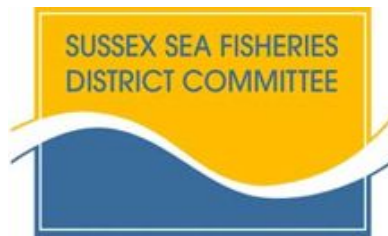


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Regional Stakeholder Group  
Balanced Seas  
c/o Regional MCZ Project for the south-east  
Durrell Institute for Conservation and Ecology (DICE)  
Room Marlowe 65A, Marlowe Building  
University of Kent  
Canterbury  
Kent, CT2 7NR

19<sup>th</sup> August 2010

Dear members of the Regional Stakeholder Group (RSG),

Please find attached a report from the Sussex Sea Fisheries Committee. The report details a recommendation from the Committee to the RSG that an area in the vicinity of 'Kingmere Reef' is designated as a Marine Conservation Zone (MCZ). The Committee believes that the designation of the area, as a MCZ, can support the sustainable development of the Black Bream (*Spondyliosoma cantharus*) fishery and meets the requirements of the MCZ Ecological Network Guidance.

The Committee considers that the Balanced Seas Project is currently the most effective way of pursuing its objective: to engage effectively with stakeholders in the development of management measures for this site. The Committee values the role of stakeholder participation in decision making and wish to support the RSG and the Balanced Seas process through the provision of the report which accompanies the recommendation.

The Committee's report also includes recommendations for management, and advocates that a monitoring system is established for the specific area. The Committee consider that any MCZ designation should be accompanied by such recommendations.

Thank you for considering this recommendation.

Yours sincerely

Robert Clark

Acting Chief Fishery Officer  
Sussex Sea Fisheries District Committee.

The Sussex Sea Fisheries Committee is funded jointly by Kent County Council, Brighton & Hove City Council, West Sussex County Council and East Sussex County Council



# Kingmere Reef

## A recommendation to the Regional Stakeholder Group

<p><b>Report to:</b> Regional Stakeholder Group Balanced Seas c/o Regional MCZ Project for the south-east Durrell Institute for Conservation and Ecology (DICE) Room Marlowe 65A, Marlowe Building University of Kent Canterbury Kent, CT2 7NR</p>	<p><b>Report from:</b> Sussex Sea Fisheries District Committee Unit 6 Highdown House Shoreham Airport Shoreham-by-Sea West Sussex BN43 5PB Tel. 01273 454407 Fax. 01273 454408 Email. <a href="mailto:admin@sussex-sfc.gov.uk">admin@sussex-sfc.gov.uk</a> Web. <a href="http://www.sussex-sfc.gov.uk">www.sussex-sfc.gov.uk</a></p>
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**Date:** August 2010

## **Sussex Sea Fisheries Committee Recommendation**

The Sussex Sea Fisheries Committee has formally resolved to recommend to the Regional Stakeholder Group (RSG) of the Balanced Seas Project that:

***“The region identified as Kingmere Reef (in figure 1.) should be designated as a Marine Conservation Zone for the protection of spawning black bream (*Spondyliosoma cantharus*)”***

### **Purpose of recommendation**

The purpose of this recommendation is to seek to secure the sustainable development of an important recreational and commercial black bream fishery by protecting a sensitive spawning site.

By recommending the designation of the Kingmere Reef region as an MCZ the Committee recognises the need to avoid duplication between its management processes and that of the Balanced Seas project and importantly to make good use of resources to ensure effective engagement with stakeholders.

### **Justification**

The Committee believes that the black bream spawning aggregations found in the vicinity of the Kingmere Reef network (EMU, 1999, 2007a, 2007b, 2008, 2009) constitutes a Feature Of Conservation Importance (FOCI) (Ashworth *et. al.*, 2010) for the purpose of the Marine Conservation Zone (MCZ) planning process.

The Committee considers that the unusual spawning behaviour of black bream (Lythgoe and Lythgoe, 1971, Pawson, 1995, James *et. al.*, 2010 and Clark & Vause, 2009) means that a spatial management technique (closing an area) is likely to positively contribute to the sustainable development of this fishery by protecting a proportion of the stock. The area recommended for designation is also designed to allow access to the fishery but ensures a proportion remains free from disturbance.

