



Sub No 4

Clew Bay Marine Forum Ltd.
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W0021-02

EPA Headquarters
PO Box 3000
Johnstown Castle Estate
Co. Wexford

Environmental Protection Agency IPC Licensing Received 28 JUN 2007 Initials _____

27th June 2007

Re: EIS Application by Mayo County Council for a Review of Waste Licence W0021-1 W0021-02 at Derrinnumera & Discharges into Newport Bay.

The Clew Bay Marine Forum Ltd (CBMF) membership includes shellfish farmers, for mussels, gigas oysters & scallops, finfish farmers for salmon & trout, Clew Bays Oyster Co-Op for native oysters & the Clew Bay Potfishermens Association for lobster, crab, prawn & shrimp. CBMF has represented aquaculture and fishery interests in Clew Bay in all aspects of bay management. From 2000-2006, one of CBMF's key roles for its members has been the weekly 'on water' provision of a co-ordinated multi agency water and shellfish sampling programme. This programme has incorporated statutory biotoxins & phytoplankton sampling, shellfish bacteria samples for statutory classification, virus risk assessment research, EU project and other research, Statutory Quality of Shellfish Waters (QSW) monitoring, finfish aquaculture monitoring, other water chemistry parameters & consultation phase submissions on Water Framework Directive monitoring.

Newport Sewerage Scheme.

CBMF welcomes the proposal for a sewage treatment plant in Newport and anticipates that this development will deliver an improvement to the water quality of Clew Bay. We request that best available technology (BAT) be employed in the treatment and reduction of bacterial & viral contaminants from the discharge. We also request that coliform levels be monitored prior to discharge and that sampling stations be put in place to monitor coliform levels within the receiving environment. We also request that the EPA impose as a condition that Mayo County Council finances a co-ordinated weekly monitoring programme throughout Clew Bay for the maintenance and improvement of water quality in areas affected by marine discharges.

Discharge Location

The members would prefer the discharge, including the storm outflow to remain in its current position in Newport. Bacterial sampling and analysis carried out in Newport estuary indicates that there is a considerable reduction

in e-coli levels by the time the effluent from the local population reaches the native oyster beds closest to the existing discharge and we would expect that the WWTP should safeguard and improve this area's classification. However, discharge at the proposed site in Rosmore is too close to the oyster beds and poses an additional threat to Lough Furnace. It is clear from the Westport WWTP that depth of water / navigation is not an absolute requirement for a WWTP discharge. If depth is required for additional dilution of the landfill / sludge hub centre leachate, then a higher level of treatment than is currently being considered for this combined discharge is needed.

Quality of Shellfish Waters (QSW)

We wish to bring to your attention that Clew Bay is designated under SI. 268/2006 as a Quality of Shellfish Waters (QSW) area & that neither landfill nor sludge hub centre leachates are currently discharged into these waters. As such these are new discharges to a QSW area & have the potential to be new pollution sources in Clew Bay if the levels of treatment are not adequate to remove all pollutants.

SI. 268/2006 is the Statutory Instrument for EU 923/79 QSW Directive. Article 8 of the 79 Directive states "Implementation of the measure taken pursuant to this directive may on no account lead either directly or indirectly, to increased pollution of coastal or brackish waters."

In SI. 268/2006, the phrase "where practicable" has replaced "on no account" but careful consideration should be given to ensure that the spirit of the directive is not breached & that the 2 new discharges proposed by MCC are not allowed to become a source of pollution.

Correspondence

In our correspondence of 12.12.02, 20.2.04, 14.7.04, 22.12.06 & 22.12.07 (copies enclosed) CBMF outlined our concerns so that they might be included in the EIS. Unfortunately, some of the correspondence is missing from the EIS & many of the items such as pollution from endocrine disruptors and newly emerging contaminants, treatment levels, independent risk assessment, hospital wastes, compensation proposals, leachate discharge via Westport WWTP and other comments have not been adequately addressed and we seek further information on all of these.

Treatment levels for newly emerging contaminants.

We wish to know how the proposed levels of treatment will deal with Persistent Organic Pollutants (POP's) & other compounds with properties which can bioaccumulate in shellfish. Of particular concern to us are compounds with known abilities to bioaccumulate for which discharge standards are not available.

