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22nd July 2004

For the attention of: Nigel Bayliss, Casework Officer, Minerals and Waste Planning Division,
Office of the Deputy Prime Minister, Zone 4/B1, Eland House,
Bressenden Place, London SW1E 5DU.

Dear Mr. Bayliss, Proposed Dredging for Sand and Gravel, Areas 458 and 464,
West Bassurelle, in the Eastern English Channel Region.

These are the comments of MARINET, the Marine Network of Friends of the Earth Local Groups, and we thank you for the invitation to comment on the supplementary environmental information submitted by the applicant (RMC Marine Ltd and United Marine Dredging Ltd) under the Government View procedure in connection with the licence application to dredge for sand and gravel in Areas 458, 464/1 and 464/2 which are located in the eastern English Channel.

We also note that the application to dredge has been amended in terms of the extraction tonnage. We understand that the original application was seeking to extract 10 million tonnes annually for 15 years, but under the new application the extraction rate would commence at 1.5 million tonnes in the first year, rising to 3.9 million tonnes annually by year five in order to give a total extraction tonnage for the first five years of 14.9 million tonnes. In year 6 to 15 we understand the applicant will determine extraction tonnage in the light of monitoring and feedback to ODPM from the first five years of operation should a licence be granted, and that extraction tonnage shall never exceed 10 million tonnes per year.

We regard this as a wise precautionary proposal.

However, we note that an extraction level of 10 million tonnes per year is still a very high level of extraction. The Regional Environmental Assessment (REA) for the eastern English Channel envisages extraction in this region to approach 8.5 million tonnes per annum once the initial licences are granted, and then after an initial five year period to rise to around 11.5 to 13.5 million tonnes per annum. We observe that under these arrangements Areas 458 and 464 would be providing the lion's share of extraction tonnages in the eastern English Channel region. We believe this predominance of Areas 458 and 464 needs to be reassessed.

We also advise you that we were not involved in the original consultation on the licence application for Areas 458 and 464 which was lodged with you in June 2000. We have therefore not seen the original Environmental Statement and supporting Technical Documents.

We now wish to record for you our main issues of concern.

Our principal concern is that the assessment of the impact of dredging on the benthic community (marine life living on or in association with the seabed) has not been properly assessed, both in terms of the immediate location where dredging will occur and in terms of the wider ecological structure of the eastern English Channel region.

Our concern in this regard is drawn from two quarters. The first is drawn from the description of the benthic community recorded in the Regional Environmental Assessment, and the second is drawn from the details of the Pre-dredge Monitoring Programme outlined by the applicant in the Application Status Review, December 2003.

Details regarding these two matters are as follows.

Status of Benthic Community.

The Regional Environmental Assessment, January 2003, states (section 4.4.7):

“The benthic communities of the east English Channel are considered to be climax communities that have developed under relatively stable conditions, albeit with intensive fishing activity in some areas. These communities are controlled by biological interactions and are dominated by slow growing, long-lived species. They are characterised by a high species diversity and evenness and, generally, there is no single dominant species. This, however, means that the effects of any significant disturbance will persist. Slow growing, long-lived organisms such as brittlestars are particularly sensitive to the disturbance and smothering that would be associated with certain dredging processes. Other species, such as Sabellaria spinulosa, are of importance because the reef-like structures that can be built by this worm comprise complex habitats that support a wide range of dependent species. Although Sabellaria spinulosa occurs throughout the area, there are no records of any reef-like structures of this species and it is considered unlikely that they constitute habitats of conservation importance within the ECR.

Brittlestar beds have been recorded in high density within the study area. These species are slow moving and their dense aggregations mean they are prone to disturbance. Brittlestar beds have been mostly recorded in areas of coarse sediment and strong currents. They are relatively intolerant of high sedimentation rates. Disturbance or loss of the brittlestar beds could have potentially damaging effects upon the rest of the benthos. These beds are considered to be an interest feature of marine SACs and it is believed that large beds may have significance in terms of ecosystem function.

