



**OFFICE OF
LICENSING &
GUIDANCE**

INSPECTORS REPORT ON A LICENCE APPLICATION

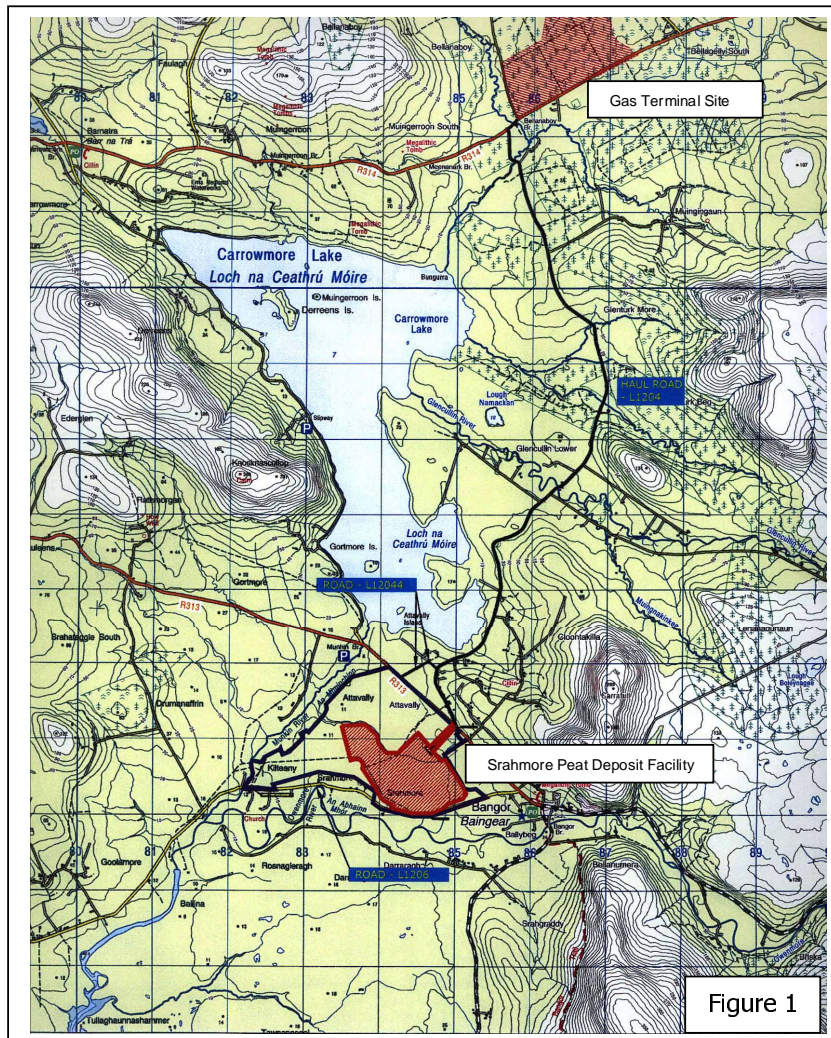
To:	DIRECTORS	
From:	DR J M DERHAM	- LICENSING UNIT
Date:	28/6/04	
RE:	APPLICATION FOR A WASTE LICENCE FROM BORD NA MONA ENERGY LTD., LICENCE REGISTER 199-1	

Application Details

Type of facility:	Landfill
Class(es) of Activity (P = principal activity):	3 rd Schedule: Class 1 (P), Class 4, and Class 13 4 th Schedule: None.
Quantity of waste managed:	450,000 t (over 2 years)
Classes of Waste:	Peat
Location of facility:	Srahmore, Attavally, Bangor-Erris, Co Mayo
Licence application received:	18 Dec 2003
Third Party submissions:	15
EIS Required:	Yes
Article 14 compliance date:	10/2/04
Site Inspection:	8/1/04

1. Facility

Bord Na Mona Energy Ltd (BnM) are applying for a waste licence for a peat disposal area at Srahmore, near Bangor, Co Mayo. The application relates to the placement of c.450,000m³ of peat waste excavated from the development of the Shell Corrib Gas Field Terminal at the nearby Bellanaboy Bridge. Figure 1 shows the location of the respective sites. The peat which is from a 3000 to 5000 year old Atlantic Blanket Bog will be temporarily windrowed on the site of excavation to reduce free water content (peat is 85 - 90% water) and transported by road in trucks to the BnM deposit area. It is anticipated that the peat transport and deposit will take place over a 6 month period. Up to 4,000m³ of peat may be moved daily. Hours of operation are 7am to 7pm



Monday to Friday and 7am to 4pm Saturdays for peat delivery: and 7am to 9pm Monday to Friday, and 7am to 6pm Saturdays, for internal site operations.

The Srahmore Peat Deposit Area (PDA) is on a cutover BnM bog, part of the Oweninny Group of Mayo bogs. The bog is part of a group that has been in use for the previous 40 years to supply peat into the nearby ESB power station. Figure 2 shows the geography of the PDA. The whole area geomorphologically resembles a shallow bowl. Carrowmore Lake lies to the north of the site, Munkin River lies to the west and Owenmore River lies to the south (refer Figures 1 & 2). The deposit area is in a series of low fields (~11 to 14m wide strip of bogland defined by field drains) separated by high fields (refer Figure 3).

