

Mr. Matthew Louis
Planning Directorate
Minerals & Waste Planning Division
Office of the Deputy Prime Minister
Zone 4/B1
Eland House
Bressenden Place
Victoria
London SW1E 5DU

Our Ref: MARINET/NSAG4

22nd February 2006

APPLICATION FOR A GOVERNMENT VIEW: AREA 401/2 LICENCE

Dear Mr. Louis

My group have been given to understand that a list of those opposing the application for a government licence to dredge Areas 401/2 was sent out to all protesters on 16th January 2006, and that responses were supplied to the points raised by the objectors who were then given a further opportunity to respond to the UK Government ODPM (the licensing authority) on the above Re Licensing application.

Apparently the earlier communication of objections sent to you by me representing the North Sea Action Group and my side of MARINET were not included in the follow up presentation, neither did we receive a copy of the letters, technical notes and accompanying HR Wallingford Coastal Impact Study Report EX 5030 that should have covered my points of objection licensing dredging in Area 401/2. Furthermore, the objections placed at the meeting on the topic organised by Hanson at Great Yarmouth Racecourse on Tuesday 19th April 2005 do not appear either.

Thus I have appended my communication of 5th March 2005 sent to MES at the footnote of this document.

Having not been addressed, I must assume that these points were not considered, and that this is the reason that no satisfactory answers have been received, and that these key questions have been ignored. When these matters were considered by DEFRA I would always receive a copy of each new dredging application, but this has ceased since your department took over the role. It would thus appear that you are reluctant to address the better informed points of contention because of the difficulty in providing a satisfactory response.

However, I was made aware of the further consultation by local contacts, and so take this opportunity to remit our concerns, hoping that these will now be included.

Our members (and myself as the loser of our coastal residence due to offshore dredging induced erosion) are extremely concerned regarding the

increasing rapid erosion of our beaches, dunes and soft sand cliffs coming about in a prior accreting shoreline area only since the commencement of offshore aggregate dredging offshore to our coastline, as fully evidenced in my earlier submission to EMU, (HAML's Environmental Consultants). Over 135 million tonnes of offshore aggregates has been dredged from the Great Yarmouth and adjacent areas over the last 15 years, a far greater level of exploitation of the seabed than any other area in the world. As a consequence the north, north-east and eastern sections of the Norfolk coastline have suffered the greatest level of erosion in Europe. Most of this coastline has only vulnerable soft sand, dunes and soft cliff as its sea defences, which have suffered by undermining to allow a far more accelerated rate of coastal erosion.

Two years ago the BMAPA announced that aggregate dredging would cease offshore adjacent to Great Yarmouth (Area 401/2 and adjacent) because of exhaustion of suitable aggregate, although stating their concern to be the environmental impact. Yet HAML are now additionally applying to renew their license to continue dredging Area 401/2. It thus has to be assumed that in the absence of any new stable deposits, this new source must have newly arrived at the extraction point from material eroded from the shoreline due to previous cumulative dredging operations.

Neither NSAG, the North Sea Action Group, nor MARINET, the Marine Environmental Information Network are satisfied by Emu's explanations in their letters, technical notes and accompanying HR Wallingford Coastal Impact Study Report EX 5030 and consider that our objections listed in our earlier submitted returns have not been satisfactorily addressed.

Our objections are based on awareness and the recognition that: -

- (a) Offshore Marine Aggregate Dredging Accelerates Coastal Erosion.
- (b) Offshore Marine Aggregate Dredging is the main cause of beach draw-down and the consequential loss of protective beach sand and shingle.
- (c) Offshore Marine Aggregate Dredging impacts and is exploitive of the natural longshore drift and the offshore/onshore sediment movement from the offshore sand banks and natural sediment flows.
- (d) Offshore Marine Aggregate Dredging is in stark contrast to the Draft Kelling to Lowestoft Shoreline Management Plan (SMP) policy of "No Active Intervention" for area unit 3b14 (Winterton to California).

These points are evidenced by the published results of empirical research conducted by bodies not aligned to the licence needs of the dredging companies, e.g: -

- (1) Dredging as far as fourteen miles offshore caused erosion of previously accreting shorelines. The Study for Cape Canaveral harbour made by the US Army Corps of Engineers (Final Feasibility Report and Environmental Impact Statement – August 1990) evidenced that modest dredging of a channel 14 miles offshore created a large, hydraulically self-sustaining open pit mine offshore serving to denude the onshore coastline. The report concluded that

even though this dredging took place 14 miles from the coastline and it was a relative small project it brought about massive shoreline changes stopping previous accreting and causing highly significant coastal erosion.

