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Proposed amendment to the boundary of the Scanner Pockmark Special Area of Conservation (SAC)

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Background

The UK submitted the Scanner Pockmark candidate Special Area of Conservation (cSAC) to the European Commission in 2008 for the protection of the Annex I habitat 'Submarine structures made by leaking gases'; the European Commission confirmed the site as a Site of Community Importance (SCI) in 2009 and the site was subsequently designated as a SAC in 2015. The site area was 3.35km^2 when designated and comprised a simple polygon to encompass known records of Submarine structures made by leaking gases in the vicinity (Figure 1).

Previous surveys between 1983 and 2006 identified the existence of methane derived authigenic[1] carbonate (MDAC) in the site (Hovland & Sommerville 1985, Dando *et al* 1991, Judd *et al* 1994, Judd 2001, Dando 2001 and Judd & Hovland 2007). Images of MDAC were obtained along with methane recorded in sediment samples and evidence of bacterial mats and gas seeps.

New evidence

Additional survey work commissioned by JNCC in 2012 collected multibeam echo-sounder data, backscatter, side scan sonar data, drop camera footage and sediment grab samples (Rance *et al* 2016). JNCC commissioned the British Geological Survey (BGS) to compare survey data from 2012 with earlier geological data to assess changes in pockmark morphology and condition (Gafeira & Long 2015). The study confirmed the presence of 61 pockmarks within Scanner Pockmark SAC, four of which measured over 72,000 m^2 with a depth of greater than 12 m below the surrounding seabed. However, the study also identified the presence of six additional clusters/individual pockmarks on the western side of the site where Gafeira and Long (2015) noted strong acoustic reflections that are indicative of the presence of the interest feature in the majority of these pockmarks.

JNCC reviewed these new data and concluded that the pockmarks outside the site are likely to represent examples of the Annex I feature Submarine structures made by leaking gases; these pockmarks meet the criteria to be included within a SAC.

Proposed amendment to site boundary

The proposed amendment (Figure 2) would extend the whole site boundary (predominantly out towards the North and West of the existing site) to encompass all potential records of the Annex I habitat Submarine structures made by leaking gases recorded in the area (based on evidence presented in Gafeira and Long, 2015). Following JNCC's guidance (2012) on defining boundaries for marine SACs for Annex I habitat sites fully detached from the coast – a 3:1 ratio of distance from a feature to water depth was applied to create a buffer on a precautionary basis around the pockmarks to determine the new boundary for the site. Maximum water depth in the site is 165m therefore a buffer of 495m has been applied around all potential records of the feature.

[1] An authigenic sedimentary rock deposit is one that was generated where it is found or observed. Sedimentary authigenic minerals include calcium carbonate.