In the absence of macrophytes [plants and seaweeds], the sessile benthic epifauna may be highly important in terms of increasing habitat complexity and biodiversity. These include erect colonial species such as hydroids Hydrallmania falcata and Obellia sp. As noted in Area 473 (Emu, 2002). These species may be important in the settlement and development of scallop spat (an important commercial species in the east English Channel). Being sessile these species are vulnerable and sensitive to disturbance, especially scouring and smothering.”

We observe:

1. The applicant's Application Status Review offers no assessment of the impact of dredging on the ecological communities recorded above.

2. The biological communities are interdependent and characterised by slow growing, long-lived species. Therefore damage to specific communities in the dredging area may damage other communities outside the dredging area due to the nature of this interdependence. Also, such damage may be prolonged and intensified by the slow rate of recovery of the dredged area due to the fact that the biological community in the dredged area is likely to be a climax community (i.e. incapable of short-term or quick recovery).

None of these issues are assessed in the applicant's Application Status Review.

3. Brittlestars are identified as a key biological community which may have significance in terms of ecosystem function. Such communities are particularly sensitive to the disturbance and smothering associated with dredging.

None of these issues are addressed in the applicant's Application Status Review.

The question of smothering is addressed in the report EX 4731, written by HR Wallingford, published in February 2003, titled "*The Physical Environment and the effects of Dredging: East Channel Region*", a copy of which accompanied the applicant's Application Status Review.

In Report EX 4731 it is stated (ref page 26):

"The deposition of large quantities of mobile sand in and around the dredged areas, as a consequence of screening operations, may have a number of effects on the physical environment. The main process of concern is that a layer of sand will travel over, and settle upon, areas of the seabed outside the areas actually dredged, and perhaps even outside the ECR itself. If such a layer is thin and remains only briefly, then its effects on the seabed, and its flora and fauna, will be modest. If however the depth of the layer is greater, and/or if it is long-lived or even permanent, then greater environmental changes would be expected, especially if the affected area of the seabed is not naturally covered by sand."

This is a clear statement of the issue. Why has this issue not been assessed in the Application Status Review, and can any licence application be valid if this issue has not been fully assessed ?

Report EX 4731 does offer some comment on this issue. It is stated (ref page 27):

"Evidence for an existing flux of sand through the ECR is sparse, although the tidal currents are certainly strong enough to transport it. It therefore seems likely that the sand deposited on the seabed following the screening operations will be mobilised and subsequently be transported away from the dredged areas."

However, providing quantitative predictions of the depth and duration of any sand cover of the seabed outside the dredged areas, requires the development and application of complicated modelling methods. This type of prediction was outside the scope of this study."

Accordingly, it is clear that Report EX 4731 recognises the importance of this issue and the scale of the risk to these biological communities. However, it has not been within the brief of the Report to study the issue.

This is curious. Why does this assessment deficiency exist, and why has this deficiency not been challenged under the Government View procedure ?

It is even more curious because in the next paragraph of Report EX 4731, page 27, it is stated :

“The modelling of the turbid plumes so far carried out for dredging (with screening) in the ECR e.g. for the West Bassurelle area (HR Wallingford 2000b), includes considerations of the fate of fine sand (up to 250 microns). Based on this modelling, it seems unlikely that the seabed more than 50 m outside the dredged area will be covered by more than a few millimetres of sand, and then only for a few hours during each tidal cycle, during and immediately after a single visit from a dredger [. . . .] Any siltation outside the areas actually dredged will be a short-term phenomenon [. . . .] except extremely close to the boundaries of that area (e.g. within a few tens of metres).”

Thus, Report EX 4731 provides this apparent refutation that a serious risk of smothering exists, having previously stated that such a risk does exist. This is a curious contradiction. Moreover, the evidence (modelling) cited from HR Wallingford earlier report, titled *West Bassurelle Aggregate Dredging Studies – Dispersion of dredged material, Report EX 4131, March 2000*, is not supplied in Report EX 4731.

