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**Ref: Your letter of 14<sup>th</sup> March 2007 Reference RMAR21 to Stephen Eades, MARINET, copied to myself.**

**Subject: Licence renewal of marine aggregate dredging Area 430 (East of Southwold) – Scoping Report.**

Dear Anne Morton,

Thank you for the copy of your letter to Stephen Eades, MARINET of 14<sup>th</sup> March 2007, Reference RMAR21, for the copy of your scoping report and for placing me on the list of consultees for all future correspondence. As Stephen Eades is now fully preoccupied with concerns on the Marine Bill, he has asked me to respond to your letter. We are in full consultation on this matter.

I would wish to come back to you on your responses to the points 1 to 11 made to you by Stephen Eades when he stated concern on the level of adequacy given in Table 5.1, 'Potential Impacts and EIA Scope'. On Point 1, he wrote to you:

*"1. We have asked for a full bathymetric study of the near shore sandbanks (we believe that this should be for all sandbanks between the site and the coast, both to the west, north and south of Area 430) recording changes that have occurred since the original licence was granted. Could you please advise whether this is within the scope of the EIA" and ...*

"2. We have asked to see a wave model, based on current bathymetric data and current meteorological data. Could you please advise whether this is within the scope of the EIA"

This you have replied to by pointing out that a full bathymetric survey and wave model was conducted for the original EIA. This is accepted, but we would wish to point out that because of the subsequent dredging and the cumulative effect of this, the condition then found would no longer be true today. Hence, it is essential to update this bathymetric survey and wave model.

**Accordingly, we request:**

- 1. You provide us with a complete copy of the *original* bathymetric survey and associated wave model ( at an early date please )**
- 2. You reconsider your position and incorporate the need for a full bathymetric survey and updated wave model in your forthcoming EIA. Unless you do this we will regard your Coastal Impact Study accompanying the current licence application to be seriously deficient in scientific data.**

Indeed, we feel that the very provision of such evidence is likely to give credence to our concern that because of the deepening of the sea bed and consequently altered wave patterns, and thus changes in coastal currents, added to by the enhanced beach slope, an impact upon both the Sizewell Bank and the shoreline of the general area is now highly likely.

You have also stated:

*"A full record of changes to the profiles of the coastline since the original licence was granted (point 3) is **not** a requirement of the current GV procedure and therefore **will not** be included in the scope of the EIA"*

Whilst this is not specifically demanded under the MMG2 report, I would point out prior statements made by DEFRA such as where under 'Safeguarding our Seas', 'A strategy for the Conservation and Sustainable Development of our Marine Environment', to be found by going to DEFRA's website at :

[http://www.defra.gov.uk/environment/water/marine/uk/stewardship/pdf/marine\\_stewardship.pdf](http://www.defra.gov.uk/environment/water/marine/uk/stewardship/pdf/marine_stewardship.pdf) ,

DEFRA states:

*Human activities and demands that we place on the marine environment.*

*1.16 Past management of our oceans and seas has often been fragmented, sectorally-based and driven by short-term economic gain through policies such as yield maximisation. Action was taken only when scientific evidence proved beyond reasonable doubt that there was a problem – with the effect that it was often too late to devise and implement a solution.*

*And stakeholders were not always properly involved in policy-making and implementation ... this gives grounds for concern that direct or indirect inputs to the marine environment may harm human health, living resources and marine ecosystems or other legitimate uses of the sea, even when there is no conclusive evidence of a causal relationship between the inputs and the effects.*

*1.20 Where scientific evidence is not conclusive, we need sensibly to apply the precautionary principle. This means, for example, taking preventive measures where there are reasonable grounds for concern that direct or indirect inputs to the marine environment may harm human health, living resources and marine ecosystems or other legitimate uses of the sea, even when there is no conclusive evidence of a causal relationship between the inputs and the effects.*

You will know from the concern expressed earlier by myself, again more recently by the 12th March '07 study conducted by the Flood Hazard Research Centre at Middlesex University for Greenpeace (seen on our website under <http://www.marinet.org.uk/latestnews.html#eaf2> ) and by the October 16th '07 Public Meeting meeting at Saxmundham on the topic, that there exists considerable disquiet and trepidation that dredging off this area could bring about erosion of the shoreline so undermining the Sizewell A and B nuclear power reactors.

You will recognise that since offshore dredging commenced that erosion of the beaches either side of Sizewell has escalated enormously, but that hitherto Sizewell itself has been offered a degree of protection by the offshore Sizewell Bank. Eminent Coastal Geomorphologist Professor John Pethick has publicly stated that it is essential that this bank is not interfered with by dredging otherwise more erosion will result.

I am sure you do not need to be told of the potential consequences of the undermining of the nuclear installations at Sizewell, and that every safeguard possible must be taken to ensure its stability. Thus, it would appear clear that any change in wave patterns and the integrity of this offshore sandbank should be fully and thoroughly assessed in the EIA for Area 430.

