

Area 435 Biodiversity Action Plan

Area 435, Inner Owers, is a marine aggregate extraction area situated 6 miles south of Littlehampton, West Sussex, in the English Channel. Sand and gravel is removed from the site by dredging vessels and delivered to markets along the south coast of England. This Biodiversity Action Plan has been produced to give due consideration to the biodiversity issues of the site and wider area and inform extraction management decisions through the life of the operations.



Background Information

Site Name and Location	Area 435, Inner Owers 6 miles (13km) south of Littlehampton - full boundary coordinate details shown with location plan
Hanson Company and Region	Hanson Aggregates Marine Ltd, Southampton Hanson South East Region
Local BAP or other BAP(s) that will be targeted	Marine Habitats and Species of the UKBAP Relevant Sussex & Hampshire Coastal and Marine Biodiversity Action Plans
UK or Local BAP Habitat(s) to be monitored	Rock (sublittoral chalk) and biogenic (<i>Modiolus modiolus/Sabellaria spinulosa</i>) reef, sublittoral sands and gravels
UK or Local BAP species to be considered	Grouped commercial fish, black bream, sharks and rays.
Designated Natural area	Eastern English Channel Marine Natural Area as defined by English Nature (2004)
Background and site description	The Inner Owers is the northern extension of the original Owers licence area. The area is formed of two parts that exist within a largely triangular overall footprint. The total area licensed for aggregate extraction is 9.78km ² . Active areas exist within the overall licence area. Currently two areas are designated as active constituting 1.51km ² . Active areas are defined on a 6 monthly basis subject to licence conditions. Flint dominated sand and gravel deposited by the palaeo-Arun River is extracted from the area. Licensed maximum extraction rate from Area 435 is 1Mtpa. Specific ecological sensitivities are black bream nesting sites to the north of the area. General issues relate to the nature and extent of primary and secondary impacts on the seabed within and surrounding the licence area.
Resource Requirements - comment on cost if appropriate	Ecological monitoring issues related to Area 435 are dictated by specific licence conditions. HAML Resources department are responsible for commissioning monitoring and reporting services in fulfilment of the licence conditions. Resources for completion of monitoring and reporting tasks are determined on an annual basis and budget request made by HAML to plc.
Benefits	The work undertaken during the application process for Area 435 highlighted several ecologically important sites for black bream nesting within 3 miles (5km) of Area 435. Monitoring conditions specified detailed investigation of these sites along with monitoring of the seabed between the nest sites and Area 435. Results of monitoring have distinct PR and educational potential. Also may be able to provide value and assistance to Natural England and SSFDC in fulfilment of their duties, especially under the requirements of the Habitats Directive (Natura 2000).
Contribution to marine biodiversity understanding	Monitoring of Area 435 has provided important information regarding the distribution and density of black bream nesting sites and detailed information regarding the nature of seabed habitats over a total area of seabed of ??km ² . Future work may improve the understanding of black bream nesting behaviour and the effects of marine aggregate extraction on seabed habitats.
Partners and Local initiatives	Natural England, JNCC, Hampshire and Sussex Biodiversity Partnerships, SSFDC, Wildlife Trust South East Marine Programme.
Other documents supporting the site BAP	HAML Sustainability Reports HAML Resources and Reserves Documentation Area 435 Environmental Statement, Technical Notes and Consultation Report Area 435 Licence Conditions Hanson plc BAP Hanson plc Environmental Policy
Contacts	Robert Langman (Resources Manager, Hanson Aggregates Marine Ltd) Ian Selby (Operations and Resources Director, Hanson Aggregates Marine Ltd)



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Objectives, Targets and Actions

Item No	Objective	Biodiversity Feature	Targets	Action	Assessing Indicator	Responsible Person	Timescale (Completion)	To Achieve Hanson BAP Targets
1	Undertake acoustic monitoring to determine extent and character of reefs and sub-littoral sand and gravel habitats and species	UKBAP reefs and sub-littoral sand and gravel	Develop clear understanding of the extent of reef and sand/gravel habitats in the licence area and wider region	Develop clear plans showing the boundaries of seabed types within the area of monitoring	Seabed habitat interpretation chart	RL	End 2007	1, 2, 3, 4, 6, 7, 10
2	Undertake habitat and species audit for Area 435 and surrounding seabed	UKBAP reefs and sub-littoral sand and gravel and associate species	Determine and report the key benthic species present in reef and sand and gravel habitats in the vicinity of Area 435	Review ES and baseline benthic survey and list important species	Determination that species present are representative of sand and gravel habitats in the wider region	RL	End 2007	1, 2, 3, 4, 6, 7, 10
3	Undertake monitoring of seabed surrounding Area 435 to detect habitat change	UKBAP reefs and sub-littoral sand and gravel	Determine the extent of aggregate extraction influence and the nature of changes to seabed (spatial and temporal)	Monitor the northern boundary of the licence area to assess the behaviour of sand deposited as a result of extraction	Maintenance of existing natural sediment transport regime and no influence on bream nest sites	RL	As per licence conditions	1, 2, 3, 4, 6, 7, 10
4	Undertake monitoring of black bream nesting sites	Black bream nest sites	Provide a comparison of black bream nest coverage and density at 9 pre-determined sites to the north of the licence area	Compare baseline and repeat bream nest monitoring surveys	Comparative report showing the nature of spatial and density changes in nest sites	RL	As per licence conditions	1, 2, 3, 4, 6, 7, 10
5	Monitor recovery of the seabed habitats following cessation of dredging	UKBAP Sub-littoral sand and gravel	Provide a comparison of pre-dredge status of habitats with those that exist upon cessation of extraction	Compare pre-, operational and post-dredge monitoring to determine the significance of changes to seabed habitats	Comparative report showing the character of seabed before, during and after dredging has occurred	RL	Following cessation of dredging and post-dredge monitoring surveys	
6	Develop and maintain links with aggregate extraction companies operating in the Marine Natural Area to improve biodiversity planning	UKBAP reefs and sub-littoral sand and gravel	Investigate the possibility of reaching agreement on collation of similar information with other operators	Form strategy for developing associations with other operators with a view to issuing aggregate industry biodiversity plan for the wider area	Strategy document summarising companies, benefits of forming association and possible management mechanisms	RL	End 2007	1, 2, 3, 4, 6, 7, 10
7	Develop and maintain links with stakeholders interested in reviewing biodiversity information generated by operations in Area 435	UKBAP reefs and sub-littoral sand and gravel	Engage Natural England and others to determine what plans they have for promotion of marine biodiversity	Generate HAML position statement for circulation to limited audience to determine how marine biodiversity planning might develop in the next 12 months	Letter issued to relevant stakeholders	RL	April Annually	1, 2, 3, 4, 6, 7, 10