As there are currently no analytical scientific assessments conducted by ICES or Cefas on the status of the black bream stock in the Channel it is not possible to evaluate if the fishery is sustainable (Armstrong *et. al.* pers. comm. 2010). The Committee believes that the protection of sensitive spawning areas is therefore consistent with a precautionary approach.

Further information supporting the recommendation is included in appendices to this report.

### **Management**

The Committee recognises that if the site is designated as a MCZ then the management of the site will defer to the Sussex Inshore Fisheries and Conservation Authority (IFCA) and the Marine Management Organisation.

***The Committee considers that the IFCA should close the designated area to all fishing gears during the nesting period of the bream***

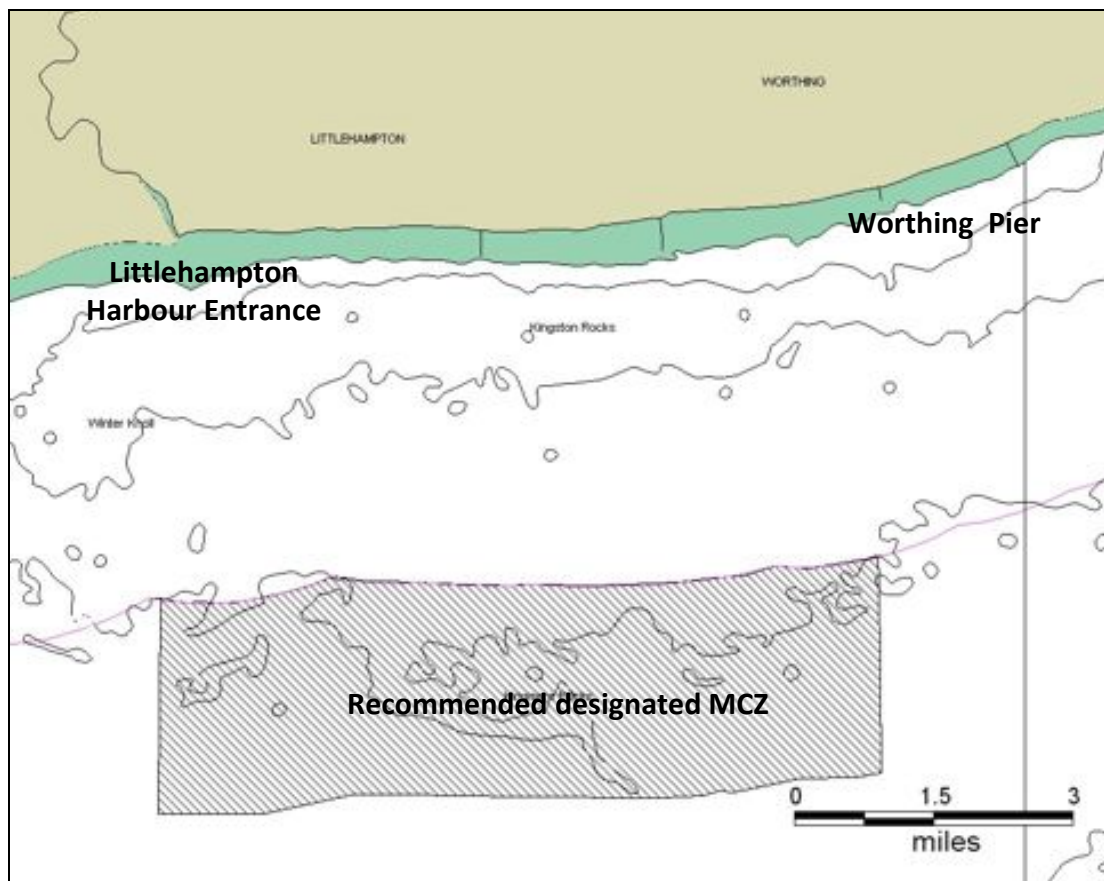
Historically this has been the end of April to end of June. The Committee however advocate flexibility in the timing of this closure to adapt to potential fluctuations in site utilisation due to climatic / oceanographic variables and or change.

