OFFICE OF LICENSING & GUIDANCE

INSPECTORS REPORT ON A LICENCE APPLICATION

To:	DIRECTORS	
From:	BREEGE ROONEY	**OFFICE OF ENVIRONMENTAL ENFORCEMENT**
Date:	15 NOVEMBER 2005	
RE:	APPLICATION FOR A WASTE LICENCE FROM WATERFORD COUNTY COUNCIL, **LICENCE REGISTER 187-1**	

Application Details	
Type of facility:	Non-Hazardous Landfill
Class(es) of Activity (**P** = principal activity):	3rd Schedule: 1, 2, 4, 5(**P**), 6, 7, 11, 12 &, 13. 4th Schedule: 2, 3, 4, 9, 10, 11 & 13.
Quantity of waste managed per annum:	120,000 tpa
Classes of Waste:	Non-hazardous household, commercial & industrial wastes.
Location of facility:	Garrynagree & Reanagullee Townlands, Dungarvan, Co. Waterford.
Licence application received:	6 June 2003
Third Party submissions:	Seven
EIS Required:	An EIS was submitted with the Application. I have examined and assessed the EIS and I am satisfied that it complies with the requirements of the EIA and Licensing Regulations.
Article 14 compliance date:	10/11/05
Site Inspections:	1/07/03 (Site Inspection & Notice Check), 5/04/04 (Site Inspection & Notice Check), 31/01/05 (Site Inspection)

Assessment of Application

In preparing this report I consulted with Mr. Tadhg O'Mahoney (Inspector) and Dr. Karen Creed (Inspector) in relation to the ecology of the Freshwater Pearl Mussel *Margaritifera margaritifera*.

1. Facility

Waterford County Council proposes developing an engineered, non-hazardous landfill at Dungarvan, Co. Waterford (Site Location Map). It is proposed that the landfill will have a capacity of 1,875,000 tonnes accepting non-hazardous domestic, commercial and industrial waste.

The proposed waste management facility site is located in the townlands of Garrynagree and Reanagullee approximately 7Km southwest of Dungarvan, Co. Waterford. Coillte Toranta and Mr. Corneilius Flavin, (who is opposed to the proposed development), currently own the site. The proposed site comprises a total area of 103.5 ha. This is broken down as follows the proposed licenced facility would comprise of 94ha of which the landfill footprint would be some 20 hectares with approximately 36 ha of ancillary works and screening berms and 36ha of a buffer zone. The council intend purchasing an additional 10ha approximately along the bank of the River Lickey to be used as an additional buffer and for ecological improvements of the River Lickey. The River Lickey is part of the Blackwater River (Cork/Waterford) candidate Special Area of Conservation (cSAC) No. 2170 and is protected in particular because of the presence of the Freshwater Pearl Mussel *Margaritifera margaritifera* and salmon. The nomination of the River Lickey as a cSAC occurred in June 2003. In total Waterford County Council intend purchasing 103.5 ha to accommodate the development and to provide additional buffer zones. The site was under forest for a number of years and the mature forest have now being substantially felled and replanted.

Planning Permission was granted for this facility, after an Oral Hearing was held, by An Bord Pleanala on 15 December 2004**.**

There are 8 houses within 1km of the landfill footprint and the nearest house is 680m away. The nearest commercial activities are 2 public houses that are located approximately 1.5km east of the proposed development adjacent to the N25. Apart from the public houses there are no hospitals, schools, hotels or other public buildings in the vicinity of the facility.

2. Operational Description

The council have stated in the EIS that they expect that the landfill will receive a maximum of 120,000 tonnes of non-hazardous waste per annum.