This is a very fundamental issue. The applicant’s Application Status Review places great reliance on the assertion that significant smothering will not occur “more than 50 metres outside” the dredged areas. Yet the evidence in support of this assertion is unclear and unsubstantiated in the Application Status Review.

Moreover, it must be noted that elsewhere in Report EX 4731 where the question of the impact of dredging on coastal areas is considered, it is stated (ref. page 38):

“A substantial volume of sand will be deposited on the seabed as a consequence of the screening of dredged sediment, and this will subsequently be “available” for transport by tidal currents. There is therefore no risk of supplies of sediment to the coastlines of either England or France being diminished by the proposed aggregate extraction operations.”

Thus it is clear that Report EX 4731 expects that a substantial volume of mobile sand will arise as a result of dredging, and that it will move considerable distances beyond the immediate dredging area. This is an interesting contradiction of the assertion that significant volumes of mobile sand will only occur within 50 metres of the dredged area as a result of dredging.

Indeed, most models of sand deposition following screening anticipate that sand will settle in significant amounts up to a distance of 2 kilometres from the dredged site (ref. Regional Environmental Assessment, Figure 5.8).

In this context it is to be noted that there is a significant geological feature, known as the Northern Palaeovalley, which lies between Area 464/1 and Area 464/2. This is an ancient river valley. When dredging occurs Areas 464/2 and 458, it is very likely that deposits of screened material will be carried by seabed currents into this ancient valley in the seabed (northern palaeovalley).

The question must therefore be asked: what is the biological/ecological importance of this ancient river valley within this part of the English Channel ? And, having determined its importance in this respect, will it be impacted by dredging in the adjacent areas ?

Neither of these questions have been addressed in the applicant’s Application Status Review.

4. It is to be noted that marine reefs and sandbanks which are continuously submerged are habitats listed for protection under the Habitats Directive. Also, the Regional Environmental Assessment identifies the importance of brittlestars, the worm *Sabellaria spinulosa* and its attendant reefs, and certain hydroid species as of being of particular importance in the eastern English Channel. It is also noted that these species form an essential element in a broader, interdependent ecological community which has, in ecological terms, “climax status”. It is well known in the ecological literature that damage to elements of climax communities can lead to a wider systemic collapse, and the inability of the whole ecosystem to regenerate.

We have seen no evidence in the applicant’s Application Status Review that these issues have been addressed.

5. It is to be noted that the eastern English Channel is an important spawning and nursery area for scallop and sustains a significant fishery of this species. Areas 458 and 464 are located in the middle of this fishery. This fact is recorded in the Regional Environmental Assessment and the applicant’s *Fisheries Consultation Report, November 1999*, which accompanies the Application Status Review.

The *Fisheries Consultation Report* also records that the importance of the scallop fishery and other species is testified to by the Comite Regional des Elevages Marins de Haute-Normandie, Dieppe, (French fishermen). It is stated, ref. page 12:

“He [M. Manner] confirmed that ‘West Bassurelle’ constitutes 90-95% of the French fishing effort, using trawlers for pelagic catches and dredgers for scallops. He thought the area was the most productive of the eastern Channel [. . .] ‘West Bassurelle’ is an area of great richness with fishing occurring all year round. During the summer, trawlers exploit pelagic species and from October 1st to May 15th the scallop season is open. M. Manner provided a map showing high-density scallop beds in the vicinity of ‘West Bassurelle’ as well as production data for scallop from 1991 to 1997. He explained that the beds were mobile and that the tonnages varied from year to year.

One of the local fisheries committees’ representatives raised the importance of ‘West Bassurelle’ as an area for reproduction and species richness. He declared the region to be important for herring as they migrate through in November/December and as a spawning ground. The sand is clean and well oxygenated from the currents in the area, which favours the spawning of eggs as well as development of the young. The herring eggs are a source of nutrition for cod; therefore a good herring season makes for a good fishing season. In addition, vessels fish the area with tremelles nets from pas-de-Calais for cod and sole.”

The response of the applicant’s Application Status Review is to assert that Areas 458 and 464 lie to the east of the main scallop and herring spawning and nursery grounds and attendant fishery, and therefore dredging in these areas will not impact adversely on these fisheries.

