

To: Marine Ecological Surveys Limited 5th March 2005
From: MARINET & NSAG, Norwich FoE

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 and this 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.

The Physical Aspects

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 of seabed material has resulted in much damage, and further exploitation will undoubtedly produce even more, as ...

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 perienced 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 those 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

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A further letter was sent in response to the Environmental Impact Assessment which accompanied the application. This EIA, among other points, concluded that the disturbance and impact of dredging will be of 'low significance' in relation to the biological environment such as plankton, shellfish, fish stocks etc apart from the effect on herring spawning grounds where there will be 'moderate' impact.

The EIA stated "Lack of precision with respect to the area and location of the herring spawning ground means that impacts cannot be clearly determined. Clearly if the areas do overlap, then potentially impacts may be occurring and continue to occur. These will be limited to the periphery of any area that may exist by the nature of the tidal regime". It dismissed the erosive impact along the coastline. This was responded to on 25th March 2005 with the following points: -

MARINET/NSAG shoreline impact and erosion, physical points Area 401/402. Opposition of the granting of a licence to continue to dredge for aggregates.

1. No indication has been given as to the need or for the use of this aggregate. Over one third of that aggregate extracted from this general area in the past has been exported to The Netherlands, which country severely restricts such commercial exploitation on account of the damage inflicted to the shoreline and to the marine ecosystem and fish stocks were it so permitted. The justification for this further dredging activity should only arise if an overriding and essential national need is identified rather than the production of monetary profit.
(Note: It was later submitted by the applicant that: "The resource under consideration in the Area 401/2 will provide for the continuation of a suitable resource for building materials to meet future needs in the South East [UK] and The Netherlands." [Reference: Environmental Statement (ES) Appendix C, section C.8]).
2. The employment of recycled building material, china clay waste, harbour dredgings, ground glass containers and the likes should first be considered as a source for the needs expressed rather than the continued exploitational rape of the seabed.
3. We are now in a period of escalating global warming, with rising sea levels, when greater winter storms, lower barometric pressures and greater northerly wind speeds will result in an escalation of North Sea surges. These are forecast to be more frequent and far stronger than that experienced in 1953 when three hundred people died in East Anglia due to the failure to maintain damaged sea defences To continue to permit an operation that correlates powerfully with the loss of our sea defences formed by protective sand cliffs, dune systems, salt marshes and sandy beaches can bring about undermining of what little defence we now have by way of protective sea walls. This application is coming about when a reduction of

sea defence funding has been applied and a plan is afoot to permit 'managed retreat a.k.a. 'coastal realignment' a.k.a. 'making room for water', resulting in the loss of coastal villages, housing, beaches vital for tourism and land required for agriculture without the provision of compensation. A further severe impact upon the regions economic income from tourism and agriculture would result from further and escalated erosion, as well as an increased impact upon the already severely damaged local fishing industry.

4. We again ask that the precautionary principle be invoked even if the powerful correlative and practical evidence of damage is not felt as to be entirely conclusive by the government. We would point out that no evidence whatsoever exists to suggest that large scale cumulative offshore aggregate dredging is benign over a long term period and broader coastline.
5. Recent surveys (SNSSTS) has found that the sediment flow down the southern North Sea has all but ceased, this despite the fact that considerable loss of beaches and sand cliffs have come about due to erosion. The sand and material so liberated has not resulted in a build up of sand and gravel upon the devastated area of our coastline.

The sea rise due to thermal marine expansion and glacial and icecap melt calculated as 6 - 7 mm per year cannot account for the escalating intrusion of the sea to our coastline. It is that the beaches have been [drawn down](#) by as much as five metres in sand depth at many points, so allowing tidal incursion, so indicating that previous offshore aggregate dredging must be seen as the only alternative cause. The annual deficit of our coastline's sediment budget is 300,000 - 450,000 cubic metres, with little or no sediment flow now coming down the North Sea and across The Wash compared with that known prior to sediment removal by commercial scale offshore aggregate dredging.

Conventional defences such as groynes are 'full' already and have long been so. Once 'full' their holding capacity no longer inhibits the [littoral sediment flow](#). But additional material has been released by the permitted demise of many of these original defences. What is more, that sand and gravel now released by such and by increasing sand cliff, dune and beach erosion does not appear in the sediment budget. Thus a serious deficiency is indicated that can only be explained by offshore aggregate dredging capture, that being the only new component in the equation. Marine aggregate dredging offshore to the Humber and from the Winterton to Corton area removes between 10,000,000 and 12,000,000 cubic metres per annum. This is obviously the main factor in the balance. Awareness of these facts should produce a demand that no more aggregate should be taken from the East Anglian seabed.

