Rossport South,
Ballina,
Co. Mayo.
30 March 2004.

Mayo County Council,
Planning Office,
The Mall,
Castlebar,
Co. Mayo.

03/3343

SCANNED

Objection Submission: Re Shell Exploration & Production.

Dear Sir/Madam,

I am writing to you with serious concerns regarding the latest requested information supplied to your department by Shell Exploration & Production for a gas refinery in Bellanaboy.
One aspect is the health and safety aspect of the proximity of the pipeline: approximately 70 meters from my home and other occupied residents, what, if any, criteria was used to determine this distance.
Furthermore on the engineering aspect of laying the pipeline, are they aware that the rock is very close to the surface and would require blasting. The consequences this would have on our land that is on a steep decline towards the shore would result in landslides.
If the proposed pipeline goes through my land, my farming activities would be disrupted if not completely wiped out.
There is also a threat to a pure spring water well, at the foot of the cliffs that has been providing clean drinking water to our families for generations. Blasting would cause this to become polluted, in addition to polluting Sruth Fada Conn Bay.
Another aspect of the route of the proposed pipeline is the untreated gas and other impurities going through our land at 150bar pressure; this a huge underlying threat, which is more experimental [illegible] than proven.
[illegible] only on theory and desktop analysis.
The traffic management plan is incredibly unrealistic, especially on the network of narrow, winding roads and unstable bridges and no alternative routes, except those that are signposted: DANGER OF LANDSLIDES AHEAD. Not an attractive option.
So, in conclusion the best option would be to leave this development until the technology is advanced enough that it would be environmentally friendly to the residents and the environment and most importantly safe.

Yours Sincerely,

Brendan Philbin.

Brendan Philbin

MAYO COUNTY COUNCIL
RECEIVED
31 MAR 2004
PLANNING & DEVELOPMENT

Mayo County Council
Aras An Chontae
Castlebar

Ref No.: P03/3343

02/02/2004

Mr Brendan Philbin
Rossport South
Ballina
Co. Mayo

A Chara

I wish to acknowledge receipt of submission received from you on 30/01/2004 in connection with planning application by SHELL E & P IRELAND LIMITED for CONSTRUCT GAS TERMINAL FOR THE RECEPTION AND SERAPATION OF GAS FROM THE CORRIB GAS FIELD, AND FOR A PEAT DEPOSITION SITE, RESPECTIVELY. THE DEVELOPMENT WILL CONSIST OF THE CONCURRENT DEVELOPMENT OF TWO SITES LOCATED 11 KILOMETRES APART, APPROXIMATELY, AND IDENTIFIED AS THE SITE OF THE GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS FROM THE CORRIB GAS FIELD IN THE TOWNLAND OF BELLAGELLY SOUTH AND THE SITE OF THE PEAT DEPOSITION SITE IN THE TOWNLANDS OF SRAHMORE AND ATTAVALLY, BANGOR ERRIS. THE DEVELOPMENT AT THE BELLAGELLY SOUTH SITE WILL CONSIST OF: A GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS INCLUDING PLANT AND EQUIPMENT; PROVISION OF 4,935 SQ M (GROSS FLOOR AREA), APPROXIMATELY, OF BUILDINGS; ACCESS ROADS; 40 NO. CAR PARKING SPACES; AND ANCILLARY DEVELOPMENTS, OF WHICH 13 HA, APPROX, WILL BE DEVELOPED INRESPECT OF THE GAS TERMINAL'S FOOTPRINT. THE PROPOSED DEV. WILL OF THE BELLAGELLY SOUTH SITE WILL ALSO CONSIST OF; THE EXCAVATION AND REMOVAL OF 450,000 CUBIC M at BELLAGELLY SOUTH SRAHMORE ATTAVALLY.

The matters referred to by you will be taken into consideration by the Council before a decision is made on the application. Notice of the Council's decision on the

application will be given in accordance with the requirements of the Planning and Development Regulations, 2001. This may be in the form of:

(a) posting the notice directly to you; or

(b) publishing the notice in a newspaper circulating in the area where the proposed development is situated.

Please note that in the event of an appeal being lodged by you, An Bord Pleanala will require a copy of this letter of acknowledgement.

Mise, le meas

RUNAI CHONDAE

(1)

7 V
only FE
check if made
submission.

Mayo County Council,
Planning Office,
The Mall,
Castlebar,
Co. Mayo.

Ref: 7920
€20 cpl
1/4/04

Re: Planning application File No. PO3-3343 by Shell E & P. Ireland Ltd. being the construction of a natural gas refinery at Ballinaby, the establishment of a deposition site on Cuilmeen Bay at Srahmore, & the transport of enormous volumes of waste between the two sites.

Submission: Cornelius King, Aughoose, Pullathomas, Ballina, Co. Mayo.

In my submission I'll be dealing with the
1° Corrib Terminal: Ballinaby Badger, Earthworks Report December 2003.

2° Srahmore Peat Deposition Site, Non-Technical Summary, (E.I.S.)

3° Shells response to Request for further information – item 11.

The excerpts I've picked at random from the two documents will clarify my total opposition to this project. This is the third application by Shell for the same project. The same inadequacies are in the E.I.S. My original worries have not been assuaged. I know you'll understand it is a matter

technical readers of the E.I.S. that I can only present my observations in layman's terms. It is the duty of the planning authority & its staff, to scrutinize the E.I.S. because they will continue to have responsibility for any fallout from said project proceeding as a result of this decision.

(3)

Borrib Terminal Bellanaboy Bridge Earthworks Planning Report.

3.8 Groundwater Control

The control of groundwater and surface water will play a key role in the safe and successful execution of the earthworks. The construction works must maintain the balance of surface run-off and the rate of infiltration, principally to avoid the accumulation of excess water on, within or below the peat deposits. For the operation phase, a similar balance is required to maintain long-term stability.

Aim:

1° The control of groundwater and surface water during the execution of the ground works.

2° The balance of run-off and the rate of infiltration is also a necessity during the operation phase.

3.8.1 These drainage re-instatement measures will be in place well in advance of construction works and will provide control on surface drainage.

How do these proceedings compare with Bord na Móna who drain the bog for 5 years before milled peat is harvested at less than 1 cm a year which means that 18 years drainage has occurred by the time 1 metre of bog has been removed.

In order to provide some level of control on the site's groundwater, it is proposed to install a system of dewatering vacuum wells to remove water from the underlying mineral soils and bedrock. This will also promote under-drainage of the peat. The wells will be sealed within the peat and vacuum assisted to help suck the water out of the relativity low permeability soils.

"Some level" seems to imply an experimental strategy. But we know there is no room for error here because "the control of groundwater & surface water will play a key role in the safe and successful execution of the earthworks."

Over this period, the surface and sub-surface drainage will generate some control on the water movement within the peat and underlying soils and at least locally reduce the amount of water within the strata to be excavated. These control measures will lead to a reduction of seepage into the excavations, will improve the excavated surface condition and the condition of the materials being excavated.

3-8.1

This result is not creditable, because first of all there is no proof given - and the insistence of 'some control' is no guarantee that there will be a reduction in seepage or that an improvement will accrue to the materials being excavated. The admission of 'some control' contradicts the positive outcome predicted in rest of the sentence.

3.8.3 **Long Term Groundwater Control Measure**

The works will commence with the construction of the permanent settlement ponds and once completed all surface water will be diverted through the ponds.

This section of the E.I.S. is peppered with platitudes. The above statement (3.5.3) is not credible.

To assist in the long-term control of the groundwater, a deep drain will be installed along the southern end of the terminal, on the terminal side of the sheet-piled wall. The purpose of this drain is to collect the surface water percolating through the fill and groundwater rising from the underlying mineral soils by means of a more permeable rockfill layer placed underneath the fill and connecting to the perimeter land drain. This helps prevent build up of groundwater pressures underneath the fill and in the areas south of the terminal footprint.

Once again we have the theory proposed for long term control of groundwater but what about long term trials to vindicate it

3.9 Monitoring and Instrumentation

This will be done by constructing survey stations on the high ground and taking the foundations down to a stiff or dense or better bearing stratum.

Continuous monitoring of the instrumentation will be carried out to allow on-going geotechnical interpretation and assessment of the ground's response to the construction works. The actual ground response will be compared to the expected or predicted response. Should observed behaviour move outside that predicted, contingency measures will be implemented as required. These contingency measures will be developed in advance of the works and both the design and the construction teams will take the appropriate actions when necessary.

3-9

The data presented here outlines very precisely the unsuitable environment selected by Shell for the Gas Chemical Plant. This site at Ballinaby is totally unsuitable for the project. There are too many unknowns and an attitude of 'let's mass engineering' is not the correct procedure. The project will introduce into our community a social degradation with degrading consequences for the whole environment.

1 of 15

4.3 Slope stability and groundwater

The expected groundwater yield is low and can be readily controlled.

This data can't be true, can it ?

4.6 Up hill slope stability of Peat Layer

In general all cut peat faces are supported by a gabion retaining wall. The wall is designed for the horizontal load applied by the peat conservatively assuming zero shear strength within the peat.

Is assumption enough for a guarantee of safety ?

The gabion retaining walls will be constructed by first strengthening the peat. This will be by means of strengthening the peat by mixing it with dry cement and/or by the installation of sheet piles to retain the peat in the temporary condition. For conservative design the strengthened parameters of peat are not used in the analyses.

What guarantee's are there that the peat will be strengthened by mixing it with dry cement ?

4.9 Stability of Fill Area

The peat layer on the retained side of the sheet pile wall have not been modelled as a stratum, due to program constraints however its effect has been modelled using a uniform load at the surface of the mineral soils on the retained side of the sheet pile.

'due to program constraints' is this a good enough excuse in determining the safety of project ?

5.2 Site Investigation Interpretation

The strengthened peat is assumed to act in an undrained manner in the short and long term, as it tends to gain strength with time.

Projects of this magnitude should not be undertaken on mere assumptions - proven reliability is a priority. This project is a new enterprise not only to Ireland but to

5.3 Stability Calculations

All site roads will be supported on a block of strengthened peat.

Where are there blocks of strengthen peat in Ireland ?

(6)

6.2 Site Investigation

Site investigation of the area around the settlement ponds is currently in progress (November 2003).

How can the E.I.S. be creditable when testing is still ongoing! How can assumed soil properties be used? (cf. Table 6.1 settlement ponds)

The ground conditions at the location of the settlement ponds are such that there is typically a 3m thick layer of peat and organic soils overlying mineral soils of clay and sandy soil composition. The mineral soils are assumed to be about 3m in thickness, which are overlying weathered schist.

Once again these kinds of assumptions are unstable if the construction of the settlement ponds depends on them. The settlement ponds are critical to the whole project and constructing them on geotechnical assumptions which can easily be incorrect as well as correct, is to say the least foolhardy presumption.

The strengthened peat is assumed to act in an undrained manner in the short and long term, as it tends to gain strength with time.

How will it act while its gaining strength? If the whole project is depending on assumptions surely its also true to say that the strengthened peat will act in a draining manner.

11.4.14 **Initial Excavation of peat from NE Terminal Corner**

The peat will be removed firstly from an eastern access road to the Terminal Platform and then progressively across the area of the north-eastern corner of the Terminal Platform working in a westerly direction.

At the early stages of peat excavation there will not be an area of exposed mineral soils available for windrowing the peat. Windrowing consists of excavating peat from the existing peat blanket and placing into linear stockpiles on a mineral soil foundation using excavators. The linear stockpiles, or windrows, could be up to 3.5m in height at the centre. Bord na Móna have indicated that the peat located in the north-eastern quadrant of the site, which is thinner and drier than much of the rest of the peat over the terminal platform, should be of a sufficient quality to be loaded into the haulage trucks for transfer to the Srahmore deposition site without windrowing.

Gradually, this activity will expose the mineral soils providing an area where peat can be windrowed prior to removal and where a truck loading bay can be established.

It is envisaged that offloading of the better peat, without windrowing, is likely to continue for a period of approximately 10 days, by which time a sufficient area will have been cleared of peat to allow some windrowing to take place. There would then be a period of a further week over which some peat would be windrowed and some would be offloaded without windrowing – this is because there would not be a sufficient volume of windrowed peat available at this stage to meet a daily offloading rate of 4,000.m³.

This data reads like a good story. It has a beginning, a middle, and an end. "Windrowing" could be a likely title for the story. It is mentioned nine times in the story in one way or another. But to meet the daily offloading of 4000m³ of peat slurry I think maybe windrowing is only an emergency exercise. There will be windrowing but not as expected. In one sense the story sums up for me the applicants attitude to Bellaghy Bridge Earthworks report. "Let feed them fiction and the facts will look after themselves."

This ends my submission re.

Corrib Terminal Bellanaboy Bridge
Earthworks Report.

(8)

Srahmore Peat Deposition Site : E.I.S.
Non Technical Summary

2 SITE DESCRIPTION

Area 5 was selected as the peat reception area. Area 6 was selected for the actual deposition of peat and a section of Area 7 will be utilised as a controlled overflow area in the event of rainfalls exceeding the design rainfall. The peat reception area to be utilised for off-loading of the peat is the closest area to the public road R313.

"Design" seems to infer that the said parties involved in this project will control the weather.

Approximately 450,000m³ of peat must be excavated from the terminal footprint to allow for the terminal to be constructed at the required level.

- The trees/scrub at the Bellanaboy Bridge Terminal Site will be removed from the terminal footprint by Shell and will be retained on site. (Refer to Bellanaboy Bridge Terminal Volume)

Here we see the mindset of the party to this development. They are prepared to visit an ecological disaster on a protected area rather than process the gas at sea.

- The peat (up to 450,000m³ cubic metres) excavated from the terminal footprint will be drained and windrowed and then transported from the Bellanaboy Bridge site to the cutover peatland at Srahmore by a fleet of forty tipper trucks. Each truck will have a load capacity of 18 tonnes but will carry approximately 11tonnes in order to minimise impact on the local and regional road network.

There will be a disastrous impact on the local and regional road network which is barely able to deal with the increase in traffic as it stands. This chaotic invasion of up convoy of tipper trucks will cause irreparable damage to the arterial network of roads.

(9)

is envisaged that 4,000m³ of peat will be deposited daily over the six months of operation of the facility, which may be spread over two seasons depending on weather conditions. It

This statement admits there will be adverse weather conditions. How adverse? Could this cause the project to be extended into a third or fourth season? How is such uncertainty going to impact on tourism in the area?

A series of 5 new settlement ponds will be constructed, in addition to 2 existing settlement ponds, to capture silt mobilised by surface water runoff.

"Settlement ponds" - reservoirs for pollution of the waterways leading eventually to the pollution of drinking water and the demise of angling in the area.

3. CONSTRUCTION

The temporary buildings, equipment and services will be removed at the end of the deposition period. The removal of the peat reception, entrance road and link roads to Area 6 is envisaged to occur at the end of the stabilisation process, which is expected to be five years after the deposition is complete.

What alternative strategy is in place if the expectations are not forthcoming? A scientific experiment on such a gigantic scale should never be allowed to take place. If the experiment fails the consequences to the environment, the flora & fauna will be catastrophic.

An experiment should be conducted on a small scale over a period of time. The results of the evaluated by the concerned parties. Then the right decision can be made.

There is the element of a reckless gamble in the project as it stands at the moment.

Festina lente.

(12)

On completion, the site will be allowed to recolonise by natural species. Environmental monitoring stations, in accordance with EPA requirements, will be established at the site and monitoring will be continued post the closure of the facility.

Admittance here that the existing natural species will be disturbed in order to facilitate the peat deposition from the Bellonaboy site. Not only is the site in Bellnaboy to be degraded but the degradation will be extended another 11Km towards a more densely populated area, with three important rivers, and a lake that supplies drinking water to the Inis area.

This site, approximately 11km away from the proposed terminal site, is one from which peat has been harvested for a local power station. The peat from the terminal could be deposited at this site, which is saucer shaped with an extensive drainage infrastructure that was installed for industrial peat extraction.

The drainage system in Srahmore has been developed over many years of peat harvesting. Shell & Bord na Móna are going to deposition 450,000 m^3 of peat in two seasons, at a rate of 4,000 m^3 a day. How can one drainage system devised over a long period of time for excavating peat successfully contain the pollution put in train with the deposition of 4,000 m^3 of slurry peat daily.

This is the optimum peat transfer and deposition method as (a) it requires minimal disturbance within the deposition site and (b) it will maximise the storage capacity of the deposition site.

This peat for deposition will have been hacked out of the ground from the Bellonaboy site, drained and maybe windrowed, loaded onto tipper trucks, carried over 11Km. and then loaded on Shaiku trailers at a hardstanding peat reception area using two front-end industrial loaders. This peat will be hauled to the deposition area. We know that this work will not be done under Mediterranean conditions. This peat will be exposed to the elements especially in the deposition area, how will the procedure "maximise the storage capacity of the deposition site."

(11)

5 HUMAN BEINGS

It is not expected that there would be any negative impact on agriculture, forestry or fishing during or after construction so long as the mitigation measures outlined elsewhere in this EIS are implemented.

It is no good Shell stating "so long as the mitigation measures outlined elsewhere in the EIS are implemented" when they have not conducted trials on a smaller scale to prove that there won't be a negative impact. How can the drainage system that maybe work for harvesting peat as the most suitable drainage system for peat deposition.

6 TERRESTRIAL ECOLOGY

The development site is considered to have low local ecological value and consists primarily of cutover peatland with drainage ditches. No rare species, or species protected under the EU Habitats Directive, have been recorded from the site of the proposed development.

There will be an overall positive local ecological impact with the increase in local biodiversity through the replacement habitats establishing in Area 5, 6 and 7. The site will be dominated by soft rush and a number of species will colonise between tussocks. Possible re-instatement options include a process of rewetting the peat deposition site. This would promote the re-establishment of peat-forming conditions and re-instate a peatland ecosystem in place of the original Atlantic blanket bog complex.

Area 7 will most likely comprise a more wetland habitat. These [illegible] enhance the local biodiversity by providing substitute habitats for species already established in the local area. With time, the area could be incorporated into the existent network of cSACs and pNHAs to complement the existing conservation value of the Erris peninsula and expand the habitat available for wildlife.

The data provided here is a wish list. If one cast ones mind's eye 11 Km back the road from the Srahmore site we arrive at the Bellanaboy site. Keeping in mind Shell's ecological credo regarding the Srahmore Biosphere one wonders is the applicant trying to justify the degradation to Bellanaboy peatland ecosystem with the rejuvenation of the Srahmore site. But of course faith without good works is dead.

(12)

7 AQUATIC ECOLOGY

The aquatic habitats which potentially could be impacted upon are the Munhin River, Owenmore River and Tullaghan Bay,

Every word in this statement is important. The facts so stated are also saying to leave well enough alone. There are no scientific studies provided by Shell to provide proof that "the aquatic habitats will not be impacted upon."
"Is leor nod don eolach".

8 SOILS AND GEOLOGY

A geotechnical assessment of global stability of existing and future conditions indicates that the Factors of Safety (FoS) available at 3 to >20 are well in excess of the standard FoS. The use of appropriate haulage and distribution equipment of peat emplacement will ensure the integrity of the internal roads during peat deposition.

Have the necessary trials been conducted with the aforementioned haulage and distribution equipment as is the actual disposition of the peat from the Bellacorick site the only experiment to be undertaken.
How can the actual undertaking be a justification in ensuring the integrity of the internal roads during peat disposition.

9 HYDROLOGY AND DRAINAGE

The proposed peat deposition area at Sralmore is situated within the catchment of the Owenmore River. This watercourse flows approximately 140m to the south of the nearest edge of the proposed peat deposition area.

This is the section of the Owenmore River that is nearest to the sea. This is the most important part of the river — the salmon run to be precise.

13

The main drain from the Bord na Móna property discharges to the Munhin River approximately 1km south of the R313.

With regard to the Munhin River, the EPA survey indicates that the water quality is slightly polluted at the sampling point just upstream of the confluence with the Owenmore River. Turbidity has always been a recorded feature of the River Munhin water quality with flows in the Munhin highly influenced by Carrowmore Lake.

In addition to the EPA surveys extensive groundwater and surface water baseline sampling has been carried out on and adjacent to the proposed site. The quality of the groundwater found below the Srahmore site is generally consistent with the established geological structure and reducing peatland environment.

What will be the quality of the groundwater in an increasing peatland environment – increasing suddenly and dramatically and what will be the consequences to Carrowmore Lake?

The surface water quality is quite good. However it does not naturally meet drinking water standards. The elevated concentration of ammonia, which is considered to result from the environment in which the water flows, would render the water unsuitable for potable supply. The high suspended solid concentrations are considered to result from the historical activities undertaken within the site. Remedial measures to remove sedimentation from the stream bed were being undertaken during the surface water sampling survey.

It is [illegible] from this data that there is serious pollution to the Munhin River. Why is this only being revealed now? Has this pollution any bearing on the suspension of angling on Carrowmore Lake during most of 2003. This pollution has resulted from the workings of the peat in the past. Now it is to be further polluted with the daily deposition of 4000m³ of peat slurry.

• *Producer Responsibility to Encourage Reuse and Recycling of Wastes:* The project will take excavated peat to a cutover peatland where it will be stabilised and integrated into a replacement peatland habitat. The material, which will be removed during decommissioning, will be recycled or disposed of at landfill.

I though a bog was a living thing - developing and growing over thousands of years. This Frankenstein experiment by Shell and Bord na Mona has the makings of a monster ecological disaster. They want us to believe we will witness a miracle at Srahmore.

This is my submission concluded. The potential for damage to the environment is one of my main concerns. There is also the danger to health from the aerial emissions from the multiple processes engaged in at the chemical when in operation. This proposal impinges directly on the Carrowmore SAC. The effects of the physical and chemical changes and dynamisms to be introduced into the ecosystem by this proposal are not enumerated. Although I note elements of high quality in the EIS and technical supplements accompanying the application for planning permission I would still like to remind the planning authority, that the general language used, and the selected material denotes the EIS from a purely technical document to one of undoubted advocacy. This application by Shell should be refused.

Signed: Cornelius King.

11. *Information on the possible impacts on water quality, aquatic ecology and surrounding peatlands arising from the use of the highly alkaline lime/cement binder to comparatively small parts of the site. The information should include technical information and assessments to support the use and appropriateness of this method of peat improvement in this location.*

A report on the proposed peat improvement works is provided . The proposed peat improvement works will have no impact on the quality of groundwater or surface waters, or their associated ecosystems, outside the Terminal boundary.

Shell's response to the council's request is not convincing. I hope you will see in my observations from the text submitted by Shell that the information in its totality is not forthcoming. Experiments are still ongoing and mostly under laboratory conditions. They are applying for full planning permission without the necessary data supplied as requested.

Its not not enough to say at the beginning of the submission: "The proposed peat improvement works will have no impact..." and to end their submission with a similar statement:

"The peat stabilisation work will have no residual effect..."

5 **Predicted Impacts**

The peat stabilisation works will have no residual effect on the quality of groundwater or surface waters or the associated ecosystems outside the Terminal site boundary.

The proof of the pudding is in the eating. The applicant has some of the ingredients in the bowl. To say the project in Rossal is complete and ready for processing is only wishful thinking. It is still at the experimental stage and the consequence of giving planning permission will be a catastrophe for the area

(2)

Reponse to request for further information:

Item 11

1.4.2 Case Studies

- Ireland - Research

Engineers from Trinity College Dublin (TCD) have undertaken studies on the engineering properties of two peats from the Irish Midlands that were mixed with a variety of binders (Hebib & Farrell, 2003). The study showed that the compressive strength of peat stabilised with cement was significantly greater than that of the original peat. However, the degree of improvement was markedly different for the two peats even though they had a similar organic content. This variation emphasises the importance of pre-construction laboratory and field tests, such as those being undertaken on peat samples from the Terminal site. In the TCD study, cement gave better results than pulverised fuel ash (PFA) or lime. The addition of gypsum or slag to the binder mix increased the strength in one peat but not the other.

The two peat theory as outlined above is not very re-assuring re efforts to stabalise the peat at Bellanaboy. The tests on the peat are ongoing under "laboratory conditions at T.C.D." There is no definite conclusion forthcoming from these trials. Therefore Shell if they cause to proceed with the stabilization on site when they don't know what the consequences will be. Therefore they are not answering the question asked of them by Mayo County Council.

2.1.4 Option selection

It is considered that column stabilisation or mass stabilisation, or a combination of the two techniques, will be feasible for the Bellanaboy Bridge Terminal site. It is proposed to use dry binder as it is considered easier to control and avoids the introduction of additional water to wet ground.

Compared to traditional methods of stabilising soils (e.g. piling) column and mass stabilisation are economical and flexible. They use less materials and energy, exploit the properties of the peat at the site and do not require the removal of peat from the site.

How can Shell be so confident in proposing to opt for column stabilisation or mass stabilisation, or a combination of both, using dry binder when they are still awaiting the outcome of test. (cf. 1.4.2)

2.2. Binders

2.2.1 Cement

Cement

Cement is a hydraulic binder. Amorphous calcium silicate hydrate and $Ca(OH)_2$ are produced when cement reacts with water. The strength, setting, hardening and stability of hydrated cement is due primarily to calcium silicate hydrate. As cement does not depend on a reaction with soil minerals it can be used to stabilise most soils including peat. Portland cement is the most widely used type of cement for soil stabilisation but other types are also suitable. Additional materials such as slag, ash or gypsum may be used with cement to augment its properties or reduce costs.

How can Shell make such an exaggerated statement: 'cement does not depend on a reaction with soil minerals it can be used to stabilise most soils including peat'.
Are they not still awaiting the outcome of trials (cf. 1.4.2.)

(4)

2.2.2. Sampling + laboratory testing.

2.2.2 Sampling and laboratory testing

At the time of writing this extensive ground investigations are underway at the site of the proposed terminal. As soils react in different ways to chemical stabilisation, comprehensive mixing trials are being undertaken in the laboratory. These trials will determine the appropriate binder composition for the soils in specific locations across the site. Shell has engaged SGI to undertake the sampling, testing and analysis. Samples of the peat were collected during February 2004 and are being tested to investigate their properties as detailed in Table 1. Previous laboratory testing has already been undertaken in the Summer 2002. The results of these preliminary tests indicated that the peat was suitable for stabilisation techniques to be successfully applied.

Here once again we are told that 'trials are being undertaken in the laboratory'. Saying that the peat was suitable for 'stabilisation techniques' is not the same as saying that we are definitely able to stabilise the peats in Bellanabo footprint.

2.2.3

2.2.3 Field verification

At the start of construction the engineering and environmental properties will be verified *in situ* by installing a number of trial columns or trial volumes (for mass stabilisation)

Field tests will confirm the strength of the stabilised soil, and the binder concentrations necessary to achieve the desired strength. Experience has shown that a more homogeneous mixture of soil and binder can be achieved in the laboratory than the field; laboratory conditions therefore may achieve strengths that are not necessarily achieved in the field.

Shell wants planning permission to be granted without proper confirmation of the peat stabilisation procedure. Bellanabo is not an experimental station into which Shell can mess around with an ecologically balanced environment supporting diverse flora & fauna to prove a point. The consequences of such an act will be irreversible.

5

2.2.4 Quantities

2.2.4 Quantities

The quantity of binder used has a significant effect on the strength of stabilised soil. The amount and type of binder to be used at the Terminal site will be determined by laboratory and field tests (Section 2.2.2). It is currently estimated that there is approximately 156,000m^3 of peat to strengthen which will require up to 24,000 tonnes of binder and a further 178,000m^3 of mineral soils that may require strengthening which would require an additional 12,500 tonnes of binder.

Without any guarantees of the efficacy of this stabalising procedure Shell now are prepared to let us know in no uncertain terms how much pollutant its proposed to ferry to the Bellanaboy site..

24,000 tonnes for the peat
12,500 tonnes for the mineral soils.

2.2.6. Option Selection

2.2.6 Option Selection

Tests have shown that the hardening process can be retarded in soils with a high organic content so not all binders are suitable for use with peat. However, laboratory tests undertaken during the EuroSoilStab project showed that cement binders will stabilise almost any soil. To achieve the best results the binder must be mixed well in to the soil to produce a homogeneous soil/binder mix. The tests showed that the following binder combinations worked best with peat:

- Cement
- Cement & gypsum mix
- Cement & furnace slag

Similar tests using Irish peats (Hebib & Farell, 2003) show a significant increase in strength when just cement is used as the binder.

Following literature reviews, discussions with engineering colleagues and the SGI, Shell has determined that the preferred binder for use at the proposed terminal site is cement, or possibly a cement / sand mix. The binder quantity and possible proportion of sand will be determined on the basis of laboratory and field testing. The binder will be used in a dry form.

If the tests in the laboratory are still ongoing how can the applicant be so positive about the correct binder.

Contradictions are very obvious here.