We believe that this assertion needs to be tested more thoroughly, and we note that the applicant’s assertion has not been tested against testimony from the Comite Regional des Elevages Marins de Haute-Normandie, Dieppe. Until this evidence has been assessed by the French fishing community, we do not believe that a great deal of reliance should be placed upon it.

Pre-dredge Monitoring Programme.

We note that in the applicant's Application Status Review an outline of the monitoring programme is provided, ref. Section 8, page 116 ff.

Part of this monitoring programme is titled "pre-dredge monitoring", the details of which can be summarised:

a/. Thresholds will be developed and agreed with DEFRA, CEFAS and ODPM for key issues prior to dredging commencing.

We observe: what are these "thresholds" ? The concept is not defined in the Application Status Review, and why are they not specified for discussion ? Also, why is the determination of these "thresholds" limited to government departments and agencies, and why does it not involve the broader community of interested parties e.g. fishermen, marine conservation organisations ?

We recommend that no decision is arrived at until these "thresholds" have been defined and circulated for public consultation.

b/. A baseline bathymetric survey is to be completed before dredging commences in order to establish existing seabed levels.

We observe: a baseline bathymetric survey should have been completed prior to the Environmental Statement of June 2000 in order to inform that Environmental Statement and the related public consultation procedure. We are most surprised, and concerned, that a decision on whether to grant a dredging licence is being considered before a baseline bathymetric survey has been completed.

We recommend that no decision is arrived at until this information is complete and has been circulated for public consultation.

c/. In conjunction with the pre-dredge bathymetric survey, a total seabed coverage side scan sonar will be undertaken in order to determine seabed configuration and composition before dredging commences. This survey will also seek to establish the location of out of service telecommunication cables.

We observe: the seabed configuration and composition should have been completed prior to the Environmental Statement of June 2000. This is essential information in order to inform that Environmental Statement. In our opinion, the absence of such information in June 2000 invalidates the Environmental Statement.

We recommend that no decision is arrived at until this information is complete and has been circulated for public consultation.

d/. Prior to dredging commencing, a baseline seismic profiling survey will be undertaken. This data will be interpreted to confirm the limits and thickness of sand and gravel deposits.

We observe: baseline data as to the limits and thickness of sand and gravel deposits is basic, fundamental information which should have been established prior to June 2000 in order to inform the Environmental Statement. We are very surprised to learn that this baseline data has not yet been established. Without such information many of the other technical aspects of the

Environmental Statement e.g. benthic survey, physical character of the site, screening and plume dispersal and so forth cannot have been properly informed. In our opinion, the absence of this baseline data invalidates the Environmental Statement.

We recommend that no decision is arrived at until this information is complete and has been circulated for public consultation.

e/. A pre-dredge benthic survey will be undertaken to establish the baseline benthic communities both within the Permission Area and beyond. The specifications will be prepared in conjunction with CEFAS, and a pre-dredge seabed sediment analysis to confirm seabed composition will also be undertaken.

We observe: clearly a baseline benthic community survey needs to exist prior to permission to commence dredging. However, we are puzzled as to why this baseline survey does not already exist. As the Regional Environmental Assessment records, benthic communities in the eastern English Channel are climax communities. This means that their character and composition is stable, and does not differ from year to year. The question that therefore needs to be asked is: why is the baseline survey of the benthic community recorded in support of the Environmental Statement not adequate? This suggestion of inadequacy in the original benthic survey leads one to suspect that the original Environmental Statement was seriously flawed. Furthermore, if this new baseline benthic survey to be undertaken in conjunction with CEFAS arrives at a different portrait of the benthic community from that presented in the original Environmental Statement, does this not then invalidate the original public consultation procedure in connection with the June 2000 Environmental Statement? And, if such a different portrait does emerge, how does ODPM intend to ensure that this information is properly assessed in terms of environmental impact? And, how will this information affect the licence application decision arrived at by ODPM?