A recent German, US & Canadian collaboration review (The Handbook of Environmental Chemistry, Vol. 2 Part J Bioaccumulation (ed. by B. Beek) ©

Springer-Verlag Berlin Heidelberg 2000) entitled "Bioaccumulation and Occurrence of Endocrine-Disrupting Chemicals (EDCs), Persistent Organic Pollutants (POPs), and Other Organic Compounds in Fish and Other Organisms Including Humans. By Harald J. Geyer, et al." makes over 400 references to papers, journals & correspondence on this subject.

On page 1 the paper begins with "Bioaccumulation of chemicals by aquatic organisms, especially fish, mussels and Daphnia, is an important criterion in risk assessment. Bioconcentration from water must be considered in context with toxicity, biotic and abiotic degradation and other physical-chemical factors in order to protect the freshwater and marine environments with their organisms. Furthermore, it is necessary to prevent human exposure from contaminated aquatic food, such as fish, mussels, and oysters." (1)

The papers recommendations on page 152 state that "It is desirable that industrial and domestic wastes be treated or eliminated to ensure that lakes, rivers, and oceans are not contaminated by persistent bioaccumulating and toxic substances including those which are endocrine disrupters. Atmospheric inputs must also be considered and reduced when necessary. The incentive for achieving this is both the protection of the population of freshwater and marine organisms from toxic effects but also the protection of the human and wildlife population which consumes these organisms. It is thus critically important that there be reliable quantification of the phenomena of bioconcentration, bioaccumulation, and biomagnification in any ecological, hazard or risk assessment of chemicals."

The recommendations go on to state that "The old and now discredited view that "dilution is the solution to pollution" is clearly misguided given the magnitude of the concentration increases of factors of millions or more by which pollutants can achieve as a result of bioconcentration."

The review does not cover all of the compounds that can be found in biota. In excess of 100,000 compounds such as PAH's, PCN's, pharmaceuticals, perfluor-compounds, brominated dioxins, other brominated compounds etc. have the potential to bioaccumulate with a variety of toxicities & effects.

We are particularly concerned that shellfish grown in the vicinity of the discharges will display higher levels of these compounds than would be found elsewhere in relatively pristine West Coast Irish Waters. This would adversely effect market perception & limit the shellfish industries development of potentially its biggest marketing feature – that of a clean safe product produced in unpolluted waters.

We are aware that Mayo County Councils (MCC) advisors began this process with the ethos that "dilution is the solution to pollution" That premise is now discredited & we are concerned that the EIS may be fundamentally flawed in this area & that MCC may have been misguided by their advisors.

Shellfish industries in Clew Bay are in the frontline regarding these types of discharge & sampling and testing techniques for POP's & other contaminants

is already a reality. It is therefore essential that treatment is adequate for their removal.

In this consultation & planning phase CBMF's members seek to ensure that from a food safety aspect any new discharges are guaranteed to be 100% safe 100% of the time and that the proponent takes responsibility for this rigorous management objective from the outset.

Westport WWTP.

The EIS states that landfill leachate was discharged via Westport WWTP in Dec 2006 following heavy rainfall. This action was carried out without informing the shellfish industry, The Department of Communications Marine & Natural Resources (DCMNR) or other relevant statutory bodies. The receiving environment was also not monitored. This situation must not be allowed to reoccur. In future we request that the facility is deemed fit for purpose, that full consultation take place, & that rigorous monitoring of the receiving environment is agreed in advance and implemented prior to any new discharges to Clew Bays QSW's.

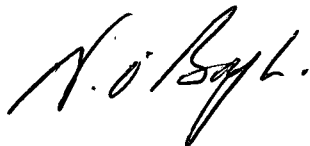
Following this discharge, CBMF received written confirmation from Minister Brown (DCMNR) that as soon as his Department became aware of the practice, they launched an investigation into the discharge following which the Department contacted both the EPA & MCC to remind them of their obligations under SI 268/2006 and asked MCC to consider alternative arrangements for the disposal of leachate in the future.

We have been advised that WWTP's are not designed to treat landfill leachate. The addition of landfill leachate to Westport WWTP was not included in Westport WWTP's EIS & will lead to increased storm overflow as well as reducing the ability of Westport WWTP to treat sewage.