(6)

3.1 P

3.1 Physical Properties

Under certain circumstances, cured cement will deteriorate in an acid environment. Tests have shown that the rate of cement deterioration is greatest where acid is flowing over the cement as this replenishes the acid and removes the reaction products. However, in the natural peat soil environment the rate of groundwater water flow is usually extremely low, and therefore the rate of any deterioration will be low. The rate of acid attack is also determined by the surface area of the cement exposed to the acid flows, and hence linked to the porosity and permeability of the cement: cement with higher porosity and permeability will undergo higher rates of deterioration. As the pH of the peat at the Terminal site is around 5.5 – 6.0, it is only slightly acidic and significant degradation of the stabilised ground is not expected.

There are two dubious statements evident here.

1° "However, in the natural peat soil environment the rate of groundwater water flow is usually extremely low"

2° "As the pH of the peat at the terminal site is around 5.5 – 6.0 it is only slightly acidic and significant degradation of the stabilised ground is not expected."

If these two statements are incorrect what then. How can the applicant be so certain of cause & effect if trials are still ongoing in the laboratory (cf. 1.4.2.)(cf. 2.2.4)

What's the difference between 'acidic' and slightly acidic?

(7)

3.2. Chemical Properties

3.2 Chemical Properties

The chemical reaction between the binder and the soil begins immediately and the pH of stabilised soil rises rapidly to 11-12 as curing begins. The speed of the chemical reactions depends on the type of binder and may take from one month to several months or even years (EuroSoilStab, 2002)

When cement is used as the binder, a stabilising gel develops between the soil granules due to pozzolanic reactions. Cement rapidly reacts with the moisture in the soil and releases calcium hydroxide, which is highly alkaline (pH 12.5). The possibility of uncured cement or calcium hydroxide migrating into the adjacent drainage ditches and acidic peat habitats is addressed in Section 4.1 but is limited due to the speed of the reaction.

The principal constituents of cement are calcium silicates, aluminates, ferro-aluminates and sulfates (Table 2). Small amounts of alkalis, lime and chlorides are also present together with trace amounts of chromium compounds. Typical Irish cement has to conform to the requirements of I.S. EN 197-1 for CEM 1 'Portland Cement'. Depending on the source of the cement, additional constituents may also be present such as pulverized fuel ash, limestone, and granulated blast furnace slag.

It is evident from the information here that the applicant is importing a polluting agent into the peats where consequently it will remain for years in the environment.

3.3

3.3 Leaching Tests

The German Cement Works Association (Verein Deutscher Zementwerke – VDF) and the Institute for Construction Research (IBAC) in Germany have carried out extensive research into the environmental acceptability of cement products in the construction industry. (www.vdz-online.de). During the reactive phase of cement and water environmentally relevant substances contained in the concrete constituents can be released into the environment relatively easily if they are present in mobile form. Substances that might find their way into the groundwater include soluble alkalis and trace element compounds. However, the research shows that trace elements in cement suspensions are predominantly insoluble and therefore unavailable for release. Hexavalent chromium is the only trace element that can be released from fresh concrete at concentrations that might be environmentally relevant. This research further confirmed that increased pH values and chromate contents occur only in the immediate contact zone of the cement (less than 60mm) and only for a very limited period of time (<24 hours). As hydration progresses, the dissolved chromate reacts so that in hardened concrete virtually all the chromium is in an insoluble state. Increased concentrations in very thin boundary layers and for short periods are not environmentally relevant and do not cause any lasting or significant adverse impact on groundwater (Brameshuber et al).

Table 3 Results of leaching test (DEV-S4) carried out on crushed concrete

Element	Content in cement	Content in leaching water
	mg/kg	mg/l
Arsenic	5	<0.0002
Beryllium	1	<0.0002
Cadmium	<0.5	<0.0001
Cobalt	10	<0.0002
Chromium	58	0.003
Copper	22	0.0008
Mercury	<0.05	<0.0002
Thallium	<0.5	<0.0002
Manganese	500	0.002
Molybdenum	1	0.0004
Nickel	28	0.002
Lead	17	0.001
Antimony	1	<0.0002
Tin	3	<0.0002

This section of the Applicants response to the County Council's question 11 once again clearly shows the unsuitability of this site for the Terminal. In order to overcome insurmountable obstacles shall propose to import into the area innumerable toxic substances that can and will leak into the environment. The weather is a huge factor in this whole project and wind and rain cannot be controlled.

"During the reactive phase of cement a wide environmentally relevant substances contained in the concrete constituents can be released into the environment relatively easily."

"Substances that might find their way into the ground water include soluble alkalis & trace element compounds."

Check the elements in Table 3 that will be imported with the binder into the environment.

(9)

4.2 Receptors

4.2 Receptors

The following sensitive receptors are identified in the EIS and may be affected by the peat stabilisation process:

- Carrowmore Lake Special Protection Area (SPA) and candidate Special Area for Conservation (cSAC) – this large shallow lake and its associated areas of blanket bog are located approximately 1.5km to the southwest of the terminal site. The site supports a number of bird species, which are of international conservation significance, including Greenland white-fronted goose, merlin, golden plover, sandwich tern and arctic tern;
- Sruwaddacon Bay SPA – this site is part of the wider Glenamoy Bog Complex cSAC and is located approximately 2km north of the terminal site. It has been designated for its wintering wildfowl and its integral role in the local salmonid fishery;
- aquatic invertebrates;
- salmon and trout fisheries;
- willow scrub;
- badgers;
- otters;
- frogs; and
- local residents and the construction workforce.

This section should be sufficient for the council to reject the applicants proposal for the import of the cement binder into the environment for peat stabilisation. Keeping in mind the list is deemed a substance listed in Table 3.0 and the consequences if they finding there way into Carrowmore lake the main reservoir for the Erris area of drinking water should be enough for any right minded individual to halt such an enterprise going ahead. The common good demands it. There are too many imponderables. It is self-evident that shell are still in the process of finding out the correct way to go about adding the peat.

When in doubt, don't.

(10)

4.3 Potential Impacts

4.3 Potential Impacts

4.3.1 Hydrogeology

Research has shown (www.vdz-online.de) that when ultra-fine cement binders are injected into water, significant effects on water quality are only detectable during the first 4 hours after the injection. Within 24 hours, the chemical composition of the test water was not significantly different from that of drinking water.

Subsurface flow in the area is minimal due to the near-surface water table and widespread waterlogging of the peat and underlying mineral soils and bedrock. The leaching experiments described in Section 3.3 demonstrate that the reactive phase of cement in water is limited to <24 hours and that the quantities of alkali and hexavalent chromium ions released in this time is insignificant. It is therefore considered that there is no risk of offsite groundwater contamination.

"It is therefore considered that there is no risk of offsite groundwater contamination". When there will be 36,500 tonnes of cement on site mixed with the peat and the mineral soils this is hard to accept. A small controlled experiment in the laboratory is no guarantee of the success of the project on the ground. One has only to live in this environment to fully appreciate the importance of factoring in the climate – wind and rain.

4.3.2. Hydrology

4.3.2 Hydrology

There are numerous ditches which drain the Terminal site, most of which have relatively minor flows. The project could impact on two separate catchment areas, with the boundary approximately following the eastern boundary of the Terminal. Ditches from the Terminal itself flow in a southwest direction, into the Bellanaboy River and subsequently Carrowmore Lake while run-off from the temporary construction area will flow to the north, to Glenamoy River and subsequently Sruwaddacon Bay.

Most of the shallow land drains on the Terminal site are frequently dry but there are some deeper ditches to the southwest and northeast of the site. The surface gradient and subsequent flow of surface water is towards a ditch in the southwest of the site, which empties into a sinkhole in the peat. This 1.5-2m deep hole only overflows after periods of heavy rainfall, when the overflowing water empties into a ditch (D16), which then flows adjacent to the R314.

The peat stabilisation process may result in a very localised and transient increase in alkalinity and/or sedimentation of these watercourses and drainage ditches, which under extreme circumstances could have knock-on effects on the aquatic ecology as described below. However, in reality, no adverse effects are anticipated.

Once again the final paragraph in this section is just wishful thinking. There will be knock on effects and the flora & fauna will be the recipients of the adverse effects not to mention the human inhabitants of the area.

4.3.3. Aquatic Ecology

4.3.3 Aquatic Ecology

Vegetation

Cement or a combination of cement and sand will be used for the peat stabilisation, leading to the possibility of watercourse sedimentation. Cement and sand could settle on submerged aquatic plants and reduce the rate of photosynthesis. However, it should be noted that sand is naturally occurring in the local watercourses.

Any increase in pH of the water from the cement may reduce plant growth and alter the species composition. This could have a subsequent impact on aquatic fauna in terms of the suitability of trout-spawning sites, shelter for fish fry from predators, etc.

Macro-Invertebrates

The baseline data acquired at and around the Terminal site show a large population of aquatic macro-invertebrates such as mayfly, dragonfly and caddis fly larvae. Often used as biological indicators, the presence, abundance and diversity of these species indicates good water quality throughout the survey area. Most aquatic larvae are sensitive to environmental changes, particularly changes in pH and/or temperature. The sedimentation of watercourses by sand could smother larvae and in the long term modify the substrate to the extent that species composition is altered.

Fish

Sea trout and salmon are known to spawn in the tributaries of the Rivers Bellanaboy and Glenamoy. Although less susceptible to changes in pH than aquatic invertebrates (both species can tolerate a relatively high pH) (www.troutandsalmon.net) they can be indirectly impacted through a change or reduction in food sources. Sedimentation of the watercourses can smother fish eggs and damage fish gills through abrasion.

The applicant is admitting here that there will be adverse effects to the vegetation, macro-invertebrates and fish. This is no good a reason as any to withhold planning permission – the destruction proposed is a recipe for disaster in our environment...

(12)

4.3.4

4.3.4 Terrestrial Ecology

Willow scrub

Willow scrub is generally common throughout Ireland but it is relatively rare on the Terminal site and as such provides an important habitat for birds. There are two areas of willow scrub composed primarily of eared willow (*Salix aurita*) alongside the secondary / emergency access road which will be stabilised using cement injection. There is a risk of willow roots being damaged directly by machinery during the stabilisation process. Eared willow is known to prefer acid soils and as such the roots may atrophy if there is an increase in soil pH.

Badgers

The secondary / emergency access road which is to be stabilised is adjacent to an area of dense scrub where an active badger sett has previously been recorded (S5). It was noted during the survey (Volume 1 of EIS) that additional setts may have been overlooked due to the difficulty of surveying in dense scrub. There is a risk of direct harm to badgers if the sett is occupied when the peat stabilisation process begins.

Otters

Otters may be present on site throughout the year, however they are most active when opportunistically preying on frogs in the spring. Any adverse effect on common frog populations is unlikely to have an impact on otters as alternative food sources are abundant in the area. However, two day nests noted adjacent to the secondary / emergency access route may be used by otters. There is a drainage ditch adjacent to the access road which may

More of the same adverse effects here on the Willow scrub, Badgers, otters, Frogs.

4.3.5. Air Quality

4.3.5 Air Quality

Handling and mixing of the cement-sand binding mixture will result in a minor and very localised increase in dust. However, the dust will land on the peat surface and will adhere, when the surface is damp, rather than being blown away. The most significant impact from cement dust will therefore be on the health and safety of the workforce, as discussed below. Generally, cement injection will stop short of the ground surface working platform which will overlie the area being stabilised. This will significantly reduce the potential for dust generation.

There will definitely be a detrimental effect on air quality — cement dust will be blown off site!

4.3.8 People

Cement is a light powder that poses little immediate hazard. A single short-term exposure to the dry powder is unlikely to cause serious harm. However, when cement is mixed with water or becomes damp it undergoes an exothermic reaction and produces a strong alkaline solution. The heat is unlikely to cause thermal burns, but if the solution comes into contact with the eyes or skin it may cause serious chemical burns and ulceration. The eyes are particularly vulnerable and damage will increase with contact time.

Strong alkaline solutions in contact with the skin tend to damage the nerve endings first before damaging the skin, therefore chemical burns can develop without pain being felt at the time. Cement mortar and concrete mixes may, until set, cause both irritant and / or allergic contact dermatitis:

- Irritant contact dermatitis is due to a combination of the wetness, alkalinity and abrasiveness of the constituent materials;
- allergic contact dermatitis is caused mainly by the sensitivity of an individual's skin to hexavalent chromium salts;

Generally, cement injection will stop short of the ground surface working platform which will overlie the area being stabilised. This will significantly reduce the potential for dust generation.

Fresh cement may contain traces of hexavalent chromium. Hexavalent chromium is a known allergen to some people although sensitisation normally requires months to years of repeated exposure. Wet cement is extremely corrosive and quickly destroys skin surfaces, which allows the hexavalent chromium to penetrate skin layers and enter skin cells. Once someone is sensitised they are usually sensitised for life and exposure to a small amount of cement may trigger a severe reaction. In an effort to improve workforce safety, the chromium content of cements has been decreased in recent years and the number of cases of chromate dermatitis has fallen.

There will be pollution effecting people in the vicinity of the site. Its nice of shell to admit this. But of course it will only be a temporary inconvenience.
are the side effects of pollution on a persons health, always regarded as temporary in their results.

5. Predicted Impacts:

5 Predicted Impacts

The peat stabilisation works will have no residual effect on the quality of groundwater or surface waters or their associated ecosystems outside the Terminal site boundary.

Don't accept this guarantee - all that has gone before contradicts this statement.

The peat stabilisation will have a residual effect on the groundwater - & on the flora & fauna of the whole area — on the watercourses and on Barrow more Lake.

In bringing my submission to a conclusion I would like to return to an earlier submission concerning the first E.I.S. submitted by Enterprise Energy Ireland. I think its pertinent to this present submission. I refer to the gas emission from the hypothetical cleaning station.

Emissions from Gas compressors:
CO_2; Co; Nox; SO_2; CH_4; VOC

Emissions from Three Generators:
CO_2; Co; Nox; SO_2; CH_4; VOC.

Emissions from Firewater Emergency Generator:
CO_2; Co; Nox; SO_4; CH_4; VOC

Emissions from Flare or Pilot gas use:
CO_2; Co; Nox; SO_2; CH_4; VOC.

This cocktail of gases will be hovering over the Bellanaboy site. Will not the heavy precipitation of the Corrib area rain these gases down on the site. What degradation will this lethal concoction have on the cement binder in the peat? There is no allowance for cause and effect in Shell's submission. Is it an omission that should be ignored by Mayo County Council? I don't think so. These gases are serious pollutants and there will be repercussion for the environment when they rain down on the stabilised peat.

The one aim of both applicants, Enterprise Energy Ireland originally and Shell subsequently is to solve the problem presented by the environment in order to procure planning permission for the Chemical Plant at Ballinaboy. But more serious problems seem to arise from the inadequate solutions proposed.

I think that at this late hour in the history of the Ballinaboy project it is time to call a halt and admit that the site at Ballinboy is possibly the worst site imaginable for such a project. The decent thing in the circumstances would be for Mayo County Council to take the applicant out of his dilemma and refuse the planning application.

The simple and common sense solution to the problem is to clean the gas at sea.

03/3343

Submission

Re

Applicant's Response to MCC Request

for

Significant Further Information

Planning Ref. P03/3343

Planning receipt No. PLAN/0/6532

Submitted by: Maura Harrington,
Doohoma, Ballina, Co. Mayo.

Submission 8 pages
Appendices 15 pages
Mail on Sunday Mar. 7 2004

Glossary

SEC	Securities and Exchange Commission (USA)
USJD	United States Justice Department
FSA	Financial Services Authority (UK)
Euronext	Amsterdam Stock Exchange (and others)
AFM	Netherlands Financial Regulatory Body
KPMG	
PwC	Price Waterhouse Cooper

I wish to record my thanks to the Senior Planner, MCC, for the verifiable professionalism of his assessment of P03/3343 to date – a trait notably absent at Local Authority level heretofore.

I believe the tenor and content of the MCC Planning request for significant further information re P03/3343 has not been matched by the applicant's response. This is not surprising. It shows that, in one aspect, there is a dire consistency displayed throughout the planning history of the proposed Corrib Project – could be summarised by the acronym SOS – Same Old Shell, Same Old Story, Same Old S**** (in the all-encompassing context of peat, SODS – Same Old Dirty Shell etc. is equally apposite).

A person of high integrity has called P03/3343 an 'affliction' – he's right. It *is* an affliction for stakeholders and proper planners to once more have to wade through the assumptions, omissions and twittering twaddle that best describes the content of Volume 1 and Appendix A most recently visited upon us all by the same Mr. Tom Phillips, TPA & Associates. On a more serious note, the imposition of an affliction has human and civil rights implications and P03/3343 lies indisputably within this area.

So it's once more unto the mire with the following observations. Before doing so, I wish to record the fact that the Co. Secretary, Mr. Condon eventually managed to clarify the closing date for receipt of submissions/observations re P03/3343. This is in contrast to P01/900 when many people, myself included, were given to understand that submissions in respect of this application would be accepted up to 12th September 2001 – by which time, of course, it was already a County Manager/Senior Planner/Frank Fahey *fait accompli.*

Volume 1

Item 1

Is the presentation of 7 grotty-looking photocopied pages gratuitously insulting or just plain stupid? Appended copy of Legal Notice, 31 July 2002 states conditions attached are 'mainly related to the protection of the environment'. Can 'written confirmation' from Frank Fahey and/or PAD PO Michael J. Daly really supercede Seveso II (even with Ó Cúiv 'no other option' rally-call)? While such claptrap was acceptable to the Co. Manager last time round (P01/900), and may or may not be acceptable to him this time round (P03/3343), can it be acceptable – in any verifiable professional manner – to the current Senior Planner?

Item 3

How many tankers? Are they factored into Traffic Management 'Plan'?

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Items 4,5

If Mr. Phillips would wish (his wishes having been entertained in P01/900) to treat this planning application as a rather large 'one-off' bungalow in a bog why weren't trial holes dug at the proposed location of the puraflo unit?

(agrément- *n.approval by state of diplomatic representatives sent to it-n.pl. amenities,courtesies, charms, blandishments: embellishments, as grace notes and trills (mus).*

Item 10

Is the glorious ecological diversity nurtured between Broadhaven and Tullaghan over millennia really reducable to the badger, otter, hen harrier, corncrake and frog (and frogs don't count)?

Please see appended article 'Warning sounded on decline of species', Guardian download, 26:03:'04. Taking into consideration the RSK ENSR high profile per their website www.rskensr.com can they quantify what their 'contribution' – be it small or large - has been to this decline?

Given the apparent disdain/dismissal/contempt/arrogance inherent in all the applicant's forest-loads of paper to date, can P03/3343 be viewed as a sustainable planning option by anyone other than Minister Ó Cúiv, Frank Fahey, Bertie 'Swans and Snails' Ahern and the rest of the Fast Track Brigade?

Item 11

p.3,2nd para 'The areas proposed for stabilisation....as shown on?????

1.4.2 This variation.....such as those being undertaken... SOS/SODS

Is there an example anywhere worldwide of 'stabilised' peat or pile-driven peat supporting a flare stack?

2.2.2 Work not done; still conceptual – SOS etc.

3.3 Hexavalent Chromium? – to use the standard art analogy, I know nothing about hexavalent chromium but I don't like the sound of it!

Please professionally and verifiably assess.

4.3.1 In what way was the chemical composition of the test water different to that of drinking water?

4.3.2 States the 'bleedin' obvious' – any fool knows that a massive industrial assault on a pristine environment will smother, kill or otherwise annihilate species. Is this section to be read as an intention to slaughter and is it thrown down under the aegis of Ó Cúiv & Co.?

Item 12

An incredibly arrogant admission that what reads as a pro forma small catchment computer-modelling system was the only model used for Ballinaboy when the 'other methods' alluded to in passing would, presumably, have yielded more accurate and per standard rationality, a more damning hydrological/ hydrogeological scenario?

It's all very well to state that Bord na Móna 'design methodology' has been licensed by the EPA – the point at issue is whether complete compliance with all conditions attached to such licences can be demonstrably proven?

Item 13

From its incompetent conception, the proposed refinery at Ballinaboy has displayed distinctly irrational behaviour – couldn't stay still in one place and tried to play peek-a-boo with ABP Senior Planning Inspector. It is direly consistent that the raving refinery should now be joined by dingbat drains!

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Item 15
First admission in print that site specific rainfall data was collected at Ballinaboy – where is it? how comprehensive is it? how does it compare day on day/month on month/year on year with Belmullet Met Station data? was Ballinaboy rainfall used in pro forma computer-modelling referred to in Item 12?
Where is data for September 2003?

Table 2 would appear to raise more questions than it purports to address. March 2003 is over a year ago – where is the measured monthly data since then – or did it cease in anticipation of the 'right' ABP decision?

Item 16
Where will the rainfall run-off from the nice waterpwoof (*sic*) sheeting go to? Is it included in pro forma computer-modelling?

Item 17
What is TPS or CPI sludge?
Where is the location of the 'Other Permitted Reclamation Site'? What process/procedure was followed to identify and properly, professionally and verifiably assess this site?
Is there a valid waste licence in respect of this 'permitted reclamation site'? (If there is, is it comparable to the Third Secret of Fatima?).

Item 20
This response produces a nasty sense of déja vu – one knew the dingy photomontages in P01/900 were 'wrong' but didn't have the technical expertise to say why; at the ABP Oral Hearing it was acknowledged by the applicant that the plates lacked a chromatographic layer. Plates 13.1 and 13.2 do not look as if they were taken from exactly the same location. Plate 13.2 was obviously taken on a fine dry night – why are there no computer-generated images showing the night light diffusion in all wet weather conditions, ranging from fine mist/drizzle to storm driven rain?
I would again point out that the only real model for a proper assessment of the night light pollution from P03/3343 is a comparative study using the GLANCRÉ Teo. plant at Muingmore as a base. The night sky pollution from this particular excrescence is panoramic. Please see appended articles, Irish Times, August 16, 2001; Fintan O'Toole 16:03:2004.

Volume 2

The admissions inherent in this response actually strengthen the contentions of those who are genuinely concerned about the effects of deposition of 450,000 m3 of disaggregated peat onto this site. The lower readings produced in times of no Bord na Móna activity at the site is a clear indication that, post cessation of all BnaM activity at the site, the riparian and marine environments heretofore affected by such activities would begin the process of self regeneration. Any proposal which would defer this process, not to mention actually impede it, is inimical to all principles of sustainability in planning.
I submit the following *verbatim* quote from Mr. James Moore, Deputy Regional Director of Dúchas (before it was subsumed) to the ABP Oral Hearing ref. PL 16.126073

'A hydraulic continuity and vertical leakage between surface, peat and groundwater in clearly identified in these extracts and any liquids entering the site have the potential to enter the groundwater and subsequently the nearby European sites.

....I acknowledge the mitigation measures specified in the EIS but in my experience, such measures are never totally effective.
To conclude, I will refer again to your responsibility under SI/94/97:

> *a Local Authority or the Board, as the case may be, shall... decide to grant permission... only after having ascertained that it will not adversely affect the integrity of the European site involved*

I believe that the Board will be unable to make such an assertion!'

The above statement was made re Ballinaboy – it is equally valid re Srahmore/Attawalla. A copy of James Moore submission is appended for your consideration.

Item 2
Would prefer not to have to translate American dates. Again refer to Item 1, above.

Item 3
***3rd para* 'The initial process of depositing .....peat harvesting process.'**
This belongs in the litany of lunacies – *anybody* who would believe such drivel must live in perpetual fear of flying pigs!

There has already, over the lifetime of BnaM activities, been significant adverse change to Tullaghan Bay. Anybody living in the area, as I have done all my life, or talking to the local communities of Coolaba, Tullaghanduff or Tullaghanban would be only too well aware of that change – which is also illustrated by EPA Reports.

Item 5
A Habitats Map showing the Corrib Project area i.e. from Broadhaven to Tullaghan would be much more interesting to all concerned, with the obvious exception of the applicant!

Item 7
***Intro.* Please specify and professionally, verifiably assess the 'comparable activities undertaken by BnaM in the past'.**
***4.2* Who attended the Oweninny 'Qualitative Tests' on 27 November '03? Was it, as with so many Royal Dutch/Shell activities, by invitation only? If so, was MCC Senior Planner invited to attend? The prescribed bodies? Stakeholders? If not, why not?**
(Purely out of curiosity, what is the location of the 3-mile rough and bumpy pot-holed road upon which the peat was "driven hard".)
It comes as no surprise that BH and PF use only initials – if I'd produced such turdish stuff I'd stick with MH too!

<u>Cumulative Impact 'Response'</u>
'..same nature as those undertaken routinely by MCC' – I doubt it.
***4.1.1* Who in MCC 'will adopt suitable traffic management measures'?**
***4.1.2* Noise is one consideration – post Dooncarton and Derrybrien, what about cumulative <u>vibration</u> impacts? What is the inevitable fate of Glencullen N.S., a fine sample of vernacular architecture? My mother taught in that school as Miss Sweeney (1945/46). The building is now the property of Dr. T.K. Whitaker.**
***4.1.3* Where is the empirical comparative analysis to support the statement that air quality will still be good in comparison to that of roads through nearby villages and towns?**
***4.2* Again refer to quote, Item 1.**

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4.3 Does the agreement of the NPWS and MCC with regard to Carrowmore Lake Complex fall under the Third Secret rule – or FOI 10(1)(a) – or can the rest of us see it?
4.4 I note the badger, otter, hen harrier, corncrake and frog-who-doesn't-count have been joined by the Greenland white-fronted goose. Nothing else remotely interesting between Broadhaven and Tullaghan??
4.5 Synergistic/synergistically are not impressive terms
4.6 Should we thank the kind 'Sorrs' for acquiring unto themselves the Glencullen road, renaming it a haul road?
4.7 Where is/are the waste disposal site/s to facilitate dumping of 41/33,000m³ of waste from Ballinaboy? Who are the 'site managers'? Has the 'pre-emptive' forward planning taken place or is it, like so much else, of the 'wing and a prayer' variety?
5 True, cumulative monitoring would occur <u>post</u> a Seveso type catastrophe; TOO LATE.

'Hindsight may make for lofty regret but it is ultimately pointless'
Eileen Battersby, Irish Times, May 2001.

<u>Appendix A</u>

<u>Section 1</u>
p.2 para 2 BnaM 'satisfaction' and proper, verifiable, professional 'satisfaction' with regard to the sustainable incorporated stability of disaggregated peat are not necessarily synonymous – and won't be, I hope.
"living document" is not confidence inspiring.
1.2 The Ballinaboy Bridge site 'designation' was obviously acceptable to Frank Fahey – up to, <u>and including</u> his last day in office; to Mr. Mahon/Ms. Gannon (Aug. '01) and to Ó Cúiv and his cronies at the Belmullet Rally, July '03. Such 'designation' has <u>not</u> been acceptable to local stakeholders, to a wide spectrum of non-vested interest groups and to ABP. The current arbiter of 'designation' is the MCC Senior Planner.
p.3 last full para – strains too many faculties to read 'coherent' here; should be deleted.
p.5(i) waste from Ballinaboy to be hauled along L1204 nearly a year after putative start – where would it be stored at Ballinaboy and where is it then going to?
p.6 As an 'artery', the L1204 is not in great shape and, to those with a titter of wit, not even a Maurice Nelligan of the Motorway would be able to do much with it!
3.1 Glencullen road also 'caters' for whole area covering Ballinaboy, Glenamoy, Pullathomas, Rossport, Ceathrú Thaidhg and all points NE. BnaM don't use that section of road.
p.8 Interesting to note reference to US Army Engineering Corps PSI methodology – lends credence to the Mad Max logistics which have absolutely <u>no</u> concept of rationality within the reality of Erris.
4.1 p.9,10 points 1-4 give lie to claim of 'routine nature' of proposed road works.
4.5 <u>2</u> 'in so far as is possible' – specify; <u>3</u> 'would ensure' – how? <u>4</u> how? <u>7</u> specify.
p.17(b) 'unsuitable materials stockpiling and export' – details and verifiable professional assessment.
p.18 'empty trucks to carry stone in reverse direction' – what stone? where?? in what direction???
5.1.3 Would the demanded upgrade take 10 weeks, 11 weeks, 3 months?
5.2 'various loads which are unavoidably scheduled on top of the average daily peat payload' 'Certified weighbridge' apart, this type of elision must be addressed – what type of loads? what size are they? where are they coming from?