We recommend that no decision is arrived at until this information about the nature of the benthic community is complete and has been circulated for public consultation.

f/. A study will be undertaken by the Licensees (RMC Ltd and UMD Ltd) to determine the herring spawning potential of the Permission Area and surroundings. A copy of this Report will be provided to DEFRA, CEFAS, ODPM and the Crown Estate prior to dredging commencing.

We observe: this study of the herring spawning potential of the licence area and surrounding area should already be in existence. The fact that it does not exist means that this issue cannot have been properly assessed during the public consultation in connection with the June 2000 Environmental Statement. In our opinion, the absence of this information invalidates the original Environmental Statement and the Government View procedures associated with it.

We recommend that no decision is arrived at until this information is complete and has been circulated for public consultation.

g/. A survey of scallop densities in the Permissions Areas and surroundings will be undertaken prior to dredging commencing. The scope of the survey will be agreed with CEFAS and DEFRA prior to being undertaken.

We observe: this survey of scallop densities should already be in existence. The fact that it is not means that this issue cannot have been properly assessed during the public consultation in connection with the June 2000 Environmental Statement. In our opinion, the absence of this

information invalidates the original Environmental Statement and the Government View procedures associated with it.

We recommend that no decision is arrived at until this information is complete and has been circulated for public consultation.

h/. Existing geophysical data will be assessed archaeologically to confirm the location, extent and morphology of known wrecks, and the data will also be scanned for other features of archaeological interest.

We observe: the fact that this assessment needs to be done suggests to us that it has not been done up till now. In other words, no archaeological survey or serious assessment of geophysical data has been undertaken in support of the June 2000 Environmental Statement. If this is so, then the consideration of this issue in the original Environmental Statement was seriously deficient in a factual sense and, in our opinion, the absence of such factual data invalidates the Environmental Statement with regard to the assessment of this area of study.

We recommend that no decision is arrived at until this information is complete and has been circulated for public consultation.

Monitoring during the Operational Stage.

We note that, in the main, monitoring during the operational stage will be undertaken in the key areas of study and assessment on an annual basis. We support this approach and level of frequency.

However, we recommend the following amendments to the applicant's current proposals:

a/. The present proposal of the applicant is to carry out a plume study only during the first year.

We believe that the plume study should be conducted on a continuous basis during the lifetime of the licence. We consider the applicant's proposal to be seriously inadequate because the level of extraction will only be 1.5 million tonnes in the first year, but will rise to 3.9 million tonnes per annum by year five, and may reach 10 million tonnes per annum during years 6 to 15. This increased level of extraction will clearly affect the character of the plume and sediment deposition, both of which are of fundamental importance with regard to the long-term health of the benthic community and associated fisheries in the area.

We recommend a continuous plume and sediment deposition study throughout the period of the licence. Only by collecting such information on a full and continuous basis will baseline information exist in order to inform decision making in respect of future aggregate dredging licence applications in the eastern English Channel.

b/. It is proposed that a benthic survey centred about the dredged area will be undertaken annually during the term of the licence, the specification of the survey having been agreed with CEFAS.

Given the importance and richness of the benthic community in the eastern English Channel, and the limited knowledge at the present time of its functioning in ecological terms, it seems essential to us that this benthic survey must be very broadly based, and not just be confined to a centre based on the dredged area. Due to the interdependence of the benthic communities in the

eastern English Channel, there is a distinct possibility that damage sustained in Areas 458 and 464 could have wider ecological implications for the marine community. This possibility needs to be continually monitored and assessed.

We recommend that the benthic survey be centred on the possible impact on the marine community throughout the eastern English Channel, and that the specifications of this survey be determined not just by CEFAS but also by all other parties with a direct interest in the long-term health of the marine benthic community (i.e. to include fishermen and non-governmental marine conservation organisations).

c/. A review of commercial fishing activity in the eastern English Channel will be undertaken annually until the fifth year review, the specifications have been agreed with CEFAS and DEFRA.