We request additional information on MCC's plans for the disposal of landfill leachate during the construction phase of a proposed landfill leachate treatment plant & what alternative arrangements have been made for the disposal of leachate during this interim period?

We hope that the above comments are of value in the assessment of this application and in ensuring the safety of any subsequent development. Should you require any additional information or wish to discuss this further please do not hesitate to make contact.

Yours sincerely,



Niall O'Boyle
Secretary CBMF



Clew Bay Marine Forum Ltd.

Knockbreaga, Newport, Co. Mayo

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E-mail innishoo@hotmail.com

Mr T. Reidy,
Mayo County Council
Aras an Contae
Castlebar,
Co. Mayo

22nd January 2007.

Discharge of Treated Landfill Leachate to Clew Bay

Dear Tony,

Further to the topic of disposal of treated leachate from Co. Council landfill site at Newport I have the following points to make;

The aquaculture industry is well established in Clew Bay. The bay is designated as an aquaculture area. The water quality of Clew Bay is classified as "A" in the north side of the bay enabling shellfish to be offered for sale without purification.

I believe that an EIA for the proposed effluent outlet has been prepared but has not been published. It is difficult for aquaculture operators to form an informed opinion on this proposal without having access to the EIA.

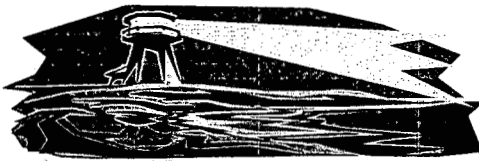
Aquaculture operators and fishermen alike need assurances that the level of effluent treatment will not have a negative effect on the water quality in Newport bay. The fact that the Marine Institute, the scientific advisers to the Department of the Marine, are concerned with this proposal does not enhance the confidence of stakeholders operating in Newport Bay.

Does the Co. Council have any measures in place to compensate operators in Newport Bay in the event of a deterioration of water quality that can be attributed to the proposed outfall?

Stakeholders in the Newport bay area would welcome an opportunity to discuss the issues raised by Co. Council's proposals with Co. Council officials. It is our intention to avoid misunderstandings which may lead to public conflict as this is not the desire of aquaculture operators in Newport Bay.

Yours truly,

Michael Mulloy, Chairman.



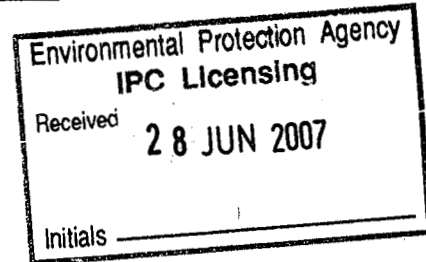
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Mr D. Mahon,
County Manager
Mayo County Council
Aras an Contae
Castlebar,
Co. Mayo

22nd December 2006.

**Re: Pollution Event 7.12.06 – 20.12.06.
Discharge of Landfill Leachate to Clew Bay via Westport WWTP.**

Dear Sir,

We refer to the above incident which is of great concern to our membership. Our members received no prior warning of the event which represented a high risk to health. The short cut to due process engaged upon by MCC & EPA caused the exclusion all other stakeholders & resource users. This led to a decision being made by the EPA which was not theirs alone to take. This series of events is being viewed by many as a breach of trust which reflects poorly on the credibility of both organisations.

Since the EPA license does not specify an end date, we seek an immediate written undertaking from MCC that the EPA license has now expired & will not be reactivated.

We also request that you send to this address the following :-

1. Details of the total quantity of leachate discharged during the pollution event.
2. Copies of all monitoring data that has been collected during the event.
3. A statement on the monitoring that was put in place and the action that was taken to determine the impact that the discharge has had on the receiving waters.
4. A statement outlining the steps MCC have considered or taken to prevent rainfall becoming contaminated by landfill leachate so as to reduce and prevent 'emergency' situations arising during periods of excessive rainfall.

We have received of a copy of Mr Commons letter of 18th December to IFA Aquaculture, outlining the events which led to the breaching of Article 8 of COUNCIL DIRECTIVE 79/923/EEC.