5.3 60,000 tonnes of unsuitable material is waste, for which a valid waste permit is necessary – throwing it 'opportunistically' into the back of trucks may seem acceptable to those involved in (used to?) such shenanigans but is hardly consistent with good planning practice; the question remains – where are 825 HGV's per month (for how many months) going to and on whose say-so are they going there?
5.4 On reading, seems as if this is timed for post grant of planning – no other option??
5.4.1 Lunatic Logistics
5.4.2 Can barcode be read through peat/mud coating or are there further employment opportunities for barcode cleaners – and should the indigenous population be forelock-touchingly grateful?
5.4.3 The admission of <u>will</u> to load trucks over self-imposed limit of 10 cu.m can be read as a certainty that this <u>would</u> happen – with what consequences?
5.4.4 Does Gárda writ run on 'haul roads'?
5.4.5 Nothing therein adequately addresses Mr. Francis Murphy.
5.4.6 TES should recommend strewing some brightly-coloured beads and bangles about – *should* adequately prevent theft of cones and barriers by nefarious natives.
5.4.7 Lighting requirements quite necessary to facilitate bead-gathering by natives.
5.4.8 Drivers giving way to laden trucks could be productively occupied in further strewage of beads etc.
5.4.9 Is pacing vehicle included in master plan?
5.4.10 Should the kind 'Sorrs' be thanked for allowing the natives out in a minibus occasionally?
5.4.11-5.4.17 Outside the parameters of any rational/facetious/ironic/cynical or polemic comment.
5.5 Found the pacing vehicle!
5.6.1 Post Dooncarton, I don't believe 'the Mayo Co. Council' will indicate a preference for the Inver route to Glengad – particularly if the funds granted to them specifically for the repair of roads and bridges has been expended as specified, which is the least the people of that area are entitled to.
(I wish to record, in the above context, that the Co. Manager appears quite vehement with regard to peoples' entitlements – his reply to me at 4.50p.m. 17 Feb.'04, when I requested that he sanction the price of a stamp to post copy of any additional information request to all those who had made submissions re P03/3343 was, *verbatim*, 'They'll get what they're entitled to get'.
Considering the further demented volumes of traffic proposed for the landfall assault on Glengad, Sruwaddacon, Rossport, Gortacreagher, why is no 'up-grade deemed necessary for the poor old [illegible] section?
5.7 There is nothing remotely feasible, achievable or in any way connected to reality in this reckless, demented paragraph.
5.8 Prefer to read 'centre' – if proper catering facilities are to be provided at each centre/ center of activity, what effect will this have on the much vaunted increase in sales of sandwiches in local shops/pubs which appeared to be the *raison d'etre* for acceptance of this proposed excrescence in the first place?
6 What Safety File? HSA input?? (don't like the sound of 'any experience and lessons gained in the initial period will be studied and drawn upon to correct any deficiencies').

Would <u>you</u> buy a used TMP from this outfit?

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Section 2

In previous and current EIS's it was possible to chuckle gently over the contents of the Leopold Matrix, in essence, a thing of little value and less worth. There is no chuckling over the truly horrifying Risk Assessment Matrix presented here by TES. The allocation of risk ownership in respect of the peat haulage route is the stuff of nightmare. One must, to a degree, acknowledge the brazenness of S/hell legal advice but *why* do they think they can get away with it?

HIGH IMPACT RISK ACCEPTANCE

	MCC	Contractor	BnaM	Shell	MCC/Shell	Con/Shell	BnaM/Shell	Con/BnaM
A	4	2	0	0	1	0	0	0
B	2	0	0	1	0	0	0	0
C	0	4	0	0	0	0	1	1
D	0	0	0	0	0	1	0	0
Total	6	6	0	1	1	1	1	1

The basis for the assumptions on which the likelihood of risk was formulated would be informative. In other words, who carried out a QRA and who evaluated it? That said, of only 4 High-rated likelihoods presented by TES, the proposed ownership appropriation is as follows:

Contractor 1; BnaM 1; MCC/Shell 1; Contractor/BnaM 1.

In this horrendous proposal, it can be seen that S/hell is trying to get away with full risk ownership of ONE High Impact/High Liability item out of a total of TWENTY ONE – not a bad coup, but the success of this is premised on dealing with cretins.
This proposed project guarantees billions to the applicant, millions to the contractor, an ego boost to the management of BnaM and sweet damn all to MCC. An acceptance of such hellish risk ownership could only be construed as either cretinous or criminally craven.
For the record, the ONE S/hell appropriated risk (B8, Transitional) states the 'risk' as:

> 'School bus drivers and pupils are unaware of the scale of the transport operation and fail to commence their own safety measures in the first weeks.'

Is this item born of S/hell experience in Ogoniland and other unfortunate S/hell-smashed places? How many children, if any, have been killed in S/hell operations worldwide? If none, are S/hell implying that Erris bus drivers are stupid/negligent? That Erris children are unused to traffic and that Erris parents would be too busy picking up bloody beads or stealing bloody cones to look after their children?

If S/hell are willing to try to shift the blame for the RD/S 20% downgrade on to the SEC – see appended FT.com download – then what odds would TES offer that S/hell would ever admit any liability in respect of anything that befell the People of Erris or the Place that is Erris. Please also refer to appended Financial Mail on Sunday articles, March 7 2004 – *Raw greed in the African oilfields* and *TAINTED BY POLLUTION AND HUMAN RIGHTS CLAIMS*.
('Erris' Players and 'Erris' Tourism take note).

Only those whose time is consumed by dodging flying pigs would be unaware of the current corporate upheaval within Royal Dutch/Shell. At time of writing, and for some time to come, RD/S shareholders are, and will remain, extremely perturbed. The publication of RD/S Financial Statement is delayed pending issue of joint Auditors Report by KPMG and PwC; the AGM has been postponed from April 23rd to June 28th. Former Shell Chairman Philip Watts is possibly facing criminal charges in the US; he will also be giving a deposition to US lawyers in the class action Ogoni case currently being heard in the US. RD/S is under scrutiny by the SEC, the FSA, AFM and Euronext. The newly appointed Chairman of Managing Directors, Jeroen Van der Veer and the *in situ* Financial Controller, Judith Boynton are 'driven hard' to answer multiple outstanding questions. Please refer to appended Times On Line download and Mayo News De Facto article, 31 March 2004.

Shortly after I downloaded Malcolm Brinded's address to the Oil and Money Conference in November '03 (appended to submission receipt no. PLAN/0/5532) I spoke with a Mr. Binto da Costa who represented himself to me as 'Mr. Brinded's right hand man'. At that time, 14 Nov. '03, I accepted Mr. Binto da Costa's assurance that he knew nothing about the proposed Corrib Project but I did ask that he consider familiarising himself with it. On 19 Nov. '03 Mr. Pyle made an unsolicited phone call to me at my home. Following Mr. Brinded's promotion in RD/S, I again made contact with Mr. Binto da Costa. This time I pointed to the much changed corporate circumstances at RD/S; the fact that a bad stakeholder story was the last thing either shareholders or management wanted at the moment; my belief that the Corrib Project as proposed would lead to the inevitable degradation of a First Class European environment and stressed the fact that Shell E&P Ireland Ltd. had abused and subsequently forfeited the trust of indigenous stakeholders. I requested that Mr. Binto da Costa appraise Mr. Brinded of these comments and further asked that a group from either Shell or Royal Dutch Head Office properly assess this proposed project for the first time. Mr. Binto da Costa refused my reasonable request and referred the matter back to Mr. Pyle. I do not consider this a failure on my part; I view it instead as one more example of typical RD/S duplicity. The reaction by Shell Centre, London to my stakeholder request is a mirror image of the elephantine corporate structure which has left its shareholders howling. In the timeframe within which P03/3343 must be professionally and verifiably assessed, the corporate beast that is Royal Dutch/Shell can most accurately described as a rogue bull elephant.

In that global context, since Mr. Phillips *et al* have provided little by way of relevance in the local context, I submit that it behoves the Senior Planner to refuse planning permission to P03/3343 on the grounds of rationality, common sense and sound, sustainable planning principles. As stated to the MLVC – and blithely ignored by them – the continued integrity of the Erris region depends on the integrity of those whose duty [illegible] to sustain [illegible] future generations.

Maura Harrington.

April 1st 2004 (Fools' Day? Knaves' Day? NOTAB DAY! *Deo Volente*)

Appendices

1. Legal Notice, DCMNR, pub. 31 July 2002, Western People

2. Warning sounded on decline of species

3. Irish Times article, 16 August 2001

4. Fintan O'Toole article I.T. 16 March 2004

5. James Moore submission

6. Ft.com download

7. Mayo News, De Facto, 31 March 2004

8. Financial Mail on Sunday articles, 7 March 2004

9. Times On Line download

10. NOTAB Song

LEGAL NOTICE

DEPARTMENT OF COMMUNICATIONS, MARINE AND NATURAL RESOURCES

1. The Minister for Communications, Marine and Natural Resources hereby announces that the Minister for the Marine and Natural Resources (whose title has now been changed to that of Minister for Communications, Marine and Natural Resources) (hereinafter called "the Minister") has taken decisions as set forth in this notice.

2. The Minister has taken a decision to approve, subject to conditions, the working by Enterprise Energy Ireland Limited and its Co-Venturers of petroleum on an application for such approval for the working of petroleum in respect of which an Environmental Impact Statement was submitted in accordance with the requirements of Section 13A of the Petroleum and Other Minerals Development Act, 1960, as amended. Furthermore, the Minister also made a decision to grant a consent, subject to conditions, to construct a pipeline; the decision to grant that consent was made on foot of an application by Enterprise Energy Ireland Ltd and its Co-Venturers pursuant to Section 40A of the Gas Act, 1976, as amended. An Environmental Impact Statement was submitted with that application. Notice of these decisions is now given pursuant to Section 13A(8) of the Petroleum and Other Mineral Development Act 1960, as amended, and to Section 40A(8) of the Gas Act 1976, as amended, respectively. The above decisions relate to the plan of development for the Corrib Gas Field submitted by Enterprise Energy Ireland Limited and its Co-Venturers and for the construction of a gas export pipeline. The conditions attached are mainly related to the protection of the environment.

3. The Minister has made a decision to grant a Foreshore Licence, subject to conditions, to construct a gas pipeline over the foreshore. The decision to grant that consent was made on foot of an application by Enterprise Energy Ireland Limited and its Co-Venturers pursuant to the Foreshore Act, 1933, as amended. An Environmental Impact Statement was submitted with that application. Notice of the making of the Minister's decision is now given pursuant to Section 21A of the Foreshore Act

4. The Minister has also made a decision to grant a consent under Section 5 of the Continental Shelf Act, 1968, as amended to construct, alter or improve any structure or works in or remove any object or material from a designated area of the Continental Shelf.

5. All of the above decisions are made in connection with the Corrib Gas Field off the coast of County Mayo. The decisions by the Minister and information thereon have been placed, and are available, on the website (www.dcmnr.gov.ie <http://www.dcmnr.gov.ie/>) of the Department of Communications, Marine and Natural Resources. This decision and information thereon together with The Environmental Impact Statement have been made available and will remain available, until 31st August, 2002 for inspection by members of the public at the Department's offices at Leeson lane (Coastal Zone Division), Dublin 2 and Beggar's Bush (Petroleum Affairs Division), Dublin 4, at Ballina Garda Station, Ballina, Co. Mayo, Belmullet Garda Station, Belmullet, Co. Mayo, Glenamoy Garda Station, Glenamoy, Co. Mayo and at Bangor Erris Garda Station, Bangor Erris, Co. Mayo.

Department of Communications, Marine and Natural Resources, Leeson Lane, Dublin 2.

July 2002

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The world has changed since you woke this morning

Warning sounded on decline of species

Tim Radford, science editor
Friday March 19, 2004
The Guardian

Scientists have produced the first comprehensive evidence that the diversity of butterflies, birds and plants is in decline in the UK. They say their research supports the argument that mass extinction threatens life on Earth.

In the past 20 years, according to a study in the US journal Science today, about 70% of all butterfly species in Britain have shown signs of decline. About 28% of plant species and 54% of bird species also declined in areas studied over long periods. The finding comes from government-funded scientists using data painstakingly amassed over the past 40 years by 20,000 skilled naturalists .

Sandra Knapp, a botanist at the Natural History Museum, said the UK survey gave a crucial message for the world: "The lesson and the warning are there for all to see. Britain, by virtue of its well-known and well-studied biodiversity, is the canary for the rest of the globe.

"This adds enormous strength to the hypothesis that the world is approaching its sixth major extinction event," said Jeremy Thomas of the Natural Environment Research Council, who led the study of butterfly populations. "The others appear to have been cosmic events, either from outer space coming in or some major perturbation - volcanos, whatever - within the Earth. So they are believed to be physical events.

"You could say this latest one is an organic event: that one form of life has become so dominant on Earth that through its over-exploitation and its wastes, it eats, destroys, or poisons the others."

The 600m-year fossil record shows a pattern of continuous evolution and extinction. But naturalists now think that extinction rates are at least 100 times greater than the natural "background" rate because of pollution, habitat destruction, hunting, agriculture, global warming and population growth.

Hard evidence, however, has been based only on research into a small number of species, mainly birds. But birds make up less than 1% of all species, while insects make up more than 50% of life on Earth.

[illegible] plant, bird and butterfly populations in the past 40 years in 10km grid squares.

One third of plant, bird and butterfly species have disappeared from one of the squares they occupied 20 or 40 years ago. About 70% of butterflies show some decline and two species have become extinct.

"We are going to lose a lot of species, there is no doubt about that. It is accelerating, this decline, for a lot of species and we are going to lose more than we have lost in the last 20 years. And it is just going to go on and on. But it is not all bad news, because the conservation bodies have done wonders," Dr Thomas said.

A second study in Science showed that pollution by nitrogen compounds, from industry and agriculture, could be linked to the loss of species from native grasslands.

Carly Stevens, a PhD student from the Open University and the NERC centre for ecology and hydrology in Huntingdon, examined 68 sites and found that rising levels of pollution by oxides of nitrogen and ammonia threatened 40% of selected native grassland plants.

Where nitrogen levels were low, plant variety increased. Where they were high, the number of species in any patch of grass was reduced. Although nitrogen is a fertiliser, many plants flourish best in poor nutrient conditions, and these were most threatened by increasing nitrogen levels from car exhausts and intensive livestock farming.

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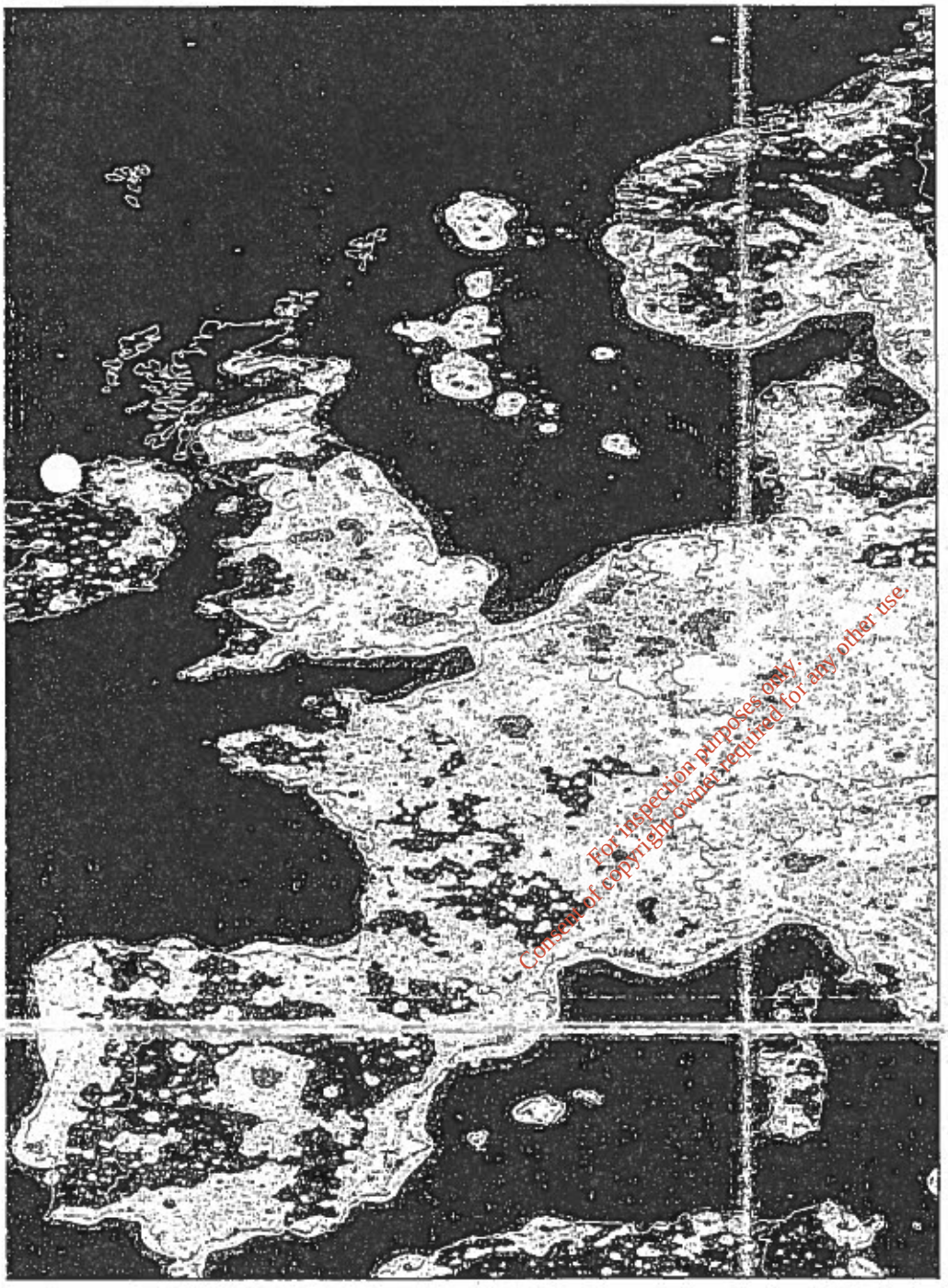
TODAY

Contact Science Today by emailing Dick Ahlstrom, Science Editor, at dahlstrom@irish-times.ie



Europe's light pollution hot spots in an artificial night sky atlas by Dr Pierantonio Cinzano of the University of Padua in Italy

Bright light pollution is depriving Europe of dark sky

The sky at night is progressively getting brighter as light pollution spreads over Europe, writes Peter Foote

ONLY one in a hundred people in western Europe can expect to see a truly dark sky when they look upwards at night, even on a clear night. The picture is the same in the USA. Many of us are being deprived of the spectacle of the Milky Way and some of nature's other night-time shows.

This is the result of light pollution. It spills from our towns and motorways and is revealed in the *First World Atlas of Artificial Night Sky Brightness* by Dr Pierantonio Cinzano of the University of Padua in Italy. The atlas will be published in the *Monthly Notices of the Royal Astronomical Society*.

"Large numbers of people in many countries have had their vision of the night sky severely degraded. Our atlas refers to the situation in 1996-7. It is undoubtedly worse today," said Dr Cinzano.

Over 99 per cent of EU US populations and two-thirds of the world's population suffer light pollution. In the regions of highest pol[illegible] countries, the sky is always brighter when there is a half moon. For some, the sky never grows darker than a "nautical" twilight — on a clear evening when the sun slipped below the horizon but night has yet to darken, a period of between 40 and 80 minutes.

To produce their atlas of sky brightness, Dr Cinzano and Dr Chris Elvidge of the National Geophysical Data Centre in Bolder Colorado used satellite images to show artificial lights on night-time Earth, combined with computer modelling.

"We take the satellite data and then use an atmospheric model to calculate the downward scatter of light back to the ground," Dr Elvidge said. The team are working on further improvements which take into account other factors such as terrain and air-moisture. They claim the adverse effects of light pollution have not been fully studied because, until now, the comprehensive data has been lacking.

It is not just star-gazers who may suffer from the lack of nocturnal blackness. Invasive lighting spilling from uncaring neighbours is a cause of stress. Add to this environmental damage is caused by excessive demand placed on electricity to keep lights burning.

Darkness is a stimulant for some of the body's natural defences. Melatonin is a powerful agent in fighting disease such as breast and prostate cancer, and the body produces it in the absence of light.

Outdoor light pollution could be a factor but Dr Elvidge said: "Probably most people would be more affected by indoor lighting

These islands fare better than most of Europe in terms of light pollution, according to the atlas.

Most of England and Wales suffer light pollution up to nine times the natural levels, the west of Ireland and north-west Scotland have large tracts that are virtually unaffected.

Image credit: P Cinzano, F Falchi (University of Padova), CD Elvidge (NOAA National Geophysical Data Centre, Boulder, Colorado). Copyright Royal Astronomical Society, reproduced from the Monthly Notices of the RAS by permission of Blackwell Science

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Opinion&Analysi

Fintan O'Toole

Bulldozing history and landscape

A hundred years before the birth of Christ, the Greek writer Diodorus Siculus wrote of an island far to the north of the Mediterranean world. Drawing on now-lost accounts which were hundreds of years older still, he described this island with a "mild climate" which lay "beyond the domain of the Celts".

Here, he claimed, was the birthplace of Leto, mother of the sun god Apollo. For this reason, he wrote, the sun god was venerated there in a "splendid enclosure" which contained a round temple. His account hints at a cult of rebirth involving the sun, the sky and the wind in a mythic ritual of impregnation and regeneration.

Diodorus's account may have nothing [illegible] But it just might be a translation into the terms of Greek myth of what were even then ancient rumours of the great round temple that is penetrated by the sun during the winter solstice, giving birth to a new year and renewed life. Since the sacred complex at the Boyne Valley was as ancient in Greek times as the ancient Greeks are to us, it is not at all fanciful to think that some knowledge of its cults and power had made its way into the classical cultures of the Mediterranean.

Move forward 2,000 years and there is another extraordinary testimony to the radiant potency of the culture whose holy places stretched between the Boyne Valley and Tara. Everyone now knows about the sun's entrance into the Newgrange tomb.

But when the site was being excavated in the 1950s and early 1960s, there was no reason to suspect such a thing. The occurrence is unique to the place, and the aperture which allows the light to enter had been hidden for at least a thousand years. Yet the archaeologists who were conducting the excavation were told by locals that some such phenomenon was connected with the mound. A vague but truthful memory had lingered over generations.

Does any of this matter? Not in the straightforward, simple sense that getting to work and earning a living and coping with the stress of contemporary life matters. It doesn't put food on the table or money in the bank.

But in a broader sense, it is important. Some kind of respect for the wonder and fragility of human survival has become almost as necessary to us as food and shelter. We can no longer take our species for granted and we need to be reminded of that fact or else risk extinction.

And it matters in a more local way, too. A society that has changed as rapidly as ours and that has such an awkward and unresolved relationship to its history needs to be reminded that the past is both long and deep and that nothing ever really goes away. Adopting the way archaeologists view the world – as a set of layers, some closer to the surface than others – is the only healthy solution to our society's neurotic swings between obsession and amnesia.

> A huge 34-acre floodlit junction a kilometre from the Hill of Tara

All of this is a way of saying that the plans to drive a big motorway through this sacred landscape are the epitome of the crass, vulgar values that now holds sway here. The M3 will not go through the Boyne Valley, but it will bisect the spiritual centre of the world of those who built and used the Boyne Valley monuments. It will include a huge 34-acre floodlit intersection a kilometre from the Hill of Tara which has been, as Dáithí Ó hÓgáin puts it, "a sacred centre from time immemorial".

As a stellar array of national and international scholars wrote in a recent letter to *The Irish Times*, the Tara/Skryne valley which will be cut in two by the toll road, is "one of the most culturally and archaeologically significant places in the world ... it holds a special key to understanding the continuous progression of European civilisation".

The motorway will be of dubious value, and a number of perfectly sensible alternatives has been put forward. But it will be a nice little earner for private investors. The taxpayer will [illegible] whoever puts up the other half will get a 30-year licence to charge two separate tolls along its 47-kilometre length. The profits will be vast – probably double the size of the investment.

The decision to press ahead with this monstrosity is in itself an eloquent statement of contemporary Irish values. A few decades ago, there was a living memory in Co Meath of things that stretched all the way to prehistoric times.

Now, memory itself – the sense that there are layers of meaning both literally and metaphorically beneath our feet – is a bloody nuisance. There is money to be made and the prospect of cutting a few minutes off a journey. Anything else is an irrelevance. People, history, cultures, landscapes, the delicate web of connections that binds us to one another and to the earth, are so much debris to be bulldozed aside.

When the Taoiseach loftily dismisses all infidels to the great god of motorways as "swans, snails, and people hanging out of trees" he gives voice to a deep contempt for anything that can't be measured in tonnes of concrete and loads of money.

Dúchas The Heritage Service

An Roinn Ealaíon, Oidhreachta, Gaeltachta agus Oileán
Department of Arts, Heritage, Gaeltacht and the Islands

National Parks & Wildlife
Lagduff More
Ballycroy
Westport
Co. Mayo.

Phone: 098-49996
Fax: 098-49997

An Bord Pleanála 18.02.2002.

Re: **Planning Application Reg. Ref. 01/900** by Enterprise Energy Ireland Limited to Mayo County Council for permission for gas reception and treatment facilities and associated works at Bellagelly South, Bellanaboy Bridge, Belmullet.

Submission of James Moore, Deputy Regional Manager, National Parks and Wildlife Service, Dúchas The Heritage Service.

INTRODUCTION

I am concerned that this proposed development, may, during the construction phase, have a significant adverse affect on three "European sites" namely: Glenamoy Bog Complex (Sruwaddacon Bay), Carrowmore Lake and Broadhaven Bay. The map attached indicates sites designated as Special Area of Conservation in Mayo, Galway and Clare. The site codes are as follows: Glenamoy Bog Complex, 0500; Carrowmore Lake Complex, 0476; Broadhaven Bay, 0472.

These three sites are designated candidate Special Area of Conservation and Special Protection Area. These designations are made under COUNCIL DIRECTIVE 92/43.EEC and COUNCIL DIRECTIVE 92/42/EEC otherwise known as the Habitats Directive and Birds Directive. In the context of the Habitats Directive such sites are referred to as "European sites". These directives were transposed into Irish law on 23 February 1997 by the EUROPEAN COMMUNITIES (NATURAL HABITATS) REGULATIONS, 1997; STATUTORY INSTRUMENT 94 of 1997.

Information on RAMSAR sites is attached for your information and you will note that RAMSAR sites have no legal protection in Ireland.

CONCERNS

Carrowmore Lake is 4 km. distant from the northern peat repository area and 3.5 km. distant form the main site. Sruwaddacon Bay, which is the inner portion of Broadhaven Bay, is 1.5.km. distant from northern peat repository area and 2.km. distant from the main site.

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The National Parks and Wildlife section of Dúchas The Heritage Service, is the statutory body with responsibility for nature conservation and is obliged to protect such sites. Sole responsibility does not rest with the National Parks and Wildlife Service however, under Part 4 of S.I. 94 of 1997 specified Government bodies also have certain obligations. Section 27(3) specifically relates to local authorities and An Bord Pleanála and states:

'a local authority or the Board, as the case may be, shall, having regard to the conclusions of the assessment to which paragraph (1) relates, decide to grant permission for the proposed development only after having ascertained that it will not adversely affect the integrity of the European site concerned'.

Included in further information received by Mayo County Council and passed to us was a Hydrology and Geohydrogeology Report. That report identifies permeable deposits such as sand, gravel and sandy clay from 1.5 – 5m deep. These lie beneath peat, much of which is also permeable, (Appendix L).

Section 5.2 refers to new peat repository site and states:

'Presently the site is underlain by peat and sandy gravelly clay over weathered bedrock (occasionally weathered to a sand) which in turn overlies unweathered bedrock. Shallow groundwater is likely to flow principally through a thin shallow peat horizon probably towards the nearest drain. Deeper groundwater is likely to flow through the sand (completely weathered bedrock) where present and through weathered bedrock towards the northwest, northeast and southeast (the lowest parts of the site) where it probably emerges as baseflow in the Glenamoy river and Sruwaddacon Bay'.

Other water discharge features include a layer of weathered rock, which according to section 9.9.3 of the EIS:

'It is considered that this layer may act as a preferential horizontal pathway for groundwater beneath the site'.

A "hydraulic continuity" is also described in section 5.1 of the Geohydrology report, which states:

'The presence of a significant thickness (~5m) of saturated peat will at least partly replenish of deeper groundwater as a result of vertical leakage'.

This information, provided by the applicant, does not alter my concerns; indeed these extracts would appear to confirm them.

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CONCLUSION

A hydraulic continuity and vertical leakage between surface, peat and groundwater is clearly identified in these extracts and any liquids entering the site, has the potential to enter the groundwater and subsequently the nearby European sites.

I believe that surface water and groundwater from the site will discharge from the site via drains, streams and rivers and especially via permeable deposits. Any liquid pollutants occurring within the site would therefore constitute a threat to the European sites.

These pollutants may typically include diesel, oil, lubricants, hydraulic fluid, detergents, chemicals, phosphates and nitrates. The source of such pollutants could realistically be an accident, a burst pipe, poor maintenance of machinery, phosphate mobility, inadequate number of chemical toilets, poorly maintained chemical toilets, negligence and human error. I acknowledge the mitigation measures specified in the EIS but in my experience, such measures are never totally effective.

To conclude, I will refer again to your responsibility under SI/94/97:

'a local authority or the Board, as the case may be, shall, having regard to the conclusions of the assessment to which paragraph (1) relates, decide to grant permission for the proposed development only after having ascertained that it will not adversely affect the integrity of the European site concerned'.