The development consists of an engineered landfill extending over 20 hectares of the site. The landfill is to be constructed in several phases over a 25 year period. Phase 1 will provide enough landfill space for a period of 5 years. The excavated material for Phase 1 will be used to construct screening embankments on the west, south and east of the landfill

The principal elements of the proposed development consist of:

- screening embankments to be constructed to the west, south and east of the landfill,
- civic amenity centre to handle small waste loads from the community,
- reserved areas (for future use) for possible handling construction & demolition waste (C&I), composting, and a third area for treating waste,
- composite lining system for the base and sides of the landfill consisting of a 500mm depth of granular material as a leachate collection layer, 6mm thick protective geotextile layer, 2mm high-density polythene membrane layer on top of at least 500mm mineral layer of engineered clay. The purpose of this composite liner is to retain leachate.
- Leachate system consisting of a collection system and a lagoon. It is proposed that the leachate will be transported to a municipal wastewater treatment plant.
- Surface water management to include surface water collection drains, surface water settling ponds and a special retention pond to accommodate any accidental spillages of leachate or oil and surface water retention ponds either side of the access road.
- Landfill gas management infrastructure: Initially it is proposed to manage the gas by a passive gas-venting network. Then when gas generation is sufficient it is proposed to install an active system actively pumping the gas to an enclosed flare for destruction.
- Site infrastructure to include two weighbridges, wheelwash, waste inspection and quarantine areas, office block, fuel storage tank and maintenance shed for servicing of machinery on-site,
- Measures to control nuisances such as litter, birds and pests.
- Upgraded access road and
- A new bridge over the River Lickey.

The proposed hours of operation of the facility are between 0800 hours and 1700 hours Monday to Saturday (inclusive of Public Holidays) and 0800 hours to 1300 hours on Sundays. In addition it is proposed that staff will be on site a half hour before opening and an hour after closing.

3. Recommendation

It is recommended that the application for a waste licence, namely the provision of a lined landfill, be refused for the reasons outlined below and in the attached Proposed Decision.

- **Location.**
- **Legislation**.
- **Opinion of the European Commission.**
- **Habitat Requirements of the Freshwater Pearl Mussel.**
- **Proposals by the Applicant.**

3.1 Location

The proposed landfill is situated in the upper reaches of the River Lickey that is a 20km tributary of the River Blackwater (Munster). The River Blackwater is:

- A designated Salmonid Water under the Freshwater Fish Directive (78/665/EEC) and
- A candidate Special Areas of Conservation (cSAC) under the Habitats Directive (92/43/EEC). The proposed extension of the River Blackwater System pcSAC to incorporate the River Lickey is based on the importance of the River Lickey for salmon and for the freshwater pearl mussel. Figures 1 & 2 attached outlines the pcSAC in the vicinity of the site.

The River Lickey is located a minimum of 20m and a maximum of 150 m to the south of the boundary of the site for the proposed landfill (see attached Figures Proposed Site Layout Plan including Proposed Final Capping Contours (Scale 1:50,000) and 1:10,000 House Location Map.). The boundary of the proposed facility encompasses a small section of the River Lickey i.e. where the river runs under the access road. The proposed access road for the landfill is the existing forestry road that extends from the N25, the main Waterford to Cork road, over a small bridge over the River Lickey. Waterford County Council proposes upgrading the road and the bridge in order to accommodate refuse vehicles and the increased traffic on the forestry road. The River Lickey forms part of a proposed special area of conservation (cSAC) for the endangered and protected freshwater pearl mussel, *Margaritifera margaritifera*.

The freshwater pearl mussel was first recorded in the River Lickey in 1993 (Lucey, 1993). Since then at least 5 studies were carried out by various groups between the periods 1999 –2001 on the freshwater pear mussel in the River Lickey. Eugene Ross undertook one of these surveys in 2001 on behalf of the Licky Concern Group and Natura Environment Consultants carried out another survey in 2001 on behalf of the applicant. The areas surveyed and the sampling methods used by the various researchers differ. The authors vary on the exact numbers of the species present in the Lickey. The total population estimates vary between 6,700 and 12,000. However all authors agree that the species is locally abundant. Ross (2001) detailed that the most significant density of Freshwater Pearl Mussel occurs between the forestry Bridge at Garrynagree downstream to Carrigeen Ford. It was estimated that a population of 7998 mussels (extrapolated from transect counts along this section of the Licky) occurs along this 1.7km section of the river. This is a significant population of pearl mussel.