(2) The EUrosion Project Report “Living with Coastal Erosion – Eurorosion Policy Recommendations December 2003” states clearly in section 2.2.2 (ii) Aggregate extraction.

Dredging of river and seabed for navigational purposes (i.e. deepening navigation channels) or constructional purposes (e.g. sand and gravel mining) removes an important amount of sediments. This creates a sediment starvation which is in certain circumstances compensated by (re)activation erosion processes along the shore areas. This has proved to be the case in a significant number of cases including Cove do Vapor (Portugal), the Western Scheldt estuary (Netherlands and Belgium), Donegal (Ireland), Cavado (Portugal), **and North Norfolk (UK)**. In some cases, dredging activities, by modifying the water depth in the near-shore area, induce wave refraction which in turn modifies the long-shore and cross-shore sediment transport patterns.”

An addendum to the EUrosion Project Report dated December 2005 stated “Since the EUrosion report was written two years ago, following studies of further UK dredging in the Wash and off Great Yarmouth, it has been found that the main original North to South sediment flow has all but ceased”.

A denial was given to the point that offshore dredging is eroding Scroby Sands and interrupting the sediment flows to Scroby Sands and the offshore Sand Banks, but the evidence can clearly be seen. Prior to the commencement of commercial scale Offshore Aggregate Dredging was some three metres higher and five times greater in area, with marram, Sandwich Tern, Little Tern and seal colonies present. Even on the highest tides these remained visible. Now the former large sand bank it is only visible on the very lowest tides.

This major sand bank (and the adjacent previously shallow areas) promote the breaking of the larger waves, preventing these reaching the coastline. (The eroding power of a wave is proportional to the height of the crest).

Furthermore, it has just been revealed by Hanson that between 2003 and 2004 the seabed of the dredging area had been lowered by 3 metres, and that by 2005 this had increased to 5m in actively-dredged zones, despite the company only extracting 0.9 million tonnes during the five years. Such deepening of the seabed is cumulative, and promotes greater eroding waves and so increases the slope of the shoreline, so promoting a greater beach draw down with the consequent reduction of the beach volume and area, and the destruction of protective sand cliff and dunes.

It is noted that the Coastal Impact Study Report submitted with Emu Environmental Statement ‘Area 401/2 Dredging Licence Coastal Impact Study Report EX 5030 August 2004’ carried out by HR Wallingford states “A system of sandbanks between the dredged area and the coastline will prevent the

direct interchange of material between the coast and the dredged area". This is factual, but it also tells us that the loss of these sandbanks due to dredging permits such direct interchange of material between the coast and the dredged area, and there is evidence that this is exactly what has come resulted.

The offshore dredging companies operations along this coastline are undoubtedly accelerating the erosion of the offshore sand banks, beaches and coastline (see evidence in my original letter below) and in our opinion this environmental destruction constitutes "Active Intervention". We therefore ask the ODPM to stop all offshore dredging along this coastline pending the outcome of a public inquiry led by an independent expert.

Other points arising: -

The commencement of Area 401/2 is within 17 km of the shoreline, not 22 km as claimed. (A similar exaggeration was applied to Area 201, when a distance from the shoreline of 7 km was given but which is fact is but 4 km). But increasing the distance from the shore only causes the resulting erosion to commence later, but over a far wider coastline length for a much longer time. Even if offshore dredging ceased today, we would continue to experience erosion for at least the next ten years.

(The distance of 22km offshore referred to in Emu reports as the location of Area 401/2 is to the centre of the area, the nearest edge of this area to the shoreline is 17km.

Evidence of previously offshore dredged areas and detailed in this letter concludes that the distance of offshore dredging from the shoreline dose not prevent it from causing accelerated coastal erosion but merely increases the time delay before coastal erosion occurs).

Because of the over exploitation of the seabed during the last 15 years and its impact to the vulnerable soft sand and marram grass coast line, we ask for a moratorium to be placed on all offshore dredging operations along the Norfolk coastline unless it could be conclusively proved that such damage does not result.

In view of the overwhelming number of outstanding objections (over 200 mainly from the general public) to the renewal of the licence for HAML Marine Aggregate Extraction Licence Area 401/2 (A&B) we strongly request that a public inquiry, led by an independent expert who is not under contract, being paid by or has previously carried out studies for HAML be instigated if/before any extension of this licence is considered or contemplated.