**The Committee recommends the closure of the area permanently to all mobile fishing gears to protect the integrity of the reef network which appears linked to the fish spawning aggregation in the area.**

**The region that the Committee recommends is bounded west by the entrance to Littlehampton Harbour and east by Worthing Pier and extends between 3 and 5nm. offshore from territorial baselines.** This region is recommended as it encompasses the major bream nesting sites and it is an identifiable sea region which should aid compliance.

The Committee only advocates the designation of the area defined in figure 1, but recognise that a rectangular polygon bounded by the corners of the area may be a suitable alternative, capable of achieving the same objectives.

**FIGURE 1.0 Kingmere Reef Region.**



Total Area proposed as an MCZ: 13.5 square nautical miles (sq. nm.)

Coordinates (Approx. Corners):	NE	50° 44. 70N	000° 22.00W
	SE	50° 42. 70N	000° 22.00W
	NW	50° 44. 40N	000° 32.45W
	SW	50° 42. 40N	000° 32.45W

Estimated Substrate area	Sand	0.65	sq. nm.
	Reef	0.50	sq. nm.
	Gravel	12.35	sq. nm.

## Monitoring

The information provided by the aggregate industry (EMU, 1999, 2007a, 2007b, 2008, 2009) describes the nesting densities of black bream. ***If MCZ designation occurs the Committee recommends that monitoring of the site should continue to ensure that not only are the objectives of designation being met but the effectiveness of the designation can be communicated to stakeholders.***

## Appendices

Appendix 1	Interpretation of habitats in Kingmere Reef area
Appendix 2	Site description of Kingmere Rocks (from Irving, 1999)
Appendix 3	Features of interest – Black Bream (from James <i>et. al.</i> 2010)

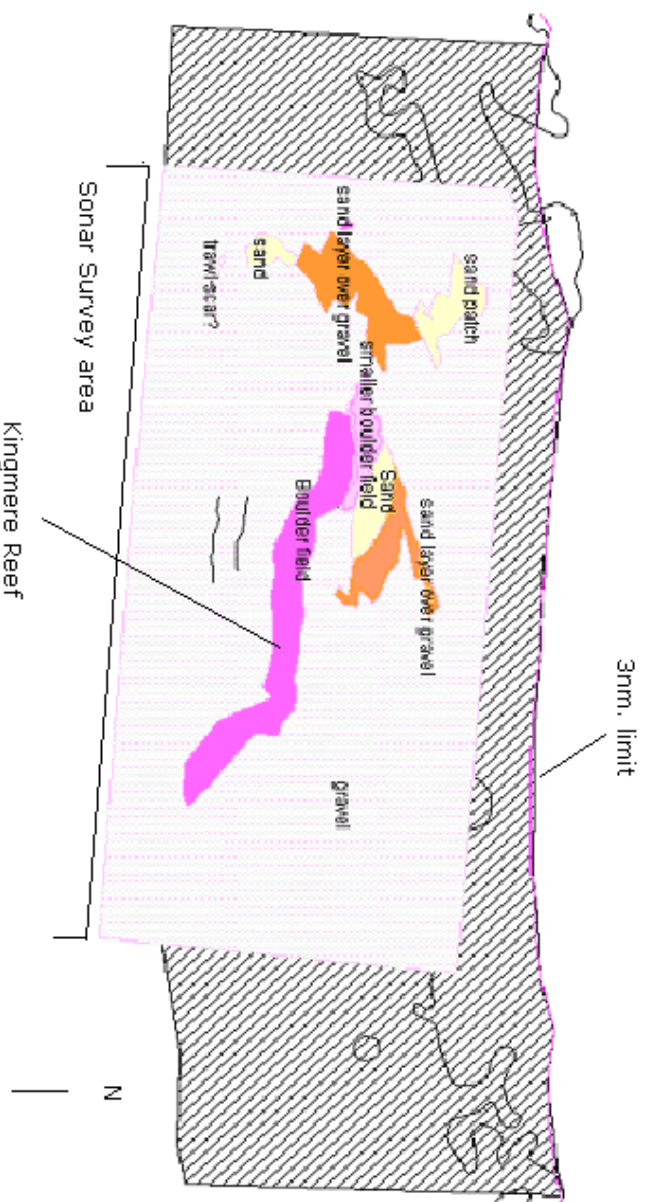
## Supporting Information

### Appendix 1

The Sussex Sea Fisheries Committee and CEFAS have surveyed the area using sonar and have produced the following habitat interpretation.

