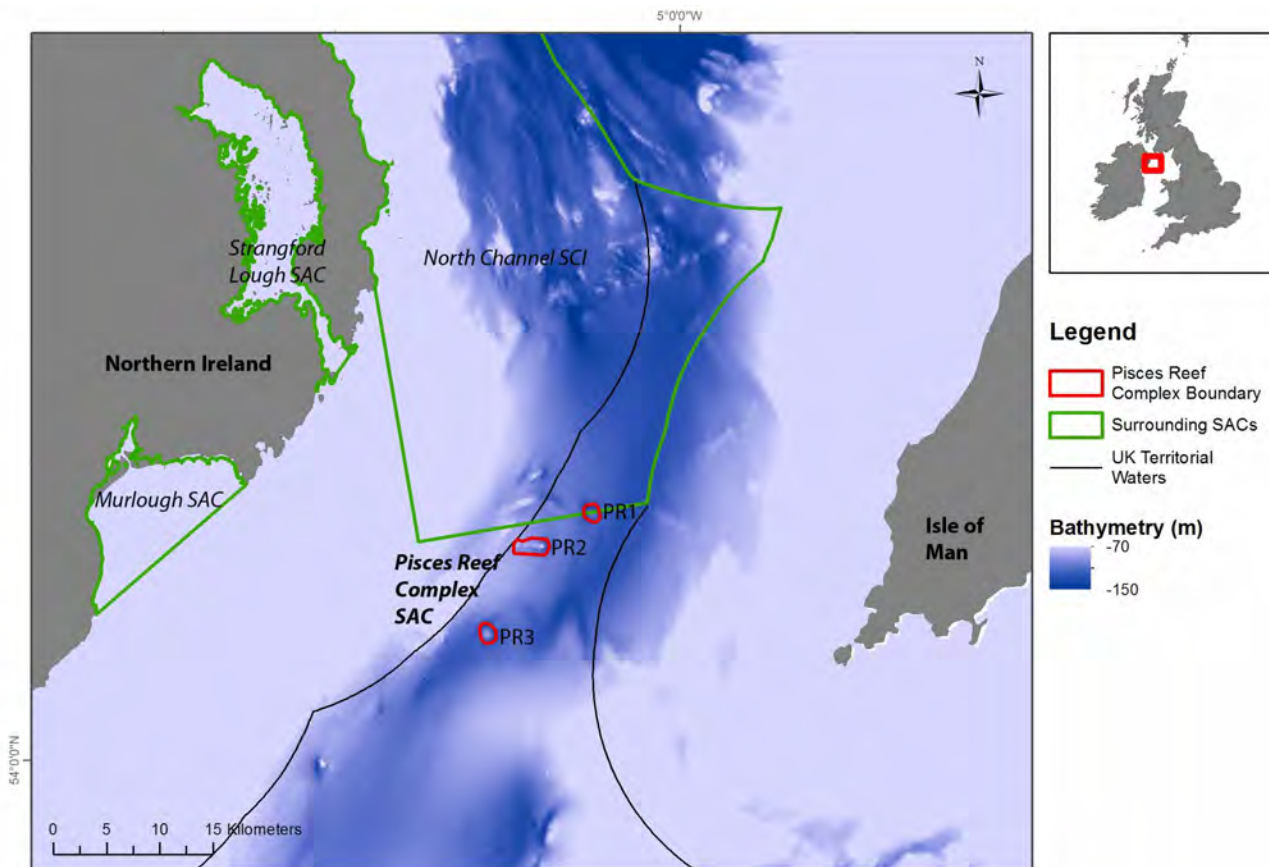
- A: Flat cobble with soft sediment – Faunal turf
- B: Cobble reef – Bryozoans, soft corals and cup corals
- C: Shallow cobble reef with soft sediment – Bioeroding crust sponges
- D: Shallow bedrock – Sparse anthozoans and sponges
- E: Cobble reef with soft sediment– Sparse sponges and ascidians
- F: Shallow bedrock and cobble reef – abundant sponges and ascidians
- G: Boulder reef – abundant cup corals and sponges