I believe that the Board will be unable to make such an assertion!

END

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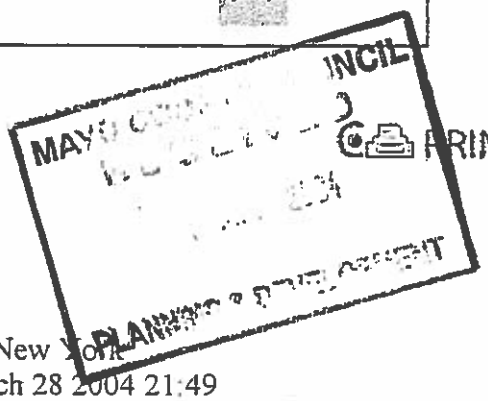
FT.com FINANCIAL TIMES



Shell plans to deflect blame over reserves

By Carola Hoyos in London and Adrian Michaels in New York

Published: March 28 2004 21:49 | Last Updated: March 28 2004 21:49

Royal Dutch/Shell, the global energy group, is preparing to insist the company was not at fault when it wrongly booked 3.9bn barrels of oil and natural gas. It will claim instead that it was the victim of ambiguous US regulations.

The defence strategy is expected to focus on the Securities and Exchange Commission's rules governing the accounting of proven reserves. The rules date to 1978 and have become more challenging to interpret in light of new technologies and a more active futures market. The SEC has updated the industry on interpreting its regulations at least four times since 2000, and has discussed the issue with companies in private.

Shell would insist it took appropriate measures when the SEC's guidance made it aware of possible problems, people close to the company's defence said.

People following the controversy say the regulations on reserves leave room for manoeuvre and that Shell may have some success in shifting blame.

But they added that Shell's proposed strategy would be difficult to maintain if deeper executive wrongdoing was uncovered or large-scale reserve miscalculations were found to have been reported for a significant period.

The report of an internal audit committee will be central to Shell's ability to shift part of the blame to regulators. If the panel finds evidence that the company was aware of problems long before it made them public to investors on January 9, lawyers may have to change the approach.

That report - whose preliminary findings prompted the boards of Royal Dutch and Shell Transport and Trading, the parent companies, to demand the resignations of Sir Philip Watts, chairman, and Walter van de Vijver, head of exploration and production - is expected to be released in about five weeks, according to company officials.

The SEC does not comment on individual investigations. However, people close to the inquiry said the US regulator was still at an early stage in its work. It has not yet formally interviewed Shell officials.

Shell is being investigated by the SEC, the US Department of Justice and UK and Dutch regulators. It also faces private lawsuits after it reduced its booked proven reserves by 20 per cent in January, explaining that they had been prematurely booked with the SEC as proved and ready to develop.

Jeroen van der Veer, Shell's new chairman, has denied knowing the extent of the reserves problem, but said he was aware of some exposures on reserves bookings. Mr van der Veer, who was head of

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chairman. However, the type of candidate will depend on whether the Dutch and UK boards agree to be merged into one unified entity as some investors and non-executive board members are advocating.

xref Feeling the pressure, Page 13 Rise of consultancies, Page 19

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Shell's reserves and reservations

SHELL RESERVES

SHELL is battling on a few fronts this weather. The Corrib project is ongoing but one has to ask, for how much longer? Will the new men at the helm of Shell make changes? Will Corrib be deemed too costly for the future of Shell? They reclassified their reserves at the start of the year after they discovered they had overestimated by 20%. That amounted to just under 4 billion barrels of oil. In typical Shell style the mess did not end there. They have now reclassified almost a further 500 barrels of oil, wiping them off their reserves. Their auditors have refused to sign off on the accounts. Investigations have been mounted by state agencies in three countries and they have lost their chairman, Sir Philip Watts, and Walter van de Vijver, their head of exploration and production. Both have walked the plank in the past two months.

LOCAL POLITICS

SHELL has a huge local interest with the Corrib gas project. Their latest (third) planning application for a gas refinery at Bellanaboy in north Mayo is currently being considered by Mayo County Council. The council requested further information in February on the application submitted last December. That further information was furnished – two x A4 folders dealing with the questions raised by Mayo County Council. One of the folders is devoted to a Traffic Management Plan for the project, which, incidentally, involved in or around 100,000 traffic turning movements as 450,000 cubic metres of peat is removed from Bellanaboy to Shramore on the outskirts of Bangor. The Castlebar office of the Galway firm, Tobin Consulting Engineers prepared the Traffic Management Plan. Traffic Management Plans are not new to this project – at least on paper. One was to have been prepared for the last planning application but attempts by several people to view the document have failed – nothing to do with eyesight, less to do with hindsight but more to do with insight. Perhaps the powers that be in Mayo County Council and Shell would oblige with a copy— if it exists at all.

For those with the stomach for same, the further information supplied is best ingested along with a helping of a report submitted as an objection to the Bellanaboy refinery project by [redacted] engineering company in Galway. He has produced a report that deserves a widespread readership, especially in Mayo. Too many people are accepting, without question, the words of those promoting the project. Brian Coyle raises a series of questions about the whole project – why is an onshore terminal being proposed for this development? There is no precedent for such a development. Why is Shell now proposing to remove up to 450,000 cubic metres of peat from the site? Their earlier applications rule this task out! This type of work was never carried out before. Even with the involvement of Bord na Móna in this part of the project there is no precedent for this because it has never been done before. Why is Bord na Móna getting so involved? Who will be responsible if pollution results from removing this peat and it runs into the waters surrounding Shramore and the salmon spawning grounds. Is there a history of Bord na Móna 'carelessness' with peat depositions causing silting in various areas? Has the area near Shramore already been affected by silting? If there is a pollution problem and the blame lies at the door of Bord na Móna, does that mean that the taxpayer is ultimately responsible? It was bad enough to have allowed Ray Burke and his ilk to sign over national assets to foreign based multi-national companies for nothing. It would be preposterous to have to end up bankrolling another multi-national for mistakes carried out by a state sponsored company. Will we ever learn?

INTERNATIONAL POLITICS

WITHOUT even getting into the history of Shell and the Ogoni people in Nigeria and the subsequent deaths of several people, the next round of responsibility falls to various state agencies after auditors KPMG refused to sign off on the Royal Dutch Shell accounts. KPMG is worried about "the quality of information" it had received. KPMG also has responsibilities as an auditing company. The Securities and Exchange Commission (USA) is investigating Shell's conduct in the "reserves' affair. Three countries – Britain, Holland and America – are now carrying out formal investigations into the way Shell carries out its business. The American Justice Department is also carrying out an investigation. There is talk of class actions by shareholders in America. One source claimed that the actions for damages could be "billions of dollars." The Dutch investigation centres on charges of insider trading. It has also emerged that the Dutch royal family has lost a few bob since Shell's share price came tumbling down" – over €370 million at the last count. It has plummeted from 640p in 2001 to 320p this year. The worst may not be over yet. The source of the problem is understood to be Nigeria although Shell claims it is a field in Norway where oil stocks were over-estimated. Nigeria offers a generous tax concession to exploration companies based on the amount of their stated reserves in the country. The higher your reserves the better your tax concession. Someone in Shell overstated the Nigerian reserves. Now all the authorities are looking for a slice of the action to ensure that (another) multi-national scandal is cleaned up in the wake of Enron and Parmalat.

SHELL RESERVATIONS

THERE are a few significant dates lighting up the Shell calendar for the next few months. The one shareholders fear is that any day there could [redacted] of reserves. The accounts, due on March 19th with the annual report, have been deferred until the end of May. The annual general meeting of the group is due to take place next month but that too has been delayed. It is now expected on June 28th. The new chairman, Mr. Jeroen van der Veer, will earn his keep over the next few months if he wants to keep this company on the straight and narrow.

There are other dates of note to the company also. April 1st – April Fools' Day' – is the final date for submissions by the public on the further information in relation to the Corrib project. The due date for a decision on the project from Mayo County Council is May 8th. *The Guardian* newspaper recently reported that according to Mr. Fadel Gheit, oil analyst with Fahnestock and Co brokerage in New York, "It's become another day, another crisis with Shell. There are only so many surprises that investors will take and yet management (of the company) still seem in denial." A complete study of all Shell's reserves is being undertaken by Ryder Scott, an American consultant. This study is to be carried out with the guidelines of the Securities and Exchange Commission's guidelines in mind. He has not completed his task as of yet. The end of April is the date set for the completion of the reserves update. One wonders will we get an accurate picture of the reserves of gas in the Corrib field. Shell appears to have taken the 'reserves' details relating to the Corrib off its website. Shell has also announced the sale of its gas network in Mexico. If Shell off-loads Corrib, which is a possibility, here's hoping that the new buyer will develop the Corrib gas field offshore.

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TIMES ONLINE

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March 21, 2004

Why we still can't be sure of Shell

A shake-up has been launched after the oil giant downgraded its reserves for a second time. Lucinda Kemeny reports

MALCOLM BRINDED certainly knows how to keep calm in a crisis. As the recently crowned head of Exploration & Production (E&P) at Royal Dutch/Shell, the British engineer clearly has faith in his ability to handle an audience.

Even with the constraints of working for a company that verges on the paranoid in its dealings with the outside world, last Thursday's gathering on the 23rd floor of Shell Centre let Brinded show off in the way that he obviously loves.

Forty journalists and analysts packed the meeting room and another 350 listened in on a conference call as Shell called a meeting to elaborate on yet another bombshell.

Yet despite the fact that Brinded and his new boss Jeroen van der Veer are involved in a huge crisis, they both managed to crack a joke or two. "I hope that we don't lose a third head of E&P in short order,"

Brinded's two predecessors in E&P have just lost their jobs. Sir Philip Watts and Walter van de Vijver were sacked two weeks ago after they lost the confidence of their boardroom colleagues. Watts had become chairman but he was damaged by his past responsibility for finding new reserves.

And that is not the only reason why the background to the meeting was anything but funny. A press release sent out just after midday confirmed that 470m barrels of oil would be wiped off Shell's proved oil reserves, on top of the 3.9 billion barrels that were recategorised from proved in January.

Not only that, but the 2003 results, which were due to be released last Friday, have been put back until the end of April while the annual meeting, scheduled for April, is now expected to be held on June 28.

One analyst said: "This is a company with good assets but a management team that does not know what it is doing."

The timing could hardly have been worse. Having sacked Watts and Van de Vijver, now should have been a time for rebuilding Shell's reputation.

Van der Veer and Brinded tried to stop people dwelling on the bad

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news with fighting talk. Van der Veer said: "We will be very sure that we will never drop this bomb again."

Both painted visions of a future Shell untainted by problems in replenishing its oil production and where a string of corporate-governance changes would make all the difference.

All would become clearer within weeks when Ryder Scott, a group of consultants that is reviewing Shell's entire oil portfolio, will complete its work, they assured.

Some analysts even left feeling upbeat. But Shell's share price told the real story. It ended the day down in both Britain and America, where an estimated $2.5 billion (£1.4 billion) was wiped off the company's market value.

With the Securities and Exchange Commission (SEC) and Justice Department in America, not to mention the Financial Services Authority in Britain and the Dutch regulator also raking over the coals, anything could happen.

One thing is almost certain, however. There will be more bad news, and when it comes, the question must surely be how long the Shell board can survive the shocks.

SHELL used to be known as the most conservative of oil companies. Inward-facing and consensus-driven, a plethora of management committees grew up — and they made sure everything was done by the book.

But in the mid-1990s something went wrong. Shell stopped being as successful at finding oil and gas. It was exploring too many sites, many of which were too small to be meaningful to the balance sheet.

This scattergun approach had got BP into trouble a few years earlier, but instead of a strong leader like Lord Browne arriving and scrapping the loss leaders, Shell carried on, wasting time while its rivals took the lead.

According to internal documents leaked to the media, Shell [illegible] relax the rules used to assess energy finds. This way it could overstate or prematurely book reserves as "proven", which the SEC defines as reserves that can be recovered with "reasonable certainty" through existing wells.

The structure of the business meant the change would have gone unnoticed by most staff unless they were directly involved. There was no standardisation of reserve bookings across the company, no regional challenging of reserves figures through the reporting system and limited use of external auditors specialising in the oil sector to support the numbers being produced.

Shell's management structure appeared to be so decentralised that business units seemed able to be run as mini-fiefdoms. This was particularly true of Exploration & Production.

January's reclassification of 20% of its oil and gas reserves was blamed in large part on overbooking in developments such as Nigeria and Ormen Lange, a gas field off the Norwegian coast.

But it has since been revealed that management either tried to conceal the problem or failed to recognise that it was breaking SEC guidelines.

Documents uncovered by American newspapers allege that an internal study late last year revealed that 1.5 billion barrels or 60% of its Nigerian reserves did not meet SEC accounting standards as "proven". But these papers recommended that the details be kept secret for fear of damaging the company's relationship with the Nigerian government. It was decided that any reclassification should not be publicly identified with the country.

Shell may have had reasons other than politeness for keeping the details quiet.

The Nigerian government offered oil companies tax breaks from 1991 to 1999 for oil-reserve additions — or any oil reserves added over and above what they expected to find. Since Shell was one of the biggest explorers in the region, it accumulated about $385m in so-called "bonus payments". Shell is now in talks with the government over the money.

This is not only highly embarrassing but comes at a time when Nigeria wants to increase production, and this could severely strain Shell's relationship with a country that has been largely untapped in oil terms.

Ormen Lange is no less worrying. Having already contributed to the downgrade in January, Thursday's announcement was driven by yet more problems being uncovered there.

Brinded explained that a review of compliance with SEC rules by Ryder Scott had revealed that Shell had used technology, including 3-D seismic mapping, to determine the volumes of reserves in some areas, most notably in Norway.

"While useful, this is not in accordance with SEC guidance and it should not have happened given the attention that this field had received," he said.

While the impact on earnings is minimal — at about $20m, Ryder Scott has analysed only 40% of the company's reserves and more bad news could be on the way. Fadel Gheit, an oil analyst with Oppenheimer in New York, said: "It will be like a slow haemorrhaging."

THE question is, did management knowingly cover up the scandal? Internal papers suggest that at least Van der Veer and Judy Boynton, the finance director, knew of the depth of the problem.

But Van der Veer was adamant that he did not. "I knew we were low on reserve replacement. That is not the point. The underlying question is did I know about incorrect bookings in SEC returns? The answer is that I did not," he said.

He insisted that the matter of reserves, which can be booked under many categories, is not a precise science and that the company was in regular contact with the SEC over what he termed "exposures", which was left to the Exploration & Production people.

"You know as a director that there are reserve figures and there are

processes going on around that. But (although) we have a committee of directors, that does not mean that every director is doing everything. Reserves are seen as something for E&P to manage," he said.

One analyst responded that it was "staggering" that Van der Veer, in his role as head of the chemicals business and therefore a key member of the executive team, appeared to say he had no idea about how the reserves were being booked.

But whether he knows or not, the regulators and American lawyers preparing class-action lawsuits intend to find out.

The SEC started its own inquiry weeks ago and the Justice Department has also begun a probe of whether Shell misled the market. This could expose Shell to criminal charges.

The Financial Services Authority and Euronext, which has the Amsterdam Stock Exchange as a member, are also in correspondence with the company.

Van der Veer denied any knowledge of a criminal probe on Thursday, but the company has admitted that the AFM, the financial regulatory body in the Netherlands, has opened an investigation about potential insider trading. One oil specialist said: "The non-executive directors are freaking out."

FOR NOW, investors and shareholders are still prepared to offer the company some benefit of the doubt. They understand that last week's announcement was coupled with a raft of corporate governance improvements, including clearer reporting lines direct to Boynton and that the committee of managing directors, the highest executive group within the company, is to sign off reserves each year.

They are also aware that Ryder Scott and the company's own staff are labouring round the clock to make sure that there are no more skeletons in the cupboard.

Tim Rees of Insight, one of Shell's biggest shareholders, said: "Analysts and investors were completely wrong-footed on Thursday, and there is even less [illegible] unsurprising. Shell needs to be ultra-conservative and publicly transparent about what it finds."

But shareholders want more. They are meeting Lord Oxburgh, Shell's non-executive chairman, tomorrow to demand headhunters be appointed to find an outsider to run the company.

Van der Veer may have done some tinkering, but they want more, and while Shell has said publicly that no wholesale changes will be decided before next year, that may be too late.

Only one thing is certain. Shell's top executives will need all the sophistication and humour they can find to keep the audience happy.

THE NOTAB SONG.

Enterprise Oil has come calling to make landfall at Ballinaboy,
It's handy for them to save millions; for us it's a cynical ploy.
There's been farming and fishing in Erris for five thousand years or more,
Are we now to allow the free market to dirty and damage our shores?

Chorus

Oh! here's to the people of Erris,
We've clean water, clean air and clean soil.
We've known hard times and forced emigration,
We'll get by without Enterprise Oil.
(And Royal Dutch Shell as well!)

We've been here on the north coast of Mayo forgotten for many's the year
A large blank space in the budgets of Tourism, Trade and Marine.
Now all of a sudden it's changing, but not for the good of our own -
A dirty great Terminal Building they thought we'd accept lying down.

Chorus

We've never been bought by outsiders and we aren't for sale to them now;
We've been here in this corner for ages and we've got things that money can't own.

Our forebears marched down to Killala to fight against tyranny then -
Do you think that we're now going to lie down, sell our children's future from them.

Chorus

Our oil and our gas rights are ceded for a fraction of what they are worth,
While the old lie on hospital trolleys and the poor are forgotten or mocked.
The wealth which is ours is extracted and sold back at the full market rate -
Are we still a proud sovereign nation or a sordid brown envelope state?

Chorus

AIR: FIR AN IARTHAIR / MEN OF THE WEST.

MH 2001

NOTAB - NO TERMINAL AT BALLINABOY!

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March 7, 2004 The Mail on Sunday

Financial Mail

African oilfields

Damned: Shell, under former chairma
Watts, made huge profits in Nigeria. E
tation for community work there is in
critical reports by its auditor and Chri

TAINTED BY POLLUTIO[N] AND HUMAN RIGHTS CLAIMS

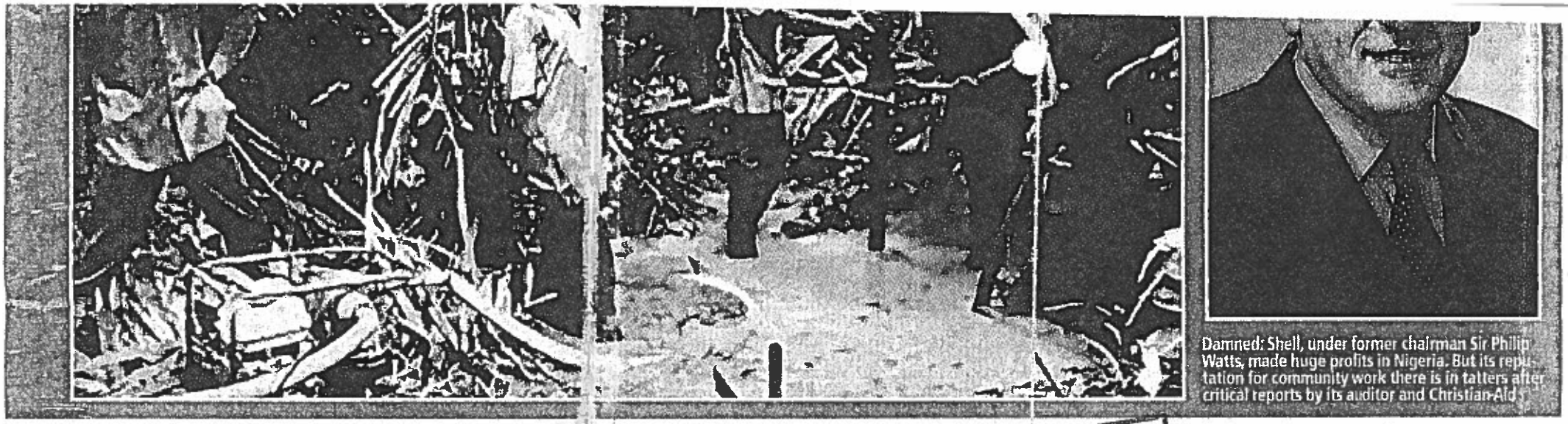
SHELL has been desperate to repair its tarnished reputation in Nigeria, where it has

company for its cha outlines a inaccurac

gainst exaggerating claims table works. KPMG's memo litany of overstatement and s in the draft, saying that it

was now focusing on 'human deve lopment' rather than infrastructure. But KPMG's impression of overstatement i Shell's charitable efforts echoes

Landlords...



Damned: Shell, under former chairman Sir Philip Watts, made huge profits in Nigeria. But its reputation for community work there is in tatters after critical reports by its auditor and Christian Aid

TAINTED BY POLLUTION AND HU[illegible]AN RIGHTS CLAIMS

SHELL has been desperate to repair its tarnished reputation in Nigeria, where it has been accused of devastating the environment and failing to stop human rights violations.

Over the years, the group claims to have spent millions on successful community projects. But a secret memo from auditor KPMG, which has vetted a draft report by Shell of its charitable activities in Nigeria in 2003, tells a different story.

According to the memo, seen by Financial Mail, Shell has slashed spending on community projects in the strife-torn country and the auditors warn the company against exaggerating c[illegible]ims for its charitable works. KPMG's m[illegible] outlines a litany of overstatemer[illegible] and inaccuracies in the draft, saying t[illegible]at it contains over-reporting of project [illegible]tivity and assertions that appear [illegible]u be unsupported, inaccurate or unbala[illegible]ced'.

Shell claimed to have 'rehabil[illegible]ted' 22 town halls, four socio-econom[illegible]cen-tres and 18 civic centres. But K[illegible]PG's research showed merely that two [illegible]own halls had been 'rehabilitated'.

Shell's budget for community p[illegible]ects in Nigeria was slashed last y[illegible]r. In 2002, the company spent $67 m[illegible]illion (£42 million). In 2003, the budge[illegible] was 'more than 50 per cent lower'.

A Shell spokesman said the co[illegible]pany was now focusing on 'human development' rather than infrastructure. But KPMG's impression of overstatement in Shell's charitable efforts echoes a damning report into the company's work in Nigeria published in January.

Under the headline 'Sustained Misery: Shell in the Niger Delta', the Christian Aid report hammered the company's record. It reported: 'The region is a graveyard of projects including water systems that do not work, health centres that never opened and schools where no lessons have been taught.'

Shareholders, battered by the reserves scandal, may now welcome Christian Aid's final demand that 'Shell should make public its accounts for Nigeria'.

Landlords...

Trackers...

Base +0.65% for 4 years
No extended tie in, 75% gearing

or

Base +0.75% for 4 years
No extended tie in, 85% gearing

[illegible]ng state assets at way [illegible]low market [illegible] was not competitive [illegible] received two letters from the

Ceathrú Thaidhg
Béal an Átha
Co. Mhaigh Eo

The Planning Section
Mayo County Council
The Mall
Castlebar
Co. Mayo

Re : Planning Application Ref No P03/3343 (as submitted by Shell E & P Ireland Ltd. on 17/12/03 and validated on 18/12/03) for the proposal to construct a natural gas terminal (refinery) at Ballinaboy, Bellagelly South, Co. Mayo. and to remove >450,000m3 liquid peat slurry to an area of cutaway peatland at Srahmore, near Bangor Erris, Co. Mayo.

Enclosures

One copy of submission on response by the developer Shell E & P Ireland to a request by Mayo County Council for further information (17 pages)

One copy of acknowledgement by Mayo County Council of receipt of submission dated 28/01/2004 .

Delivered by : Brid Mc Garry

Date : 01\04\04

Time : 12.20.

MAYO COUNTY COUNCIL
RECEIVED
01 APR 2004
PLANNING & DEVELOPMENT

SCANNED

Mayo County Council
Aras An Chontae
Castlebar

Ref No.: P03/3343

28/01/2004

Mr Michael O'Seighin & 5 Others
Carrowteige
Ballina
Co. Mayo

A Chara

I wish to acknowledge receipt of submission received from you on 28/01/2004 in connection with planning application by SHELL E & P IRELAND LIMITED for CONSTRUCT GAS TERMINAL FOR THE RECEPTION AND SERAPATION OF GAS FROM THE CORRIB GAS FIELD, AND FOR A PEAT DEPOSITION SITE, RESPECTIVELY. THE DEVELOPMENT WILL CONSIST OF THE CONCURRENT DEVELOPMENT OF TWO SITES LOCATED 11 KILOMETRES APART, APPROXIMATELY, AND IDENTIFIED AS THE SITE OF THE GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS FROM THE CORRIB GAS FIELD IN THE TOWNLAND OF BELLAGELLY SOUTH AND THE SITE OF THE PEAT DEPOSITION SITE IN THE TOWNLANDS OF SRAHMORE AND ATTAVALLY, BANGOR ERRIS. THE DEVELOPMENT AT THE BELLAGELLY SOUTH SITE WILL CONSIST OF: A GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS INCLUDING PLANT AND EQUIPMENT; PROVISION OF 4,935 SQ M (GROSS FLOOR AREA), APPROXIMATELY, OF BUILDINGS; ACCESS ROADS; 40 NO. CAR PARKING SPACES; AND ANCILLARY DEVELOPMENTS, OF WHICH 13 HA, APPROX, WILL BE DEVELOPED INRESPECT OF THE GAS TERMINAL'S FOOTPRINT. THE PROPOSED DEV. WILL OF THE BELLAGELLY SOUTH SITE WILL ALSO CONSIST OF; THE EXCAVATION AND REMOVAL OF 450,000 CUBIC M at BELLAGELLY SOUTH SRAHMORE ATTAVALLY.

The matters referred to by you will be taken into consideration by the Council before a decision is made on the application. Notice of the Council's decision on the

application will be given in accordance with the requirements of the Planning and Development Regulations, 2001. This may be in the form of:

(a) posting the notice directly to you; or

(b) publishing the notice in a newspaper circulating in the area where the proposed development is situated.

Please note that in the event of an appeal being lodged by you, An Bord Pleanala will require a copy of this letter of acknowledgement.

Mise, le meas

pp

RUNAI CHONDAE

Comments on Response by Shell to Request for Further Information on File N0. P03-3343, relating to proposed Ballinaboy Bridge Terminal and Related Srahmore Peat Dump.

Submission: Micheál Ó Seighin and others.
Contact: Micheál Ó Seighin, Ceathrú Thaidhg, Béal an Átha.
Contact Phone: 097/88961
Contact Ríomhphost: moseighin@eircom.net

Réamhfhocal:- Dáil Debates, 4/11/1998. Minister Dr. Woods:

"We will not grant a foreshore licence unless we are satisfied that there is planning permission."

Ach thit an spéir ar Acaill ó shoin.

Ongoing Development of Context:- We note that Mayo County Council did not inform the M.L.V.C., of their worries regarding the instability of Glengad Hill et alia, or of its' history of landslides. Mayo Co. Co. had so briefed the developer.

The M.L.V.C. is a committee of experts whose brief it is to recommend that the relevant Minister grant a Lease, Licence or Permission in matters marine, in this instance the go-ahead for the offshore and on-shore (8 Kilometres of pipeline and accessories) project.
"The M.L.V.C. will only consider and assess an application when it is fully satisfied that all relevant information is provided." (Marine Institute Documentation).

We note also, that responsibility for matters above HWM lies with the Local Authority.

Transport Management Plan Item 1, Vol.1

This "plan" is in response to request No. 1 (Item No. 1). The preamble notes that it is a "living document", in other words a concept, not a proposal, and as far as its implementation goes, a blueprint for an ad hoc delivery of the required result. We do not believe that this is sufficient for a project of such magnitude where the risks are so great.

Overview:- Consideration does not include the disposal of excavated material from the 8 Kilometres of pipelines, from Glengad (Trá na n-Oistreach) to Ballinaboy. It is proposed to produce this waste to make way for a pipe of 500mm from the well, 3(I think) for the umbilical, and the outlet pipe taking waste water and its' passengers out to Erris Head. As well as the pipes themselves it is proposed to import some 50,000 cubic metres of fill (stones etc) presumably along the roads from Glenamoy to Rosport (Léana Mhianaigh / Seanmhachaire) and from somewhere to Glengad to replace the excavated material over 1 kilometre from Trá na nOistreach to Rosport. This necessitates the disposal of huge amounts of waste peat and soil, on the sloping land stretching along Sruth Mhada Conn, an SPA, and on a macaire etc. Or is it intended to be left where the

JCB dumps it, on the 40 metre wayleave that Shell intends to obtain? I wonder will some of it wash off, given that over large sections of the pipeline it is intended to place it in up to 6 metres of bog?

1.4 Distinct Material Flows: Tobins mention this requirement at the top of page 3 (is that funny?) but does not further expand on it, despite a reference in 1.4 (f). Are the "*pipeline materials, trenching lining and wayleave stoning materials for the landward section of the gas pipeline from the foreshore to the terminal*" to be delivered along the 40 metre wayleave, and is this the escape route for the excavated material also? This traffic management plan is not complete and is an effort to deceive Mayo Co. Co. . In its potential for damage, immediate and irreparable, this 8 Kilometres, including a section within the terminal site, provides the "*main material movement*" and not the removal of the peat waste from the terminal site itself. Daft. What else has been forgotten, after 10 bites at the cherry?