The section along which this population occurs is within the catchment of the proposed landfill located immediately to the south of this section of the Licky (See attached Figure1 Lickey Catchment). Of note is that within this stretch no juvenile mussels were observed. However, according to Ross (2001), the apparent absence of juveniles is a characteristic shared with most surviving populations of pearl mussel throughout its geographic range. He also notes that the River Lickey offers minimum viable densities of mussels for effective recruitment (in excess of 500 individuals per $100m^2$), which suggests that successful fertilisation and larval development is occurring at the site. It should be noted that according to Minchin (2000) the reproducing population of the freshwater pearl mussel is particular difficult to locate.

Ross (2001) also states that, "The Margaritifers population in the Licky river may be of extra significance in a national context, in that it appears from available data, that it is probably the only substantial population surviving in the area between the

Blackwater River in County Cork and a tributary of the River Barrow called the Mountain river in Carlow.

The River Lickey is of high ecological importance due to the presence of the freshwater pearl mussel, Atlantic salmon, lamprey, otter and kingfisher that are listed and protected under Annex II of the EU Habitats Directive (EEC/92/43).

The proposed location and the access road for the proposed landfill is too close to the cSpecial Area of Conservation for the Freshwater Pear Mussel *Margaritifera margaritifera*. I am not satisfied that the construction or operation of the landfill facility could be carried on in a manner sufficient to guarantee nil negative impact on the protected mussel or its habitat.

3.2. Legislation: Legal Status of *Margaritifera margaritifera*

- The freshwater pearl mussel *Margaritifera margaritifera* is one of two European species of pearl mussel, which are on the International Union for the Conservation of Nature and Natural Resources (I.U.C.N.) red data list i.e. it is classified as vulnerable.

The IUCN Red List of Threatened Species provides taxonomic, conservation status and distribution information on taxa that have been globally evaluated using the IUCN Red List Categories and Criteria. This system is designed to determine the relative risk of extinction, and the main purpose of the IUCN Red List is to catalogue and highlight those taxa that are facing a higher risk of global extinction (i.e. those listed as Critically Endangered, Endangered and Vulnerable). IUCN Red Lists are widely recognized as the most comprehensive, apolitical global approach for evaluating the conservation status of plant and animal species. A taxon is vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium term future.

- It is also protected by the Council of Europe under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern convention).

The Bern Convention is a binding international legal instrument in the field of nature conservation, which covers the whole of the natural heritage of the European continent and extends to some States of Africa.

- The freshwater pearl mussel is a listed species under Annex II and IV of the EU Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora). Annex II are species whose conservation requires the designation of special conservation areas and Annex V are species whose taking in the wild and exploitation may be subject to management measures.

Article 6(2) of the Directive, inter alia, requires Member States to '*take appropriate steps to avoid, in special areas of conservation, the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated, in so far as such disturbance could be significant in relation to the objectives of this Directive'*. While the River Lickey is not a designated Special Area of Conservation it is a candidate SAC and hence Article 6 should be taken into consideration when assessing a potential impact on this area. Article 6(4) states that when a plan or project has indicated a negative implication for a site that the plan or project can only be carried out when there is an absence of alternative solutions and there is overriding public interest.

- In Ireland the mussel is protected under the Wildlife Act, 1976 and under Statutory Instrument S.I. No 112 of 1990 in Ireland. S.I. No. 112 of 1990 makes it illegal to interfere with the freshwater pearl, banes fishing of the species and requires that a licence must be obtained from Duchas to conduct any research on them in Ireland.

Based on the requirements of the aforementioned legislation it is imperative that the Agency play its role in protecting the Freshwater Pearl Mussel and refuse this application for a proposed landfill in an area adjacent to the habitat of the mussel.

3.3. Opinion of the European Commission.

EU Complaints C (2005) 2370 and P2002/4174

Some of the issues of these complaints that are applicable to the licensing assessment of this application are detailed below.