Srahmore bog is currently included within the scope of IPC Licence Register 505 which covers all the BnM Mayo bog group. The IPC licence requires the cutaway bog to be rehabilitated. A rehabilitation plan for the Mayo bog group has been agreed with the EPA. Should the development of the Srahmore Peat Deposit Area proceed then these peatlands will cease to be part of the IPC licensed area (this has been notified to BnM by the OEE as a Condition

1.2 change to the licence). However, all rehabilitation obligations will prevail under the new waste licence. The proposed peat deposit plan for Srahmore is in keeping with the overall objectives of the BnM Mayo group bog rehabilitation scheme.



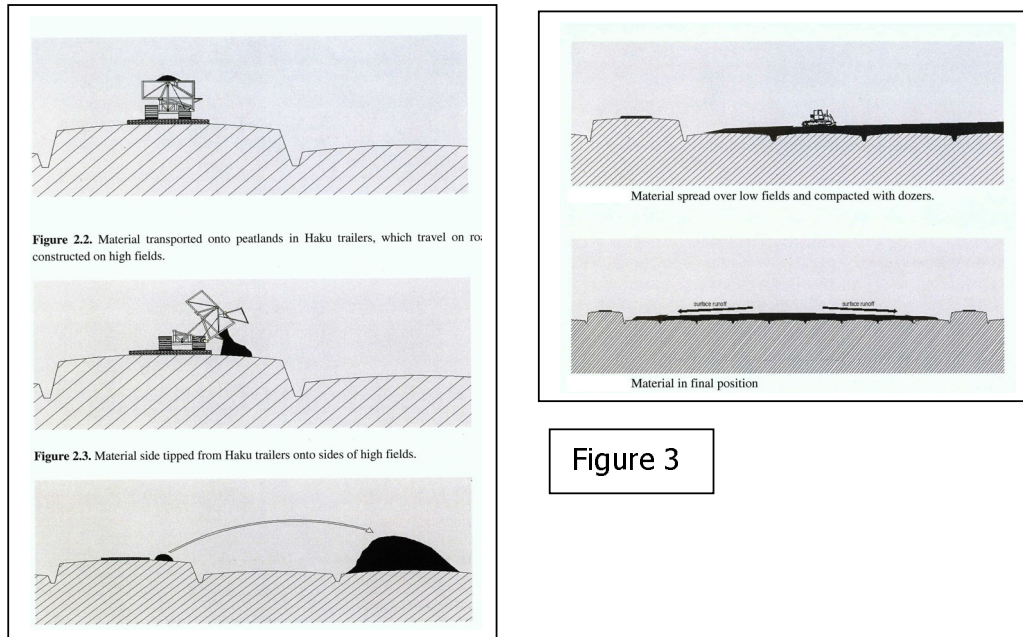
2. Infrastructure & Operational Principles

The Srahmore facilities will comprise a peat reception area, fuel services, truck parking, internal haul roads (7km), sedimentation ponds, wheelwash, weighbridge, office and support buildings. Peat delivered to the site will be deposited by the haulage trucks in a reception area and then transferred by loader to special low ground bearing pressure tractor & trailer units (Haku).

The peat deposit area comprises c.63ha, and is known as Area 6 on Figure 2. Area 6 is a shallow bowl like feature. As a result of the former harvesting technique, the area is divided into seven bays, each separated by a high field (area of bog approximately 2m higher than the cutover areas each side). The high fields were used to draw away the milled peat. They will now be used by the special Haku units travelling on laid hardcore tracks, to deliver the Terminal Site peat into the bays of Area 6. The side tipping Haku trailers deposit the peat on the high field and a long reach excavator then lifts it into the bay for spreading by a bulldozer. The peat will be profiled to fall gently from the centre of a bay to the margins (Figure 3). Maximum depth of fill will vary 1.4 to 1.8m.

The whole operation of receipt, deposit and land-forming of the peat will take place over a period of six months. This may be spread over two seasons depending on weather & ground conditions.

The surface water management system for the operation includes the development of a storm-water collection network delivering to a series of specially engineered silt ponds. There is also provision (flow-restrictors) for



an over-flow or flood area where in the event of extraordinary storm flows: water will be diverted to a large area of adjacent bog. This prevents the sedimentation lagoons being washed out.

The operational proposal for the site includes for the removal of all haul-roads (7km), etc., following successful rehabilitation of the site.

3. Use of Resources

The facility has a low energy need. Water use is restricted to office & canteen use and wheel cleaner use. There will be a seasonal high use of fuel for the internal peat movement and placement equipment. The stone used to lay the internal tracks will be lifted as part of the decommissioning process and most likely re-used at other BnM projects or sold on locally for engineering fill.

