



Marine Information Network
www.marinet.org.uk

Allington House
Allington
Chippenham
Wiltshire SN14 6LN
Tel. 01249 653972

29th October 2007.

For the attention of: Nigel Bayliss, Marine and Fisheries Agency,
3-8 Whitehall Place, London SW1A 2HH.

Dear Mr. Bayliss, Area 472 Culver Sand, Bristol Channel : Aggregate Licence Application.

Thank you for your letter dated 4th September 2007, the accompanying Environmental Statement and Consultation documents, and for your invitation to comment on these documents and the present stage of the licence application i.e. prior to the Secretary of State's decision whether to grant or refuse the licence.

It is clear to us that the key fact to have emerged from the public consultation undertaken by the applicant in May 2004 is that Culver Sand, situated in the inner Bristol Channel and located approximately 12 kilometres north-east of Minehead on the Somerset coast, is a possible Annex I site (Special Area of Conservation) involving two notifiable habitats under the EU Habitats Directive. This classification rests upon the following two qualifications:

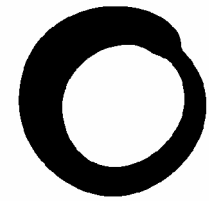
- Sandbanks which are slightly covered by seawater at all times, and
- Biogenic reef (in this case, *Sabellaria alveolata* reef).

The key question, therefore, is whether the granting and operation of a dredging licence would likely damage this possible Special Area of Conservation under the EU Habitats Directive. If there is this possibility, then it would be our clear recommendation to the Secretary of State to reject this licence application.

It is also to be noted that the applicant has changed the proposed area to be dredged, moving the proposed extraction area from the main sand bank to the minor sand bank, which lies approximately 2.5 kilometres west-south-west of the main bank. Both sand banks are nevertheless collectively known as Culver Sand, and both would appear to qualify as an Annex I Special Area of Conservation (SAC).

Issues for Consideration:

- Are both the major and minor sand banks possible SACs.
- Would aggregate extraction from the minor bank lead to damage to the major sand bank.
- Has the existence of biogenic reefs been adequately assessed and located.
- If a dredging licence were to be granted, is the monitoring regime adequate.



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Are both the major and minor sand banks possible SACs ?

From our reading of the Environmental Statement and accompanying documents, it appears to us that both the major and the minor sand banks are possible Annex I habitat on both the qualifying criteria – sandbank slightly covered by sea water all the time, and the presence of biogenic reefs (*Sabellaria alveolata*).

Obviously the relevant Nature Conservation Authorities – Joint Committee for Nature Conservation (JNCC), Natural England (NE) and Defra – are the appropriate bodies to make this determination. However, we have found no evidence in the Environmental Statement that these Nature Conservation Authorities have offered definitive advice either to the applicant or to the Secretary of State at Defra in this regard. We find this very surprising because how can a decision be made about potential damage to a marine conservation site of European Importance if the conservation status remains undefined ?

All we have been able to ascertain for the Environmental Statement is the following statement:

“Therefore, when assessing potential impacts upon subtidal sandbanks which may be designated as Annex I habitat an assumption has been made that the habitat that is most likely to be designated is the main sand bank rather than the entire sand body. Notwithstanding this the applicants are committed to monitoring both the subsidiary sand body where the application lies and the main bank feature before extraction in order to assess the status of the features and the physical processes that influence them and modify dredging activities where required. Such a discussion should take place in consultation with the relevant Nature Conservation authorities – JNCC, English Nature, DEFRA”. Ref. ES Supplement, Technical Note 4, page 4.

We find this situation to be entirely inadequate. In our view, it is imperative that the conservation status of the entire sand bank be determined before this licence application be determined. Anything less makes the conservation status of the sand bank meaningless.

Accordingly, it is our recommendation to the Secretary of State that the conservation status of the entire sandbank at Culver Sand be determined before this licence application is allowed to proceed.

Would aggregate extraction from the minor bank lead to damage to the major sand bank ?

The ES Supplement argues that the main and minor sand banks are physically discrete and not exchanging sand between one another (Ref. Annex 1, Technical Note, Section 3, page 12), and that historic bathymetric data indicates a strong sediment transport to the west which means that sediment reaching the main sand bank is derived ‘upstream’ of the proposed dredging area and thus dredging of the minor bank which lies west-south-west of the main bank will have no impact upon the sediment supply to the main bank (Ref. Technical Note 4, page 5).

Further the ES Supplement argues that dredging of the minor bank, which lies to the west-south-west of the main bank, will not result in draw-down of sediment from the crest of the main bank because these two banks are physically discrete and not exchanging sand. Hence, no draw-down is predicted (Ref. Technical Note 4, page 5).

