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17th June 2010.

For the attention of: Justina Southworth, Marine Environment Consultant, Emu Limited,
1 Mill Court, The Sawmills, Durley, Southampton, Hampshire SO32 2EJ.

Dear Justina, East Anglian Regional Environmental Assessment : Scientific Studies.

Thank you for a copy of your letter dated 14th June 2010 to Pat Gowen, MARINET member, concerning the East Anglian Marine Aggregate Regional Environmental Assessment (MAREA). Pat Gowen will reply separately, and specifically to your request for a face to face meeting. In his email reply to you, dated 15th June 2010, Pat has stated :

“It would seem to be helpful if both Stephen Eades, our MARINET coordinator and perhaps another local member could meet with you at the same place and time, ideally on the part of the East Anglian coast where you could see at first hand the damage that has resulted.”

It is not easy for me to travel to East Anglia, and therefore I must advise you that at the present time it is unlikely I will be able to be involved in these face to face meetings.

However, I do not think that this is an impediment to your understanding of the issues. Let me explain why.

MARINET, via Pat Gowen and myself, have repeatedly requested ever since the Scoping Report Stage of the REA that Emu Ltd and the Anglian Offshore Dredging Association (AODA) include in the REA a range of scientific studies which will determine whether the offshore dredging is or is not having an adverse impact on the East Anglian coastline.

This specific request for these scientific studies was made to your colleague Bruce Tomlinson at the time of the Scoping Report, and the request was turned down. We appealed against the draft Scoping Report which arrived at this conclusion, and Bruce advised us that our appeal could not be considered until AODA had determined Stage Two of the REA study as Emu Ltd did not have the funding at the time.

Following the advice dated 23rd June 2009 (copy enclosed) from Emu Ltd by Steve Freeman that Emu Ltd had received the Stage 2 contract for the REA from AODA, we wrote again

to Bruce Tomlinson on 6th July 2009 to request that our appeal concerning these scientific studies be considered.

We received no reply from Bruce Tomlinson to this request, so we wrote to the Minister at Defra on 1st February 2010 to ask that he instruct that the East Anglian REA include the scientific studies which we believe are essential in order to determine whether any adverse impact on the coastline is occurring due to offshore dredging. The Minister replied that the REA is a voluntary arrangement and that he had no powers to intervene – copies of this correspondence are enclosed.

So, we wrote again to Bruce Tomlinson on 16th April 2010 to inform him of these matters, once again requesting that Emu Ltd include in the REA the scientific studies which we have requested, copy enclosed. These studies are basic science and not exceptional requests, and we believe that it is in the interests of the aggregate companies to commission these studies in order that they may **objectively verify** that their dredging has no adverse impact on the coastline.

Once again, Bruce Tomlinson did not reply. So, on 29th May 2010 we have written to the Chief Executive of the British Marine Aggregate Producers Association (BMAPA) to advise BMAPA of these matters, and to seek a meeting with BMAPA's Chief Executive in order to resolve these outstanding requests regarding the REA, copy of letter enclosed. A reply from BMAPA is currently awaited.

Therefore, if you will address the matter of the scientific studies which we have requested and commission them as part of the REA we believe all outstanding issues can be resolved.

Let me re-state, for your benefit, what these studies are:

1. We require a scientific study examining, on a historical basis, whether there is any correlation between dredging levels in the offshore area and beach coastal erosion measurements, with erosion measurement for both before dredging commenced and since dredging commenced. We believe that all the scientific evidence for this particular study exists, and it simply requires commissioning as part of the REA. If there is no correlation, then the dredging companies will have evidence that they can be absolved.
2. We require a scientific study of whether there is any measurable transfer of sand from the beaches where erosion is occurring to the offshore dredging sites. This study is performed by means of tracer material placed on the beach, and its movement monitored and recorded. This technique involves pre-existing established scientific practices, and has already been undertaken successfully elsewhere (Fylde coast, Lancashire). The dredging companies state that there is no movement of material from the beaches to the dredging sites, and this study would confirm whether the companies are correct.
3. The REA must review the assumptions built into the computer modelling which informs the REA with regard to the offshore wave regime. The offshore wave regime and the height of waves arriving on the beaches is a key factor in coastal erosion. If the sea is deepened by removal of the seabed, the wave regime can be intensified and cause increased coastal erosion. This possibility needs to be verified. More importantly still, the existing wave regime model (originally formulated in connection with the licence application for Area 401/2 and applied to all other application sites) is now many years old, and takes no account of changes that have occurred to the seabed since it was originally calculated. Furthermore, our own studies of the original Area 401/2 wave regime model has identified that there were significant flaws in the data used to calculate the

model (land-based meteorological data rather than offshore meteorological data was used which is a valid procedure, provided it is adjusted to allow for the increased wind speeds that occur offshore and that the data is contemporaneous – however the wave model did not state that the wind speeds had been adjusted to allow for the “offshore weighting” and the land-based data was not contemporaneous but several years old). Therefore, there is a clear need for the REA in 2010 to revisit the question of the offshore wave model. It simply is not acceptable that future licence applications are made on the basis of an out-of-date wave model, and a wave model too that suffers from serious suspicions as to its scientific integrity in its original conception. If the aggregate companies wish to convince as to their commitment to science, then a new wave model would be serious evidence of that commitment.

4. Scroby Sands, which lies some distance offshore from Great Yarmouth, used to be a significant offshore sandbank always lying permanently above the high tide level, and measuring 1 mile in length and one-quarter mile in width. It had sand dunes, resident terns and seals, and was a significant physical and ecological feature. Periodically storms would erode the exact dimensions, sometimes submerging the whole sandbank, but over time the original feature and its dimensions were always re-established. However, following the commencement of offshore dredging in the 1960s the erosion that followed one such particularly severe storm was not followed by re-instatement of the sandbank permanently above high tide level, and this significant ecological feature has never returned. At the present time, there is strong circumstantial evidence that offshore dredging, which removes sand from the surrounding area, is to blame. This evidence needs to be very carefully examined from a scientific perspective and correlated against wave regime predictions and measurements (an updated version, see item 3 above). If the REA were to do this, it would gain substantial credibility and acceptability. Without such a study of Scroby Sands, the belief will always be that the REA has been afraid of the truth and ran away from it.

It is clear to us that all of the above scientific studies are essential. All are scientifically practicable, and indeed germane to the questions that the REA is meant to be addressing.

If the REA and the aggregate companies wish to convince people that they are responsible and do take decisions on the basis of science, then these studies should and must be part of the REA.

Whether I can or cannot join Pat Govern in your meeting with him is not really the issue. The issue is whether the REA will address these specific matters. If I am present, I would be saying to you exactly what I have said here. And the answer I would require on behalf of MARINET is that you and AODA will undertake these studies.

I sincerely hope that you will meet these responsibilities, and we await your advice.

Sincere regards,

Stephen Eades.
On behalf of MARINET.