Area 401/2. - Physical Aspects in the main

Destination. The aggregate is to be landed "at a number of UK coastal ports and the Thames estuary and at mainland Europe, Amsterdam, Ostend and Bruges" indicates that much is for export, and therefore no overriding national requirement is evidenced.

Despite the distance of the dredging area being 17 km from the coastline off Great Yarmouth, erosion will still come about, albeit delayed and diluted through time and over the wider shoreline area.

It is essential to maintain the protection given by the offshore sandbanks to Great Yarmouth, Caister, California, Scratby and Winterton in particular, as these areas are rapidly being eroded already. Recent survey evidence has shown that seabed in the dredged area has dropped by 5 metres already and that the Scroby sandbank has greatly diminished. The increased sea bed depth and the sandbank reduction will mean greater waves, therefore greater drawdown of shoreline beaches.

Hanson claimed at their Great Yarmouth presentation at Great Yarmouth Racecourse on Tuesday 19th April 2005 that the main Tidal movement at Great Yarmouth is offshore, thence further out to sea eastbound, then northbound and then westbound (inland) toward the north east Norfolk coastline.

Thus the sediment removal from offshore Great Yarmouth will deplete Happisburgh and south-easterly from there on along the coastline deprived of littoral drifting sediment on the coastal south going tide. It is evident therefore that the severe erosion from Happisburgh to Winterton and beyond has been brought about by dredging off Great Yarmouth, this creating the sediment loss.

In the summary of assessments of impacts under Physical processes, we hold that: -

Point 1. That the continued dredging **will** cause beach draw down and allied effects, e.g coastal erosion, and that the significance stated as 'no impact' is clearly not so.

Point 2. That dredging **will** cause loss of the shelter provided by the offshore sandbanks, so the significance stated as 'no impact' is incorrect.

Point 3. That the dredging **would** cause changes to local wave climate and therefore to wave conditions at the coast, thus the significance stated as 'no impact' is clearly not so.

Point 4. That continued dredging **would** cause changes to the tidal currents, and thus dredging of this area would most probably have an impact upon sediment movement and erosion creation.

Point 5. That it **would** cause disruption of the sediment to and from the coast

Point 6. That continued dredging **would** compromise sea defences on adjacent coastlines by leading to undermining brought about by beach draw down and by the depleted beach depth allowing the sea to now reach the toe of the defences..

MARINET and the NSAG therefore refute the significance given of 'no impact' or 'low impact' and the suggestion that mitigation and monitoring is not required. Unless this is done and actual practical research is undertaken in place of assumptions, it will continue to be claimed that the adverse effects of dredging results do not result.

A further point (Point 9), given by the dredgers as a reason for discontinuing aggregate dredging in this general area, is that the undesirable sediment washed overboard from the dredgers has resulted in a far greater ratio of silt to coarse granular sediment. This ratio, increasing with ongoing dredging, has now changed the bed sand from a cohesive format to that of a far finer silted nature, which when coming ashore, as some still does in the months of summer, decreases the ability of the beaches to remain stable under the greater and therefore more erosive waves that will result. As a result of the deeper offshore sea water and the loss of wave breaking banks, this created instability will result in a further increase the slope of the beach and a foreshortening of its extent.

That 0.5 metres of aggregate resource is promised to be left is a positive step, but, as the binding plant root structures will be destroyed by the dredging, and the coarse silt required for concrete manufacture will be replaced by the finer silt and sand washed off and overboard as waste from the dredger, the rapid tidal movement in that area will reduce that coverage down to the chalk, so that the seabed flora and hence the fauna will no longer be able to have a foothold to restore the damaged environment.

That dredged areas do not recover has been evidenced by CEFAS, who found no restoration after three to four years, and by Rodney and Graham Burns, fishermen of Aldeburgh, who have found that the area dredged off Orford, Suffolk eighteen years ago has still not recovered.

The reduced period of dredging offered as a compromise is welcome, but will not prevent irreversible damage. It is in the top layers of the coarse sand that spawning occurs, and that will be stripped by dredging. It is considered that although no signs of species repopulation of the sea bed have resulted even eighteen years following dredging, an opportunity should now be given to at least attempt to allow the recovery. Because of the over exploitation of the seabed during the last 15 years along this vulnerable soft sand and marram grass coast line we ask for immediate cessation of all offshore dredging operations along the Norfolk coastline.