In correspondence on this matter the Commission notes that Article 7 of Directive 75/442/EEC on Waste, as amended, inter alia, requires the preparation of waste management plans and the identification of suitable disposal sites or installations. The Commission contends that given the sensitivity of the surrounding environment and the risk factors associated with a landfill that Garrynagree should not have been identified as a suitable disposal site for the purposes of Article 7 of Directive 75/442/EEC.

The commission argues that Ireland has failed to comply with Article 6(3) and (4) of Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna by approving the provision of a landfill at Garrynagree beside the River Lickey in waste management plans. It states that there is evidence of clear risks to the freshwater pearl mussel presented by the proposed landfill both at construction and operational stages. In addition it argues that the available information indicates that Garrnagreee is an inherently unsuitable disposal site when placed in the context of the objective of maintaining or restoring *Margaritifera margaritifera* to a favourable conservation status.

Article 10 of the EC Treaty inter alia provides that Member States shall abstain from any measure that could jeopardize the attainment of the objectives of the Treaty. The Commission considers the selection of Garrynagree as a proposed landfill is inconsistent with the obligations that Ireland has under Article 10 of the Treaty.

On 13 July 2005 the Commission sent another letter of formal notice to Ireland related to Ireland's implementation of Council Directive 92/43/EEC on the conservation of natural habitats and of flora and fauna. This letter also refers to four previous letters of complaint. Some of the issues that relate to this proposed development are detailed as follows:

In letter ref **2004/4756** the Commission, inter alia, contended that, in light of evidence of serious and widespread declines in populations of *Margaritifera margaritifera* and *Margaritifera durrovensis* and habitat deterioration in the proposed SAC's nominated by Ireland for these two species of pearl mussel, Ireland was not, in accordance with Article 6 of the Directive 92/43/EEC, taking all the necessary and appropriate measures to ensure the maintenance or restoration at favourable conservation status of the species.

The **Court of Justice** in its ruling dated 13 January 2005 in Case C-117/03 ("Dragaggi") stated that:

'*In the case of sites eligible for identification as sites of Community importance which are included in the national lists transmitted to the Commission and, in particular, sites hosting priority natural habitat types or priority species, the Member States are, by virtue of Directive* 92/43*, required to take protective measures that are appropriate, from the point of view of the Directive's conservation objective, for the purpose of safeguarding the relevant ecological interest which those sites have at national level."*

The Commission summaries it's position in letter **P2002/4174.** It is of the view that Ireland is still not complying in full with the obligations that it has under Articles 6 and 11 of Council Directive 92/43/EEC as well as Article 10 of the EC Treaty.

The Commissions cites An Bord Pleanala approval of the proposed landfill at Garrynagree beside the River Lickey as a decision taken contrary to the best available scientific knowledge. It is argued that An Bord Pleanala did not respect Article 6(3) and 6(4) of Directive 92/43/EEC. It detailed that despite An Bord Pleanala hearing evidence from Dr Moorkens, whom the Commission refers to as Ireland's national expert on the pearl mussel, that there is no level of silt that the freshwater pearl could safely withstand, that it went on to set a limit of 35mg/l for Suspended Solids in the discharge entering the River Lickey and approving the proposed development.

In relation to Article 6(4) of Directive 92/43/EEC the Commission observed that alternative locations existed for a landfill facility and that there is no overriding public interest in establishing a landfill project at Garrynagree that would be detrimental to the pearl mussel.

The Commission contends that siting a landfill beside a river earmarked for the conservation of *Margaritifera margaritifera* cannot be considered compatible with the duty Ireland has under Article 10 of the EC Treaty not to jeopardise the achievement of the Community conservation objective of the species.

In light of the reasoned opinion of the European Commission it is recommended that the Agency refuse this application.

3.4. Habitat Requirements of the Freshwater Pear Mussel *Margaritifera margaritifera*

3.4.1 Freshwater Pearl Mussel

The Freshwater Pearl Mussel is one of the largest freshwater invertebrate occurring in Ireland. It is a large bivalve mollusc which grows very slowly and can live to over 100 years. Specimens of up to 150mm can occur typically though not exclusively in soft-water associated with large fast flowing rivers.