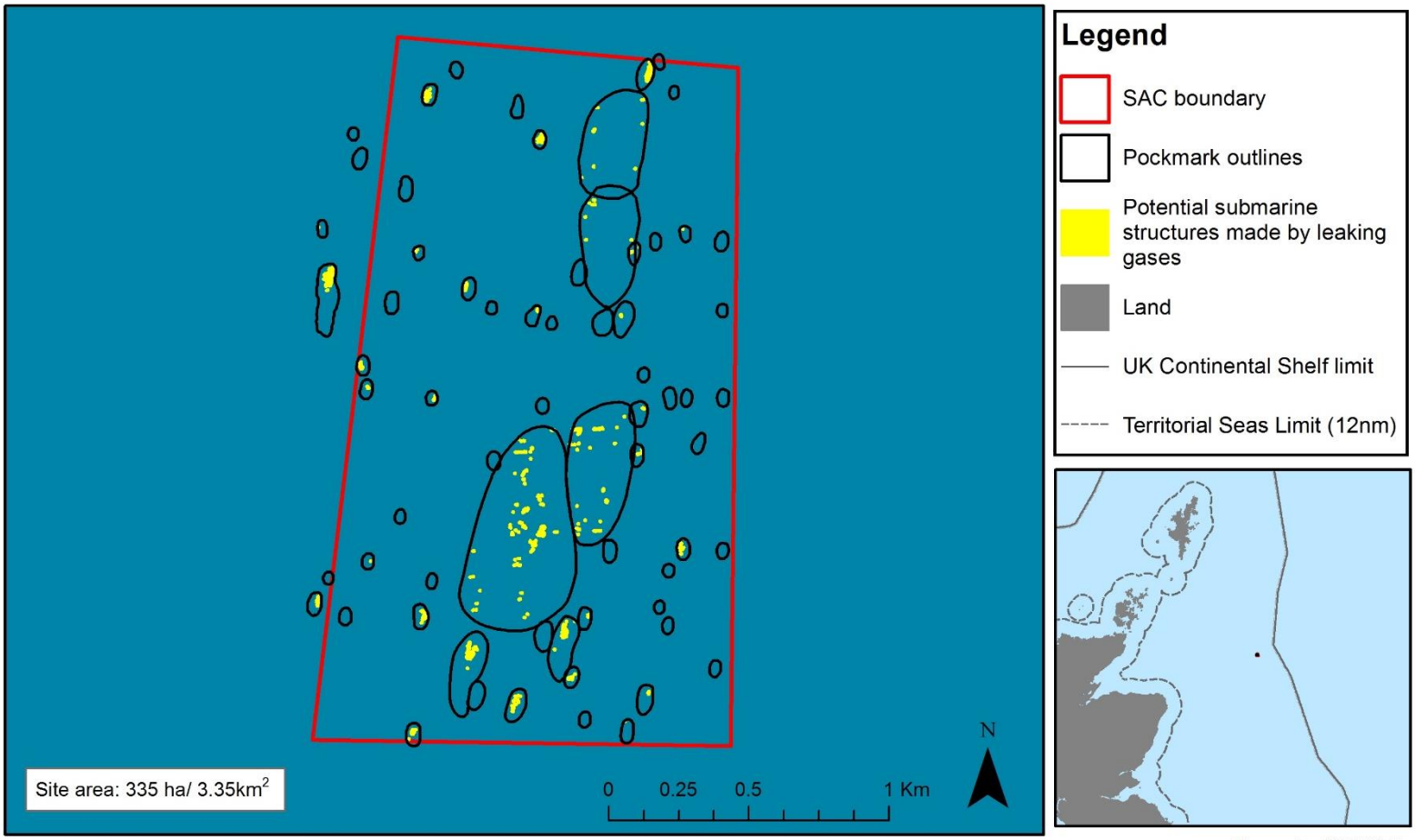
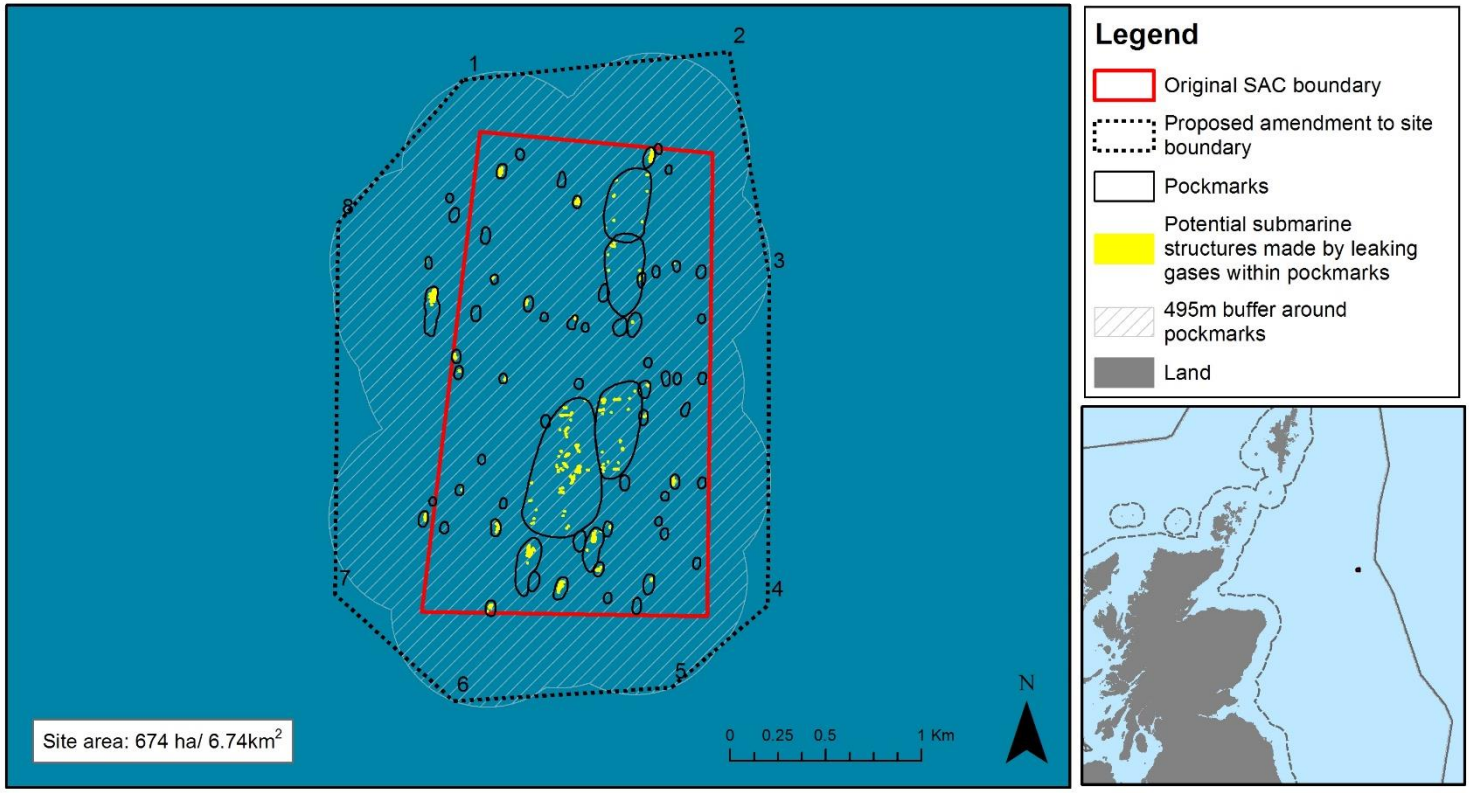


Figure 1: Current boundary of Scanner Pockmark SAC.



Map version 06/07/2017

Boundary coordinates:
1) 58° 17' 58", 0° 57' 36" 2) 58° 18' 4", 0° 59' 1" 3) 58° 17' 26", 0° 59' 16" 4) 58° 16' 30", 0° 59' 19"
5) 58° 16' 16", 0° 58' 49" 6) 58° 16' 13", 0° 57' 39" 7) 58° 16' 30", 0° 57' 0" 8) 58° 17' 33", 0° 56' 57"

Figure 2: Proposed amendment to the site boundary of Scanner Pockmark SAC based on the distribution of potential Annex I Submarine structures made by leaking gases as derived from Gafeira and Long (2015).

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