(i) We do not see to where and by what route "*unsuitable material*" is to be hauled offsite, and what are the implications of this for the TMP. We presume that the dumping of such waste will only be allowed on a suitably licensed site, holding full and contemporary planning permission, delivered by a safe and stable route.

Altogether, 11 distinct sources of HVT are named here by Tobins, but there are of course more equally relevant sources than that.

3.1 Existing Traffic: L1204 caters also for all hospital generated traffic for the entire Dún Chaocháin area, for most of Dún Ciortáin and for areas around Glenamoy. We would call to mind the fuss generated in other areas where patients are not up to 70 miles from emergency treatment under normal living conditions when any obstacle is placed between the patient and hospital care. This is the most emotive issue in this present context - Tobins are hardly suggesting by this omission that sick people should not be included in the category of the "mainly"?.

3.3 Existing Pavement Structure: It is relevant to point out how this road, L1204 became tarred originally, in the late 1950s or very early in 1960. The then management of the "Peatlands"- the site under this application - persuaded the local councillors that only the lack of a tarred road prevented a host of developments happening, that would involve heavy traffic. Conned again, as usual: *fuireachas an tsionnaigh ar mhagairlí an tairbh.* This fact may be a warning to be careful of overestimating the quality of the foundation works of this routeway.

There is no data given on depth of peat - certainly one day on the road is not sufficient to provide a satisfactory database of peat depth underlying this road: the road to be sequestered extends from Rosport to Bangor /somewhere else, and from Glengad to Bangor/somewhere else. Has this traffic management plan covered this?

Has a copy of the modified version of the USACE PCI methodology been provided to Mayo CO. Co.?. If so why has not a copy been lodged in the relevant planning file? Given the imperial sweep of the USACE this reference is less than useless: Iraq has sand problems but...

Proposed Road Improvements.

4.1 Background. It is a truism that 3.3 shows that the present pavement is not capable of carrying the proposed level of loading to transport the 450,000 cu. metres of peat, but it is required to remember that this in itself significant loading is only one item of loading, and not necessarily the most severe, if one takes load weight and balance into consideration. Not alone would it be "*likely*" to cause a "*general deterioration*" but Tobins are well aware that such a deterioration is inevitable: this language is advocacy, not science.

4.2 Road improvement details. What has previously been the behaviour of this Wet Mix Macadam on a similar peat dominated basal structure, without side buttressing? Case Studies and practical applications? And Mayo CO. Co. has accepted this engineering concept already? What is the likely effect of vibration on this peat based structure, when widening contributes both interface problems and differential sinking, bearing in mind that the interface between the soft vertical peat and the new fill materials provide small friction resistance? Sliding, settlement, rupture of ground, foundation soil extrusion, rotational failure, bearing capacity failure?: in other words will the proposals here when implemented ensure that the base, old and esp. new, will be sufficiently strong and unyielding to support the new extended pavement, which in turn is expected to resist cracking over the interface of the old and the new? Please, where and how has it been done before in a hurry or not? (It is not expected to resist cracking? Interesting?) "*normal operating conditions*" give this proposed technique a life span of ten years: this proposal, in speed of concept and application and in stress, is not normal. What experience is there of "non-normal conditions? Who accepts responsibility for that "*which is not precisely determinable at this time*" on the verge of Carrowmore Lake SAC? Is it Mayo CO. Co. - the public purse? Of course it is.

In the absence of surcharging on a realistic timescale, which is a minimal requirement for weight bearing structures, this road structure would consist of 2(or three?) separate vertical weight bearing structures on a foundation of peat under different levels of compression, with little or no possibility of keying at the interface. Common sense dictates that real proof must precede such a foolhardy enterprise. Tobins' admission here underlines the basic problem - a hurried project with not enough time to plan or implement it properly.

Other haulage with heavy vehicles will function "*for the most part outside the peat haulage exercise*". It is not an exercise - were it so no one would care much: it is for real. This kind of a promise is silly and not implementable.

P.13 How did Tobins arrive at this level of compensation for the hurried implementation of this project? Holy Ghost? No effort is made to justify the choice of scale placing: i.e. it means nothing.

"*The selected pavement design is demonstrated to be adequate*" but "*it is not possible to predict with total accuracy the behaviour of the strengthened pavement*". So, the design

is irrelevant, and Tobins take responsibility for whatever results the design may throw up? They do, like hell.

"*there would be noticeable settlement in the widened section of road compared to the existing pavement edge*". So cracking of the pavement at the interface is modelled into the proposal, and ingress of water etc? At least you're honest.

Mayo Co. Co, have recent experience of this type of result, which was then unaccountably unforeseen. Around five or so years ago Mayo Co. CO. road staff began to tidy up the roadsides in Erris and in the process add a little width to the pavement. (One of our group of signatories noted at the time that a similar effort in the sixties on the Limerick to Fermoy road led to the death of a milk lorry driver when the milk container snapped away from the trailer and broke the man's neck, when he inadvertantly drove onto the "new" part.) Within a few weeks, a lorry load of gravel being carried by Lennons, Glencastle, sank at Ballinaboy, at the junction of L1204 and R314, a lorry of Comhar Iorrais sank near the junction of R314 and L1203, an oil lorry sank on the R314 near the junction with the R313. This is a mere sample list.

4.3.1 Two Way Carriageways A tolerance of 0.5 metre between two lorries, necessitates the use of the entire road width out to the edge: if this is their experience, we feel we must congratulate Tobins on their super drivers.

4.4 Bridges and Culverts "*the loads arising from the haulage exercise are not expected to exceed 24 tons GVW*": I understood that the loads of peat (explicitly in question here) were to be limited to 11 tons? Lorries nowadays have mighty heavy tare!

It would make sense to remember the bridge destroyed by a few hours rain in recent years.

5. "*This TMP is an evolving document*". Does this mean " you make it up as you go along" or what are the parameters outside which evolution becomes creation?

5.1 Enabling Works Materials Import. The number and variety of assembly lines and flow charts in practice here remind one of the incessant construction activity of Fraggle Rock.

It obviously means a hell of a lot of lorries and a test for traffic management.

5.3 Exported Materials 66,000 tonnes "*suitable for site remediation elsewhere*" : The mind boggles. Where is "*elsewhere*", how does one get there, what is there when one does, is it licensed, has it existing planning permission? Above all, why so coy about it, suddenly remembering that Tobins are also regularly consultants for Mayo Co. CO. and for some relevant clients of Mayo Co. CO. - why so coy? This conversation piece is not sufficient in a planning matter..

If it is a "*realistic prospect*" that the lorries of stone will also double as waste removers, then unless the two dumps are the same, the figures given in this document are hit and miss at best. Not planning material.

p.20 Are we to understand that, if the fairy godmother is on the beat making "unsuitable" material "suitable", some of the 450,000 metres cubed of peat might suddenly get an upgrade in status : in other words is this a "wait and see" of which we got lashings in previous applications?. Sorry. It is not good enough for planning: this "make it up as you

go along" gave us Derrybrien. Tobins need to give chapter and verse on how this metamorphosis has occurred in the past and how it can be possible at Ballinaboy.

5.4.10 Accommodating the Needs of Local Residents. We wish to point out yet again that the roads in question are vital to the population north of this proposed project. It is evident however, that the hurried nature of this proposal has ensured that the real issues are dealt with only on a hit and miss basis. There is no holistic study, even in a narrow sense, of the implications of this monstrosity for the population and its environment, except as selected and defined by the developer's sub-contractors. The "*local needs*" here dealt with, are those imposed and identified by the transport contractors and consultants.

5.4.15 "*fugitive spills of water from tailgates*" are mentioned and then forgotten. These "*fugitive spills*" happen along Carrowmore Lake.

p.30. The filling procedures are such that no one could implement: desk top stuff.

The foregoing deals only with the road from Ballinaboy to Bangor: this is not the whole story or anything like it.

Transportation of Materials Associated with Pipeline Construction.

5.6.1 Onshore Pipeline to Terminal. All the materials are to be brought to Ballinaboy in lorries from Bangor or wider afield, whatever that is supposed to mean, but one could guess some of it: this is hardly an input to a planning application, for every source brings different implications for traffic management and environmental reception, built or naturally occurring. When the materials arrive at Ballinaboy they take different routes:

1 pipes and fill along the L5244 to Glengad (the warning sign road, where landslides are supposed to be an immediate threat.)

2 pipes and materials along the L5244 and right to the Glenamoy River along wayleave.3 Pipes and materials to Rosport , i.e. Léana Mhianaigh, Seanmhachaire.

It is proposed to bring the materials and pipes along the wayleave - on 20 feet of bog over a long section from the Glenamoy River. There is no breakdown of materials for the various sections of pipe trench or the access points required and viable.

There is no mention of the waste excavated to make way for the pipe: it bas'nt gone away you know!. It must be transported from the wayleave on something and a donkey won't do. It speaks volumes for the structure of this proposal that the removal of these enormous amounts of waste has not been addressed. The wayleave has to accomodate the initial loads of stone for fill, then endure the loading of pipes, then excavators,etc.

It is obvious that the developer has not taken on board the fact that an excavation like this in a bog is in effect making an underground road in a bog, which also serves as the floor of a drain. " *Peat deposits are very compressible,..Consequently they are not suitable for foundations of roads railways and buildings. ...Laboratory tests are often a poor indication of how peat will perform when loaded, because of* ***rapid horizontal drainage under load in the field,*** *which is not revealed by laboratory tests in a confining vessel. Other problems with peat include low stability (tendency to creep) on* ***slopes,*** *wastage*

*when exposed and subject to drying, **a tendency to float when flooded**, and the generation of methane leading to fires.* (UCL Department of Geography, *Quaternary Environments*)

p.34 This haulage of materials is to be done in February and March: We don't believe this proposal is serious: 2831 loads of HGV, at 20 tons a time, much of it over deep liquid bog, in February and March, not to mention the return of the waste to somewhere undefined!. Will you look at the roads from Glenamoy to Léana Mhianaigh and ask the roads engineers who are struggling with the Bun Abhna - Muing na Bó section. Someone along the way must be sane.

5.6.2 Sales Gas Pipeline from Terminal to Bangor. There is no traffic plan at all for this section of work: no allocation of lorry loads to individual sections. This info. must be available as it is proposed to access the wayleave at a number of points. This is very slapdash and smacks of arrogance. Again there is no mention of disposal of the excavated peat and other wastes, for the disposal of which there needs to be waste licence and some mention by the EPA. There is more involved than a few wheelbarrows of muck. The excavated material, as in the case of the pipeline from Glengad to Ballinaboy, is not segregated :it just hangs there, a little off stage, in the wings. Very slapdash and unacceptable. Again emphasising that this hurried job was never properly analysed, even as a dig-and-carry operation.

6 Review and Updating "*winter period*" the flooding and destruction at Glencullin and Glengad occurred outside this nice box of winter, in summer and autumn. To go on this basis is irresponsible in the extreme.

One gets the distinct impression that the developer does not intend to implement much of the hauling and carrying necessary for this proposal if it gets permission. This submission smells of gung ho.

Risk Assessment Matrix.

We are totally at a loss to understand how Mayo Co. Co. has taken on itself responsibility, financial and other, for risks undertaken in progressing a non-public project. It is incredible that, in advance of a planning decision and as an advance on the position indicated by the pre-planning file, that the public purse is thus mortgaged for the further benefit of Shell, which company already benefits from the most placid leasing terms in the world. Whether this is a guarantee to Shell by Mayo Co. Co. that Planning Permission will be granted to this version of the project or not, we have no doubt but that the consent of Mayo Co. Co, as here expressed to taking responsibility for such compensation as may arise, has legal implications for the public purse, and is an invitation to members of the public, to Shell and to contractors within the scheme, to further scrounge off the tax payer. Add to this the fact that the taxpayer is the owner of Bord na Móna, its originator and its paymaster. Here again and on into the future, the taxpayer is being put in hock to this version of a project: (a semi-privatised contract State system is becoming indistinguishable from a State subsidised private sector). We demand that the

names and identities of the individuals responsible for this treason be made available to the public for future reference. We have no problem with Shell playing hardball, but it is hardly cricket for people paid by the public purse to so cravenly lie on their backs and think of mother England.
We are incredulous.

Submission on Response to Item 2, Vol. 1

2 "Written confirmation .....deep peat soil."

The enclosed consent (April 15th, 2002) does not confirm that the design of the proposed pipeline as requested is suitable to ensure its stability. Rather it requires the developer (item 11) to draw up an Environmental Management Plan (where is it or is the faith test being applied?)"*to provide detailed construction methodology. The plan should address, separately, both the construction aspects* (i.e. the pipeline and ancillary constructs *and the operational aspects and should as a minimum include i.Traffic management. etc.*"
Likewise in item 16:"*The methodology of pipelaying within Broadhaven Bay, at the landfall and between the landfall and the terminal, shall be agreed with the Department before commencement of construction.*" Where is the agreement? Minister Woods' statement at the head of this submission applies.
Noteworthy also is item 19: "The developer shall undertake additional traffic studies and submit a Traffic Management Plan for approval to Mayo County Council for the management of construction traffic associated with pipeline and landfall construction activities." May we suggest that what has been attempted in this direction is quite anaemic and not adequate. Where is it?
Is Mayo Co. Co. in a position to grant planning permission for a structure on the basis of unknown/secret/whatever-your'e -having-yourself/no plans?
It defies logic to imply that a high pressure pipeline floating on up to 20 feet of bog can be stable structurally. It is not possible to distinguish between that part of the landbased upstream pipeline that is outside the terminal site and the greater part between the landfall and the terminal boundary - the same physical reality rules: in neither case has the developer shown that the regulatory authority has confirmed the proposed methodology as suitable: indeed it must be said that no regulatory authority has seriously addressed the issue of a vibrating pipe in deep bog, on a slope to Sruth Mhada Conn.
The onshore requirements of this consent, albeit issued by the offshore authority, are for leakages, not structural stability, line inspection and maintenance. The exclusion by PAD in this consent of any considered response to 8 Kilometres of land pipeline, illustrates once again the absurdity of the location of this proposed refinery and the project splitting which it entails, which leaves the PAD in the untenable position of issuing licences and leaves for farmland, pasture and bog, on the pretence that this is foreshore. It is definitively clear that the foreshore ends at the high water mark, and no amount of legalistic shenanigans changes this.The evaluation prepared by Andrew Johnson of the Onshore Pipeline Design Code for Dept. of Marine and Natural Resources, which underlies the consent as enclosed, specifically excludes any activity within the Terminal site: "*It is understood that the terminal QRA*

(prepared as part of the terminal design) .. .will consider the risks associated with all facilities within the terminal site, including the pipeline facilities." (28 March 2002)

Submission on Response to Item 3, Vol. 1

Not answered.

Submission on Response to Item 4, Vol. 1.

There is little point in being fussy over human generated sewage in this area, when the entire sewage of Belmullet and its' trade effluent, go untreated straight into Broadhaven and Blacksod Bays: and still planning permission is being given for hundreds more tax driven dwellings and bedrooms to prospectively dump tons more of the same human and trade effluent daily into the Bays. Were the market developed we could sell E-coli in place of WMD.

Submission on Response to Item 6, Vol. 1.

6 Submit a map .....clearfelling etc

The proposed transported peat consists of the entire depth of peat. Therefore all phosphate concentrations are removed to the dump at Srahmore. What is the potential effect of binders on this?

Does the dumping of carcasses (dogs, cats, fish, rabbits, horses, cattle) contribute to phosphate concentration? Have the unearthed carcasses be species identified? Why not?

The acrotelm will be removed entirely, and given the drainage history of the site, the status of the acrotelm is mote. The phosphate on site is only immobile until it gets a lift to Srahmore.

Drain 22 again lifts its enigmatic head. It is the most difficult element in the entire drainage of the site, and inscrutable. The source of the phosphate here remains a mystery, as does the amount of water flow and the pollution. It is more than a drain: it is a spring(s) also, a stream. It has been marked on the 6 inch ordnance survey maps in shortened form since the first mapping and is probably the most important drainage element historically. This bald statement hardly answers the request to provide a comparison etc.

Drain 22 has some of the mystery of another famous bog hole within the terminal site, where the water disappears underground and no one seems to be able to trace where it comes out. This has baffled the multiple consultants of many applications to Mayo Co. Co. on behalf of this project. Realistically, in the vicinity of a spring fed lake of such importance as Carrowmore is, a mystery of this nature should immediately call a halt to development that impacts on the hydrology.

Anyone who believes that "*The stored material will be covered with waterproof sheeting in periods of high rainfall*" is too innocent for this bad world.

The excavated materials will not for long impact on the Ballinaboy site, because - wait for it - they will be impacting on the Munhin and Abhainn Mhór.

Submission on Response to Item 7, Vol. 1.

7 Detail of site ... should be provided.

I hope you get the message, Mayo Co. Council: don't waste Shell's time: go and read the EIS.

This response is a non-response. The magic bottomless bogfhole is nowhere to be found on the drawings, although it featured prominently in two sessions of a long oral hearing.

Submission on Response to Item 8, Vol.1.

8 Baseline ....around the site.

Raw data was requested and no raw data is given. The mixture of data of varying definition and integrity leaves this response useless. According to the response, the required data is not available, i.e. has not been acquired.

p.3 refers to 12 months sampling: page 2 specifically states that a full year's data is not available, or maybe we are misreading page 2 or page 3 or both.

Table 13: Drain 22 again raises its enigmatic head: We wonder why? It needs explaining and real research over essential time.

3.3 Drain 22 classed as "*seriously polluted*" - We wonder why? Is it significant?

The picture here is of a water system already stressed, under pressure. This proposal would further degrade it and put Carrowmore Lake at greater risk.

Who is responsible, in the absence of bonding, for compensatory re-establishment of status quo or better? What a ridiculous question, Charlie Brown!

Submission on Response to Item 9, Vol. 1.

9 information and ...other acids.

Bord na Móna is presented here in terms of "typical" results to events. In fact, what is proposed is so much different to what Bord na Móna actually does, that it is completely misleading to equate this waste activity with the work Bord na Móna is highly experienced in. Not even their UK subsidiary, The Brightwater Group, specialising in sewage, industrial and municipal wastes and sludge, has such an undertaking as part if its c.v., although no doubt such expertise can be put to good use in projects such as the Muing Mhór perfumery.

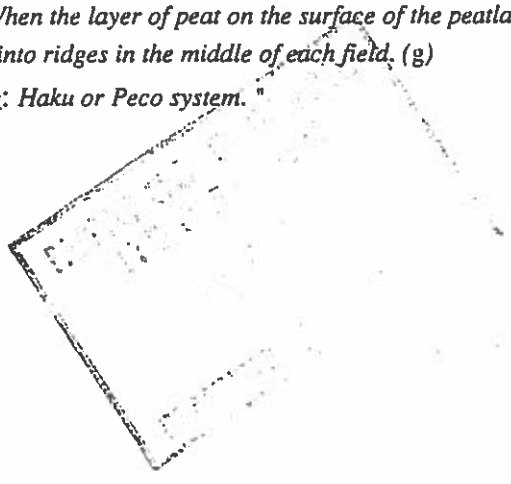
It is essential in dealing with these matters to give a cursory, at minimum, look at what Bord na Móna actually does, that qualifies them as implementers of this proposal: otherwise we are in danger of living in and dealing with a "reality" equivalent to reality TV. The following is taken from Bord na Móna "*Report on Corporate Social Responsibility 2002-2003*" : "*Undrained or pristine peatland has a water content of approximately 95% (a). Before development a peatland is surveyed and a drainage plan designed. Drainage reduces the [illegible] from 95% to 80% and removes about 75% of the water from the surface layer.*

After about three years of development work the fields are cleaned of vegetation and shaped. etc. There are essentially four operations in milled peat production(c): milling, harrowing, ridging and harvesting. *Milling:In the milling operation a thin layer of peat, usually about 15 millimetres deep(d) is cut from the surface of the peatland where it is left to air dry over a period of a few days. The water content of the crop in this layer of peat after milling is about 80%.(e)*

Harrowing: In the course of drying, the layer of peat is turned a few times to make the best use of available solar energy.(f)

Ridging: When the layer of peat on the surface of the peatland has reached the target water content, it is collected into ridges in the middle of each field. (g)

Harvesting: Haku or Peco system. "



(a) The existing drainage at Ballinaboy does not seem to have been very effective - i.e. it seems to have broken down. and the moisture level is as high as originally. This would correspond to visual evidence.
(b) Bord na Móna drains for 8 years(or is it less - figures abound)to get to this level of 80% and 75% in the acrotelm.
(c) "milled" is what Bord na Móna do - not mass excavation on this scale.
(d) One inch (1") at a time is removed from a surface that has already lost most of its moisture: **one inch.**
(e) Even off the top layer, after draining for years.
(f) "Had I a spoon, had I?"
(g) Windrowed after it has reached the required moisture content - not before.

It is up to Bord na Móna to explain how the methodology suitable for the above process can justifiably be applied, with no piloting to the circumstances of this project. This is for real.
In this section also, "*gradual*" is used again and again. It must be noted, in view of the above, that nothing in this proposal resembles "gradual" in the normal lexicon of Bord na Móna - where the context is reducing 8 years to nothing, "gradual" has lost its meaning.
No raw data is given for the "widespread monitoring".

Submission on Response to Item 10, Vol. 1.

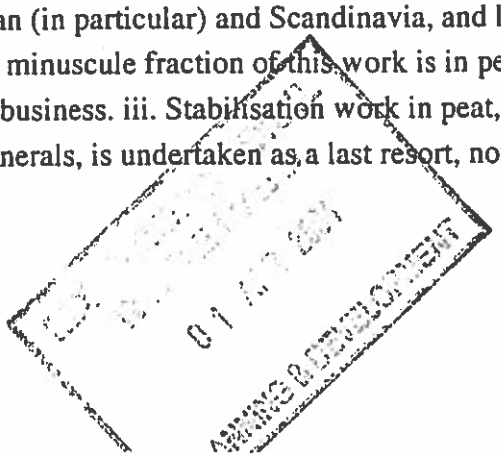
10 A schedule ....are not specified).
Seasonal constraints will surely apply for salmon and eel and peal and trout on the Munhin and Abhainn Mhór.?

Submission Response to Item 11, Vol.1.

11 Information on ...in this location.
It is hard to accept that the binding agent will have no effect outside the site but it may be true. Again the precautionary principle applies.

Peat Stabilisation:-

1.2 How is "*stabilisation*" more "*sustainable*" than total removal?
We take exception to the comment: "*Experience has shown that stabilisation is particularly suitably for peat*". No evidence is suggested for this universal comment.(It is a perfect example of the language of the neo-cons in the United States of America who have perfected it = empty language, lost performative: "Thank God for George Bush": there is no answer possible.) Nor some pertinent facts, not least among them being i. soils containing more than 10% peat must be thoroughly tested before stabilisation, for not all peat is suitable for this process, at the present state of knowledge; ii. Although the total amount of stabilisation work in soft soils undertaken in Japan (in particular) and Scandinavia, and latterly in the United States, is substantial, only a minuscule fraction of this work is in peat, which is very much the Cinderella in this business. iii. Stabilisation work in peat, owing in part to its' deficiency in pozzolanic minerals, is undertaken as a last resort, not a first choice.



1.3 No raw data to back up cement bureau statements, which may be completely justified, but the issue of advocacy and underlying absence of responsibility for outcomes requires caution.

1.4.1 Peat is a specific type of soft soil, and it is misleading to throw in figures relating to soft soils as if they are relevant to peat: very little of them are relevant. My understanding of the proposal is that it is not envisaged that mass and column stabilisation should be used on this site.

(SGI are indeed world leaders in soft soil technologies and their advice is expected to increase ten-fold the U.S. present output of 30,000 cu. metres annually of soil treated: compared with the Japanese output, this is tiny. However, very little soft soil technology is relevant to the peat at Ballinaboy or anywhere else for that matter.)

1.4.2 The samples given are hardly indicative in any case. Pre-loading is not proposed, not even in road widening; a mix of peat and clay is not relevant; use of columns not proposed; elements do leach from the binder; ratios of peat to binder vital, also depth of peat, drainage status, etc. This work has a promising future, but very limited prospects in Ireland, because of political-economic issues that do not concern us here.

2.1.3 Where and how has this been done: raw data is absent. This is a proposal for real - not a trial, with a real not a theoretic outcome.

2.2.2.So testing is ongoing - no results available. So, the time constraint on good work kicks in again. Laboratory tests in peat, especially relating to physical and mechanical properties, are notoriously unreliable and until proven on the ground, in a dynamic situation, must be very sceptically treated.

2.2.3 'Tis a bit late to verify when decisions to go ahead are in place.

2.2.4 On what basis is it estimated that 36,500 tons of binder will be needed, when SGI has only recently been hired to do this work, and have not reported ?

"*Further 178,000 m cubed*": where are they or from where are they? Are they in situ or on the move?

2.2.5 Pre-loading/surcharging is not proposed for this site? Why introduce it? Be real.

3.1 Of course what the binder does not reach won't be stabilised!.

"The addition of binder decreases permeability" is a very simplistic presentation of the reality on the ground and going forward. Surely it is not being suggested that the chemistry involved and inevitable heating will evaporate or similarly use up all the water in the sites being treated? As I understand it these sites will be covered with structures and will inevitably dry out, unless constantly fed with water - hereby is the major fire hazard as peat spontaneously combusts when dried out. But unless the entire depth of the profile in place is to be dried out in the stabilisation process, it is miraculous that all the void spaces are to be filled? We would like further information on EuroSoilStab's "Design Guide Soft Soil Stabilisation" to see the extent of peat study rather than just soft soil.

3.2 Chemical Properties It is our understanding of the chemistry of these reactions - admittedly rudimentary - that peat soils are typically deficient in pozzolanic minerals

needed to react with the calcium hydroxide in the cement, and that therefore the best results are obtained with cement in conjunction with a pozzolanic additive? Without the additive, the chances of calcium hydroxide migration are surely higher?

3.3 While the trace elements are dealt with the soluble alkalis are not. Why not? Tests carried out when the damage is done are irrelevant.

4.3.1 If the sub-surface flow is minimal, why has it not been possible to trace the destination of water disappearing in the magical boghole? Or is that why 'tis minimal?

4.3.2 Hydrology At last an admission that an increase in alkalinity in this very acidic environment would not be surprising, and of course sedimentation: 'tis obvious.

Submission on Response to Item 12, Vol.1.

12 The basis for ...settlement ponds.

"The model uses two parameters, impervious areas and rainfall intensities, to calculate the peak runoff."

Tobin's report on the Glengad/Dún Ciortáin floods and landslides, seems to demand that a third parameter is essential to a proper basis for the calculation of peak runoff. Tobin, in its' report to Mayo Co. Co. attributes the calamity to the dry condition of the peat previous to the heavy rain on the relevant night: this opinion seems to be supported by the inhouse report prepared by GSI and supplied to Mayo Co. Co. and to Tobin. It seems reasonable to assume (unless evidence contradicts the official Tobin report) that the model used by Shell as here presented, although simple and two dimensional and thus easily understood and plotted, will give a theoretical reading that does not allow for the extreme conditions already encountered here, in September 2003. The usefulness of this model would seem to be questionable. An extra degree of complexity would seem to be required by what is not a simple system.

The information requested has not been provided. There is no information on the assumptions regarding size of settlement ponds required, why Bord na Móna experience unmodified is relevant, indeed decisive. It is not shown that Bord na Móna methodology is directly transferable: inputs are so different that the combined effects must be different. Unquestioning acceptance of the Bord na Móna experience, acquired by a different process, under different guidelines, with different ends in view is misguided, simplistic. The costs of this airy fairy judgement are ours to bear. One item of difference: the settlement ponds of Bord na Móna take runoff from a well drained acrotelm(sic). When it rains, some soakage occurs to cushion the run-off. This does not happen where the living acrotelm has been removed, and is decisive in flash flooding.

Submission on Response to Item 13, Vol.1.

13 investigation of ...settlement ponds.)

Not dealt with - especially the suggestion of a floodplain approach to potential flooding. Item 12 relevant here. Shell again seems to see that Mayo Co. Co. have a problem reading the EIS.

Submission on Response to Item 14, Vol.1.

14 Examine the ...underlying peat.

"*The proposed location allows the entire site to drain by gravity*" does this contradict the response to item 13?We don't understand the significance of "*minimising supplementary groundwater recharge at higher elevations*". Nor is "*uncontrolled loading*" significant to this query?

Submission on Response to Item 15, Vol.1.

15 data history ...solids.

The response here is very weak. It is significant, however, that no statistics or measurements have been presented in support of any issue, that precede the submission of the first application for planning permission: or indeed the second application. This in itself is an index of intentionality and not very comforting. If the query was worth making, it has not been answered.