#### Figure 2.0 Interpretation of Kingmere Reef habitats

Estimated Substrate area	Sand	0.65	sq. nm.
	Reef	0.50	sq. nm.
	Gravel	12.35	sq. nm.



© Sussex Sea Fisheries District Committee, 2010

The data used to create this Interpretation will be provided to the Balanced Seas team

## Supporting Information

### Appendix 2

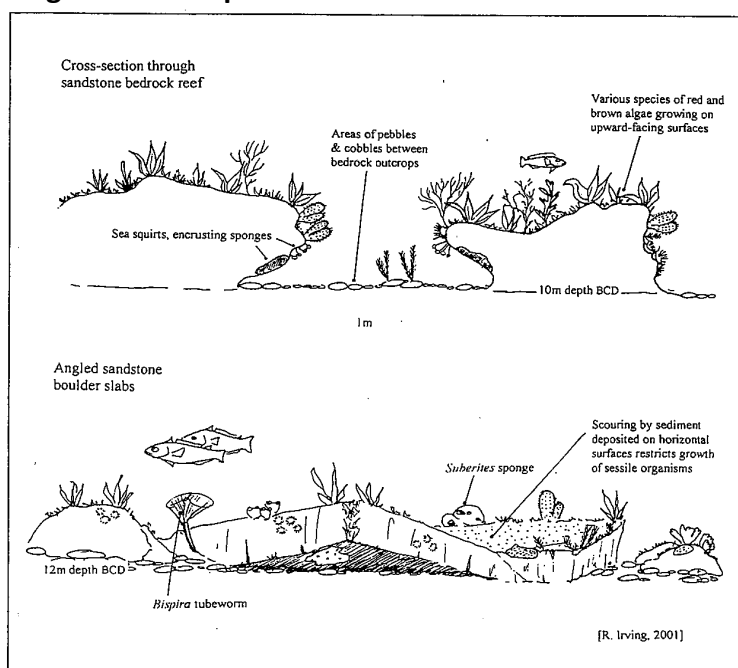
#### Site description: Kingmere Rocks (From Irving, 1999 © Sussex Seasearch, 1999)

Kingmere Rocks encompasses a large area (in the region of 0.5 sq. nautical miles) of uneven seabed, consisting of outcrops of sandstone rising 2-3 m above the surrounding seabed, with boulders and mixed sediment areas in between. The boulders are frequently in the form of large rectangular slabs, 1-2 m in width/length and 20-50 cm thick (see also the Waldrons reef; mSNCI ref. 5). Although the depth of the seabed ranges from 6-14 m BCD, there is very little obvious slope to the seabed. In places, horizontal exposures of mudstone are present amongst the mixed sediment areas.

The upward-facing surfaces of sandstone bedrock and boulders are covered by marine life, the tops of the shallower ones < 8 m depth BCD) having a covering of foliose red algae, whilst those slightly deeper are dominated by a dense animal turf; particularly the bryozoans *Bugula* spp. and *Flustra foliacea*. Extensive patches of encrusting coralline algae are present on the sides of the boulders, together with various sponges (*Esperiopsis fucorum*, *Dysidia fragilis*, *Tethya aurantium*, *Suberites ficus* and *Polymastia mammilaris*), dead man's fingers *Alcyonium digitatum*, sea squirts (especially *Clavelina lepadiformis*, *Aplidium punctum* and *Morchellium argus*), and occasional starfish *Asterias rubens*. The mud tubes of fan worms (particularly *Bispira volutacornis*) protrude from the cracks between boulders, and edible crabs *Cancer pagurus* are frequently encountered sheltering under overhangs. A narrow band at the base of bedrock outcrops and boulders is scoured clean of encrusting marine life by periodic movement of surrounding sediment. Fish associated with the reef areas include bib *Trisopterus luscus*, tompot blenny *Parablennius gattorugine* and ballan wrasse *Labrus bergylta*, though the most frequently recorded wrasse species from here has been the goldsinny *Ctenolabrus rupestris*. Areas between the reef have a seabed of mixed sediments, consisting of cobbles, pebbles, gravel, shells and sand. Occasionally, there are chalk cobbles and pebbles in amongst the flints. Most of the fauna here is mobile, reflecting the unstable nature of the sediments, such as hermit crabs, netted dogwhelks *Hinia reticulata* and gobies. However, there may also be the occasional dahlia anemone *Urticina felina* and the odd cobble or pebble with encrustations of keelworms *Pomatoceros riqueter*.