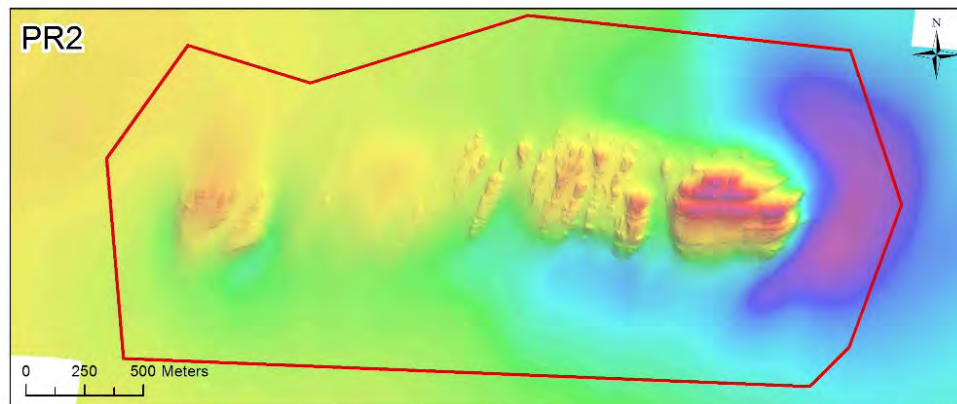
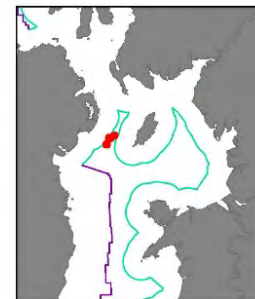
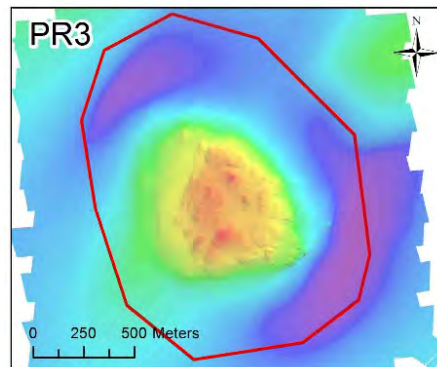
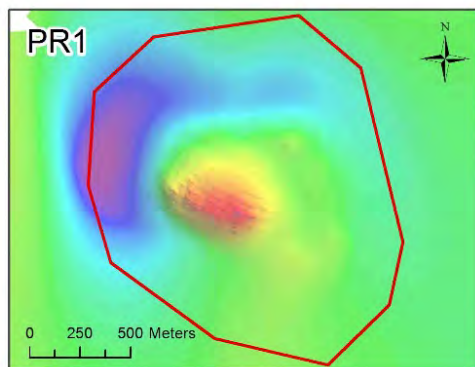
Pisces Reef Complex



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- 70 – 150m
- 8.73km²
- Frequency counts (25 cell grid)
- Sublittoral rock indicator

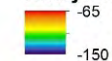
Pisces Reef Complex (2015 survey)