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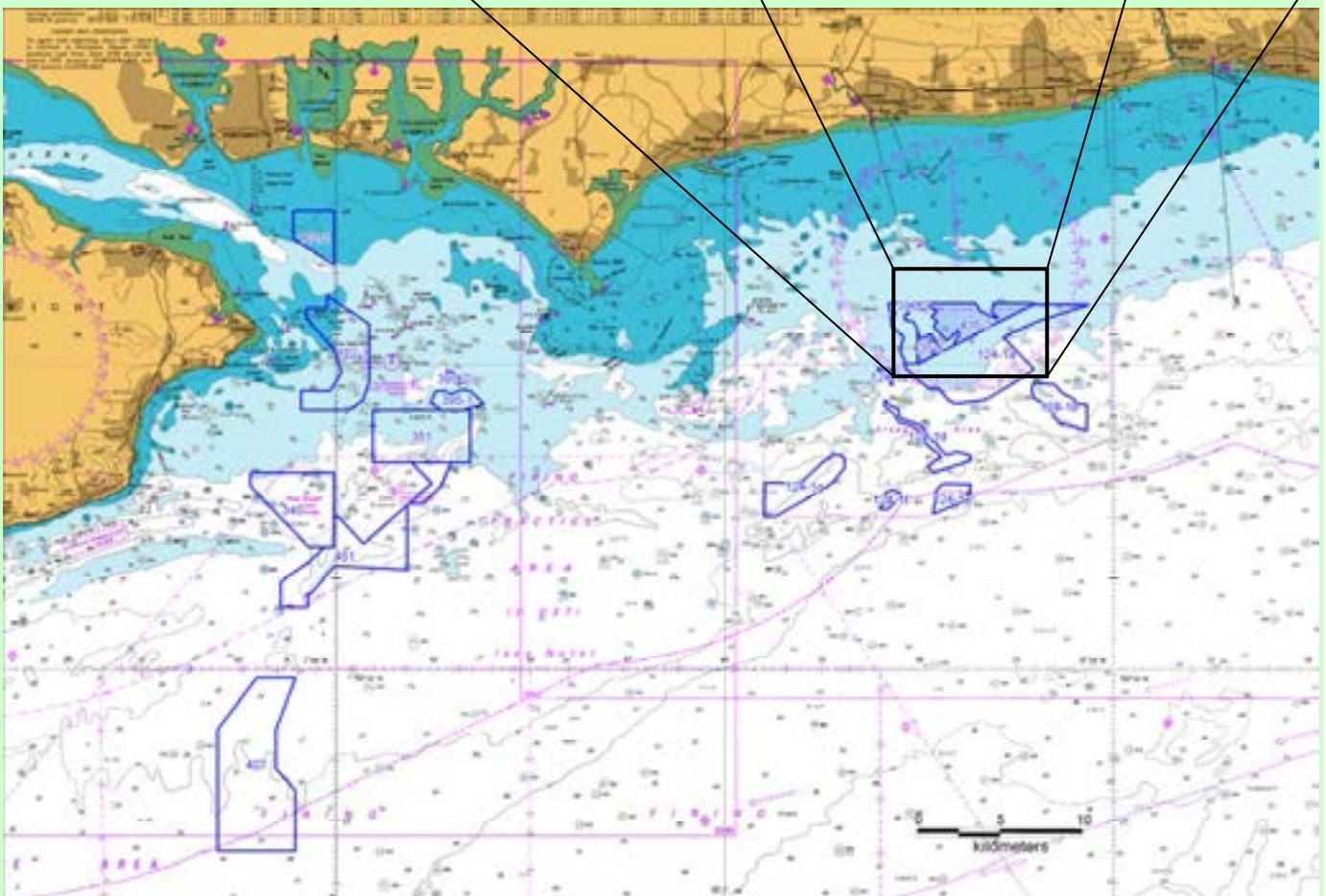
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Area 435 Site Plan

Area 435 is located as shown below. The coordinates of points that define the licence area are provided in the table on the left.

Other licence area in the region include Areas 124, 395, also on the Owers Bank, and Areas 351, 395, 340, 122 and 451 which are in the Solent to the east of the Isle of Wight.



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Area 436 Related Biodiversity Information

The image below is taken from a sidescan sonar survey of bream nest sites to the north of Area 435.

Features of biodiversity interest include the rock reef that is evident through the centre of the image (note the shadows cast by the reef). The other features of interest are the bream nests themselves that appear as small 'craters' on the image. The size of the nests varies from 2 – 3 metres in diameter. The density of nest also varies with some area showing dense nest sites whilst other areas show only sparse, or individual, nests.