As aforesaid, in view of the overwhelming number of outstanding objections (over 200 mainly from the general public) to the renewal of the licence for HAML Marine Aggregate Extraction Licence Area 401/2 (A&B) we request that a public inquiry, led by an independent expert who is not under contract, being paid by or has previously carried out studies for HAML be instigated if/before any extension of this licence is considered.

This contribution has in the main addressed the physical impact concerns that we feel are most likely to result from continued dredging of this area.

The impact upon species will be addressed by MARINET's Stephen Eades in his submission to you.

Yours Sincerely,

For and on behalf of the MARINET and the North Sea Action

Pat Gowen,

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To: Marine Ecological Surveys Limited
From: MARINET & NSAG, Norwich FoE

5th March 2005

Marine Aggregate Extraction - Licence Area 401/2 (A & B) for Licence Renewal

Dear MES,

Thank you for giving our Marine Environmental organisations the opportunity to express our concerns on the potential granting of a licence that would permit the further commercial dredging of aggregate from the above area(s).

Following consultation with our local experts, will be addressing our mutual concerns on the physical aspects and impacts upon the shoreline, our MARINET coordinator Mr. Stephen Eades will address you separately on the concerns regarding the impact on the seabed ecosystem. That contribution will be with you well before the 29th March deadline. It may then be combined with this as an overall response from the organisations we represent.

You will have in your records previous objections from my group that cover in fine detail all of the aspects of our concern on the damaging impact of Marine Aggregate Dredging. It is therefore felt to be unnecessary to repeat all of these yet again. Thus, a précis of our main points of objection on this specific application are as follows.

A) The Physical Aspects

(i) Over 135 million tonnes of aggregate has been dredged from this general area over the past 15 years. It has suffered by far a greater exploitation of its seabed than any other area known in the world. The result of this long term cumulative stripping has seizure of seabed material

(1) We are now in a period when greater winter storms, lower barometric pressures and greater wind speeds will result in an escalation of North Sea surges, these probably far greater than that experienced in 1953 when three hundred people died in Norfolk alone. To continue to permit an operation that correlates powerfully with the loss of our protective sand cliffs, dune systems, salt marshes and the undermining of our sea walls when a severe insufficiency of affordable protection is apparent is to our eyes highly irresponsible. Whilst the correlation between offshore aggregate dredging mechanism is well researched and understood in most of coastal Europe and America, so banning this activity, we ask of you who doubt these findings that at least the precautionary principle be invoked in the United Kingdom, even if the evidence you have of the damage is not felt to be entirely conclusive to you.

(2) We maintain that the cumulative effects of high level aggregate dredging are now clearly apparent and evident by the escalating erosion along our north and eastern East Anglian coastline. Other than that eroded from our decaying coastline, the main sediment supply for the East Anglian coast migrates from the Humber area across to East Anglia via The Wash. It is therefore vital to maintain this feed source. It should not be intercepted and restricted by its removal.

(3) At this time of East Anglian sinkage, rising sea levels and worsening erosive weather conditions, it is imperative to sustain as much of our coastline, salt marshes and dune defence systems as possible.

(4) In that government policy refuses compensation and that insurance is not possible for the many coastal properties and businesses being lost to erosion, and that recent cuts in the coastal defence budget have just been decreed, it is socially and ethically unacceptable to permit any further dredging activity. An important point is that the many vulnerable wildlife sites in The Wash area demand protection from the effects of exploitive dredging operations.

(5) We are further concerned that the high level of income to the government by way of royalties and VAT provided to the Exchequer resulting from granting further dredging licences suggests that the government are an interested party in the licensing process, and cannot be seen to be non-partisan in the decision making process.

(6) We also are concerned at the impact upon the fish spawning beds, habitats and feeding grounds that would result at this time of diminishing fish stocks and the decline of our fishing industry. We see from the findings of our longshore fishermen that the decline in fish stocks and the various fishing industries correlates to the damage to the habitat, spawning and feeding grounds caused by on-site offshore dredging and the silting of far greater

down-tide areas by the wash-off process. Upon these grounds too we would wish to see a total abandonment of offshore aggregate extraction.

We would ask you to refuse this and any future applications for offshore sand and shingle dredging and deny a favourable government view.

Yours Faithfully,

Patrick J.A. Gowen JP MIST

Head of the North Sea Action Group and Chairman of MARINET