Sublittoral rocky reefs account for probably less than 3% of the total area of seabed off Sussex (within the 12 nm limit of territorial waters). Kingmere Rocks is an example of a sandstone reef area with a rich and diverse fauna and flora associated with it.

#### Diagrammatic representation of the site



## Supporting Information

### Appendix 3

#### **Features of Interest – Black Bream (*Spondyliosoma cantharus* (L.))**

(From James *et. al.* 2010 © Crown Copyright, 2010)

In spring each year black bream migrate from the wider English Channel, along the 9 °C isotherm, to the shallow coastal waters within the South Coast REC area, once inshore the fish form spawning congregations. The larger male fish seek specific types of seabed sediment where they 'build' or excavate individual 'nests' or depressions on the seabed surface in the hope of attracting a mate.

In the process of building their 'nests' male black bream use their tail to remove the surface layer and expose the bedrock or compacted gravel beneath. In so doing male black bream may use their nests in intraspecific competition to attract a female.

Sea bed substrates and features which have been identified with bream nesting include thin sands and gravels and gravels on bedrock and adjacent to reefs and wreck. The bedrock they have been noted on includes Chalk and the Tertiary Bracklesham Group. Bream nest sizes are typically between 1–2 m wide and 5–30 cm in depth, they create a distinctive group of pitted sea bed features that are clearly discernable on side scan sonar records. Figure 8.14 illustrates such groups on a sea bed of thin sediment on bedrock with the bedrock evident as thin ledges where bedding is exposed.

Once a female bream has selected a suitable nest she will lay her eggs in a thin layer within the nest; bream eggs are sticky they become strongly attached to the substrate. After the female has laid her eggs the male fish will fertilise them, the male fish will then guard the eggs until they hatch to protect them from predators such as crustacean and to ensure siltation of the nest does not occur. This philopatry however makes the adults susceptible to fisheries overexploitation which exposes the eggs to trawl damage and the juvenile fish to trawl by-catch.