We note that reference is made to an EIS for a proposed leachate treatment facility in the Derrinumera landfill site and discharge into Clew Bay. With regard to this proposal, please be aware, that our membership strongly supports the precautionary approach which has been adopted in the UK, whereby; any discharge into a food production area must be guaranteed to be 100% safe 100% of the time.

Having said that, we do not consider references to the proposal to be relevant to this particular event for the following reasons:-

1. A proposed leachate treatment facility in Derrinumera landfill site & discharge into Clew Bay is just that, a proposal.
2. It has not been determined if this proposal is also in contravention of Article 8 of COUNCIL DIRECTIVE 79/923/EEC
3. The EIS referred to has not been published despite having been in preparation for over 2 years.
4. Westport WWTP was not designed to treat landfill leachate & is not effective for that purpose.
5. Landfill leachate is known by MCC & EPA to reduce the ability of WWTP's to treat normal sewage.

We wish to request that a meeting be convened of representatives of all relevant stakeholders and resource users early in the New Year. The purpose of the meeting will be to determine what useful experiences can be gained from this episode and to explore a means by which water quality in Clew Bay can be properly managed & guaranteed into the future.

Yours sincerely,

Niall O'Boyle
Secretary.

cc. DCMNR, EPA, FSAI, BIM, Marine Institute, ISA, CLAMS, CBOC.



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Mr. Pat Commons,
SEO, Capital Works,
Mayo County Council,
Aras an Chontae,
Castlebar,
Co. Mayo.

Environmental Protection Agency IPC Licensing
Received 28 JUN 2007
Initials _____

14th July 2004

Dear Sir,

**Newport Sewerage Scheme and proposed Derrinnumera Sludge Hub Centre
& Landfill Leachate outflow to Newport Bay**

The members of the Clew Bay Marine Forum (CBMF) wish to thank Mayo County Council for the May 26th consultation regarding the proposals for a sewage treatment plant in Newport and the proposals for an outflow of treated Leachate from the Landfill site and 'Sludge Hub Centre at Derrinnumera. Unfortunately, time constraints made it difficult to discuss the proposals fully, so we have set out our comments and concerns below and we request that all of these be addressed in the EIS's under preparation for these proposals.

We are extremely concerned that the marine industries in Clew Bay will be adversely affected should these proposals go ahead. Whilst the provision of a WWTP in Newport offers some improvement to water quality, the treatment and discharge of leachate from the landfill and the sludge hub centre are separate proposals and threaten to reduce water quality considerably. Contrary to the benefits to be derived from the treatment of sewage currently being discharged in a raw state into the bay, the introduction of landfill and 'sludge hub centre' leachate treatment and discharge offers no benefits to human beings, flora and fauna, or in material assets to Newport's maritime activities. In fact, leachate discharge will reduce water quality in Newport Bay unless full treatment can be provided onsite at Derrinnumera for bacterial, viral, chemical contaminants, endocrine disruptors and if applicable, radiological contamination.

Newport WWTP

CBMF welcomes the proposal for a sewage treatment plant in Newport due to the improvement to the water quality of Clew Bay. However the members would prefer the discharge, including the storm outflow to remain in its current position in Newport and for UV treatment to be installed and used and we will request the Dept of Communications, Marine & Natural

Resources to include UV treatment as part of the conditions for the foreshore license.

WWTP Discharge Location

Bacterial sampling and analysis currently being carried out in Newport estuary indicates that there is a considerable reduction in e-coli levels by the time the effluent from the local population reaches the native oyster beds closest to the existing discharge and we would expect that the WWTP should safeguard and improve this area's classification. However, discharge at the proposed site in Rosmore is too close to the oyster beds and poses an additional threat to Lough Furnace. It is clear from the Westport WWTP that depth of water / navigation is not an absolute requirement for a WWTP discharge. If depth is required for additional dilution of the landfill / sludge hub centre leachate, then a higher level of treatment than is currently being considered for this discharge is needed.

Chemical and heavy metal contamination

Chemical and heavy metal contamination in the food chain has become a global problem. The discharge into Newport Bays shellfish production area of landfill leachate carrying elevated levels of chemical and heavy metal contamination increases the risk of higher than background levels being present in shellfish and other produce. Dilution or bioaccumulative contaminants with waste water and after discharge may hide the pollution by transferring it to another medium, but it does not reduce the contamination risks to shellfish. Substances with the ability to bioaccumulate, such as heavy metals, PCB's, dioxins, furans, priority substances and other relevant pollutants must be identified and removed prior to discharge.