It seems to us that to simply review fishing activity annually is insufficient. The key issue is the impact of dredging on fish stocks and their ability to regenerate, and it is this issue which should be the centre of focus of the annual study. Moreover, dredging activity is estimated to expand from 3.9 million tonnes per annum in year five to a figure close to 10 million tonnes per annum in subsequent years. It is therefore imperative, in our opinion, that the study of the impact on fish stocks and their ability to regenerate be undertaken annually throughout the period of the licence. Any study which did not have this depth of focus would be failing to address the issue.

We recommend that there be an annual study of the impact of dredging on fish stocks throughout the eastern English Channel, and that this study should include an assessment of their ability to regenerate. Further, this study should be conducted throughout the entire period of the licence and should involve all interested parties, in particular commercial fishing representatives from both England and France.

d/. A study of an agreed area will be undertaken every two years (or as required) into the spawning of herring, and the specifications of the study will be agreed with CEFAS and DEFRA.

It seems essential to us that this study has greater depth, and be conducted on an annual basis.

We recommend that this study should be conducted annually for the entire length of the licence period, and should involve in particular commercial fishing representatives from both England and France.

e/. A repeat scallop survey centred on the dredged area will be undertaken every two years, with a report of the study being provided to CEFAS, DEFRA, ODPM and the Crown Estate.

Once again, it seems to us that this proposed study lacks depth. The fundamental issue is the impact of dredging on the scallop fishery throughout the eastern English Channel and its ability to regenerate. This issue should therefore be the focus of study. Such study should be undertaken and reported on annually.

We recommend an annual study and report of the impact of dredging on the scallop fishery throughout the eastern English Channel, and that the design and reporting of this study should involve commercial fishing representatives from both England and France.

Post-dredge Monitoring Programme.

In the applicant's Application Status Review it is suggested that the post-dredge monitoring programme should consist of a bathymetric, sidescan sonar, seabed sediment sampling and benthic study to be carried out within 12 months of the cessation of dredging, and that a final report be issued within 6 months of these studies being completed.

We observe that knowledge of the impact of aggregate dredging on the marine environment, both from a physical, biological and ecological perspective, is seriously inadequate. This inadequacy in knowledge is reflected in the content and character of the Environmental Statements which currently come forward in support of new licence applications.

This inadequacy in knowledge is due, in large part, to the failure of existing aggregate dredging licences to undertake adequate monitoring during the lifetime of the licence and, in particular, during the period following the expiry of the licence. For example, the rate at which the benthic community recovers at a dredged site once dredging has ceased is a grossly under-researched subject, and published studies are confined to a period of two years in connection with "experimental" sites rather than "commercial" sites. This is a most unsatisfactory state of affairs.

We recommend that if a licence to dredge is issued for Areas 458 and 464 it is a condition of the licence that a full bathymetric, sidescan sonar, seabed sampling, benthic and fishery study be undertaken in connection with the site and its impact on the wider eastern English Channel region for a period of 20 years following the expiry of the licence, and that this study report its findings every 2 years. This information will then be available to inform new licence applications in the eastern English Channel and elsewhere in UK coastal waters in future years. This requirement is, in our opinion, an essential step in placing the marine aggregate industry on a sustainable basis.

Conclusion.

On the basis of the evidence we have seen, it will be clear that we regard the assessment of the impact of the proposed aggregate dredging licence for Areas 458 and 464 upon the marine environment of the eastern English Channel as seriously deficient. It appears to us that major areas of study have been omitted from the original Environmental Assessment of June 2000, and that as a consequence the public consultation conducted on the basis of its Environmental Statement was seriously flawed.

The development of aggregate dredging in the eastern English Channel is an activity that could have significant long-term impact on the integrity of the marine environment in this region. It is therefore imperative that, before such licences are issued, the full character of this impact is quantified and assessed. We do not believe that a full environmental impact assessment has been carried out to date with respect to the application for a licence to dredge Areas 458 and 464. Accordingly, until such time as a full environmental impact assessment has been conducted and circulated widely for public consultation, it is our recommendation that the Government should refuse this licence application.

Yours sincerely

S. D. Eades
On behalf of MARINET, Friends of the Earth Local Groups.