3.4.2 Habitat Requirements

Margaritifera margaritifera is found in clean, well oxygenated waters which flow over non-calcareous rock. The substrate of the riverbed is of great importance and determines in which stretches of river channel the pearl mussel can survive. Clean gravel and sand are essential to a healthy population of pearl mussel. The mussels partially embed themselves in the substrate of the river and feed by filtering the water thus improving the water quality. If the substrate becomes clogged with silt, oxygen is no longer able to reach the juveniles and they die. According to Moorkens (1996), where significantly large quantities of silt accumulate on the riverbed, or if the riverbed becomes coated with filamentous algae, no juveniles will survive and adults become stressed, close their shells shut and begin to waste away and die. In 1999, distribution maps indicated that the pearl mussel was widespread in Ireland, however very few of these populations were producing juveniles. According to Moorkens, (1996) *'since the 1970's, the main cause for decline has been deteriorating river quality, and the largest populations are to found in remote areas with the least changes to the river channel, and with the least intensive agriculture, forestry, industry or human pressure within the catchment'*.

The freshwater pearl mussel can live up to 100 years. Following fertilisation of the female eggs by sperm discharged from the male, the eggs develop into the larval stage, referred to as *glochidia* in the female's brood chamber. The maturing glochidia are released into the water body during August and September, in Ireland, and a small percentage of these will be inhaled by passing salmonid fish (Native salmon *Salmo salar* and trout *Trutta trutta* in Ireland) and become attached to the gills. Following maturation on the gills of the host fish, the young mussels drop off the gills and bury into the gravel in the channel bed, remaining buried for in the order of five years. During this time the juvenile mussel requires an aerated flow of water and food.

3.4.3 Key Habitat Requirements:

- Clean/unsilted gravely and sandy substrate
- Well oxygenated waters, typically flowing over non-calcareous rocks
- Oligotrophic conditions i.e. poor in minerals, nutrients and organic content, pH 7.5 or less with low conductivity (e.g. 100uS cm^{-1}), nitrate less than or equal to 1mg/l and phosphates less than 0.03mg/l.
- Viable population of native salmon and/or trout.
- Stable channel with little bed transport.
- Possibly more strict water quality standards than salmonids.

Anything that directly or indirectly interferes with the above requirements constitutes a threat to the pearl mussel.

3.4.4 Potential Threats of a Landfill Development to the Freshwater Pearl Mussel

The landfill footprint lies approximately 230m (from the tributary to the Lickey) to around 350m from the main channel of the River Lickey. Some of the proposed infrastructure including the leachate lagoon and storwater retentions ponds are closer again to the Lickey. There are a number of threats to the habitat of the mussel that could occur if a landfill was constructed in this area. Some of these threats could be ongoing for a period greater than 25 years.