International Standards

Clew Bays produce is marketed primarily in mainland Europe, it is therefore imperative that the treatment of leachate conforms to the highest European expectations to prevent a reduction in market value and perception. There should be a full review of available treatments with a full assessment of alternatives worldwide with references to international examples of discharges to shellfish waters.

Sludge Hub Centre

The creation of a commercial sludge hub centre at Derrynumera, with sewage wastes imported from all of Mayo and other counties introduces many additional risks. Sewage wastes contain bacterial and viral contaminants. At present, classification is directly related to e-coli and faecal coliform levels in shellfish flesh and for 'A' classification must be lower than 230 e-coli or 300 faecal coliform per 100g. Indicative water levels of e-coli to achieve 'A' classification are less than 1 per 100ml. The proposal to discharge faecal coliform levels of 2000 per 100ml puts Clew Bay North in danger of being declassified to 'C' or worse still, unfit for shellfish production. The method of determining classification may change in the future with more emphasis on viral contamination. Since Newport already has areas that are struggling to conform to 'A' classification, it is essential that bacterial and viral contaminants are eradicated at the treatment works at Derrynumera. Shellfish production relies on pristine water quality,

without which expensive depuration is required to market produce. It is not reasonable to expect local people and businesses to pay the price of the commercial discharge of any additional levels of contamination from other areas and effective treatment must be put in place to protect local industry.

Endocrine Disruptors

Sewage wastes contain endocrine disruptors. Studies show that use of the female contraceptive pill is causing sewage wastes to contain high levels of female hormones. These hormones have been shown to have an effect on shellfish and fish reproduction in some cases causing sterility and even sex change. Oysters are particularly susceptible to the effects of these hormones and the reproductive cycles of the native oyster and other species will be put at risk, from the importation of sludge, if endocrine disruptors are unable to be removed prior to discharge.

Newly Emerging Contaminants

Recent studies show that sewage contains levels of PBDE chemical contaminants and levels of PBDE contamination are now being studied and recorded in fish. Whilst these chemicals are not yet on the banned list and are only one example, they are bioaccumulating in the food chain and are believed to possess endocrine disrupting abilities. It is imperative that the treatment facility in Derrynumera is sufficiently adaptive to remove these types of newly emerging contamination prior to discharge in Newport's food production area.

Hospital Wastes

Derrynumera Landfill operated as an unlicensed landfill from the 1970's and no records are available of what went into the dump during that period. Since Derrynumera is the closest landfill to Castlebar hospital, there is a strong possibility that the landfill received hospital wastes prior to the granting of the license. Since certain types of hospital wastes contain and emit radiological contamination, analysis is required to identify radiological contamination and if necessary steps should be taken to prevent access or radiation to the environment via the leachate.

Independent Risk Assessment

An extensive Risk Assessment should be carried out detailing a comprehensive profile of the current and expected chemical and physical characteristics of the leachate by reference to both domestic and internationally published data on leachates, giving detailed information outlining forecasting methods.

The Risk Assessment should describe the likely significant effects, direct and indirect, on the environment of each one of the chemicals identified in the above leachate profile explained by reference to its possible impact on:- All species of flora and fauna referred to in the SAC list for species, their food sources and all of the life stages of those species particularly the larval, juvenile and reproductive stages. The risk assessment should identify which contaminants may escape the treatment process and what their effects will be. If adequate information is not available in the published scientific literature then studies should be carried out including ecotoxicology testing on bivalve development & bioaccumulation to determine the risks that

particular contaminants, which may escape the treatment process, pose to human health.

Planning and Design

The capacity of the leachate treatment facility and lifespan of the landfill is of concern to the members since there are so many variables associated with the proposals. What is the anticipated lifespan of cell linings in the landfill and what long term plan is in place in the event of failure / expiration of the cell linings? It is crucial that there are no discharges of untreated leachate effluent and the planning phase should factor all of the variables into the design capacity to ensure that, population growth, 10year storm events, additional landfill cells and climate change scenarios are scientifically assessed for a 20+ year life span. There should also be an emergency contingency plan in the event of overload with notification procedures laid out to prevent contaminated produce reaching the consumer. This plan should specify compensation measures agreed with producers and backed by an appropriate insurance bond, in the event of disruption to production, product contamination, market recall and loss of market image.