**With the above resultant potential in mind, we would also ask that you reconsider this rebuttal, and to conduct a fully comprehensive and thorough investigation into, and obtain a full record of changes to the profiles of the coastline since the original licence was granted. We ask that this record should contain a record of all changes to beach profiles over the wider coastline area. We regard this as an essential feature of a Coastal Impact Study.**

We now know that quite modest dredging levels can bring about coastal erosion at great distance from the dredging site. (see work by the US Corps of Engineers where dredging 14 miles from the shoreline resulted in the severe erosion of previously accreting beaches 40 miles distant to the south of the dredging site <http://www.marinet.org.uk/mad/scientificstudies.html#uns> )

The SNSSTS (Phase 2) states:

L2631/06 ENGLAND — East Coast — Sizewell Bank and Sizewell Bank Southeastwards

*Rates of cliff erosion are very variable, being nothing either at or close to the nesses but elsewhere are highly variable. At Covehithe, between 1882 and 1903, 5.2metres were lost each year though it fell to 2.7metres between 1925 and 1952. At Benacre between 1925 and 1958, 5.8metres per year were lost. Further to the south at Dunwich, rates of erosion are just as variable being between 0.06 and 3.53 metres per year between 1587 and 1975, an average of 1.15m/year. At Easton Bavents, rates of approximately 2.80 metres are the average since 1849 (Carr 1979). **However, recently due to the protection given by the enlarged Dunwich/ Sizewell sandbanks, erosion has decreased immensely.***

Further:

*Current meter data from the shallow near-shore Sizewell-Dunwich area, off the coast of East Anglia UK, have been harmonically analysed, enabling the tidal and residual currents of the region to be described. The area is close to the amphidrome in the southern part of the North Sea and this dominates the tidal current pattern. Thus the astronomical tides are mixtures of standing and progressive waves and for  $M_2$  are in the proportion 3 2. The tidal currents are nearly rectilinear, flowing parallel to the coast with maximum midwater velocities up to  $1.20 \text{ m s}^{-1}$ . Estimations have been made of the **tidal energy flux through the area and of the frictional dissipation at the seabed**, showing that energy fluxes are weaker inshore. The residual circulation is complex although there is evidence of an anti-clockwise eddy over the seaward flank of the Sizewell Bank.*

Your reply to our point 4 we are happy with, but would ask you the intended destination and use of the aggregate intended to be dredged.

Your reply to our point 5, the need for a full statement of the physical resource available at Area 430, and the changes that have occurred to this resource since the original licence was granted, we still have concern with, and would point out that a post prior dredging finding is now necessary as undoubtedly the silt and wash off material resulting from the previous dredging will have smothered the seabed for some considerable downtide distance, so resulting in a degree of damage to the benthic community and eco-system.

This is also covered to an extent in point 6 (for the current sampling of the benthic community to be cross-referenced to the data at the time of the original application) A comparison of findings will provide a valuable guide to the prior impact.

Apropos point 7, we asked for a full and thorough examination of the ecological structure of the site, with analysis of whether the benthic order (hierarchy of species and food chain) and if that had been in any way affected by dredging, and that this statement of ecological structure should reflect all species, from meio- and microfauna to marine mammals.

We trust that the report on the more recent 2006 survey will give the full and adequate comparators to that performed in 2004.

Given your agreement that the survey undertaken by Marine Ecological Surveys in 2004, along with subsequent work in 2006, will inform the forthcoming EIA, **we request that you make available to us, at an early date, a copy of the 2004 MES survey along with the subsequent 2006 work.**

As regards our point 8, where we have asked for a clear statement of the extent of knowledge of fish and shellfish recorded at Area 430 and its surroundings at the time of the original licence application. It would appear that you have this in hand, but we would add that the main fish (sole) are migratory, and could be missed out unless a year round survey was instituted.

We feel it is most important that the fish survey be referenced to the full yearly cycle otherwise your study will be omitting important factual data, and thus be scientifically flawed. **Accordingly, we request that you reconsider your statement that “*sampling of the fish and shellfish living in Area 430 throughout the yearly cycle . . . has not been included in the EIA*”, and we request that this specific study be included. We note that a study of commercial fisheries and marine ecosystems is an essential part of MMG2.**

Our point 10 is also thus included for such reconsideration.

In respect of our point 11 which asks for " a full historical record (extending from the time dredging first commenced in the Great Yarmouth area) of the use of the near and offshore sandbanks (we believe that this study should encompass all sandbanks between the site and the coast in all compass directions from Area 430) by birds and marine mammals both in the dredging area and its surroundings, and for a study of the changes that have occurred during this historical period up until the present time. We have asked for a similar study over the same historical period and using the same principles of study in respect of elasmobranches"

We believe that this historical record is essential in order to understand the changes that are occurring in the area. A number of the birds and mammals and elasmobranches are potential European Habitats/Wild Birds Directive protected species, and therefore their historical use of the near and offshore sandbanks is essential information. All this information is available from public historical sources, and therefore available to you. **Accordingly it is our clear recommendation and request to you that a properly designed EIA should contain this information and be properly evaluated.**

Thank you for confirming that our understanding of Table 5.1 is correct and that the findings of the 2006 survey will be included in the EIA.

Finally I would point out that under 'A Strategy for the Conservation and Sustainable Development of our Marine Environment' it is stated:

*The key issues an EIA needs to address include:*

- minimising the overall impact of dredging by reducing the risk of cumulative impacts from multiple dredging operations and other human activities, minimising the area being dredged at any one time, and minimising the total area permitted for dredging*
- controlling dredging operations through the use of legally enforceable conditions attached to dredging permissions*
- requiring operators to monitor, as appropriate, the environmental impacts of their activities during and on completion of dredging.*

Your consideration of the above points and your response will be most welcome.

I would be grateful if you would copy your reply to Stephen Eades.

Yours Sincerely, o.b.o. MARINET and the NSAG

Pat Gowen