Legend

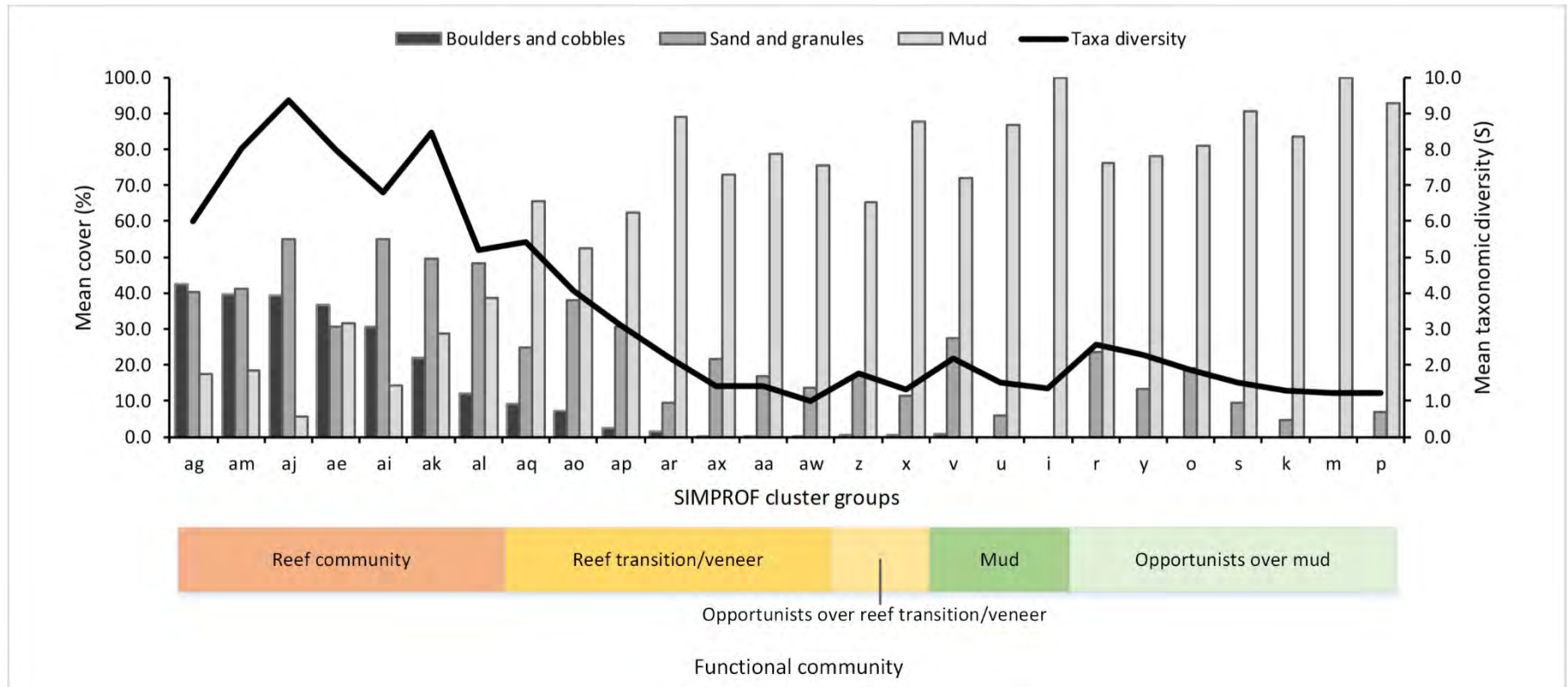
- Pisces Reef Complex Boundary
- UK & Ireland Coastline
- UK Continental Shelf
- 12nm Limit

Bathymetry (m)



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Pisces Reef Complex (preliminary results)



Relationships between taxonomic diversity and proportions of abiotic substrata across dominant SIMPROF cluster groups. Functional communities are displayed beneath graph to indicate which larger community the cluster groups most likely fit into.