Thus, the applicant argues that extraction from the minor bank will not lead to damage to the major sand bank.

We note that Defra, in their submission dated May 2004, asked the applicant's consultants to demonstrate how this conclusion that the major and minor sand banks are physically discrete and do not exchange sediment has been arrived at.

The response in the ES Supplement (Ref. EX4600 – Addendum, page 9) states that swathe bathymetry is only available from 2006, and that this 2006 data allied to evidence from historical charts and more recent aggregate company data shows that the main part of Culver Bank has and is moving to the north-west into deeper water; and, additionally, there has been a deepening of the saddle between the major and minor banks, suggesting an increasing separation between the major and minor banks as the north-west movement continues. Consequently, the ES Supplement argues that as the banks separate further there is a reduced potential for interaction between the dredging area and the main bank.

Whilst the above evidence may be true, we do not believe this fully answers the question and we continue to present the following questions for consideration by the Secretary of State:

○ Why does Culver Sand exist at all? The answer offered by the consultants is that, allied to the south-westward movement of sediment, the sand bank has formed downstream of islands located in the inner Bristol Channel. The Bristol Channel is a “sediment starved environment” and in Appendix 1 of the ES Supplement, written by Chris Evans, it is stated on the subject of the morphology of Culver Sand:

“Detailed bathymetric surveys show that a narrow, thin tail of sandy sediment extends from the eastern end of Culver Sand back to Steep Holm, supporting the suggestion that the bank’s position is in part controlled by the secondary flows generated by the island.”

Whilst this offers a partial, if not definitive, explanation of why Culver Sand exists where it does – surely a crucial question if one is to begin to interfere with its physical integrity and thus predict its future – it also highlights the fact that sediment is moving **south-westward** in the inner Bristol Channel.

This raises the question of how the sand in the minor bank at Culver Sand finds itself in that location? It appears to us that this sand has travelled south-westward in the inner Bristol Channel, which means that the sand that has arrived at the minor bank must have first passed over, perhaps even emanating from, the main bank given that it has been pursuing a south-westward direction.

In our opinion, this does not exactly square with the assertion that the major and minor sand banks at Culver Sand are entirely physically discrete and do not exchange material. Certainly sand may not pass from the minor bank to the major bank (such movement would be against the dominant flow), but it does seem to us that sand may move from the major bank to the minor bank (which would conform with the dominant flow), and that this movement may be intensified if aggregate extraction were to occur on the minor bank and thus induce “draw-down”.

In response to Defra's questioning of this matter in May 2004, it is to be noted that the ES Supplement has asserted that because the main bank is moving north-westward into deeper water (see above) there has been a deepening of the saddle between the minor and major banks, thus making the exchange of sediment less likely.

However, if one examines Figure 11 in the ES Supplement (Ref. EX4600 Addendum: *Gross morphological changes between 2000 and 2006*, source: Resource Management Association), one finds that the minor bank has also moved north-westward into deeper water, and is displaying the same morphological and behavioural pattern as the major bank.

Thus, in our opinion, the assertion in the ES Supplement that this north-westward movement of the main bank will result, in general terms, in a less likely exchange of sediment is not warranted, and is not factually supported because both the minor and major banks are displaying the same morphological behaviour.

Thus, we are of the belief that the ES Supplement has failed to resolve outstanding questions about the possible exchange of material between the minor and major banks and that, at best, such statements by the applicant and its consultants are predictions, and nothing stronger. In short, there is no conclusive factual basis for the belief that sediment is not exchanged between the minor and major banks.

Accordingly, it is our recommendation to the Secretary of State that further research into the exchange of sediment between the minor and major banks is required, and that the data which exists at present is insufficient to guarantee the physical integrity of this possible Annex I habitat.

Has the existence of biogenic reefs been adequately assessed and located ?

The ES Supplement states:

“S.alveolata was recorded as an encrusting form at the majority of stations where it occurred. Only at Station 38, located outside of the proposed licence block and to the south did it occur as an erect reef structure, approximately 10-15 cm in height.”

In fact, *Sabellaria alveolata* was found in an encrusting form at 12 out of the 13 stations where it was located, and the main site – Station 38 – is actually within the topographical structure known as Culver Sand. Station 38 lies approximately 2 km south of the main bank and 2km east of the minor bank.

There is therefore clear evidence that Culver Bank, overall, qualifies as an Annex I reef habitat.