4. Receiving Environment

The northwest Mayo coastline, and in particular, the Erris peninsula and its associated coastal habitats is recognised as being of significant ecological value. There are no designated sites of archaeological, ecological or heritage status within or immediately adjacent to the site of the proposed facility. There are 10 designated sites/areas within a 10km radius of the proposed PDA. Carrowmore Lake which lies 1km to the north (and up-stream) of the

facility, and the Owenduff/Nephin Bog Complex are the nearest designated sites. Of the 10 designated areas only Tullaghan Bay and Blacksod Bay are hydrogeologically/physically connected to the site.

The designated areas are host to species listed in Annex II of the Habitats Directive (otter, salmon, lamprey, two plants and three bird species).

The site of the facility is within the lower reaches of the Owenmore River system (c.4km upstream of Tullaghan Bay). The site is bordered on the south by the Owenmore and on the west by the Munkin River. The Munkin which drains Carromore Lake, merges with the Owenmore about 1km upstream of Tullaghan Bay (part of Blacksod Bay Complex). Most of the drainage from the existing bog workings on the proposed site discharges to the Munkin. The Owenmore River and Carromore Lake are important salmon fisheries, with the Munkin River linking the two. The Munkin is a significant fish pass to the lake. Tullaghan Bay is designated as a pNHA, a SPA, an Important Bird Area, and as a *Ramsar* site. The proposed peat disposal area will have three storm water discharge points: two small discharges to the Owenmore River, with the main discharge to the Munkin River.

EPA biological surveys have classed the lower reaches Owenmore River as Q-Value ranging 4-5 (Unpolluted). The Munkin River has been assigned a Q-Value of 3-4 (Slightly Polluted). The report suggests the turbidity from the historical peat workings in the area likely contribute to this rating.

The site of the proposed PDA is currently degraded (drained and/or cut-over Atlantic blanket bog). The intended finished landscape for the application site is considered to be supportive of native/listed species and will form a complimentary habitat. The EIS for the application concludes that there will be no permanent impacts on any designated area within 10km of the site.

5. Emissions

5.1 Noise:- Noise emissions associated with the peat deposit and spreading are compatible with the historical peat harvesting noise profile for the area. There will be additional noise from the road delivery trucks arriving at the facility (average 42 truck movements per hour). Truck start-up in the morning will also add to the profile. The road movement element of this noise impact has been considered by the Local Authority under planning. There will be no continuous tonal or impulsive noise component likely to result in nuisance. Intermittent noise for vehicle reversing alarms (H&S requirement) will likely be audible in the immediate area of the facility.

Having regard to the temporal nature of the works and the previous use of the site it is not considered that the noise emissions from the site will result in unacceptable impact. Standard Agency guidance in relation to noise control and hours of operation will apply.

5.2 Air:- There are no specific point emissions of significance. The peat to be moved is not milled therefore the potential for dust generation (fugitive emissions) will be limited to that fine material potentially generated on internal

peat transport roads. The application proposes to lay hardcore tracks for the Haku units. This will limit the peat road dust. It is not anticipated that the activity will produce air emissions of any significance.

5.3 Waste:- The non-hazardous waste produced by the facility comprise the standard small office, toilet and canteen type waste. Small amounts of hazardous waste will include any used spill-kit material, oily rags and oily sludge from the interceptors. All these waste will be sent off-site to agreed facilities.

5.4 Accidental Emissions:- The flow restrictor devices fitted to the drainage inlets of the settlement ponds will prevent the wash-out of the pond silt into local rivers in the event of an exceptional storm event. The provision of a storm over-flow area (cut-over bog with no drainage outlets) assists this purpose. Conditions in the Proposed Decision require the regular inspection and maintenance of the lagoons. Mobile fuel bogies for mobile plant operating in the field will be double skinned. These bogies will be returned to a secure bunded area in the evening. The truck parking, weighbridge, wheel wash and reception area is fully contained with drainage directed to a grit trap, a petrol/oil interceptor, and finally to a silt lagoon. A contractors dismantlable fuelling unit will be parked up in the depot for the refuelling of the road fleet used to haul the peat for the Terminal Site. Conditions in the Proposed Decision require the bunding of this refuelling unit and the installation of crash barriers/bollards. Refuelling is to take place within a designated area. Conditions in the Proposed Decision require the unit to be locked and under the control of a designated officer.

5.5 Discharges to Ground:- There are no discharges to ground from the facility. The residual peat in Area 6 (the deposit area) is underlain by a thickness of clay thereby reducing the vulnerability of the groundwater. Groundwater flow direction beneath the site is south-west towards the Owenmore River.

5.6 Process Effluent & Leachate:- There are no process effluent emissions associated with the operation. The waste peat deposited is 3,000 to 5,000 years old. It has a character the same in most respects to residual peat in the cut-away area designated to take the waste. It will not produce a leachate in the conventional sense, however storm water falling on the area has the potential to wash solids into the receiving water. Also, ammonia will be naturally present in run-off from peat areas. This emission is considered in greater detail under storm water/surface water emissions below.