Submission on Response to Item 16, Vol. 1.

16 Proposals to deal ....site.

Covering wet peat with plastic sheets is standard Bord na Móna practice??. It is, when dealing with dried long lines of windrowed milled peat. This is another misleading reference to Bord na Móna: it does not cover and uncover wet peat, not even where it deals (or has dealt) with sodded turf. Rows of milled peat awaiting transport to the firing squad is so covered - but not on a "run out and close on the hens" basis. Without such covering the vacuum harvested milled peat would blow away, as much of it still does much to the discomfort of householders on the wrong side of the prevailing wind. On the basis of this tongue in cheek answer can we visualise a squad of Bord na Móna workers waiting patiently for the first drops of rain, which is the signal for them to charge around (in the wind) pulling enormous sheets of plastic into place?. Do ye think we are all of us stupid?

Submission on Response to Item 17, Vol. 1

17 A detailed ...routes.

The main bulk of waste generated is peat. However, no proposal has been made for the disposal of the waste excavated from the proposed pipeline from Ballinaboy to Glengad (8 Kilometres) or from the BGÉ proposed pipeline from Ballinaboy to the Bangor vicinity or the unsuitable non-peat waste from the terminal itself. Such an oversight beggars belief. Is someone hiding something? Insíodh sé scéal ar féin!?

Submission on Response to Item 18, Vol.1.

18 Figures 12.1 to ...numbering

Exposure of residents to 24 hour noise in an open rural area, as detailed in the EIS is a disgrace to contemplate. Even the barking of dogs from the laboratories next to the

proposed refinery site is heard for miles downwind at all times. We do not know how bad the proposed noise level is to be. George Bush is in trouble for announcing WMD from where none have materialised, thus presenting a new situation where even the most powerful are being held to account for what may have been an economy with the truth. The same applies to this project, but with no bonding proposed, and the State accepting all the risks ??

A recent article by the Director of Psychology at St. Vincent's Hospital, Dublin, states that "*The guidelines allow building noise between 8 a.m. and 7 p.m. from Monday to Friday and between 8 a.m. and 1 p.m. on Saturdays....This is the dissonant demise of the quality of our lives in the interests of progress.*" "*CALM, the network of an EU initiative on noise emission recognise(s) 'no person should be exposed to noise levels which endanger health and quality of life.'*" "*The issue is an issue of public concern, of health and safety.*" *(Irish Times, Monday March 29, 2004).* And the relevant authorities.

Submission on Response to Item 1, Vol 2.

1. Additional water ...conditions.)

No treatment of the possible or likely presence of carcasses or their extent or nature or potential toxicity. We have lost track of the exact designation of the water samples.

Submission on Response to Item 2, Vol 2.

2 Reconcile ..(249-632mg/l)

We can make neither head nor tail to this bit of special pleading: we have a feeling of being conned by "*total solids*" and "*suspended solids*".

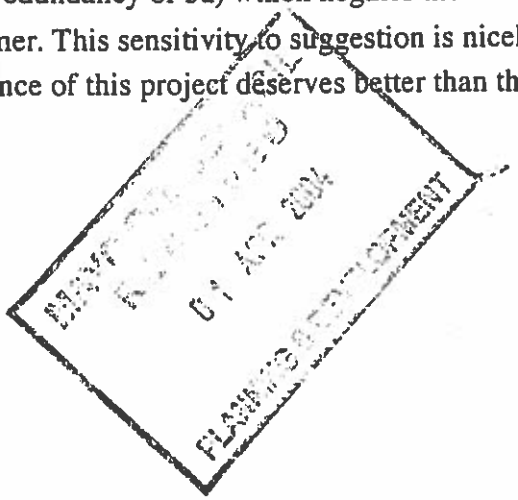
Submission on Response to Item 3, Vol 3.

3 Indicate ...adverse effect.

"*being wetter*" You can try, but you can't have it both ways: you cannot here argue that the peat is wet and therefore not likely to increase nitrogen levels at Srathmore, while arguing repeatedly elsewhere that this same peat has dried out considerably because of [illegible] allowed to proceed on this sensitive dynamic environment.

3 a) Given the special conditions under which measurements of Oct. 29th, 2003 were carried out, they are not a basis for anything except for throwing in the bin.

b) The conclusion "***will*** *have the effect of reducing ammonia concentration*" is derived from "*this* ***suggests***" in 3a). Apart from the redundancy of 3a) which negates the entire sequence, one swallow does not make a summer. This sensitivity to suggestion is nicely touchy feely but not very useful. The importance of this project deserves better than this juvenile logic.



Submission on Response to Item 6, Vol.2

4 A map ...contours.

The response deals with the construction phase only: much more terrifying is the prospect of a 24 hour industrial rumble going on forever. Ref. to submission on Item 18, Vol.1.

Submission on Response to Item 7, Vol 2.

7 An assessment ...peat soil.

It is sad to again have to note the efforts by an important sub-contractor, owned as yet by the taxpayer, i.e. Bord na Móna, to cope with the pathetic initial presentation of the case for this project. The planners were expected to tolerate any old cod, dished up in a fish cake. This less than BAT approach has dogged this project/concept from its initiation, and allied to the ever present political advocacy and promise, has led to undue delay and inordinate expense for the developer and still being pushed to put a good potential project in the wrong place.

Investigation into handling of raw peat:-

2 Is Bord na Móna suggesting that juncus effusus has roots that penetrate over 5 metres into the bog?

We fully accept that under the definition of slurry as given by the author of this response no peat that I know of could be called slurry - much slurry could be extra the definition. We have difficulty with "*pulverised*": we know that peat, however, dug out in sods by a JCB-type machine will not "*maintain its shape readily,*" and is a frightful mess if heavy rain follows extraction, even in old drained turf banks.

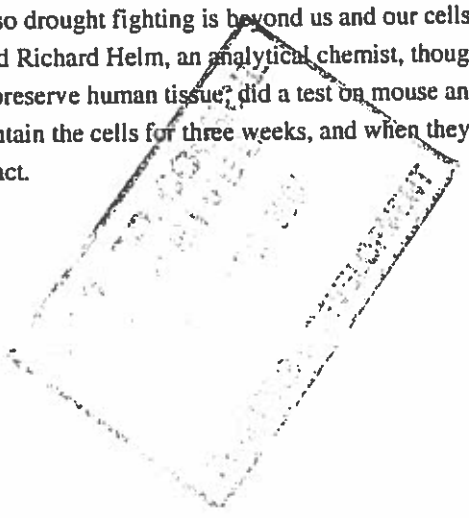
"*windrowed*": Where does Bord na Móna "windrow" heaps of raw peat ("*stacking of peat in piles*")? Where have Bord na Móna developed the cumulated experience to know what is the effect of this copying indiscriminately of vacuum harvested peat technology. Where is the data - even unverified data - for this dream topping? It is reasonable to expect the outer skin to dry substantially even in 8 days of good drying conditions, but in the circumstances depicted here, the potential for "*draining away*" from the mass of the peat is very limited. The description given here is of a milled peat experience and does not transfer.

4. Industrial Field Trials.

When does a Field Trial Justify a Conclusion?

4.1 One swallow does not make a summer, but believing that it does, gives us the Snarl at the Mad Cow (Red Cow). In order to show how ridiculous are the conclusions drawn here from one tiny unvalidated test it is necessary to show what "science" is and is not:-

A nondescript cyanobacterium, *Nostoc commune*, lives in shallow depressions in limestone outcrops. Very exposed, it has learned to secrete a glycan that immobilises the cells during dry periods and protects them from dehydration. We mammals can't do this and so drought fighting is beyond us and our cells etc dehydrate = dead. A biochemist Malcolm Potts and Richard Helm, an analytical chemist, thought that maybe the specific glycan could help protect and preserve human tissue; did a test on mouse and human kidney cells. They used the glycan to dry and maintain the cells for three weeks, and when they rehydrated the cells they were perfect, with their structure intact.



Therefore the experiment was a success? Yes. It proved that human cells can be preserved in a dehydrated state and then be rehydrated successfully? No, it didn't: it proved that two samples of kidney cells, were dried and preserved for three weeks, using the glycan technique, and were successfully rehydrated. That is all. It suggests possibilities: storing enzymes under normal temperatures, stabilise blood for transfusions, long term preservation of human organs (years maybe). No one would propose that these possibilities are facts.The important point is "mairg do ghní deimhin dá dhóigh: drawing generalised conclusions from one test or so, is pub talk standard science or engineering and should be left in the snug.

4.2 A trial. How deep a sample of source peat; drainage status; water content; etc: without control of variables a test like this is only codding oneself.

"*wetter*" means nothing - just a comparative: how deep are the drains, how long the drainage period, where was material sourced vis a vis the drainage channels, etc. can help put meaning into the comparative.

A vacuum harvested bog has no acrotelm, which is the living layer. The mixture from Ballinaboy is to be dumped on a compacted catotelm, and then bulldozers are to drive over and back on the dumped waste to do what? The surface of the catotelm compacted from machining forms an interface and potential drainage surface etc etc. It is the acrotelm that contains the seed bank: modern practice is to store it to help towards limited restoration - not possible to do in retrospect.

Derrylea Case Study: This study is in no way comparable to conditions in this project. The peat being bulldosed in Derrylea is a turf bank, and because of this is already drained substantially in its bulldosed entirety, as any bank of turf is, not alone by gravity but by wind and evaporation. We do not know how long the bank of turf in Derrylea was operating, or how deep the cutting, or if the cutting was from both sides of the bank or one side only. What is bulldosed here is the acrotelm and the top layers of the drained catotelm. Of course it worked - it was sensible.

Submission on Response to Item 1, Other Matters.

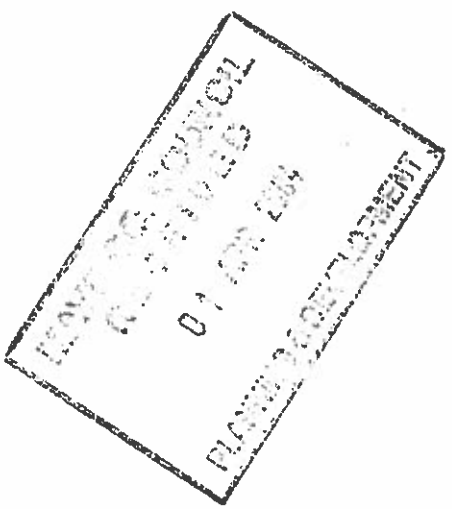
1 Please submit ...the haul route.

As no bonding is proposed for any promises, whatever the subject, in this instance the number of traffic movements per day, one does not expect them to be complied with.

4.5 A cynic might suggest fattening the goose for Christmas.

4.6 What a vacuous comment emphasising the gap between reality and the developers agents "*Landscape disturbance is significantly reduced by using an existing road for the haul route rather than constructing a new dedicated route.*" We must accept that the possibility is hardly more crazy than the basic concept .

All in all, a tongue in cheek performance.



Finally, we the undersigned do not consider that the substantial extra information provided on behalf of Shell has made this project more viable in planning terms. We note shortly the historical consistency of Bord na Móna discourse and its conflicting historical record on the ground. We note anxiously the weight of traffic proposed to be borne by the L1204, especially given that this road was off limits to heavy vehicle traffic in Co. CO. responses to earlier planning applications, which decision we presume was not arbitrary. We note the silence on the traffic and loading implications for the L1203, L12035, L52453, L52453-25 and the L1202, all of which roads must be earmarked as carriers of substantial plant and materials traffic and removal of waste.. We note the uncertainty or complete silence on dumping location(s) for considerable bulk of waste, and are surprised that the Co. Co. survey of 9 bridges on the R313 and R314, including one of a mere 7 tonne bearing capacity, or an update of the survey if such exists, has not been alluded to or whether use of these bridges for HVT has been outlawed. We note with considerable unease, that EU and national requirements on project splitting seem to be ignored. We note that the importance of stratification/layering for the stability as such of bulk peat has not been addressed. Finally we draw attention to the concept of "wise use" of mires, taken from the Ramsar Convention on Wetlands and accepted by Bord na Móna among others, and its widely accepted definition (accepted by Bord na Móna) defined in the acclaimed work "*Wise Use of Mires and Peatlands* - **Background and Principles including a Framework for Decision-Making" by Hans Joosten (Greifswald University, IMCG) and Dónal Clarke (Bord na Móna):**

Wise Use

"Those uses of mires and peatlands for which reasonable people now and in the future will not attribute blame."

$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

£££££££££££££££££££££££££££££££££££££

Signed by the following, on their own behalf, without prejudice to other such submissions as they, individually or severally, may otherwise lodge with regard to this project :-

Micheál Ó Seighin

Micheál Ó Seighin, Ceathrú Thaidhg.

Uinsionn Mac Graith

Uinsionn mac Graith, Ros Dumhach

Uinsionn Mac Graith

Uinsionn maac Graith, Ceathrú Thaidhg.

Treasa Ní Ghearraigh

Treasa Ní Ghearraigh, Ceathrú Thaidhg.

Caitlín Uí Sheighin

Caitlín Uí Sheighin, Ceathrú Thaidhg.

Bríd Ní Sheighin

Bríd Ní Sheighin, Ros Dumhach.

Gortacragher
Rossport
Ballina
Co. Mayo

1st April 2004

Mr Ian Douglas S.E.P.
The Planning Section
Mayo County Council
The Mall
Castlebar
Co. Mayo

Re : Planning Application Ref No P03/3343 as submitted by Shell E & P Ireland Ltd.

Dear Mr Douglas,

This is a submission based on planning application P03/3343 and the information submitted by the developer to Mayo County Council on 11th March 2004 in response to a request by Mayo County Council for further information on 17th February 2004.

We refer to the above and wish to make a number of observations.

Volume 1 ; Item 2 - "Written confirmation from the relevant regulatory authority that the design of the proposed gas pipelines from the Terminal compound to the site boundary is suitable to ensure the structural stability of the pipelines constructed in deep peat soil".

The Seveso II Directive applies to the transport of dangerous substances in pipelines inside the refinery establishment(s) therefore the upstream pipeline containing raw inpure wet gas at elevated pressure(s), the control umbilical and discharge pipeline etc. are within the remit of the Directive and thus safety aspects with respect to this reality have not been taken into account by Mayo County Council and The Health and Safety Authority. At the last oral hearing conducted by An Bord Pleanála in November 02 the N.A.O.S.H. report prepared by Mr John Colreavy stated on page 5 that "The Directive does not apply to pipelines or the road transport of dangerous goods outside the boundary of the establishment". He did not fully assess the health and safety implications in relation to the upstream pipeline section within the boundary as was his remit and what was assessed was based on dry not wet gas. In reality as the term "establishment" refers to the whole area under the control of an operator and as the Corrib Field(s) is to be controlled and operated by Shell E&P (as operator) and partners etc. this upstream section of pipeline from the landfall to the proposed terminal (refinery) should fall within the establishment. Please refer to Appendix A whereby Ms Breda Gannon S.E.P. stated on 6/8/02 that " . . all information received with respect to the gas terminal and upstream pipe forms part of the application for planning permission". Mr Colreavy did not address the impact of gas explosions precipitating landslides in his assessment. After the Dooncarton landslides on 19/09/03 this is a very real issue.

We refer to a request for "written confirmation from the relevant regulatory authority" and response by the developer as follows : "The import pipeline is to be constructed in accordance with the consent obtained by Shell on 15th April 2002 from the Department of the Marine and Natural Resources persuant to Section 40 of the Gas Act 1976. A copy of the consent is provided. This consent is subject to technical and environmental conditions with which Shell is obliged to comply". It is unclear from the letter of the 15/04/02 to Mr Brian Ó Catháin, Managing Director, EEI Ltd. Corrib House, 52 Lower Leeson Street, Dublin 2 by Frank Fahey T.D. (Minister for the Marine and Natural Resources) as to whether this is the actual consent to construct the upstream pipeline, as it states the following "I will be grateful if you would acknowledge and indicate your acceptance of the above conditions". There is no response from Mr Brian Ó Catháin on record to indicate that he accepted the conditions referred to and therefore how can we accept that this is the actual consent.

We believe that Technical Condition 2 ("the pipeline route is to be fixed near inhabited buildings to ensure that a minimum proximity distance of 70 metres is achieved") cannot be complied with because there are a number of inhabited houses within the 70 metre zone along the upstream route.

Referring to Technical Condition 22 we quote the following "Duration, likely frequency and noise associated with flaring of both the HP and LP flares should be kept to a minimum in accordance with best industrial practice". The Department of the Marine and Natural Resources has no jurisdiction over the proposed terminal (refinery) and their jurisdiction over the upstream pipeline(s) is highly questionable. Will flaring be in operation to reduce the wellhead pressure of 345 BARG to 150 BARG in increments along the upstream route from the landfall to the terminal (refinery)? If so these "flares" will require planning permission as well as other ancillary equipment such as a proposed "single in-line joint / termination unit" to be located on our private lands (refer to Ballinaboy Bridge Terminal EIS P00/2934 under 5. Alternatives p 5-9) and valve station at the Dooncarton landfall. We refer you to Appendix B (Bord Gáis Mayo-Galway Gas Pipeline EIS Non Technical Summary dated May 2001 by ARUP). On page 3 the following is stated "Gas pipelines do not require planning permission. However any above ground installations, other marker posts, such as block valve stations require planning permission from the relevant Local Authority". Therefore the upstream associated infrastructure would require planning permission. We also refer you to Andrew Johnston's report (commissioned by the Department of the Marine and Natural Resources) page 21 under the title summary "in-ground utility crossing and inside above ground installations".

We refer you to Appendix C whereby the onshore line is set at 345 BARG (pipeline specification 344 BARG) and the onshore Terminal (refinery) is set at 150 BARG at the proposed Terminal. This would strongly indicate that depressurisation by some means such as flaring along the proposed upstream route would have to occur to have an arrival pressure at the proposed Terminal (refinery) of 150 BARG. This projected reality is unprecedented in the world and poses an unacceptable risk to human and animal health and wellbeing.

What regulatory authority will mitigate against the effects of the proposed blasting on adjoining residential properties and on Dooncarton mountain?

We refer you to Appendix D - A critique of the operational methodology and process components at the proposed Ballinaboy Bridge Gas Terminal, County Mayo, Eire by Mr Peter Rossington

B.Sc (Hons) M.R.S.C. He states on page 3 "The EIA admits that around year nine of the proposed plant's twenty year lifespan mechanical refrigeration will have to be installed . . . . For anybody not familiar with gas processing, the installation of a major chilling plant is not a simple operation. Major construction will be required at the Terminal in year nine, the extent of which will nearly equal the major construction currently proposed. This construction will once again result in large scale disruption to the life of local residents. If it is taken into account that mechanical refrigeration is a more efficient processing technique than adiabatic expansion, it will be required in year nine of the terminal's life anyway and local residents should be inconvenienced as little as possible by the proposed terminal, then Enterprise Oil should incorporate mechanical chilling into the current design of the Terminal" Also on page 3 he states the following "The EIA makes reference to the use of propane as the refrigerant medium in the proposed mechanical chilling system to be installed in year nine. Whether a refrigerant system is installed either in year nine, or at the beginning when it should be present, it is surprising to see that propane is being considered as the chilling medium. Propane is a highly flammable gas that by its presence alone causes increased risk for local residents and terminal operators alike . . ."

This development is not in compliance with Seveso II Directive (Mechanical Refrigeration implications and the use of propane have not been addressed) with respect to health and safety criteria whereby the developer must supply and include all the types and cumulative quantities of the anticipated products / byproducts used in the gas processing industry. Therefore the legal requirement which must be implemented as a result of Seveso II is that technical advice on the risks arising from the establishment must be available when planning decisions are made.

As this mechanical refrigeration unit will require major construction this will also involve the removal of colossal amounts of peat and dóib with associated siltation and other negatives such as disruption to local residents, effects on the roads structure etc. Where will this displaced peat and dóib be removed to? This development will also present problems from a visual point of view with the further removal of trees due to the health and safety criteria and also the interaction of other chemical processes on site. According to the Seveso Directive these and other questions must be addressed NOW.

We refer you to a report "Corrib Gas Pipeline Project - Report on Evaluation of Onshore Pipeline Design Code", prepared by Andrew Johnston dated 28th March 2002, submitted to the Department of the Marine and Natural Resources for assessment re. the upstream pipeline and quote the following from page 11 under the heading 4.2 Key Aspects of the Corrib Gas Pipeline.
" The circumstances include the fact that the pipeline has an unusually high design pressure and transports unprocessed wellfluid, which is a WET GAS and therefore corrosive when combined with carbon dioxide (CO_2) in the gas". The Health and Safety Authority derived their conclusions with respect to its modelling assessments re. potential impacts based on DRY GAS. Wet gas usually contains hydrogen sulphide which is corrosive. Therefore it is our considered opinion that the planning application would need to be modified to reflect this reality. This report is damning with respect to the upstream section and we urge you to study it carefully. (Appendix E)

We refer you to the proposal to route a large section of the upstream pipeline and misc. through our private lands. This proposed pipeline has three 90 degree turns along this section of the route (Appendix F). This is unprecedented for highly pressurised gas, as explained previously. There is

no mention of the matter of the change of use of this property i.e. from agricultural to commercial use. We have been issued with documentation in relation to compulsory acquisition without any authority and we question the legality of these documents. It would appear that compulsory acquisition powers were not transferred to Mr Frank Fahey (Marine Minister) under the Gas Act 1976 as amended and Mayo County Council would need to seek legal advice on this issue. There is little point in assessing a proposal for a Terminal (refinery) if there is no feeder supply into it from source. The compensatory terms are completely inadequate given the nature of this proposed development.

With reference to Volume 1 ; Item 6 "Phosphate Hotspots" Independent assessment would need to be conducted to verify the readings submitted. Phosphate could leach from the peat in transit to Srahmore. The information provided by the developer in relation to phosphate hotspots is not complete and does not take account of the mechanical refrigeration unit referred to earlier.

In our previous submission re. P03/3343 (dated 28/01/04) we referred you to "the risk to human health with respect to contaminated buried carcasses on the Ballinaboy site, an issue which was raised at the oral hearing into the proposed gas terminal (refinery) at Ballinaboy and which is referred to in the Terminal EIS Volume 1, 8.4.6." This matter will also apply to the area for the proposed mechanical refrigeration chiller.

With respect to Volume 1 ; Item 20 the Point-of-Ayr gas terminal is located on the shoreline with a flare stack in isolation and with no forest plantation in the vicinity. How can this be compared to the current proposal for Ballinaboy which is surrounded by mature coniferous forest (a potential fire hazard). In the Point-of-Ayr the terminal' s location is highly significant as the incoming gas is depressurised and received on the shoreline for processing. In Ballinaboy however the proposal is to allow highly pressurised gas and misc. to traverse inland for a distance of nine kilometres through residential areas, again unprecedented. Please refer to Appendix G where it is stated that "The Point-of-Ayr was developed at a cost of £1.1 billion (sterling) and employs approximately 550 people and contributes an estimated £15 million in goods and services into the local economy each year. The Point-of-Ayr Terminal was built in 1995 . . . ." The proposed Ballinaboy Terminal is to cost in the region of 150 million euro which alone reflects the inadequacy of this proposal, utilising some of the worst gas terminal design that maximises emissions, minimises energy efficiency and maximises disturbances in the area - for an estimated 15 to 20 years supply of gas!!!

We have real concerns with respect to copious, miscellaneous emissions into the air which will be directed by the prevailing south westerly winds directly towards our village in Gortacragher. The upstream pipeline has been described in the An Bord Pleanála report on page 76 by Mr David Taylor, on behalf of the proposer, as "it is the only one of a kind that he is aware of". Is is any wonder then that no competent or regulatory authority has taken responsibility for it which puts the whole concept into perspective. It creates a health and safety hazard which has not existed previously. We, as residents along the pipeline route, are sandwiched between the highly pressurised incoming gas and the proposed Terminal (refinery) at Ballinaboy. Because of this reality our private lands and residental properties will be totally devalued by this development as it is non sustainable.

Having perused the response to further information we have come to the conclusion that the

information provided by the developer is incomplete and inadequate. We have made our concerns known to Mayo County Council in previous submissions which were later vindicated by An Bord Pleanála. The latest application P03/3343 is flawed in the extreme from a planning, engineering, health and safety, environmental and academic perspective. We believe that Mayo Council Council have no option but to refuse planning permission for what is a concept and unprecedented.

Yours sincerely

Bríd Mc Garry.
Bríd Mc Garry B. Agr. Sc. (Food Science and Chemistry)

Teresa mc Garry
Teresa Mc Garry

Encs.

Appendix A

COMHAIRLE CONTAE MHAIGH EO

MAYO COUNTY COUNCIL

MEMORANDUM

TO:	Mr R. Norton, Director of Services Mr P. Hynes, Director of Services Mr S. Granahan, Director of Services Mr J. Beirne, Director of Services/County Engineer Mr I. Douglas, Senior Planner Ms B. Gannon, S.E.P., Planning Section
FROM:	Mr J. Walsh, A.O., Corporate Affairs
DATE:	25th July, 2002
SUBJECT:	FREEDOM OF INFORMATION REQUEST - FOI 287

Attached please find copy of request for information under the Freedom of Information Act, 1997, received from William Fry, Solicitors, Fitzwilton House, Wilton Place, Dublin 2.

The Freedom of Information Act refers to records created on or after 21st October, 1998.

I would be grateful if you could provide a report on the records as requested to the undersigned not later than Wednesday, 7th August, 2002.

Thanking you.

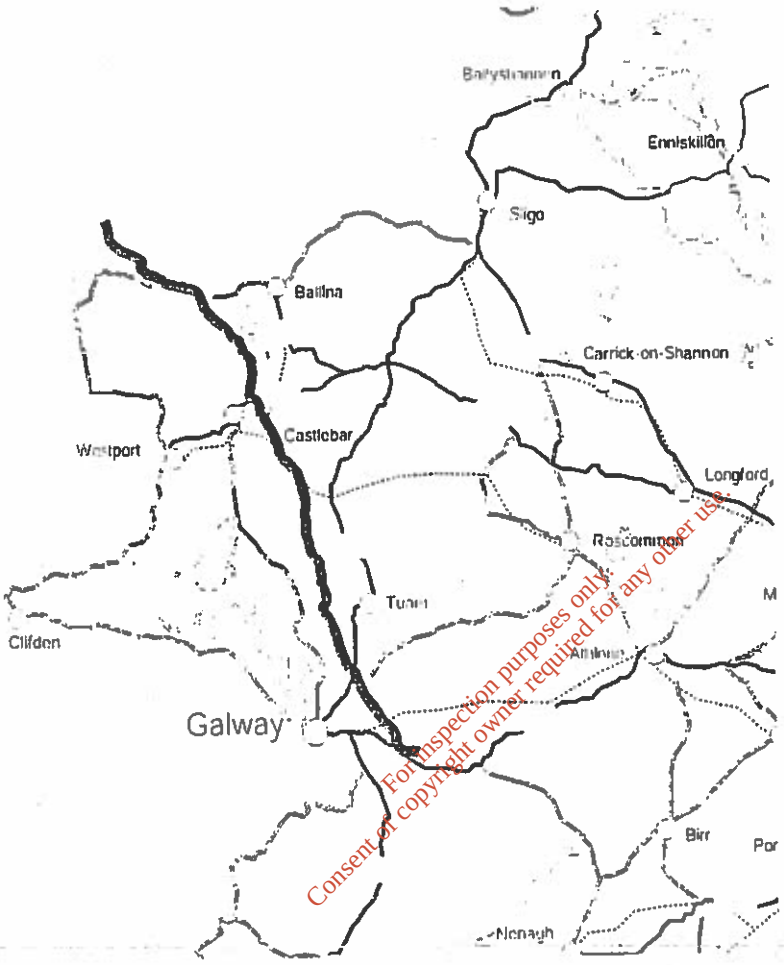
J. Walsh

S 50 Please respond - all information received with respect to the gas terminal & upstream pipe forms part of the application for planning permission & is available for inspection during office hours

Appendix D

BORD GÁIS
TRANSMISSION BUSINESS UNIT

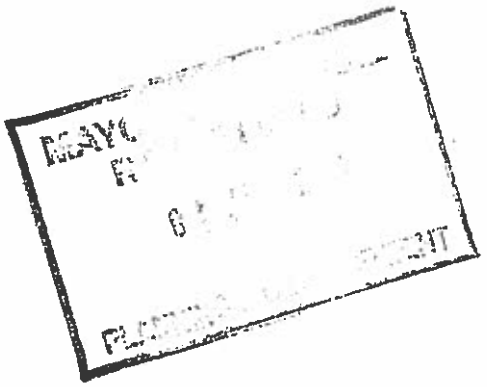
MAYO-GALWAY GAS PIPE LINE



ENVIRONMENTAL IMPACT STATEMENT

Non-Technical Summary

MAY 2001



ARUP

2 Environmental Impact Assessment

BGE must obtain the consent of the Minister for Public Enterprise to construct and operate a gas pipeline. For gas pipelines greater than a certain size and length BGE must submit an EIS to the Minister to accompany the application for consent. The Minister may attach conditions to his approval.