Two additional matters need to be considered in this regard:

- Firstly, whilst Station 38 may be the only fully developed *Sabellaria alveolata* reef that has been recorded at the present time, it must be borne in mind that reefs are developing entities, and that they possess nascent immature forms before they arrive at a fully developed state. The conservation objectives for an Annex I habitat would undoubtedly seek to protect these nascent forms of reef because it is from immature structures that mature structures are born.
- Secondly, it is necessary to ask how comprehensive the sampling for *Sabellaria alveolata* reefs has been because, if sampling is taken on an individual spot basis rather than on the basis of a comprehensive overall survey, nascent and indeed mature reefs may have been missed. It is not clear from the ES Supplement how comprehensive the survey has been, but it is clear that it has been undertaken on a spot basis. Thus unsurveyed areas will definitely exist. Further when it comes to the proposed pre-dredge survey, it is clear from Figures 5 and 6 (Ref. ES Supplement, Annex 3, Pre-Dredge and Repeat Monitoring Plan) that the minor bank will be spot surveyed in just six locations (the area measures 3.775km²) and the total for the area that includes the main bank is 15 spot sites.

In our opinion, it appears that the survey of Culver Sand, (i.e. main and minor banks), for *Sabellaria alveolata* reefs is incomplete, and that the full extent of this Annex I habitat remains only partially known, both at the present time and under plans outlined for the pre-dredge survey.

Accordingly, it is our recommendation to the Secretary of State that there is already clear evidence that Culver Sand overall qualifies as an Annex I habitat, and that the surveying of the sand bank for this Annex I habitat is substantially incomplete. Therefore to grant an aggregate dredging licence at the present time would expose this Annex I habitat to real and immediate danger.

If a dredging licence were to be granted, is the monitoring regime adequate ?

Given the foregoing observations, it is essential that any monitoring regime must, should a licence be granted, be very robust.

In our view, it is imperative that monitoring ensures the protection of the two Annex I habitats, and enables a complete cessation of dredging to be implemented should any damage to these habitats become evident. These habitats are:

- Sandbanks which are slightly covered by seawater at all times, and
- Biogenic reef (in this case, *Sabellaria alveolata* reef).

With respect to the sandbanks which are slightly covered by seawater at all times, damage will inevitably occur to the minor bank (because this is where dredging will be located) and may easily occur to the main bank.

In the case of the minor bank, the applicant asserts that after the 15 year period of the licence, the crest of the minor bank will have fallen by no more than 2.5 metres, with an average lowering of 0.17 metres per year (Ref. ES Supplement, Annex 2, EX4600 – Addendum, page 10). Therefore, if dredging were to be permitted on the minor bank, annual monitoring would have to ensure that this lowering of the bank crest does not exceed 0.17 metres per year, otherwise dredging should be terminated.

In the case of the main bank, there would have to be no lowering at all of the bank crest. Annual monitoring must establish that no erosion is occurring, otherwise dredging should be terminated.

With respect to the biogenic reefs, whose full extent is yet to be established, there must be no damage. Once the baseline is comprehensively established, there must be no damage to these reefs, either in mature or immature form, otherwise dredging should be terminated. Monitoring to establish no adverse impact must be undertaken annually.

Under the present monitoring proposals submitted by the applicant (Ref. Appendix K1), monitoring of these Annex 1 parameters will occur in Year 2 (Active dredged area only), Year 5 (Entire area), Year 8 (Active dredged area only), Year 11 (Entire area), Year 14 (Active dredged area only) and will then be followed by a post-dredge survey (Entire area).

In our opinion, this proposed monitoring regime is substantially deficient, and will allow damage to the Annex 1 status to escape attention for a large period of time, thus forestalling any ability to take remedial action. We regard this monitoring proposal as unacceptable.

Accordingly, we recommend to the Secretary of State that there should be annual monitoring of the integrity of the two types of Annex I habitats, and that dredging should cease if any annual survey reveals that damage has occurred to those habitats.

Conclusion:

We are surprised that an aggregate dredging licence is being considered in and around a site which contains two different types of Annex I habitat under the EU Habitats Directive. We would have expected the existence of these habitats to have prevented this application proceeding to this stage.

We are also surprised that an application of this kind is being considered when the UK Government has issued a White Paper in preparation for the introduction of a Marine Bill which will establish Marine Conservation Zones based on criteria which include, first and foremost, Annex I sites under the EU Habitats Directive.

We recommend to the Secretary of State:

- 1. That the exact nature and extent of the Annex I habitats in and around Culver Sand be determined by the National Conservation Authorities before this licence application is considered further.**
- 2. Once the exact nature and extent of the Annex I habitats is established, the aggregate dredging licence application be considered and determined on the basis that no damage to the Annex I habitats will occur and that, where there is uncertainty about whether such damage may occur, the Precautionary Principle be applied.**

Yours sincerely

S. D. Eades
On behalf of
MARINET, the Marine Network
of FOE Local Groups and affiliates.