5.7 Storm Water/Surface Water Emissions:- As discussed earlier the aquatic habitats in the area of the proposed PDA are of international ecological significance. In relation to the assessment of the impact of the storm-water discharges there are potential direct effects (discharge to rivers) and potential indirect effects (downstream receptors - Tullaghan Bay). The potential impacts are considered to include the following:

- smothering of aquatic ecology (from peat silt),
- interference with angling,
- fish health impact, and

- fuel oil pollution,

The storm water discharge from the PDA can contain suspended solids. Ammonia is also characteristic of run-off from disturbed peat lands. A very small amount of phosphorus may also characterise some of the peat deposited due to historical Coillte application of mineral phosphate on the Terminal Site lands.

The main emission from the facility will be from the two principal settlement lagoons for the PDA (Area 6). These discharge to the Munkin River via a drainage channel. The other notable discharge is storm water from the service area; also to the Munkin River via the same drainage channel. There are three other minor discharges from small settlement lagoons.

The applicants propose three main methods of mitigation for these potential impacts:

Mitigation by Avoidance: The applicant has selected a site that will assist containment of solids (saucer shaped, with deposit areas interspersed with high fields). Also the deposited peat will not be in fine milled form: rather it will be loosely excavated clods. An environmental management system will be in place to operate the facility.

Mitigation by treatment: The provision of specially engineered sedimentation ponds (to EPA approved standard) and drainage scheme (designed in consultation with NWRFB). These ponds are designed on a worst case 100 year storm event. The provision of an engineered emergency overflow to closed cut-over bog. The provision of hard-standing, double-skinned fuel tanks, and petrol/oil interceptors and spill kits in the service area.

Mitigation by remedy & re-instatement: The revegetation plan will stabilise the peat and reduce the potential for sediment in runoff.

The applicant also proposes a monitoring program for these discharges including the provision of composite sampling. The nature and volume of the emissions will be no different from that currently experienced in the cut-over area. Indeed the installation of the two new main sedimentation lagoons and the early revegetation of the site will result in an improvement in water discharge quality from Areas 5 (reception area) and 6 (deposit area) of the site, from that currently experienced.

In relation to suspended solids, BAT for the sector is the use of specially engineered sedimentation lagoons. Their operational principal is simple – the lagoon is sized to reduce the velocity - of predicted worst case flow - in runoff to a rate that promotes settlement of any solids suspended in the stream. One of the main issues for sedimentation lagoons is scouring of settled deposits during flood flow. The applicants propose to introduce a technique common in Finland to deal with this concern. I refer to the use of an overflow discharge area. The inlets to the sedimentation lagoon have flow restrictors, any excess being discharged to the Area 7 cut-over bog storage area (Figure 2). The outlets from Area 7 are sealed. This proposed solution is an enhancement of BAT as it currently exists in Ireland for suspended solids treatment of run-off from the peat harvesting sector.

The operational controls and emission limits proposed in the PD will ensure that the receiving water quality and ecological systems are protected.

5.8 Nuisance:- Dust, noise and soiled roads are the only potential nuisance factors considered relevant to the operation proposed. The first two have already been considered. In relation to soiled roads the proposal includes for a wheel wash at the site to deal with trucks leaving the site.

6. BAT

The peat deposit operation proposed is unique and does not have a direct BAT standard for its entirety. However the proposals for storm water management and treatment are in excess of BAT for the peat harvesting sector where more fines would be expected. The depot infrastructure is considered BAT (interceptors, etc). The rehabilitation proposals are BAT, and the Management System proposed for the site is BAT. In-so-far as is relevant, the operation of the deposit area complies with the Landfill Directive.

7. Visual Impact & Rehabilitation

The main criteria defining successful rehabilitation of cut-away peat are:

- Revegetation of the peat areas,
- Mitigation of silt run-off,
- Re-establishment of peat-forming communities where possible.

On completion of the peat filling of Area 6 it is proposed that the peat surface will be anchored by vegetation. It is anticipated that the high seed content in the Terminal Site peat will lead to a flush of rush seedlings in the first growing season with establishment of vegetation on the site in the following 5 years. Figure 4 indicates the finished profile and appearance of the filled area.



The drains will be blocked to promote peat formation. BnM have over the years developed huge experience in the rehabilitation of cut-away bogs. A comprehensive plan for rehabilitation of the Mayo bog group covered by IPC licensing has already been agreed. The proposals at the Srahmore site are compatible with the overall rehabilitation plan.

8. Waste Management Plans

This facility is dedicated to the development waste from a nearby site. The waste is unique, as is the proposal. Because of its dedicated purpose, the development will serve no function in any regional waste management plan infrastructure; nor will it contradict such a plan.

9. Alternatives

Shell E & P Ireland Ltd (Shell) with BnM investigated a number of alternatives for the excavated peat (other than deposit). It was not deemed suitable for fuel as it was not milled and too wet to use directly. Very large windrow areas would have to be constructed to allow it to dry. The local power station is due to close in 2004, so additional haulage would be necessary. This would not be considered the best practicable environmental option. Sod peat use was also considered impracticable.

The blanket bog type peat is too humified for horticultural purposes. There is also a lot of seed dispersed in the shallow horizons of the material.