1. *Sedimentation/siltation:* An Bord Pleanala held an oral hearing on the proposed development in June 2004. Dr. Moorkens, whom the European Commission refers to as Ireland's national expert on the pearl mussel, made a submission on the pearl mussel. She stated that there is no level of silt in the River Lickey that *Margaritifera margaritifera* can safely withstand and that the conservation of the species in the River Lickey required an improvement in and not merely a maintenance of existing water quality. Dr. Moorkens detailed that there is a real risk of silt or other pollutants entering the river and that rehabilitation would be impossible should such impacts occur. Dr. Ross on behalf of the Lickey Concern Group has detailed that a limit of 0 mg/l Suspended Solids would have to be set in any discharge to the River Lickey in order to protect the pearl mussel. Hence no level of siltation of the River Lickey, during construction, operation or restoration of the proposed landfill, is viable. There are a number of risk factors associated with the development namely the construction of a new bridge, access road, construction during the development, operation and restoration of the landfill, phased construction of the cells, failure of mitigation measures i.e. retention and settlement ponds and the impossibility of achieving zero silt input from the proposed development.
2. *Leachate:* The habitat requirements of the Freshwater Pearl Mussel are such that any impact on water quality could have a significant and irreversible impact on the population. It is generally accepted that the Freshwater Pearl Mussel prefers oligotrophic conditions – poor in nutrients, pH of 7.5 or less and low conductivity. Risk factors from the proposed landfill include any failure of either leachate management during the ongoing phased development, operation and restoration stages of the landfill or accidental spillages of leachate during transport.
3. *Drainage & variations in flow regimes:* Even slight hydrological changes may result in serious degradation of the Freshwater Pearl Mussel habitat. Alteration to land drainage that has the potential to increase siltation or the speed of run-off can among other things result in the formation of algal mats and reduced interstitial-water column mixing or remove mussels from their beds.
4. *Channel Structure:* It is important that the channel structure should not be altered in any way as this could impede water flow, increase flooding, or alter the distribution of substrates.
5. *Host species:* Salmonids (*Salmo salar* and *Trutta trutta* in Ireland) are the host species for the Freshwater Pearl Mussel. The survival of the mussel is

dependant on host fish stocks and availability, therefore, any impact (eg reduced water quality) on either would have a detrimental effect on the long-term viability of the mussel population. However, it must be noted that water quality levels required for the mussel are more restrictive than those required for salmonids thus helping ensure host sustainability.

It should be noted that the juvenile stages are very sensitive and the presence of even a slight degree of pollution could cause their destruction. The population of pearl mussels in the vicinity of the facility is significant. The issue here is the consequence of any failure of either surface water, leachate management or accidental spillages of leachate and/or fuel during leachate transport. Further, the ongoing need to develop the facility on a phased basis generates risks associated with each phase of construction and associated excavations. In addition, the likely disturbance due to daily movements of Heavy Goods in the vicinity of the Licky may also have the potential to impact on the pearl mussel population. The species is so sensitive that any impact on water quality-either sediment of leachate derived-could have a significant impact and most likely irreversible on the pearl mussel population. The need to protect the pearl mussel population would require emissions standards which are more restrictive than those required to protect salmonid waters.

Hence it is recommended that this application be refused.

3.5. Proposals By Waterford County Council

All the engineering proposals made by the Applicant Waterford County Council in order to protect surface water, groundwater, manage leachate, manage landfill gas and control nuisances and manage accidents represent Best Available Technology. However the sensitivity of the site to a very low risk of pollution is such that BAT (i.e. Landfill Directive) engineering proposals are not sufficient to mitigate the risks to the Freshwater Pearl Mussel.

4. Confidential Information

The Agency received information on financial provisions in relation to this application and Waterford County Council requested that this information be treated as confidential information. The information was considered to be commercially sensitive and is held by the Agency as confidential information.

5. Submissions

Seven valid submissions were received in relation to this application as detailed below.

Submissions Received Reg. No. 187-1

No.	Name	Organisation	Submission Received
1	Mr. Padraig S. O'Mathuna	Local Resident	30/06/2003

2	Mr. Cornelius Flavin	Local Resident	27/08/2003
3	Mrs. A.J. Finn	Local Resident	29/09/2003
4	Mrs. A.J. Finn	Local Resident	16/10/2003
5	Mrs. A.J. Finn	Local Resident	14/11/2003
6	Mr. A. J. O'Donnell	Lickey Concern Group	24/05/2004
7	The Manager	Department of the Environment, Heritage and Local Government	12/07/2004

1. Submission from Mr. Padraig S. O'Mathuna received 30/06/03

Mr. O'Mathuna's main concern was that the EIS and other documentation were unavailable in Irish. According to the Constitution it was his right to read the information in Irish. He refused to study the EIS as it was and was unable to forward any opinion as a result.

Comment: As this was not a matter for the Agency the submission was forwarded to Waterford County Council to address.