Monitoring and Review Procedures

The EIS's should address proposals to agree, transparent procedures to monitor the discharges effects, the method of disposal of leachate solids and the estimated future flows of leachate. The EIS should include a detailed review of all the alternative technologies available for the disposal of leachate together with a Cost Benefit analysis of each. The EIS should also state what review procedures are proposed as scientific understanding grows and leachate treatment methods improve?

Treatment

Almost no information was available regarding the level of treatment that the leachate will receive. The EIS should incorporate a comprehensive description of the treatment technology and processes. We also request to be consulted in the decision making process on the effectiveness of primary, tertiary, polishing and additional chemical removal at extracting contaminants from the leachate to agree what is the most suitable treatment for this effluent.

Previous correspondence

As stated in our letter of 12th December 2002, CBMF remain strongly opposed to proposals to treat and discharge leachate in Westport WWTP as a temporary measure until the Derrinnumera plant & pipeline is operational. This facility was not built for this type of treatment and we do not believe that this activity would conform to SI No. 200/1994 & the Quality of Shellfish Waters Directive. In that letter we urged the council to carry out an expert and independent assessment of the long-term effects that leachate discharge has had on the Castlebar River over the past 2-3 years, we would like to know if this work has been carried out and if so we request copies of the findings. We also expressed our surprise at the consultant's plans to conform to the wastewater treatment standards only after initial dilution. We do not believe that dilution is in itself a solution and are now even more concerned since it appears that our comments have been

disregarded. The consultants propose to use dilution to disguise the contamination levels of the leachate and that this is the main method of achieving discharge standards. We do not believe that this offers Newport's food production area sufficient protection and that it makes nonsense of the discharge standards. The EIS's should specify true values in the form of the total quantities of contaminants that will be discharged per annum over the anticipated lifespan of the facilities.

Further Comments

The treatment of the leachate will need to be of a uniquely high standard to achieve the requirements of The Quality of Shellfish Waters Regulations, under which Clew Bay is designated. The members recognise that a reasonable stance regarding this designation should be taken, but we feel that these proposals place too much emphasis on dilution and not enough on treatment and are a threat to our survival. Unfortunately, to date, consultation and follow up communication have failed to reassure and our concerns have increased. At this point it must be asked how reasonable is it to expect the sensitive food production waters in Newport and Clew Bay to withstand the deterioration in water quality that these proposals will cause?

At the International Conference on Molluscan Shellfish Safety held in Galway last month, no fewer than 27 presentations of papers from all over the world were given on:- the microbiological status of shellfish, shellfish viruses & pathogens and chemical contamination of shellfish. The studies agree that shellfish act as 'sentinel' bioindicators of water quality and many of them are looking at ways of detecting contaminants to prevent them reaching the table. Clew Bay shellfish are able to withstand Newport's relatively low levels of pollution and still produce a top quality product. After absorption of sewage and landfill contamination from all over Connaught, what quality of shellfish will Clew Bay export to European tables?

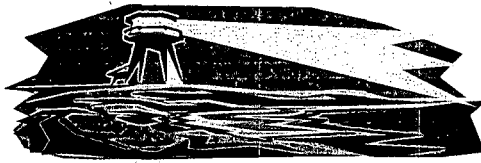
We would be grateful for the opportunity to discuss these points further at your earliest convenience and look forward to your reply.

Yours sincerely,

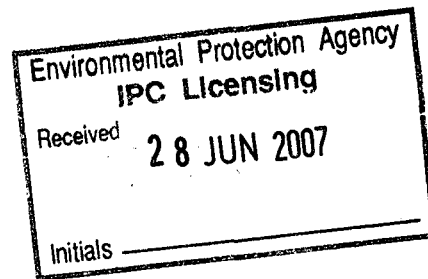
Niall O'Boyle.
CBMF Secretary.

cc:

Board Members,
Clew Bay Oyster Co - Op. B.I.M. Offices, Newport.
Marine Institute, Furnace.
Micheal O'Cinneide, MI.
Mr David Lyons, FSAI
Mary Ferns, Chairwoman, ISA
Mr Donal Maguire BIM



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Mr Pat Commons,
Capital Works,
Mayo County Council,
Aras an Chontae,
Castlebar,
Co. Mayo.