Storage on-site at the terminal was rejected by An-Bord Pleanala. Dumping at sea was also rejected by Shell. Re-engineering the Terminal site to avoid peat removal was also considered but this examination did not yield a satisfactory and safe design solution.

The use of the peat as backfill to cutaway areas in support of an integrated and varied rehabilitation plan for the Mayo bog group was considered the most practicable solution. Shell and BnM examined a number of areas of cut-over bog as potential deposit areas. These were scored on a matrix against set desired environmental and operational criteria. Following assessment, Area 6 of the Srahmore Bog was deemed the most suitable.

10. Environmental Impact Statement

I have examined and assessed the EIS and am satisfied that it complies with the EIA and Waste Licensing Regulations.

11. Compliance with Landfill Directive

The Landfill Directive is specifically addressed at municipal type wastes. It does not easily cater for mono-fill facilities with the type of waste proposed for Srahmore. Nevertheless, the proposal is considered to comply with the relevant sections of the Landfill Directive.

The IPPC Directive does not apply to this facility.

12. Fit & Proper Person Assessment

The applicants experience, technical abilities, financial and legal standing would qualify them as Fit & Proper Persons.

13. Submissions

There were 17 submissions made in relation to this application. Two of these were made by the applicants who were responding to issues raised by the other submissions. Many of the concerns raised in the submissions deal with planning issues (e.g. road transport); the discussion of submissions set out herein only deals with those aspects that are within the remit of the EPA. The Proposed Decision as drafted has, in its general construction, taken into account the concerns raised in many of the submissions.

13.1 Submission from Mr Edward & Ms Imelda Moran, Belmullet, Co Mayo

The Morans make a number of points in their submission which are considered as follows:

(i) Weather constraints and handling difficulties (drying times for peat before movement) are underestimated.

Comment:- It is true that the BnM milled peat harvesting operations are impacted by weather. One of the main constraints being the moisture content specified by ESB for the milled peat. The same vulnerability is not present in the case of the peat deposit activity. It is not intended that the peat excavated at the Terminal Site will be allowed to fully dry before movement. Rather, temporary windrows will be established to permit shedding of readily available free moisture. Accordingly the waste peat delivery and placement project is not expected to be delayed.

(ii) Concern is raised over BnM's experience and technical abilities for the project proposed.

Comment:- BnM (and its predecessors) have been working and researching the National peatlands since 1934. Over this period considerable experience has been built up within the company in respect of the engineering properties of peat. Indeed a deal of this knowledge has been exported to other parts of the world. Harvesting of milled and sod peat involves many steps including, inter alia, clearing, draining, cutting/milling, harvesting & rehabilitation. All these steps require essential knowledge about the engineering properties of peat, be it loose, drained, natural, sod or slurry.

(iii) Concern is raised over erosion of deposited peat, water quality impacts and revegetation of area.

Comment:- The peat will be deposited in a shallow bowl area of cut-over bog. The area is divided into compartments by high fields (refer to earlier text). All drainage will be collected and discharged to sedimentation lagoons. The peat will be compacted in a thin gently sloping layer. This design is intended to prevent excess erosion loss of fines to the surrounding sensitive waters. The EIS and licence application contained extensive assessment of the existing receiving environment (hydrology, chemical & biological). The Agency is satisfied that operation of the peat deposit area in accordance with the controls, standards and limits

specified in the proposed decision will ensure maintenance of the ecological status of the area. Ecological studies of the source area for the peat have indicated the presence of a large percentage of natural seed in the peat. This will assist the rapid revegetation of the PDA.

13.2 Submission from Mesdames Bríd & Teresa McGarry, Rossport, Ballina, Co Mayo

The McGarrys make a number of points in their submission which are considered as follows:

(i) Peat stability/erosion & water quality concerns.

Comment:- Refer to Comment on similar issues in Section 13.1(iii) above. In view of the geometry of the PDA as well as the depth and method of fill the likelihood of 'bog-burst' or equivalent of any environmental significance is remote. The proposed decision requires the monitoring of stability in the deposited peat. The submission also raises some concern in relation to the protection of Carrowmore Lake. This water body is upstream of the proposed PDA and will not be impacted directly by the facility. There is phosphorus in some of the source peat due to historical fertiliser application by Cuillte. Assessment submitted by the applicants in support of the application demonstrates the low mobility of this P within the peat. It is not considered to present any risk of eutrophication in the local receiving waters. Nitrate concentrations in the peat run-off are not elevated. Ammonia is naturally present in peatland run-off. Refer also to Section 5.7 of this report.

(ii) Elevated noise.

Comment:- The placement of the peat in the deposit area will have a similar noise profile to a busy period of conventional peat harvesting. The whole operation will be completed in a relatively short period, in addition there are limits placed in the proposed decision in relation to hours of operation of the facility. The peat reception area will be further limited in hours of operation as this is where the main noise sources will likely arise. Refer to Section 5.1 of this report.

(iii) Groundwater contamination.

Comment:- The PDA overlies a substantial layer of low permeability till, the groundwater vulnerability is rated as moderate to low at the margins and low in the central area. The aquifer potential of the underlying rock is considered to be poor. Having regard to the geology of the area and the nature of the fill material the groundwater risk is considered to be negligible.