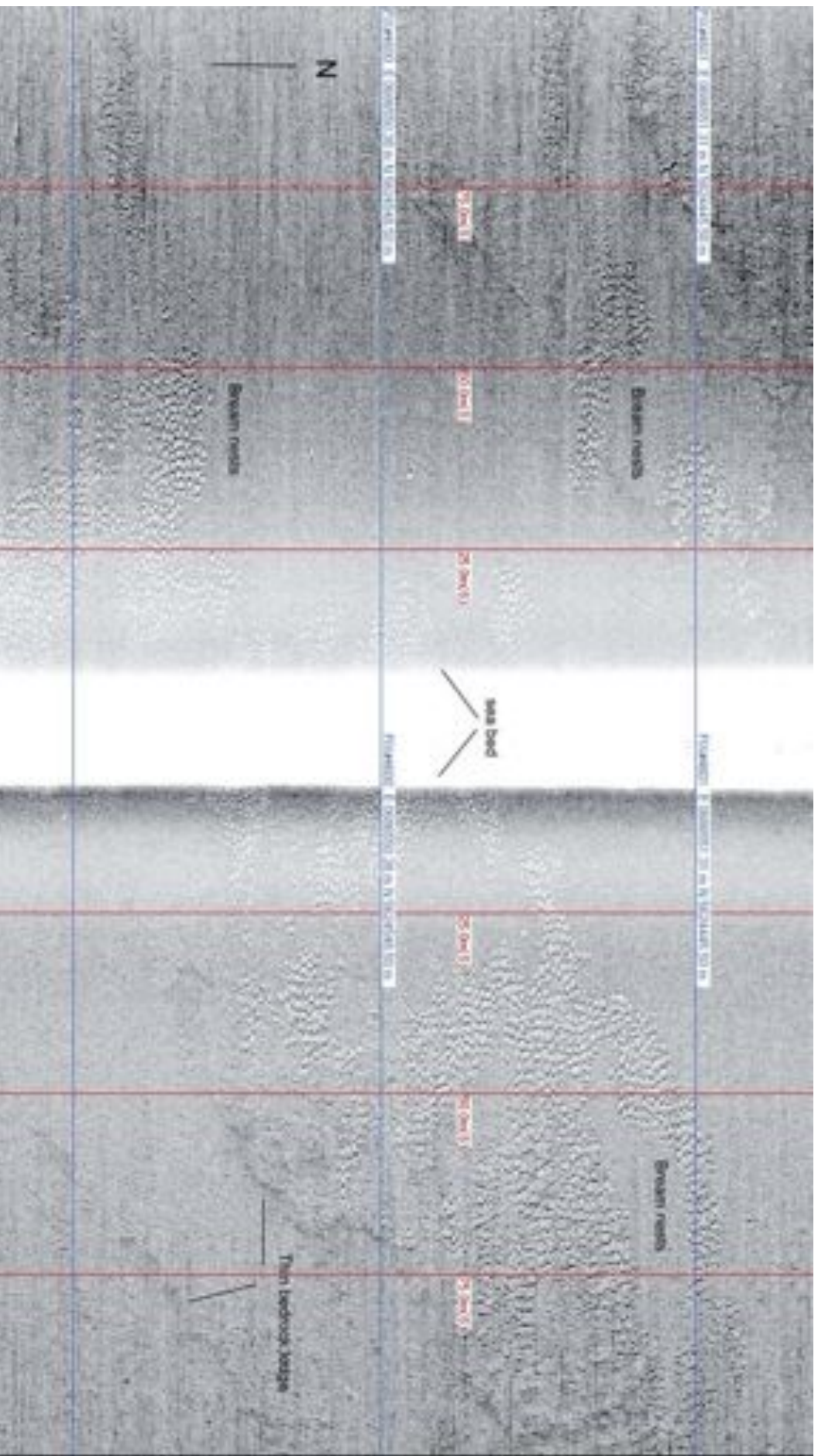
Unmolested juvenile bream will remain in the vicinity of the nest sites until they are 7–8 cm in length; they then disperse but remain in the inshore areas for 2–3 years (approximately 20 cm in length).

Black bream are protogynous hermaphrodites; at sexual maturity they develop female sexual organs then later, as they grow, they become male. When the bream become sexually mature (as females) they recruit into the adult stock and range into the wider English Channel and South West Approaches to feed. It is expected that the bream exhibit site fidelity; returning to the same sites to spawn annually.

Black bream are not subject to ICES stock assessment, they are not classed as a pressure stock for EU fisheries management purposes and no Total Allowable Catch is prescribed. As a non-quota species the fish is fished inshore and offshore in net and trawl fisheries, notably in the South Coast REC area by pair trawlers. There is currently no minimum legal landing size for black bream under European Union technical regulations; as protogynous hermaphrodites such measures can have a counter productive effect. The vulnerability of the nesting sites means that they are suitable candidates for protection through spatial management measures.

**[ SFC COMMENT the committee has in place technical conservation regulations which require large mesh codends to be used on trawls during the black bream spawning season, reducing incidence of juvenile fish capture; the committee considers that the fisheries is susceptibility to overexploitation is not limited to removal / damage by trawl ].**

Figure 8.14: Sidescan sonar record of groups of black bream nests on thin sediment on bedrock. Corridor 11 of South Coast REC 2007 Survey.  
From James *et. al.* 2010  
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