Ref S/NI/1(a) 1

20th February 2004.

Newport Sewerage Scheme and Outfall – Environmental Impact Statement.

Dear Pat,

Thank you for your letter of 13/2/04. We welcome the opportunity of further consultation regarding the scope of the EIS concerning the proposed WWTP at Newport and the discharge of treated leachate through the proposed marine outfall of the treated municipal wastewater.

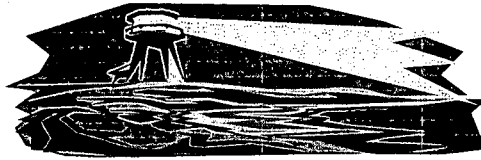
We are unsure if there is more than one EIS being prepared and we ask you to clarify whether the consultations will include the proposal to site a Sludge Hub Centre at Derrynumera as well as a leachate treatment centre. If there is to be more than 1 EIS, I have been asked to express our interest in being involved in consultations on any and all EIS's that are being prepared.

The members have asked me to thank you for the works that have been completed in Westport and to seek confirmation, whether Westport WWTP is being considered for the treatment and discharge of landfill leachate and if the new WWTP in Castlebar will continue to treat and discharge leachate.

Finally, I should be grateful if you would forward copies of An Bord Pleanala's written opinion on the information to be contained in the relevant EIS's.

Yours sincerely,

Niall O'Boyle
Secretary
CBMF



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Mr. Pat Commons,
SEO, Capital Works,
Mayo County Council,
Aras an Chontae,
Castlebar,
Co. Mayo.

12th December 2002

Dear Sir,

**Newport Sewerage Scheme and proposed Derrinumera Landfill
Leachate outflow to Newport Bay**

We wish to thank Mayo County Council for the initial consultation on December 5th regarding the proposals for a sewage treatment plant in Newport and the proposals for an outflow of treated Leachate from the Derrinumera Landfill site.

Arising from the meeting the Board of Directors of Clew Bay Marine Forum (CBMF) feel further discussion and clarification is required to ensure that the marine industries in Clew Bay are not adversely effected should these proposals go ahead.

CBMF welcomes the proposal for a sewage treatment plant in Newport with the resulting improvement to the water quality of Clew Bay. There are however some concerns regarding the location of the outflow pipe, which are outlined in the accompanying document.

CBMF also welcome the provision of the Westport sewage treatment works but we are concerned that UV treatment is not to be included because it was not a stipulation of the Dept of Marine Foreshore Licence. Since bacterial and viral contamination to shellfish poses a clear risk to human health we request that UV treatment be included prior to the plant becoming operational. This treatment should also be installed in the proposed Newport Plant.

We were particularly interested that storm runoff is only anticipated once a year. We would like to know how this estimate was arrived at and how it compares with what happens in other sewage works. We also request that plans for notifying shellfish

producers in the event of storm surge runoff in Westport and Newport be put in place via a hotline which CBMF will facilitate.

The proposal to pipe treated leachate to Newport Bay is of a completely different nature to the sewage outflow. In particular we are concerned that the Council consider that an EIS is not required as the population equivalents are below 10,000. However, since toxicity levels contained within leachate do not relate to population equivalents we feel strongly that this proposal must be accompanied by a full EIS, which will address the toxic content of the leachate. Some recommendations regarding the EIS are also contained in the accompanying document.

As mentioned by the consultants, a baseline information study will be required of receiving waters and this information should include toxic elements, known to be contained in leachate. CBMF already have some sampling sites in situ and possess some bacterial and viral information which can be added to this study as well as having access to boats and shellfish for sampling purposes. We would expect to be able to play an active role in the gathering of baseline information and have prior input regarding the type of testing to be carried out. We request that Pettits consult with us on their proposals for a baseline study and that we assist them in undertaking it in full. We also request that we be given the results of the tests as they are received.

Furthermore, we urge the council to carry out an expert and independent assessment of the long-term effects that leachate discharge has had over the past 2-3 years. A study of the effects of the toxic elements on the Castlebar River and connecting waterways will be essential in assessing the likely effects on marine life in Clew Bay. We should also be grateful if you would supply us with An Bord Pleanála's reasons for not allowing the treatment of leachate in the new Castlebar sewage works.