13.3 Submission from Mr Sean McDonnell, Glenamoy, Ballina, Co Mayo

Mr McDonnell's submission also represents three other named individuals. This submission is considered as follows:

(i) Peat stability/erosion & water quality concerns.

Comment:- Refer to Comments on similar issues in Sections 13.1(iii) and 13.2(i) above.

13.4 Submission from Ms Mary Coruff & Family, Rossport South, Ballina, Co Mayo

Ms Corduff makes a number of points in her submission which are considered below.

(i) Air & water quality concerns.

Comment:- There are no specific point emissions of significance. The peat to be moved is not milled therefore the potential for dust generation (fugitive emissions) will be limited to that fine material potentially generated on internal peat transport roads. The application proposes to lay hardcore tracks for the Haku units. This will limit the peat road dust. It is not anticipated that the activity will produce significant air emissions.

On the issue of water quality I refer to Section 5.7 of this report.

(ii) Technical ability of BnM

This is a similar point to that raised earlier. Refer to Comment in Section 13.1(ii) above.

13.5 Submission from Mr Cornelious King N.T., Pulathomas, Ballina, Co Mayo

Mr King's submission is considered as follows;

(i) Water quality concerns.

Comment:- On the issue of water quality I refer to Section 5.7 of this report, and to the Comments on similar submissions in Section 13.1(iii) and 13.2(i) above. The submission refers to observations of peat silt in the local water systems. Indeed it is the case that historical harvesting practices did result in poor silt control. In recent years this has improved with the introduction of high capacity silt control lagoons and other engineering/operational improvements. The proposed decision for the Srahmore PDA requires the operation & maintenance of high performance lagoons and a storm over-flow area to manage flood events. In addition the peat deposited at Srahmore will not be the fine grained milled peat which is prone to collection by run-off. The exceptionally high ecological status of the area will be assured and likely improved upon as the PDA is rehabilitated.

13.6 Submission from Ms Monica Muller, Rossport, Ballina, Co Mayo

Ms Muller makes a number of points in her submission, which are considered below.

(i) Rehabilitation of Srahmore site and BnM Mayo Bog group in general.

Comment:- Under the terms of IPC licence Register 505 for the Mayo (Oweninny) Group of bogs, BnM has agreed with the EPA a strategy for the rehabilitation of the Mayo cut-over bogs. This strategy, which involved consultation with interested parties and State bodies, integrates a number of different approaches (forestry, wetland, renewed bog growth (incorporating drain blocking), etc.,). The Srahmore bog is currently part of the IPC licensed area of the Oweninny Group. The EPA has communicated with BnM that in the event of the waste licence being

granted for the Srahmore area that the 'site' of the Oweninny Bog Group under the terms of the IPC licence would be amended to exclude this area (Condition 1.2 amendment, no review necessary). This is an administrative facility as two EPA licences for the same site under different legal codes would be a nonsense. The rehabilitation obligations agreed under the IPC licence would transfer to the waste licence. In this way there would be no part of the bog that falls through the enforcement net. Having regard to the general objectives for the rehabilitation of cut-over bog, the importation of peat fill is not incompatible with the ultimate goal. There will be no conflict with, or contradiction of, the IPC licence. The proposals for the Srahmore PDA do not contradict any of the criteria established to define successful rehabilitation of a cut-over bog (refer to Section 7 of this report).

13.7 Submission from Mr Peter Sweetman & Assoc., 184 Lower Rathmines Road, Dublin 6

Mr Sweetman writes on behalf of the Irish Heritage Trust. His concerns are set out below.

(i) Relationship to IPC Register 555 [sic. - 505 BnM Mayo Oweninny Group].

Comment:- This is substantially the same concern articulated in Section 13.6(i) above. Refer to Comment on same.

(ii) Moisture content of excavated peat

Comment:- This is substantially a matter for the regulation of the Terminal Site. However, as the 'dried' peat is transported to the Srahmore site some comment on this 'drying' is warranted. It is not intended that the peat excavated at the Terminal Site will be allowed to fully 'dry' before movement. Rather, temporary windrows will be established to permit shedding of readily available free moisture.

(i) Adequacy of the EIS in relation to the design and operation of the settlement ponds.

Comment:- Having reviewed the EIS documentation I am satisfied that there is sufficient information for the purpose intended.

13.8 Submission from Mr Brendan Philbin, Rossport South, Ballina, Co Mayo Mr Philbin's concerns are set out below.

(i) Risk to Carrowmore Lake and local rivers.

Comment:- The submission expresses concern in relation to the pollution risk to the Lake from the deposit site. Mr Philbin understands the Srahmore site to be 'upstream' of the lake, which in fact is not the case. In relation to the risk to other water courses I refer to my Comment on other similar submissions in Section 13.1(iii) above and to Sections 4 and 5.7 of this report.

13.9 Submission from Mr Mark Garavan, School of Health Science, Galway-Mayo Inst. Of technology, Wesport Road, Castlebar, Co Mayo.

Mr Garavan's concerns are set out below.