6. Previous EA's and EIA's, whilst considering the [littoral](#) drift, have failed to consider the onshore/offshore movement of beach and shoreline material. The past fifteen years failure of the major summer return of beach material lost to offshore in the winter months indicates that seizure by offshore dredging is responsible for the long term loss.
7. The cumulative effect of distant sediment extraction over a long-term period, and the consequent coastal denial of otherwise naturally deposited beach material due to this have not been addressed in EA's and EIA's. That this and the impact to fish stocks has long been recognised in Europe, where offshore dredging has consequently been severely restricted, is good reason enough to discontinue the ongoing exploitation of the offshore sea bed of the East Coast in this country.
8. The essential wind farm on Scroby Sands, adjacent to the dredging area, has been severely impacted by the loss of sand and shingle on this previously stable sand bank which has lost considerable content since large scale cumulative offshore aggregate dredging commenced. In the absence of any other logical possibilities, [draw down](#) brought about by dredging has to be seen as the main and most obvious causal factor.

9. We further see from the findings of our long shore fishermen that the decline in fish stocks and the various fishing industries correlates to the damage to the habitat, spawning and feeding grounds brought about by on-site offshore dredging and the silting of far greater down-tide areas by the wash-off process.

The release of deeper sea bed toxic agents by disturbance is a further threat to the marine environment, as for many years offshore Great Yarmouth was the source of untreated effluent placed by pipeline from Caister-on-Sea. The possibility/probability of the release of methyl and alkyl mercury carried down with the sediment from the high bed deposits in the outflowing River Yare is such a factor to consider, as is the likelihood of release of chlorpiriphos and other toxins from the Pakefield toxic waste site should this be lost to the sea by erosion.

10. The main operational monitoring programmes previously reviewed were little preoccupied with those off the East Anglian coastline. Yet this area suffers by far the greatest exploitation of offshore marine aggregate with the consequent highest level of shoreline loss (dune, salt marsh, soft sand cliff, marram bank, coastal housing and habitat destruction) and the greatest impact upon the fishing community. It cannot be coincidental that this highest level of erosive damage from The Humber down to north Essex is adjacent and downtide to those areas where the greatest levels of aggregate extraction in Europe have been practised for the longest period of time.
11. That the sand and shingle deposits are claimed by the dredging companies to be stable when the area has already been dredged twice brings about the question as to where the new aggregate to be taken has come from. Obviously the up drift coastline, beaches and sand cliffs, seen to be severely denuded, has to be the only logical source. That shoreline loss and the arrival of further offshore material correlates is evidence enough of the damage and threat brought to the coastline by the continuity of the practice.
12. We are concerned that the Environmental Impact Assessments (EIA's) are sought and paid for by consultants appointed and selected by the dredging companies themselves, and that no second opinion is applied. The old adage of "he who pays the piper calls the tune" comes to mind. We need to have studies performed that are fully independent of any vested interest groups and assessment by bodies that are truly seen to be independent. This aspect was criticised as long ago as 1992 when the House of Commons Environmental Enquiry on Coastal Planning and protection stated "We were concerned to find that the whole area of the impact of marine aggregate extraction on the coastal zone is under-researched and based on premises years out of date". Reports and numerous independent experts before and since then have reasserted this view. But, nevertheless, later UK 'research' has used much of that dubiously theorised information in place of the actual practical investigation necessary to 'prove' the situation.
13. Based upon past experience, we have little faith or trust in the EIA's so far produced. The studies performed by earlier EIA's we see as very limited, non-comprehensive, often looking at the wrong area or in the wrong period for any evidence of damage, with little attempt to study aggregate drift from shoreline depletion transport on the depleted offshore areas. That much of this literature is based upon computerised speculative and hopeful assumption financed by the dredging companies themselves rather than factual findings by independent bodies questions the validity of the reassuring points made.
14. Before further dredging is permitted from this already denuded area, an independent and comprehensive study of the effects of the dredging is required. An ideal opportunity to study past and current impacts is now presented to evidence the effects of the exploitation.
15. The level of growing damage to our coastline, tourist and fishing industries, housing and incomes due to erosion and the threat of saline incursion to the Norfolk Broads and riverine

system, as well as consequent flooding of low laying inland towns and villages, is reason enough to show that Offshore Aggregate Dredging falls well outside of sustainability, and thus should be terminated. Our organisations look to responsible government bodies to protect our ailing environment in these times when the government is far more attuned to the fiscal monetary interests of 'big business' and are seen to lose sight of the long-term benefits. As witnessed by the ailing fish stocks, habitat losses, loss of seaside trade and housing, decrease in sea birds, etc. a sufficiency of such protection from profitable exploitation is lacking. It is essential that the protective principle must be invoked and that sustainability becomes the prime target. The marine environment has been already considerably damaged by polluting and toxic industrial and domestic sewage outfalls and the seabed stripping that has been continuing and enlarging. Our groups would wish to see a reversal of this situation.

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