2. Submission from Mr. Cornelius Flavin received 27/08/03

Mr. Cornelius Flavin is a farmer whose family has farmed in the area for generations and he has done so for forty years. He was very concerned to learn that forty acres of his farm was to be part of the development and that Waterford County Council had not consulted him on the matter. His was also concerned about the biota of the area, effect on the local area, quality of life, his family's privacy & welfare, his business, and that the effect of the landfill could be negative both environmentally, economically and socially.

Comment: A refusal of the application would resolve all the above concerns.

Submissions 3, 4 & 5 from Mrs. A.J. Finn received 29/09/03, 16/10/03 and 14/11/03.

Mrs. Finn pointed out that in her opinion that part of the site (to the west) is within the townland of Reamanagh East and that this townland was not mentioned in the site notice newspaper advertisement etc.

Comment: The Agency requested the applicant to address this matter in the Article 14(2)(b)(ii) issued on 18/08/03. Waterford County Council amended the application, erected new site notices and readvertised to reflect the amendments

6. Submission from A.J. O'Donnell on behalf of the Lickey Concern Group received 24/05/04

The Lickey Concern Group requested if the Agency had received a copy of a *recent Letter of Formal Notice from the EU Commission in relation to the proposed development beside the River Lickey earmarked for the conservation of the freshwater pearl mussel Margaritifera margaritifera. The Group requested that the Agency defer it's decision on the application until the alleged breaches in the Letter of Formal Notice were investigated.*

Comment: The Agency has considered all letters of Formal Notice from the EU Commision in relation to this application, as detailed previously in this report, in reaching its decision on this application.

7. Submission from The Manager of the Department of the Environment, Heritage and Local Government received 12/07/04

The Deparment pointed out that the River Lickey is part of the Blackwater River (Cork/Waterford) candidate Special Area of Conservation (cSAC) No. 2170 and is protected in particular because of the presence of the Freshwater Pearl Mussel Margaritifera margaritifera and salmon. Both species are listed under Annex II of the EU Habitats Directive (Council Diurective 92/43/EEC on the conservation of natural habitats and of wild fauna and flora). A Site Synopsis was enclosed with the submission.

It was the Department's opinion that in order to protect the species it is essential that there is no siltation of the river during construction or operation of the facility and no enrichment or pollution of the river by runoff or leaching.

A number of recommendation were included if the facility was licenced including monitoring of water quality, monitoring of the two species and additional measures to sustain the mussel population.

Comment: The Agency has considered all the Departments comments and the Site Synopsis in reaching its decision on this application.

6. Recommendation

I recommend refusal of this application for a proposed landfill at Garrynagree & Reanagullee Townlands, Dungarvan, Co. Waterford for the reasons discussed above and in the Proposed Decision.

_____ Date:_____

Breege Rooney
Inspector
Office of Environmental Enforcement

9. References

Lucey, J. (1993) The distribution of *Margaritifera margaritifera* (L.) in southern Irish rivers and streams. *Journal of Conchology* 34: 301-310.

Minchin, D. (2000). *One day survey to investigate the status of the pearl mussel* Margaritifera margaritifera *in the Lickey River.* A report prepared for the Lickey Concern Group.

Moorkens, E.A. (1996*). Studies on the Biology and Ecology of Margaritifera margaritifera in Ireland.* Unpublished Ph.D Thesis, University of Dublin, Trinity College.

Natura Environmental Consultants (2001) *Waterford Landfill Environmental Impact Statement: Flora and Fauna. January 2001.* NEC, Wicklow.

Ross, E. (2001). *An Assessment of the distribution, abundance and recruitment levels of the pearl mussel* Margaritifera margaritifera *(L.) in the Lickey River (Co. Waterford).* A report prepared for the Lickey Concern Group and Heritage Council.

Appendix 1

1:50,000 Site Location Map

Appendix 2

Figure 1 Extent of Blackwater River pcSAC

Figure 2. Proposed Landfill Development at Garrynagree.

Appendix 3

Proposed Site Layout Plan including Proposed Final Capping Contours (Scale 1:50,000) and 1:10,000 House Location Map**.**

Appendix 4

Lickey Catchment