(i) Creation of a 'dump' in a bog.

Comment:- Mr Garavan contends that the proposed PDA is contrary to the objectives of waste minimisation; he questions the need to turn the Srahmore cut-over bog into a dump. From examination of the alternatives proposed in the EIS I am satisfied that it is not the developers wish to produce this excess or waste peat; as the exercise, environmental factors aside, is very costly. The PDA is not a conventional 'dump' or landfill. It is to accept excess 3000 to 5000 year old peat for a nearby development. The fill is of the same character of the in-situ material at Srahmore. The filling is once-off and short term. The PDA is not intended to serve as a regional or district waste disposal facility. Regional waste plans and identification of necessary infrastructure can only reasonably predict for the known and anticipated waste arisings. These plans cannot accurately predict for development type waste that may arise in the future as there are too many unknowns. Statistical calculations in this area are based on current development waste arisings. The facility at Srahmore is intended to facilitate the Gas Terminal development phase only. Such needs are not readily anticipatable in plans, accordingly to argue that the Srahmore facility is contrary to the need to minimise the number of landfills is not reasonable.

(ii) Bog slide risk, precedence & experience

Comment:- The submission suggests there is no precedent for this type of activity. This is largely the case for the deposit element. However, in relation to the engineering aspects of disturbance of peat there have been a number of major civil engineering projects that involved the large excavation of peat. For example a similar quantity of peat had to be excavated and stored to allow the development of the Lisheen Mine Tailings Facility which was constructed on a bog. A number of national roads projects also involved the removal and storage of excess peat. This experience allied to the 70 or so years of collective experience within the BnM engineering chore has improved the knowledge of peat behaviour. The recent Bog slide in Mayo was the result of environmental factors unrelated to what is proposed for the Srahmore site. The peat will be deposited in a shallow bowl area of cut-over bog. The area is divided into drained compartments by high fields (refer to earlier text). There will be no excessive gradients likely to contribute to catastrophic failure. BnM comment that the blanket bog in question is fibrous and has extensive growth of deep rooted soft rush that knots the peat together. Additionally, the peat will be extracted in scoops rather than finely milled. Stability is not anticipated to be an issue. In any case the design, as well as the operational and monitoring controls set out in the Proposed Decision will ensure stability will not become an issue.

(iii) Drying of excavated peat

Comment:- It is not intended that the peat excavated at the Terminal Site will be allowed to fully dry before movement. Rather, temporary windrows will be established to permit shedding of readily available free moisture.

Any further loss of moisture at the landfill site will be captured by the surface water drainage and treatment system. The proposed decision does not permit any deposit of the waste peat in areas outside the control system. BnM, commenting on this submission, present data in support of their engineering solution.

13.10 Submission from An Taisce, Back Lane, Dublin 8

An Taisce's concerns are set out below.

(i) Adequacy of the EIS.

Comment:- The EIS was assessed in so far as the environmental pollution from the operation of the facility and determined to comply with the EIA and Waste Licensing Regulations.

(ii) Risk to protected ecological areas.

Comment:- This matter has been discussed in Sections 4, 5.7, 13.1(iii) and 13.2(i) above.

(iii) Drying of peat.

Comment:- This issue has been considered previously. See Comment on Section 13.9(iii) above.

13.11 Submission from Western Health Board, Mercy Road, ballina, Co Mayo

The Health Board's concerns are set out below.

(i) Dust.

Comment:- There are no specific point emissions of significance. The peat to be moved is not milled therefore the potential for dust generation (fugitive emissions) will be limited to that fine material potentially generated on internal peat transport roads. The application proposes to lay hardcore tracks for the Haku units. This will limit the peat road dust. It is not anticipated that the activity will produce significant air emissions. Operational controls included in the Proposed Decision also require monitoring and management of potential dust issues.

(ii) Surface Water Quality.

Comment:- This matter has been discussed in Sections 4, 5.7, 13.1(iii) and 13.2(i) above.

(iii) Groundwater risk.

Comment:- This issue has been considered previously. See Comment on Section 13.2(iii) above.

(iv) Oil/Hydrocarbon risk and accidents.

Comment:- Refer Section 5.4 of this report. Also the Proposed Decision includes conditions in relation to notification of incidents to competent bodies, and the establishment of Accident & Emergency procedures.

13.12 Submission from Heritage Section, DoEHLG, Harcourt Lane, Dublin 2
The Departments submission is considered as follows.

(i) Rehabilitation & relationship to IPC Licence Register 505.

Comment:- Refer to comments on a similar point in Section 13.6(i) of this report. The EPA does not usually specify in a licence a specific end use for a rehabilitated waste area. It is normally the case that a rehabilitation plan is agreed with a licence holder under the terms of a condition requiring the development of same. This plan details, *inter alia*, all the construction and quality standards necessary to rehabilitate a given site, and may well indicate a subsequent use of the site (which has to be compatible with the maintenance of any pollution control infrastructure in place at the facility). The EIS outlines a strategy to promote vegetation establishment on the PDA. In addition, the EIS states that ongoing monitoring will yield data sufficient to determine if engineering intervention to rewet the area will promote peat-forming conditions. EIS commitments unless varied by an authorisation, are legally binding. As was the case for the IPC licence for the Oweninny Bog Group (IPC Reg 505), the Proposed Decision for this waste application requires the licence holder to consult with state bodies having an interest in such matters (e.g. fisheries, Heritage Section of DoEHLG, etc.) in relation to the development of the detail of the rehabilitation plan.