Gas pipelines do not require planning permission. However any above ground installations, other marker posts, such as block valve stations require planning permission from the relevant Local Authority.

The EIS has been prepared in accordance with the requirements of the European Communities Environmental Impact Assessment (Amendment) Regulations 1999, which specify the projects requiring an EIS and the information to be provided.

The principal elements of the environmental assessment process, up to submission of the EIS, which were followed during this environmental impact study, are described below:

Scoping - determining the issues to be part of the study, including further issues identified by Consultees, and the availability of data

Determination of baseline conditions - determining the criteria with reference to which the likely environmental effects of the proposed development were to be evaluated

Consultation - undertaken throughout the assessment process in order to inform interested parties and invite comment

Evaluation of significant effects/determine mitigation - an iterative process whereby the significance of potential effects is determined and design improvements or appropriate mitigation identified in order to reduce adverse effects

Determination of significant environmental effects - once mitigation/design improvements have been incorporated, the significance of residual environmental effects was determined

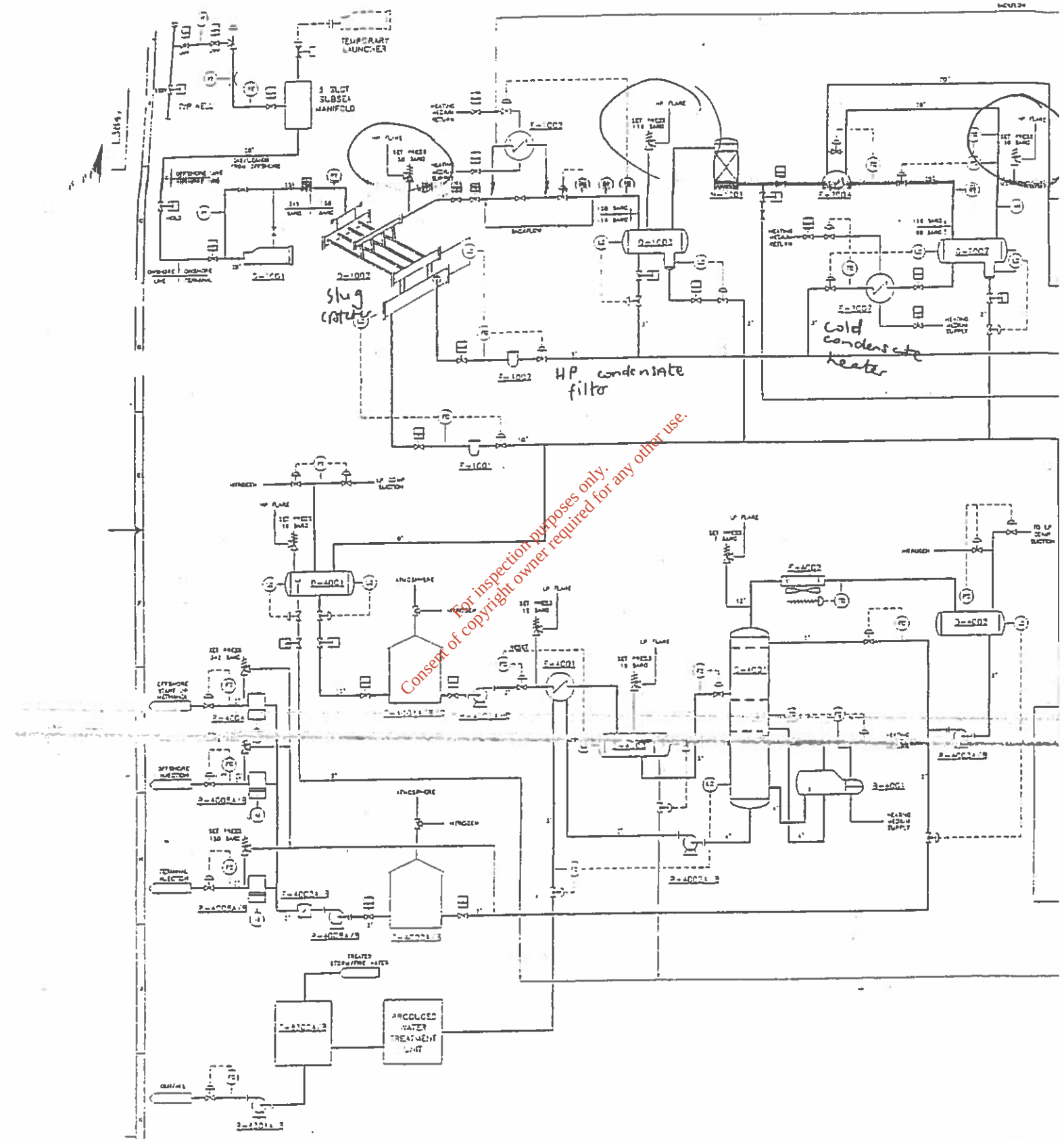
Reporting - the findings of the assessment are reported in an EIS, which is a public document

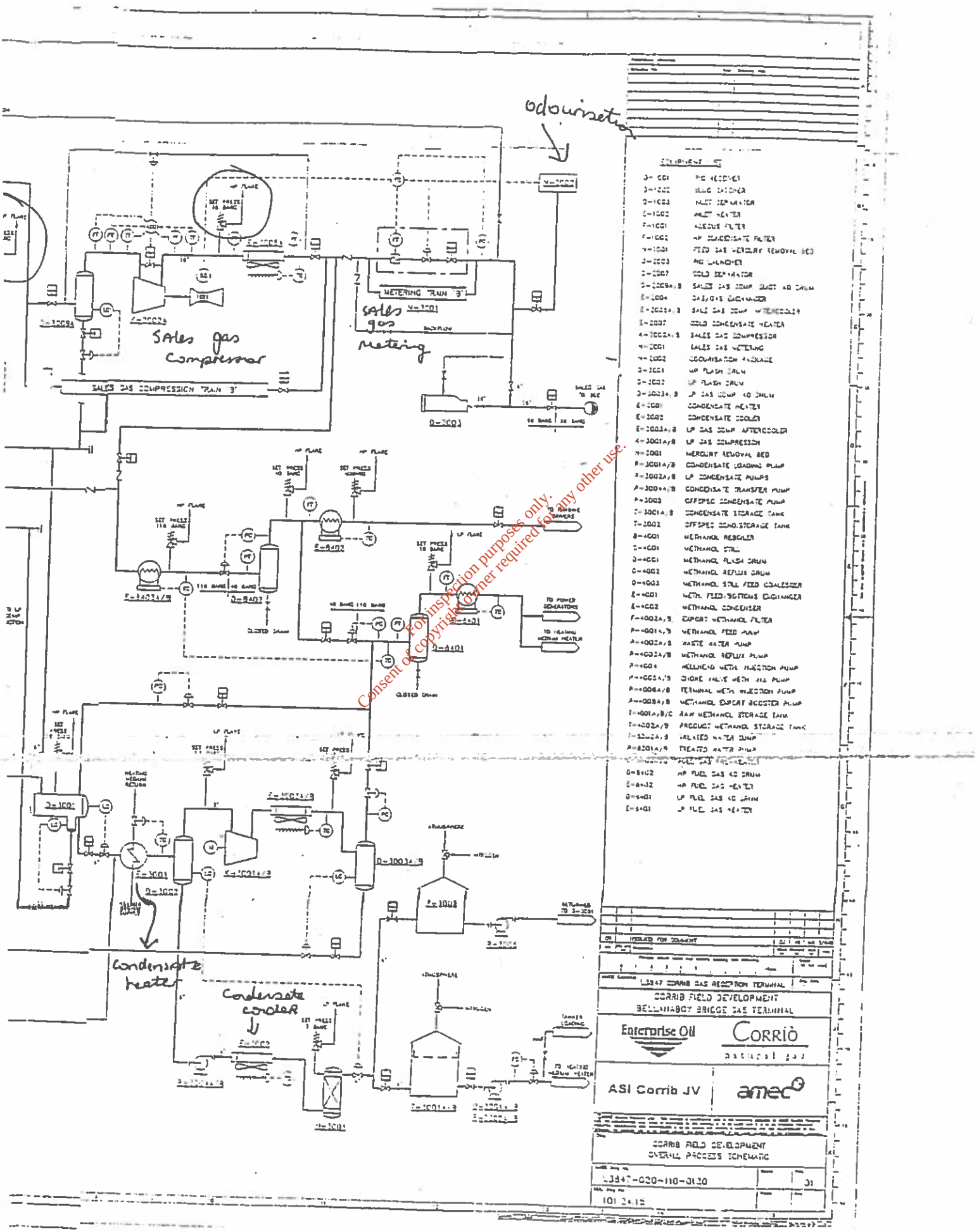
Consultation

Consultation is a very important part of the environmental assessment process. Consultations took place with government departments and other agencies during the environmental assessment. The main organisations contacted were:

- Dúchas (Parks and Wildlife Section)
- Birdwatch Ireland
- Irish Peatland Conservation Council
- Department of Zoology, TCD
- Dúchas (Research, Bogs and Wetlands)

Appendix C





Appendix 2

A CRITIQUE OF THE OPERATIONAL METHODOLOGY AND PROCESS COMPONENTS AT THE PROPOSED BELLANABOY BRIDGE GAS TERMINAL, COUNTY MAYO, EIRE.

BY PETER ROSSINGTON B.Sc. (Hons) M.R.S.C.

The benefits of using natural gas as a fuel for power generation in an expanding economy are well known. In fact, in section four of the Environmental Impact Assessment (EIA), for the proposed Bellanaboy Bridge gas terminal, they are even documented. It is stated that, "As the demand for energy increases, it is expected gas will have will have an increasing importance because of the efficiency of energy use in combined cycle gas turbine generators and the resulting relatively benign environmental impact of the emissions". From this statement, and other similar ones throughout the EIA, it is possible to think that Enterprise Oil and its partners understand the importance of energy efficiency and the need to keep toxic emissions to an absolute minimum. However, when the operational methodology and process components for the proposed terminal are studied, the impression is given that at their own facilities Enterprise Oil apply other principles. The proposed Bellanaboy Bridge terminal incorporates some the worst gas terminal design, that actually maximises emissions, minimises energy efficiency and, due to the need for residual construction throughout its lifespan, maximises disturbance for local residents.

Throughout the EIA, the impression is given that Enterprise Oil care greatly about the environment, but their words seem meaningless when the equipment specification is studied and the consequential emissions are considered. In most peoples minds, minimising the impact to the local environment means employing processes and equipment that produce the minimum emissions possible with current technology. However, minimising the impact on the local environment to Enterprise oil seems to mean, with a few exceptions, meeting current legislative requirements for emissions. Many local residents around the proposed terminal have realised the distinction between these two very different definitions given to the same term, and have consequently become very concerned about what this might mean for their health and local environment. This is very understandable when the history of industrial development, and its effects on the environment, is considered. For example, discharges of toxic metals from factories in both Europe and the United States for many years met the legislative requirements of various national governments until it was discovered huge areas of estuaries, rivers and lakes were highly polluted. A classic example of this was lake Michigan, which in the late 1970's was found to contain unacceptable levels of mercury and cadmium. The cause of the pollution was numerous plants discharging supposedly "safe" industrial effluent into the lake. Many of the plants responsible for the pollution were not fitted with technology that could have reduced the emissions of heavy metals to virtually nil, even though it was in existence and well proven.

To truly have a minimum impact on the environment, Governments and companies must adopt a target zero approach, and use technology and practices that minimise or completely stop toxic emissions and maximise energy efficiency. This is something Enterprise Oil has not done at the proposed Bellanaboy Bridge terminal.

At the proposed Bellanaboy terminal sweet gas from the Corrib field will be processed to national transmission line standards by adiabatic expansion through a Joule-Thompson valve. The adiabatic expansion of the gas will cause cooling and consequently the drop out of water and hydrocarbon vapour in the gas, which in turn will give it an acceptable dew point for transmission. Whilst not requiring any energy inputs adiabatic expansion does result in a significant pressure reduction, which consequently results in the requirement for downstream compression of the gas to transmission line pressure. This compression does require energy input, and at the terminal it is proposed that this should come from a gas fired turbine compressor package that will be a large producer of nitrogen oxides and carbon monoxide.

At many gas terminals, adiabatic expansion is not the preferred method of cooling the gas for dew point control. Instead, the gas is fed through a series of heat exchangers, cooled on one side by a mechanical refrigeration unit that uses either propane or a HCFC refrigerant medium. This method does not result in a significant pressure drop in the gas pressure, and therefore, providing input pressure is above transmission line pressure, compression after treatment is not required. Mechanical refrigeration also requires the input of mechanical shaft energy and at many terminals this is supplied either by gas fired engines or turbines. These engines can also be large producers of nitrogen oxides and carbon monoxide. However, at smaller processing units, large electrical motors are sometimes used as the source of mechanical shaft energy. (An example of a plant that utilises this technology is the old Hamilton Brothers plant located within the Amoco complex at the Bacton terminal, Norfolk, United Kingdom. Two processing streams with a combined processing capability of 500 mmscfd operate of two large electrical motors powering two compressors using KLEA refrigerant.)

Adiabatic expansion is not the most suitable processing technology for the proposed terminal for two principle reasons :-

1. Emissions are maximised per unit of gas processed
2. Adiabatic expansion can not process gas for the proposed lifetime of the terminal

Emissions are maximised per unit of gas processed because of two factors :-

a. Compression of natural gas is more energy intensive than refrigerant compression
b. Turbine driven machinery is only 30 - 35% efficient at converting fuel energy to mechanical shaft energy

The EIA states that a 7.7MW turbine is required for the compression of the gas after the Joule-Thompson valve, but if a mechanical chilling system was used, only a 2MW turbine would be required for processing the same amount of gas.[1] Assuming both turbines produce similar levels of emissions per megawatt generated, the higher energy input of the 7.7MW turbine would result in approximately three and a half times more emissions than the 2MW machine. Therefore, adiabatic processing is three and a half times more energy intensive, and polluting, than mechanical chilling.

Unfortunately, turbine driven machinery also suffers from the drawback that it is very inefficient, with only 30-35% of the input energy being converted to mechanical shaft energy. Electric motors are far more efficient at converting input energy into mechanical shaft energy, with efficiencies as high as 90%. Electric motors also have the advantage that they do not directly produce nitrogen oxides or carbon monoxide

[1] Figure taken from a 500 mmscfd plant using a Ruston TA1750 for mechanical refrigeration.

Therefore, an electrically driven refrigerant compressor, if powered in a certain way, is far more advantageous for the environment and energy efficiency. (Electricity generation also results in emissions of nitrogen oxides and carbon monoxide, so it is possible to argue that using electrical motors does not really stop pollution. However, this point will be addressed later.)

The EIA admits that around year nine of the proposed plant's twenty year lifespan, mechanical refrigeration will have to be installed. The natural drop off in the inlet pressure, as the wells are used and become depleted, will result in insufficient adiabatic expansion and cooling to meet the dew point requirements. Therefore, mechanical refrigeration will have to be installed and used to ensure the export quality of the gas. For anybody not familiar with gas processing, the installation of a major chilling plant is not a simple operation. Major construction will be required at the terminal in year nine, the extent of which will nearly equal the major construction currently proposed. This construction will once again result in large scale disruption to the life of local residents. If it is taken into account that mechanical refrigeration is a more efficient processing technique than adiabatic expansion, it will be required in year nine of the terminals life anyway, and local residents should be inconvenienced as little as possible by the proposed terminal, then Enterprise Oil should incorporate mechanical chilling into the current design of the terminal.

Two further issues should also be considered about the gas processing, and they are :-

1. The type of refrigerant used in any mechanical chilling system
2. The need for the installation of the proposed gas compressors

The EIA makes reference to the use of propane as the refrigerant medium in the proposed mechanical chilling system to be installed in year nine. Whether, a refrigerant system is installed either in year nine, or at the beginning when it should be present, it is surprising to see that propane is being considered as the chilling medium. Propane is a highly flammable gas that by its presence alone causes increased risk for local residents and terminal operators alike. If Enterprise Oil truly wants to reduce the risks for their operations staff, and local residents, they should not select either propane or ammonia as the chilling medium. Instead, a modern HCFC stable refrigerant should be selected. While HCFC still poses a potential threat to the environment, through depleting the ozone layer if released, proper controls should ensure minimal refrigerant is released from the system.

Whilst mechanical chilling is preferential to adiabatic expansion followed by gas compression, it is important to stress that it is the opinion of the author that the gas compression units still be completed in the original construction phase of the terminal. As the wells become depleted and the gas pressure falls it is likely that some compression will be required to meet the export pressure requirements. If the compressors are not installed in the original construction phase, this could again cause disruption for local residents at a later date when they are installed. As they will not be required in the initial stages of operation, if mechanical chilling is used, a set of bypass pipework will additionally be required. This however should not be difficult to incorporate in the design. It is important to stress that the compressors should be driven by electric motors, and not turbines as currently envisaged.

It is stated in the EIA that there is no external grid power for the site and therefore gas driven electrical generators are required. This is again an example of where Enterprise Oil could have chosen better equipment and have missed opportunities to minimise the impact of the proposed terminal on the environment.

It is virtually acknowledged by everybody involved in fossil fuel generation that the only way to meet the requirements of the Kyoto protocol is to build more combined heat and power (CHP) plants that increase the efficiency of generation by utilising waste heat. As well as helping to meet the requirements of the Kyoto protocol these plants also offer the advantage of cutting the net toxic emissions from power plants. At the proposed Bellanaboy Bridge terminal, Enterprise Oil plan to generate electricity using gas fired compression engines that really do not allow for large scale utilisation of waste exhaust heat. In addition to selecting engines that do not allow for much utilisation, Enterprise Oil have also not incorporated any waste heat utilisation into their design.

Earlier in this critique it was argued that the main mechanical shaft energy requirements of the terminal should be met by electric motors, due to the efficiency of energy conversion and the fact that electric motors produce no direct pollution. Despite electric motors not producing any direct pollution, it must be acknowledged that electricity generation does result in the emission of nitrogen oxides, carbon monoxide and in some cases, depending on the fuel, particulate emissions as well. However, if the electrical power for the electrical motors is supplied by a CHP plant, the net toxic emissions for the terminal overall can be greatly reduced.

At the proposed terminal, a 15 MW base duty (43 MW net thermal input) gas fired turbine generator, with a waste heat boiler, should be part of the design. This would meet the electrical power requirements of the plant, both at the beginning and end of its life, and its thermal power requirements, but reduce the output of nitrogen oxides and carbon monoxide by as much as 82% and 97% respectively.[2] Modern gas turbines can be equipped with abatement technology to produce less than two and a half parts per million of nitrogen oxides and one hundred parts per billion carbon monoxide per cubic metre of exhaust gas. It is more than likely at the beginning of the proposed terminals life, 15 MW of electrical power will greatly exceed the power demand of the plant. Therefore, the terminal design should incorporate a power cable to the grid, and any excess power should be exported for sale. As the nearest grid point seems to be some miles away, this will increase capital cost, but this should not be used as a reason by Enterprise Oil to install the plant if they truly care about the environment and the effects of their operations on the local environment.

The greatest advantage of a CHP plant would be that the proposed heating medium heater would not be required. It is stated by the EIA that the greatest impact on air quality will come from emissions of nitrogen oxides, and whilst nitrogen oxides will be one of the major emissions from the proposed terminal, more toxic emissions that are likely to have a very negative impact on health should be of greater concern. It is proposed by Enterprise Oil that the heating medium heater should be fired on stabilised natural gas condensate from the Corrib field. This is very concerning because it is likely that the condensate will contain a number of toxic heavy metals that will be released into the environment when the condensate is burnt. The EIA gives no major details on the different heavy metals present in the condensate, apart from mercury, and therefore the likely emission rate of them. It admits that if the condensate is not treated emissions of mercury will be unacceptable, but only mentions treatment of the condensate for mercury. However, the type of treatment for mercury removal is not described. The EIA should give details on all the metals present and the likely emission rates, as well as the details of the proposed treatment system for metal removal.

Another undesirable consequence of using condensate as fuel, is emissions of all particulates will be higher than if the plant was fired on gas or not used because of the presence of a CHP plant. The EIA gives no details of what the likely ambient concentrations of particulate matter

[2] Based on the figures calculated in appendix I of this critique

Appendix E

Corrib Gas Pipeline Project

Report on Evaluation of Onshore Pipeline Design Code

Report prepared by:

Andrew Johnston

28 March 2002

28 March 2002

Corrib Gas Pipeline Project

Report on Evaluation of Onshore Pipeline Design Code

Table of Contents

Corrib Gas Pipeline Project

Report on Evaluation of Onshore Pipeline Design Code

1.0 Introduction

Enterprise Energy Ireland Ltd is developing the Corrib Gas Field located approximately 65 km offshore from the County Mayo coastline. The gas is transported from the offshore facilities to the onshore terminal via a 91 km long 20" pipeline, 9 km of which is routed onshore from the landfall to the terminal.

The onshore section of the Corrib Gas Pipeline operates under certain conditions which are unusual, and consequently it is important that careful consideration is given to the selection of the pipeline design code, to ensure that the design takes into account best public safety considerations.

In order to investigate both the applicability of the selected design code, and how the Corrib Gas Pipeline design and operating conditions conform to the code requirements as well as internationally accepted design and construction techniques, this report presents the following:

- An evaluation of those codes which are relevant to the design of onshore gas pipelines, and
- An assessment of design and construction aspects which affect the integrity of the onshore pipeline section.

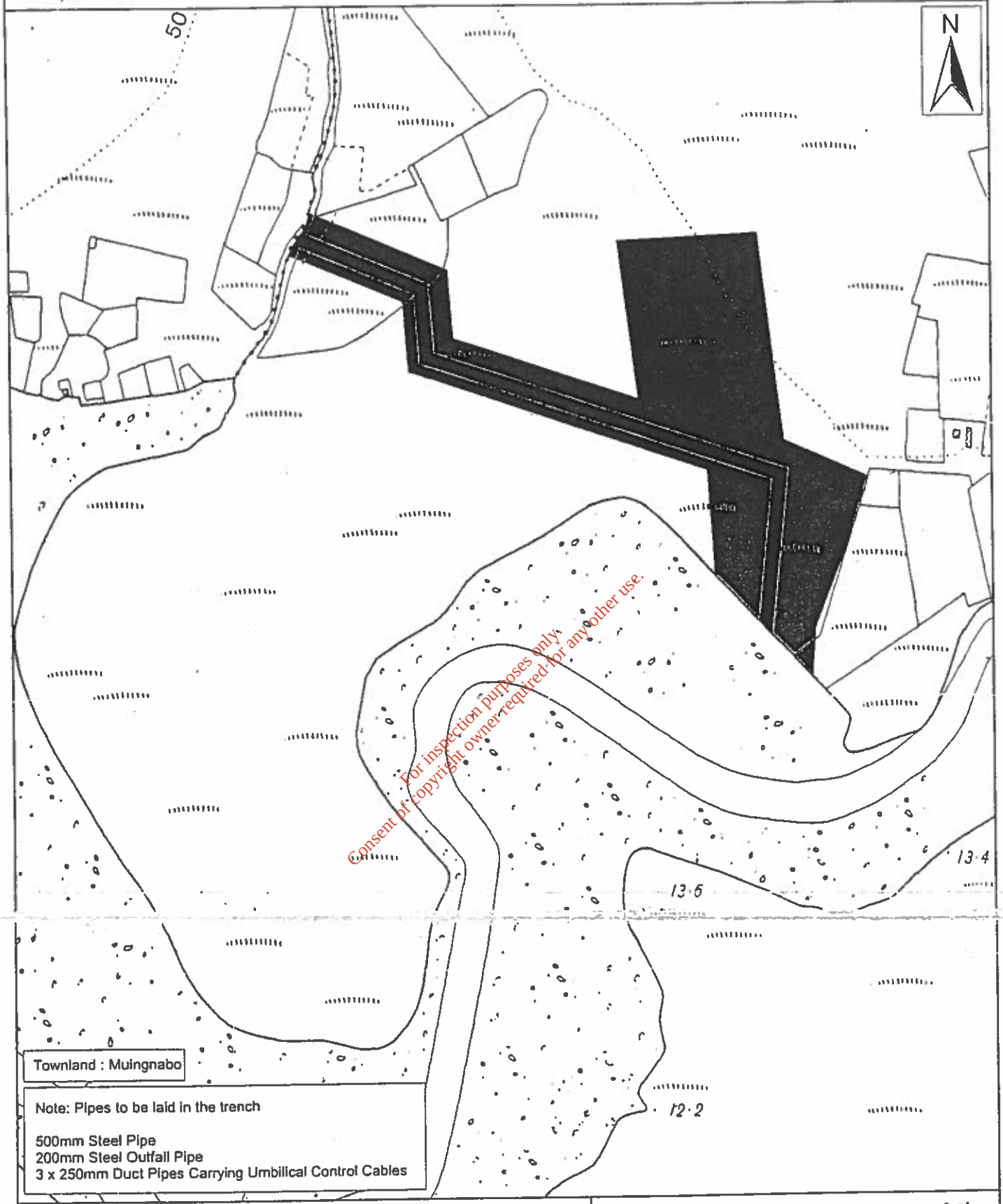
In doing this, the report identifies the following key aspects of pipeline design and construction which have particular relevance to the Corrib Gas Pipeline, and comments on how the design accommodates them, taking into account the specified code requirements:

- Design methodology
- Operating conditions
- Pipeline corrosion
- Public Safety
- Welding and testing
- Pipeline material quality
- Protection from interference

The report addresses the whole length of the onshore pipeline, from the landfall point to the terminal, including the two crossings of Sruwaddacon Bay, and the road crossings. The limits of the onshore pipeline are from the mean low water level to the first valve upstream of the pig receiver at the terminal and this section of pipeline includes a valve station near the landfall.

The report uses as a basis design documentation prepared by Enterprise Energy Ireland Ltd., J P Kenny Ltd. and Granherne/Allseas, and

Appendix 4



Townland : Muingnabo

Note: Pipes to be laid in the trench

500mm Steel Pipe
200mm Steel Outfall Pipe
3 x 250mm Duct Pipes Carrying Umbilical Control Cables

PROJECT CORRIB - OFFSHORE LANDLINE

Owner/Reputed Owner (shown in yellow):

Name: Teresa McGarry
Address: Gortacrogher, Rossport, Ballina, County Mayo

Approximate Permanent Wayleave: Length	725m	Width 14m
Approximate Permanent Acquisition Area (shown in Red):	10150 sq m	
Approximate Deviation Area (shown in Green):	64107 sq m	
Approximate Total Area:	74257 sq m	

Ordnance Survey Reference No(s): 992-B

Corrib Field Development Project
Enterprise Energy Ireland Limited
Corrib House
52 Lower Leeson Street
Dublin 2

Enterprise Oil

Drawing Ref.: 22257/OD10/30660
Sheet 1 of 1

Drawing By N Meadows

Based on Ordnance Survey Ireland by permission of the Government. Licence No EN0003200 Copyright: Government of Ireland.

Scale: 1:5000

Version: D

Appendix G

The recent report by the Western Development Commission has shown that the region has lagged behind the

130 jobs during con ruction and up to 60 direct and indire jobs during operation.

of the Corrib field.

CORRIB natural gas News Letter

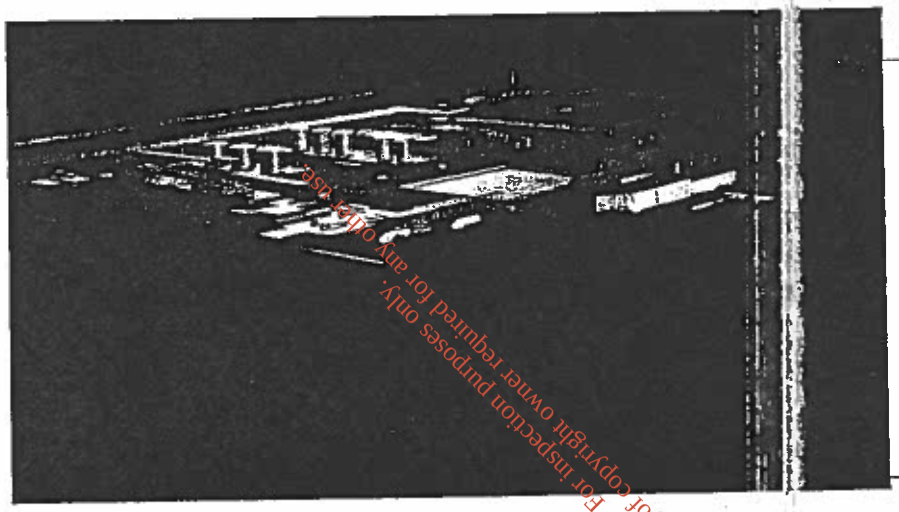
Issue 1 August 2001

The Bellanaboy Facility

A dedicated team has been working on the development of the Bellanaboy facility to ensure top quality design and excellence in environmental standards, as well as compliance with the highest European standards of environmental protection.