Reef

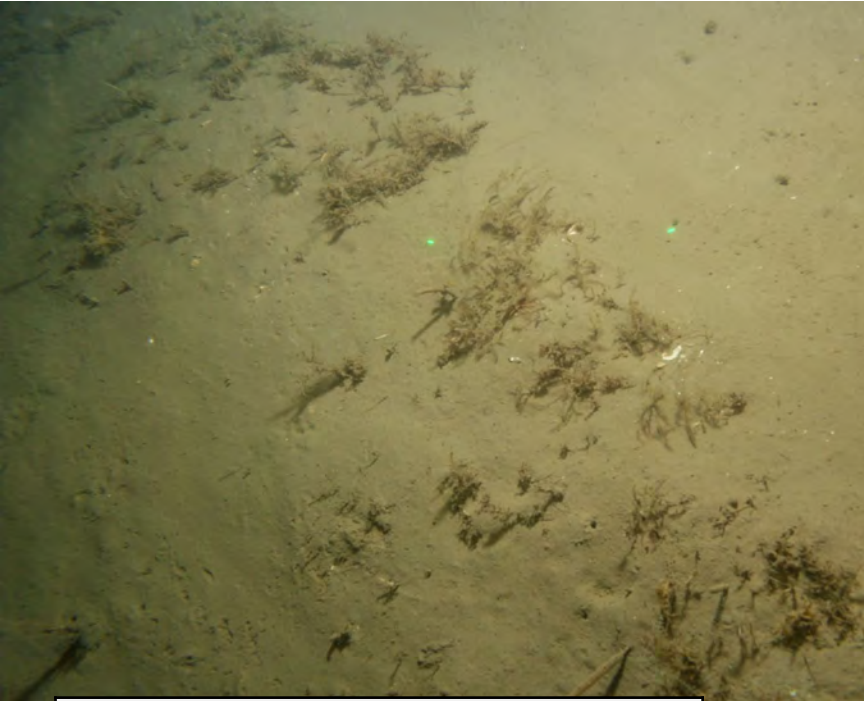
Common taxa (explain 90% group similarity)
Turf/Caryophyllia/Crusts/Hydrozoa
Turf/Crusts/Hydrozoa
Turf/Hydrozoa/Caryophyllia/Pap.Porifera
Turf/Galatheoidea/Hydrozoa
Turf/Hydrozoa/Caryophyllia



Reef transition

Common taxa (explain 90% group similarity)
Turf/Hydrozoa/Porifera.Gen
Turf/Hydrozoa

Reef veneer



Common taxa (explain 90% group similarity)

Turf/Crusts/Hydrozoa/Peracarida

Turf/Hydrozoa

Turf/Hydrozoa

Galatheoidea/Turf

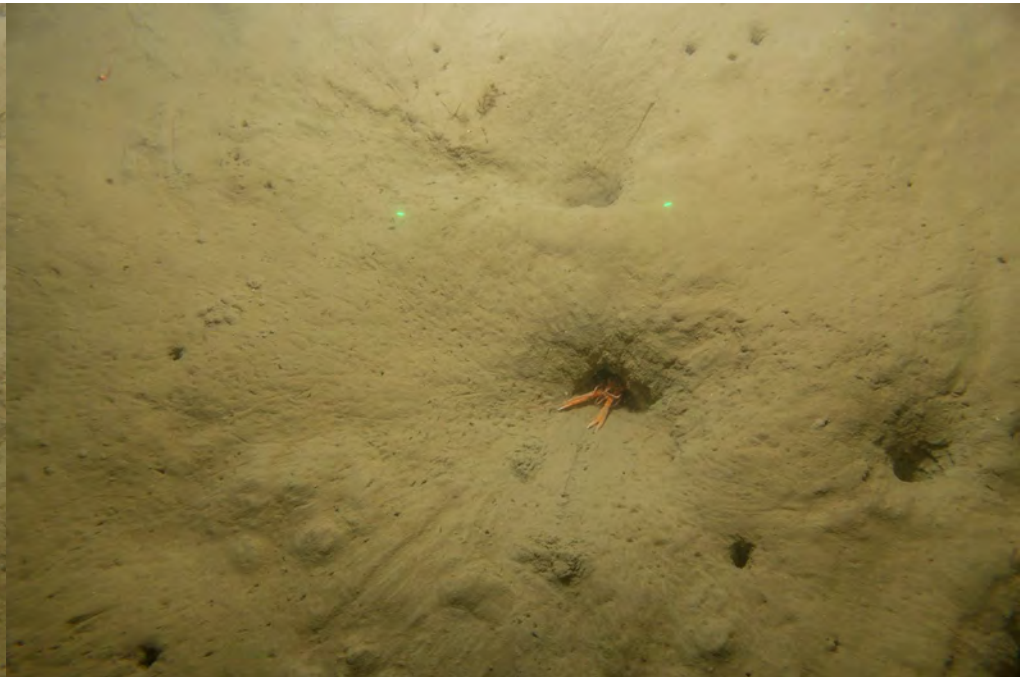
Turf

Hydrozoa

Turf



Mud



**Common taxa (explain 90%
group similarity)**

Pachycerianthus multiplicatus

Ceriantharia

Nephrops norvegicus