(ii) Water Quality & protection of ecologically sensitive areas.

Comment:- The heritage section recommended more sampling of the local water systems, furthermore the issue of ammoniacal Nitrogen leaching from the peat and impact on surface waters needs to be examined. This was done by the applicant and submitted as additional information under the EIS process. Other issues raised are similar to those considered in Sections 4, 5.7, 13.1(iii) and 13.2(i) of this report.

(iii) Pond Maintenance.

Comment:- The submission raises issues in relation to the operation & maintenance of the ponds. The Proposed Decision requires procedures for the monitoring, inspection & maintenance of the ponds to be established.

(iv) Oil/Hydrocarbon risk.

Comment:- Refer Section 13.11(iv) of this report which deals with similar issues.

13.13 Submission from Mr Richard Hewat, Rathmichael Lodge, Shankill, Co Dublin

Mr Hewat writes on behalf of the Glenalt Fishing Syndicate that own the fishing rights to Carrowmore Lake and parts of the Owenmore and Munkin Rivers. Their concerns are considered as follows.

(i) Silt risk to Carrowmore Lake.

Comment:- It is recognised that the submission is a copy of one sent to the Planning Authority in relation to their consideration of the Terminal Site and the PDA. In respect of the Srahmore PDA application there are

no emissions into the lake. Moreover dust blow impacting on the lake is considered highly unlikely given the nature of the material being deposited.

(ii) Silt & Water Quality.

Comment:- The development and filling of the Srahmore site will disturb the in-situ peat and may potentially lead to silt run-off risk. To mitigate this risk the Proposed Decision requires that the drainage system and silt ponds are the first elements of site development work to be constructed, and in any case prior to the receipt of peat waste. The storm-water collection system proposed ensures that all drainage from the site is collected and discharged via an appropriate treatment system. The submission notes the risk of silt loss during periods of heavy rain, which is common to this region. This flood risk has been recognised by the applicants. The superior drainage system and extended silt ponds with flow restriction and controlled over flow area should address this concern. The pond capacity has been designed for a 100 year storm event. The Proposed Decision also includes a range of conditions dealing with the monitoring, inspection and maintenance of the lagoon and drainage system; emission limit values sufficient to protect the receiving water; as well as monitoring requirements for the up- and down-stream water quality in the receiving waters.

(ii) Enforcement.

Comment:- The submission requests that independent monitoring of the BnM operation be undertaken. Any licence for this facility, if granted, will be monitored and enforced by the Office of Environmental Enforcement.

13.14 Submission from Ms Monica Muller, Rossport, Ballina, Co Mayo.

Ms Muller's concerns are similar to concerns raised by a number of other community residents. They are addressed as follows.

(i) Rehabilitation & relationship to IPC Licence Register 505.

Comment:- Refer to comments on a similar point in Section 13.6(i) of this report. Restoration work under IPC register 505 for the Srahmore area has not been formally commenced to date.

(ii) Drying of peat.

Comment:- This issue has been considered previously. See Comment on Section 13.9(iii) above. As was the case for the IPC licence for the Oweninny Bog Group (IPC Reg 505), the Proposed Decision for this waste application requires the licence holder to consult with state bodies and others having an interest in such matters (e.g. fisheries, Heritage Section of DoEHLG, etc.) in relation to the development of the detail of the rehabilitation plan for the PDA.

13.15 Submission from The North Western Regional Fisheries Board, Abbey Street, Ballina, Co Mayo.

The NWRFB's concerns are addressed as follows.

(i) Silt Pond operation & Monitoring

Comment:- Elements of this concern have been considered previously. See Comment on Section 13.13(ii) above. The Proposed Decision requires the installation of a continuous composite sampler at the main outfall from the PDA. In addition the Proposed Decision requires the periodic monitoring of the other minor pond discharges (two in number) from the PDA, as well as up- and down-stream monitoring in the receiving waters.

13.16 Response to Submissions

The applicant submitted two responses to third party submissions made on the application. These documents are intended to point to references or assessment in the EIS that specifically addresses concerns raised in submissions, or to add information. In particular they comment in the geotechnical aspects on the peat handling.

14. Charges

The charges have been set having regard to the anticipated enforcement effort for the site, and include for independent water quality monitoring by EPA Laboratory and Enforcement staff.

15. Recommendation

I have considered all the documentation submitted in relation to this application and recommend that the Agency grant a licence subject to the conditions set out in the attached PD and for the reasons as drafted.

Signed

Dated:

Jonathan Derham

Procedural Note

In the event that no objections are received to the Proposed Decision on the application, a licence will be granted in accordance with Section 43(1) of the Waste Management Acts 1996-2003.