CBMF are strongly opposed to suggestions / proposals that leachate is to be treated in Westport as a temporary measure until the Derrinurra plant & pipeline is operational. This facility was not built for this type of treatment. Any plans to transport the leachate to Westport would need to be the subject of an in-depth and updated EIS to ensure that SI No. 200/1994 is not contravened. Without this there is no way of assessing the possible impacts on the waters of Westport Bay and rest of Clew Bay. Such temporary arrangements without solution will only transfer the problem from one area to another and lead to a proliferation of contaminated areas.

There was considerable surprise at Tobins comment that they would not be able to reduce levels of some elements to conform to the wastewater treatment standards but that the levels would decrease after initial dilution. We believe that the standards cover what comes out of the pipe and not what it dilutes down to. The fact that the consultants appeared to be publicly advocating a course of action that may not conform to standards is a matter of grave concern to us.

The treatment of the leachate will need to be of a very high standard to achieve the requirements of The Quality of Shellfish Waters Regulations. Clew Bay is designated under schedule 2 of this act. It would seem to be impossible to have any improvement in the quality of water if the Newport sewage treatment plant does not go ahead. There were concerns regarding the transparency of the original consultation for a location for a sewage outflow pipe since leachate disposal was not mentioned during

that process. However it seems that the two proposals are inextricably linked in that it would not appear to be legally possible to discharge leachate without simultaneously improving the water quality by providing a sewage treatment plant.

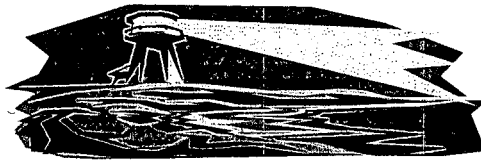
We would be grateful for the opportunity to discuss these points further at your earliest convenience and look forward to your reply.

Yours sincerely,

Niall O'Boyle.
CBMF Secretary.

cc: Board Members,
Cllr. Frank Chambers, Newport.
Clew Bay Oyster Co - Op.
B.I.M. Offices, Newport.
Marine Institute, Furnace.
NADDCO

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EIS.

That there is insufficient data regarding the effects of leachate discharge on the marine environment and an expansion of the EIS should be carried out prior to the proposal being advanced. The EIS should address: -

- Detailed information on the effects to Lough Furnace and effect of toxic elements of leachate .
- Concerns that effluent will build up at Rosmore & be flushed upstream on the incoming tide to Furnace and Acres where it will become trapped.
- The potential for contaminants to cause hormonal and chemical effects on salmon, shellfish and the environment.
- That the proposals adhere to the NASCO Salmon Habitats agreements.
- The climate change scenarios currently being discussed – such as up to 30% reduction in summer flows and higher frequency and volume of winter floods are factored into the planning phase.
- A model run of worst-case scenario storm overflow should be run to assess the impact on the bay.
- A model run in the event that UV treatment is not fitted to assess the impact on the bay.
- Full history of what is contained in the dump.
- The life and size of the landfill is specified and the effect that increases in population will have is planned for.
- Probable future flows and leachate content.
- Anticipated lifespan of cell lining.
- Full and independent characterisation of what is contained in leachate. What treatment will be carried out. What will be removed. What will be left after treatment.
- Full and independent characterisation of complex chemicals, which have not been tested for and which are usually most toxic elements in leachate.
- Whether untreated leachate will be discharged during storm events.
- The method of disposal of leachate solids.
- The scientific data required under SI No. 200/1994 (EU 76/923) be reviewed in preparing the EIS and that we be supplied with copies of that data.
- Comparisons of best available technology including reed beds, activated charcoal filters and ozonation.

Outfall location.

- Consideration should be given to providing a separate outflow for leachate.
- The storm waters will continue to be discharged into the Newport River leading to 2 areas of contamination.
- Too much importance was placed on the navigational issue & water depth requirement in building an EIS based on achieving these criterions within the shortest distance of the landfill and Newport.
- The Marine Institute Hydrographic model should be used to locate a more suitable discharge point as proposed site is 3m deep but surrounded by shallow areas.