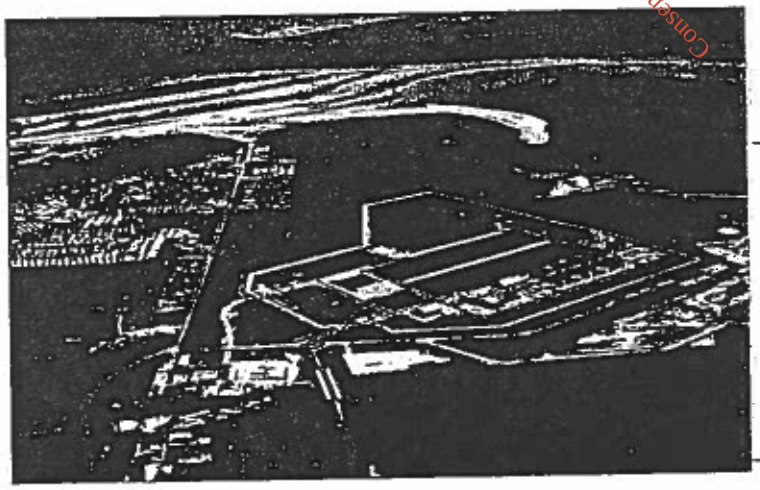
The facility will comprise a number of attractively designed low-rise buildings. These include administration, control room buildings, laboratory and power generating buildings as well as offices and a staff canteen.

The building finishes have been selected to merge with the local landscape in an attractive manner. The site, which was bought from Coillte, is well screened from adjacent roads by mature trees and it has been used over the years for research in improved crop productivity. For the most part, the facility will not be visible from the surrounding road network.



An architectural model of the proposed Onshore Gas facility, Bellanaboy, County Mayo.

The proposed Bellanaboy facility, which is subject to planning permission and Environmental Protection Agency licensing, is designed to world-class standards and will look broadly similar to the onshore Point-of-Ayr facility, North Wales. However, while the Point-of-Ayr facility is located close to the town of Talacre, as the photograph below shows, the Bellanaboy facility will be constructed within an existing forest and secluded behind a deep screen of trees around the site perimeters.



he Point-of-Ayr Onshore Gas Terminal - Broadly comparable in ze and style to the proposed Bellanaboy facility.

eveloped at a cost of £1.1 billion, the Point-of-Ayr Terminal nploys approximately 550 people and contributes an estimated 5 million in goods and services into the local economy each ar. The Point-of-Ayr Terminal built in 1995, has made a ubstantial contribution to attracting new industry into the region nd is a source of considerable pride for the local community.

Mayo County Council
Aras An Chontae
Castlebar

Ref No.: P03/3343

30/01/2004

Brid & Teresa McGarry
Gortacragher
Rossport
Ballina
Co. Mayo

A Chara

I wish to acknowledge receipt of submission received from you on 28/01/2004 in connection with planning application by SHELL E & P IRELAND LIMITED for CONSTRUCT GAS TERMINAL FOR THE RECEPTION AND SERAPATION OF GAS FROM THE CORRIB GAS FIELD, AND FOR A PEAT DEPOSITION SITE, RESPECTIVELY. THE DEVELOPMENT WILL CONSIST OF THE CONCURRENT DEVELOPMENT OF TWO SITES LOCATED 11 KILOMETRES APART, APPROXIMATELY, AND IDENTIFIED AS THE SITE OF THE GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS FROM THE CORRIB GAS FIELD IN THE TOWNLAND OF BELLAGELLY SOUTH AND THE SITE OF THE PEAT DEPOSITION SITE IN THE TOWNLANDS OF SRAHMORE AND ATTAVALLY, BANGOR ERRIS. THE DEVELOPMENT AT THE BELLAGELLY SOUTH SITE WILL CONSIST OF: A GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS INCLUDING PLANT AND EQUIPMENT; PROVISION OF 4,935 SQ M (GROSS FLOOR AREA), APPROXIMATELY, OF BUILDINGS; ACCESS ROADS; 40 NO. CAR PARKING SPACES; AND ANCILLARY DEVELOPMENTS, OF WHICH 13 HA, APPROX, WILL BE DEVELOPED INRESPECT OF THE GAS TERMINAL'S FOOTPRINT. THE PROPOSED DEV. WILL OF THE BELLAGELLY SOUTH SITE WILL ALSO CONSIST OF; THE EXCAVATION AND REMOVAL OF 450,000 CUBIC M at BELLAGELLY SOUTH SRAHMORE ATTAVALLY.

The matters referred to by you will be taken into consideration by the Council before a decision is made on the application. Notice of the Council's decision on the

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(a) posting the notice directly to you; or

(b) publishing the notice in a newspaper circulating in the area where the proposed development is situated.

Please note that in the event of an appeal being lodged by you, An Bord Pleanala will require a copy of this letter of acknowledgement.

Mise, le meas

RUNAI CHONDAE

MAYO COUNTY COUNCIL
RECEIVED
1 APR 2004
PLANNING & DEVELOPMENT

Rossport South
Ballina
Co. Mayo

1st April 2004

Mr Ian Douglas S.E.P.
The Planning Section
Mayo County Council
The Mall
Castlebar
Co. Mayo

Re : Planning Application Ref No P03/3343 as submitted by Shell E & P Ireland Ltd.

Dear Mr Douglas,

This is a submission based on planning application P03/3343 and the information submitted by the developer to Mayo County Council on 11th March 2004 in response to a request by Mayo County Council for further information on 17th February 2004.

We refer to the above and wish to make a number of brief observations.

The traffic management plan : During trenching operations along the pipeline route we know there will be a significant amount of peat removal, at least 5 km. up to the gas refinery and again on the Bord Gáis pipeline route from Ballinaboy to Bangor. We know this peat cannot be stored on the wayleave width, therefore we feel Shell E & P Ireland Ltd. have not accounted for the proper amount of lorry movements. It is also unthinkable that the developer proposes to haul all material to the landfall site on the Glenamoy to Glengad road via Dooncarton (recent landslide location).

Disposal of peat : Given the information supplied to Mayo County Council by Bord na Móna it appears that Bord na Móna plan to continue with their reputation i.e. to silt every river and stream in the area. Bord na Móna's plan to dry peat in windrows over eight days (covering the same windrows in adverse weather) is a complete joke.

The stability of the pipeline in deep peat is of major concern to us and has not been addressed at all by the developer. A specific committee was set up (Marine Licence Vetting Committee) to advise the Minister for the Marine and Natural Resources Mr Frank Fahey on issues relating to the environmental aspects of the proposed development, but we feel they were issues outside their remit i.e. peat issues and pipelines. We have now become aware that four members of the original seven are no longer on the committee of the M.L.V.C. This is very reassuring !!!

We have taken the opportunity to look at the submissions on the public file at the planning offices of Mayo County Council. There are a number of submissions based solely on personal gain and with a short term view. Our submission is based on health and safety. In its present form the proposed development is a disaster waiting to happen. Some of the submissions believe this project will benefit tourism in Erris. However we fail to see how a gas refinery with possible evacuation plans in progress because of gas leaks and flaring etc. would attract tourists.

Let us say once again that we are not objecting to gas in Erris. However we have serious concerns in relation to the manner in which it is proposed to bring this gas ashore **at any cost**, regardless of our health and safety, damage to the environment and little or no benefit to the area. We trust that Mayo County Council will take our concerns on board and refuse to grant planning permission to this proposed application.

Yours sincerely

Mary Corduff.

Mrs Mary Corduff and family
(Concerned residents)

Mayo County Council
Aras An Chontae
Castlebar

Ref No.: P03/3343

02/02/2004

03/3343

MAYO COUNTY COUNCIL
RECEIVED
1 APR 2004
PLANNING & DEVELOPMENT

Ms Mary Corduff & Familly
Rossport South
Ballina
Co. Mayo

A Chara

I wish to acknowledge receipt of submission received from you on 30/01/2004 in connection with planning application by SHELL E & P IRELAND LIMITED for CONSTRUCT GAS TERMINAL FOR THE RECEPTION AND SERAPATION OF GAS FROM THE CORRIB GAS FIELD, AND FOR A PEAT DEPOSITION SITE, RESPECTIVELY. THE DEVELOPMENT WILL CONSIST OF THE CONCURRENT DEVELOPMENT OF TWO SITES LOCATED 11 KILOMETRES APART, APPROXIMATELY, AND IDENTIFIED AS THE SITE OF THE GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS FROM THE CORRIB GAS FIELD IN THE TOWNLAND OF BELLAGELLY SOUTHLAND THE SITE OF THE PEAT DEPOSITION SITE IN THE TOWNLANDS OF SRAHMORE AND ATTAVALLY, BANGOR ERRIS. THE DEVELOPMENT AT THE BELLAGELLY SOUTH SITE WILL CONSIST OF: A GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS INCLUDING PLANT AND EQUIPMENT; PROVISION OF 4,935 SQ M (GROSS FLOOR AREA), APPROXIMATELY, OF BUILDINGS; ACCESS ROADS; 40 NO. CAR PARKING SPACES; AND ANCILLARY DEVELOPMENTS, OF WHICH 13 HA, APPROX, WILL BE DEVELOPED INRESPECT OF THE GAS TERMINAL'S FOOTPRINT. THE PROPOSED DEV. WILL OF THE BELLAGELLY SOUTH SITE WILL ALSO CONSIST OF; THE EXCAVATION AND REMOVAL OF 450,000 CUBIC M at BELLAGELLY SOUTH SRAHMORE ATTAVALLY.

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Mise, le meas

pp RUNAI CHONDAE

4 Pages including Cover

03/3343

Observations and comments on the Corrib Gas Field Development: Response to request for further information including Appendix H: Traffic Management Plan

Ref - PO3/3343

Submitted by - Martin Harrington
Tallaghard
Iversala,
Ballina,
Co. Mayo.

1. TENORM
2. TRAFFIC re. DMNR Consent

Volume 1, item 17, 3.5

Having previously requested clarification on how Shell propose to deal with the issue of TENORM. I was surprised to see that there is still no information forthcoming and that they revert to reliable NORM. TENORM is a well documented phenomenon of the gas industry and the following information may be of some use to concerned parties:

TENORM – "Naturally occurring radioactive material, not subject to regulations under the Atomic Energy Act disturbed or altered from natural settings, or present in a technologically enhanced state due to human activities, which may result in a relative increase in radiation exposures and risks to the public above background radiation levels."

Technologically enhanced – "Technologically enhanced means that the physical, chemical, radiological properties and concentrations [of NORM] have been altered such that there exists a potential for;

- Redistribution and contamination of environmental media (soil, water and air)

- Increased environmental mobility in soils and groundwater.

- Incorporation of elevated levels of radioactivity in products and construction materials.

- Improper disposal or use of disposal methods that could result in unnecessary and relatively high exposures to individuals and populations via any environmental pathway and medium.
(Health Physics Safety NORM Working Group. See also Euratom Council Directive 96/29)

I would, therefore, once again request clarification on the issue of TENORM.

The Traffic Management Plan submitted on behalf of Shell completely disregards one vital point contained in the letter of Consent issued by Minister Ahern on 15-4-2002 which specifically states that - " Construction traffic management shall be such as to avoid peak hours and particularly those hours when children will be likely to be going to or coming from school". The failure to address this point leads one to conclude that either ;

(a) The entire traffic management plan is fundamentally flawed and needs to be completely re-written in order to comply with the above - mentioned ministerial directive etc ;

(b) The aforementioned letter of Consent is merely worthless paper to be conveniently ignored by the developer and other vested interests and therefore brings into question the validity and/or necessity of the entire project.

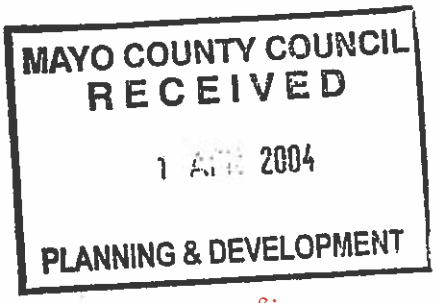
It would seem, therefore, that Mayo County Council has been placed in a somewhat invidious position. Rejection of the proposed traffic management plan would incur the wrath of Shell, and acceptance of it would imply that Mayo County Council ignore ministerial directives and have little or no regard for the safety of schoolchildren.

Mayo County Council
Aras An Chontae
Castlebar

Ref No.: P03/3343

02/02/2004

Mr Martin Harrington
Tallaghan
Geesala
Ballina
Co. Mayo



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Mise, le meas

RUNAI CHONDAE

Gortacragher
Rossport
Ballina
Co. Mayo

7911
€20 cash
1/4/04

1st April 2004

Mr Ian Douglas S.E.P.
The Planning Section
Mayo County Council
The Mall
Castlebar
Co. Mayo

Re : Planning Application Ref No P03/3343 as submitted by Shell E & P Ireland Ltd.

Dear Mr Douglas,

This is a submission based on planning application P03/3343 and the information submitted by the developer to Mayo County Council on 11th March 2004 in response to a request by Mayo County Council for further information on 17th February 2004.

As an owner of property within 0.5 km of the proposed terminal (refinery) I am concerned about the proposed development and its adverse effects as outlined at the various stages of the planning process to date. It creates a health and safety hazard which will result in my private property being totally devalued.

I request that Mayo Council Council refuse planning permission for this totally inappropriate development.

Yours sincerely

John Mc Garry

John Mc Garry (property owner in Bellygelly South, Glenamoy, Ballina, Co. Mayo)

MAYO COUNTY COUNCIL
RECEIVED
1 APR 2004
PLANNING & DEVELOPMENT

SUBMISSION

Re P03/3343 - Further information requested

Item 1, Vol. 1. – Traffic Management Plan

Minister's Consent

The first thing to note about the Transport Management Plan is that it was specifically required as one of the conditions of consent by the Minister of the Marine in his communication[1] of 15th April, 2002. It is consequently extraordinary that it had to be requested as further information as recently as 17th Feb. 2004 by the Planning Authority. It should have been included in the EIS. The fact that it wasn't adds to Shell's credibility gap, which dates back to the arrogantly inadequate responses made to An Bord Pleanala's request for further information, previously.

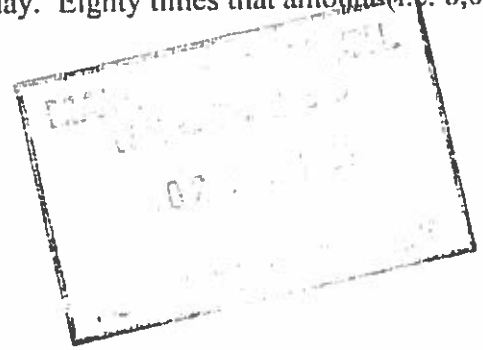
5.5 metre road width

However to deal with the present, what the Transport Management Plan envisages is so incredible that it defies ordinary commonsense and simple arithmetic in a most extraordinary way. For instance the ramped haul route will have an average width of 5.5 metres, and will include at least four 'single-lane-only' bottlenecks, yet we are asked to believe that up to 800, 2.5 metre-wide truck trips per day (averaging 80 per hour) can be expected to travel in opposite directions at up to 40 miles per hour on this 5.5m route while maintaining a very tight schedule on absolutely depends on free-flowing conditions for viability.

Shell

6" traffic clearance

Taken in more detail, it means that trucks will be passing one another at a rate of once every 90 seconds with a space of only 0.5m total clearance. This in turn allows only 0.16m (6") clearance at the road margins on either side and 0.16m (6") between the vehicles themselves. However, the full picture is even more implausible in that the margins are admittedly very prone to subsidence so that a 6" (0.16m) clearance cannot be considered safe even for ordinary rates of HGV traffic, say 10 per day. Eighty times that amount (i.e. 8,000%) places it beyond all belief.



Independent Expert Evaluation

Shell is effectively presenting 'desk-studies' as workable solutions when, in fact, they fail to stand up to even preliminary scrutiny. It is outrageous, consequently, that these proposals are not being subjected to independent expert evaluation such as the ERM Report, DNV Report, Posford Haskoning Report and Peer Review Group Report which were commissioned in respect of the previous application. Those reports provided a credible basis for identifying and addressing vital issues. The Planning Authority failed to commission such expert evaluation last time around and drew severe criticism as a result. Yet it is repeating this failure again despite several requests, oral and written, to do so.

Extreme Liberties

What seems likely in the event of this impractical scheme being approved is that once permission is achieved, extreme liberties will be taken with the conditions set. It will be forced through by hook-or-by-crook - like a battle field operation with little regard for consequences. Who can honestly envisage up to 800 trucks a day passing each other in opposite directions at up to 40 mph at 90 second intervals with no more than 6" clearance between the trucks themselves and between trucks and road margins? There will be extraordinary pressure on Shell E & P Ireland Ltd from Shell Ltd. to meet deadlines. E & P stands for Exploration and Development which represents the darker side of Shell, as the Ogoni people in Nigeria, and others world-wide have good reason to know. The international head office creates the pressure, local management must deliver – weather etc. is irrelevant.

Bottlenecks

Going further into the matter, consider what might happen in practice at each of the recognised bottlenecks and, especially, at the crossing of the main Belmullet to Ballina/Castlebar Road (R313) Consider the R313 where up to 80 trucks must cross every hour. This means a truck every 45 seconds. Unless they queue into groups of 5, or so, there is no way in which they can be accommodated. However such queuing is not possible as the various stages of unloading, wheel-washing recording etc. would be over-loaded by such crowding. Worse still, the crossings of the R313 are to be staggered so that the returning trucks cross in two stages, first into the west-bound lane and then, 1km on, they must cross the east-bound lane. This results in *non-Shell* traffic on the R313 being subjected to unmanageable levels of interruptions - one every 45 seconds and further complicated by involving two separate junctions 1km apart. As non-Shell traffic on that stretch runs at up to

2,000 per day (i.e. up to 200 per hour - 1 every 20 or so seconds) the schedule set by Shell of 400, 45-52 minute round trips cannot be remotely realistic.

Grid-lock

This is still only the tip of the iceberg. Each of the acknowledged single-lane bottlenecks would add to the potential grid-lock, especially those where the bottleneck is compounded by an extended curve and consequent poor vision. Equally, the impact on queues at loading, weighing, recording, wheel-wash and unloading apron, as well as egress from deposition site back into the traffic-flow on the public roads, is literally inestimable. Yet the Response does little more than gloss over such real and potentially insurmountable obstacles.

Credibility Gap

The credibility gap is unbridgeable. The attitude of Shell is clearly as arrogant as previously, being dismissive of the consequences for the public overall. This was evident at the re-convened Oral Hearing in that the constraints set by Shell in commissioning their plans invariably turned out to be the root cause of the fundamental defects, which only became apparent as the Hearing unfolded. 'Time constraints' and 'cost constraints' were the main culprits, as indeed they are in the current proposed Transport Management Plan. Setting a schedule for 400 round-trips per day, for example, is so tight and inflexible that it shows little comprehension of the consequences of the multiple clogging-points en route. In this regard, the target of 120 working days to transport the waste peat appears to have forced all other considerations out of the picture.

Weather

When the uncertainty of weather is added to the above picture, and it is recalled that work on Srahmore bog has always been seriously hindered by the unpredictability of the weather, all assurances re targets ring hollow. With milled peat Bord na Mona were working at all times with a comparatively dry material which was capable of being stockpiled for many months to enable targets to be met in the event of extended bad weather. In the current instance, Bord na Mona are faced with an essentially slurry-like[2] material, as raw peat is up to 95% water content. Bord na Mona cannot guarantee secure and containable conditions for such slurry-like waste either at the terminal or at the deposition site during inevitable periods of extended rainfall. The implications of such an untried and untested undertaking for traffic management during the projected six months of peat transportation are potentially of chaotic proportions.

Nothing in the Response addresses the inevitable log-jams and protracted delays inherent in such clearly intractable problems.

Time Constraints

The consequences of unrealistic time constraints imposed on transport schedules apply equally to the route preparation. It is acknowledged in the Response that the proposed haul route roads as they stand are entirely inadequate and that not only re-construction but widening is needed before transportation of peat could commence. However, time constraints prevent much of this work being carried out, particularly in regard to widening. When it is realised that only minimal widening was envisaged in the first instance, the real seriousness of the situation emerges. Anyone living in the Erris area who drives regularly on these 'rural non-national roads' knows how frequently truck drivers unfamiliar with peat-based roads lose control and topple over due to the margins giving way. Likewise, those who walk on such roads when heavy vehicles pass know how jelly-like the wobble under-foot feels. Short-cuts are being taken re route preparation and these immense consequences for all aspects of traffic management are not addressed by the Response.

Margins

Time constraints likewise preclude the type of work necessary to provide an adequate foundation for the margins of the proposed haul road. The report acknowledges that the type of reinforcing envisaged is so deficient that very substantial subsidence is expected and will be the focus of on-going repair work. At 5.5 metres, road width makes no allowance for safety, and with up to 800 trucks per day passing in opposite directions at 90 second intervals constant use of the margins will be the norm. In such circumstances, it is inevitable that dangerous conditions will frequently prevail and that accidents with potentially life-threatening consequences become not merely a possibility but a probability.

Cost Constraints

Time-constraints are only one of the fundamental, unrealistic impositions. Another which is clearly quite as fundamental and pervasive is cost-constraints. A 6.5 metre wide road, with no bottlenecks and a solid foundation, is the minimum requirement implied by the survey findings as presented in the current 'Response'. A road laid on bog is, in effect, 'floating' on the underlying peat and can never be stable. This is documented in the Response which acknowledges that peat-based roads are subject to surface break-up and to frequent,

significant and unpredictable subsidence as the level of groundwater fluctuates with changing weather conditions. Every regular road-user in the Erris area knows that an apparently good road can deteriorate into a 'humps-and-hollows' condition in dry weather. Ironically it is the 'good' weather which causes the most dramatic damage.

HGV's

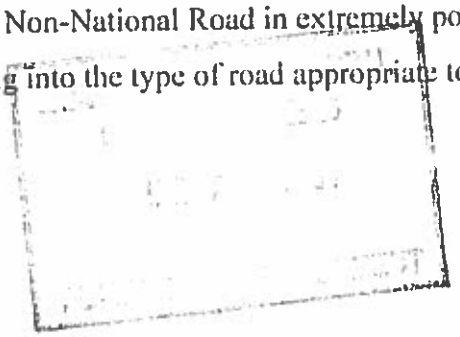
The relatively cheap, quick-fix solution proposed might be adequate for normal traffic as the quoted standard suggests but this standard is based on traffic use of only 200-1,000 per day over a design-life of 20 years. Heavy Goods Vehicles are assumed to account for 10% of that traffic (i.e. 20-100 HGV's per day). Up-grading this standard, as proposed, to the 1,000-2,000 vehicles per day level (i.e. 100-200HGV's) does not come anywhere near meeting the requirements of the projected six-month long, intensive use by 800 HGV's per day - and this is only Shell traffic. Nor does the use of a geosynthetics layer dispel legitimate fears as there is nothing 'normal' about 800 HGV's per day on top of the "approximately 2,000 vehicles per day (which) have been recorded on this section of road" (R313). From this we can infer that another 200 HGV's must be accommodated bringing the total to 1,000 HGV trips per day on this section of the R313.

Rural Non-National

Another clear inference is that the standard appropriate to 1,000 HGV trips per day would be that suited to an overall vehicle usage rate of 10,000 vehicles per day (i.e. where HGV's account for 10% of traffic.) Obviously HGV's have a wear and tear effect on roads exponentially greater than light vehicles usage so that it is National Road Standards, not Rural Non-National Road Standards as proposed, which should apply. In like manner the 20 year design life, and the 10 year maintenance life, standards are not appropriate. Deterioration resulting from intensive use is not only not directly proportional to rate of use (i.e. the number of vehicles per day) but is likewise not directly proportional to the length of period of use. Intense usage over a concentrated period of time creates energy build-up effects and resonance related damage of extraordinarily disproportionate levels. On unpaved roads in East Africa I have witnessed this phenomenon very graphically.

Planning Authority

In short, there is no way that a Rural Non-National Road in extremely poor condition can be transformed by superficial re-building into the type of road appropriate to handling National



Road levels of HGV usage, especially when it is a peat-based Rural Non-National Road. Time-constraints and cost-constraints place consultant/planners in an invidious position and so Planning Authorities must maintain a bottom-line re minimum acceptable standards. If they fail to counterbalance those negative pressures to produce 'quick fix' and 'cost-effective' solutions, then the community must pay the price in terms of upheaval, vastly increased risks and potential tragedy. Reliance on the Observational Method has been thoroughly discredited so ultimate responsibility rests solely on the Planning Authority.

Footnotes: Item 1:

1. see copy of this letter supplied in Shell's Response, Item 2, Vol 1.
2. The exhaustive borehole and auger test results done for the previous application show how rapidly peat changes to a slurry-like consistency beneath the relatively firm top 12" layer.

Vol.1 Item 2: Structural Stability of Pipelines

Pipeline Pressure

Shell's response to this Item is again both evasive and minimal. The safety implications underlying this issue are potentially the most fundamental and explosive of all the issues raised by the Planning Authority. Yet nothing in Shell's reply acknowledges the dangers inherent in the import pipeline which carries raw gas at extremely high pressure from the gasfield to the terminal. Instead, the Response refers to the import pipeline and the export pipeline as though they were similar in all respects. This is precisely the kind of misleading, simplistic response to fundamental issues which increases the credibility gap concerning Shell's[1] openness and accountability.

Safe Management

There is as much difference between the import and export pipelines as between a raging torrent and a smooth-flowing river. The import pipeline carries raw gas at full gasfield pressure and has all the added complications which impurities, highly flammable additives

(methanol) and liquid slug build-up create for safe management. The export pipeline, by contrast, carries purified gas at much reduced pressure levels. Both pipelines present major potential safety threats to the populated areas they pass through, but the threat inherent in the import pipeline is of a far greater magnitude. To portray it otherwise, and thus ignore the enormous safety implications, is grossly misleading.

Unique Location

The basis for this contention lies in the fact that there is no other instance <u>world-wide</u> of a pipeline at gasfield pressure carrying raw gas 9km inland (and through populated areas), as confirmed[2] by Mr. David Taylor, consultant, at last year's Oral Hearing. The norm is to de-pressurise raw gas as close to the well-head as possible and to process it off-shore. In the minority of instances where raw gas is brought ashore for processing, it is de-pressurised and refined in the immediate vicinity of the shore (e.g. Ayr, and Bacton in UK). The enormity of what is proposed for Bellanaboy is best highlighted by the fact that there is ***<u>no</u>*** recognised standard for transmission of such high pressure gas applicable to the current context. The ***<u>Andrew Johnson Report</u>***, which is the only expert evaluation of the on-shore section of the import pipeline, conservatively states:

- "The onshore section of the Corrib Gas Pipeline operates under certain conditions which are unusual. (P.3) …
- It is rare for an onshore pipeline to transport unprocessed well fluid in the vicinity of inhabited buildings. (P.9) …
- The project design basis for the onshore pipeline states that IS328 will be used as a supplement to BS 8010 where this is considered to be beneficial. (P.9) … It is not normal practice for sections of one code to be substituted by sections from another. (P.11) …
- An upper pressure limit is not defined although the code states that in general practice, the maximum pressure ranges up to 100bar.

Nothing in the absolutely innocuous Response to Item 2 alerts one to such fundamental reservations being on record. As stated by Johnson, the highest maximum pressure recognised by industry standards is 100bar whereas the import pipeline is intended to operate at up to <u>150bar</u> - this is analogous to a speed limit of 100kph (62mph) being exceeded by speeds of up to 150kph (93mph)!

Written Confirmation

Shell's Response is devoid of detail and can in no way be construed as an adequate reply to the Planning Authority's request for "written confirmation from the relevant regulatory authority that the design of the proposed gas pipeline from the terminal compound to the site boundary is suitable to ensure the structural stability of the pipelines constructed in deep peat soil". The truth of the matter is that the Minister's letter of 15th April 2002 merely outlines the parameters within which the consent is to be granted. Shell makes no attempt to identify any particular item in this letter as constituting "written confirmation…that the design of the proposed gas pipeline…is suitable to ensure structural stability….in deep peat soil" because there is no basis for such a claim in the letter. The question asked by the Planning Authority was quite specific, the response from Shell is so vague as to constitute outright disregard for the Authority and for the Planning legislation underpinning it.

DET NORSKE VERITAS

The Det Norske Veritas Report was prepared in response to "an ABP request that the Health and Safety Authority (HSA) make recommendations to ABP on the acceptability of the proposed development under the Seveso II Directive". This Report indicates how extraordinarily weak are the bases on which absolutely vital aspects of the proposed import pipeline are intended to proceed. It leaves no doubt about the imperative need for a clear and categorical answer by Shell to **Item 2**. It states:

- "A recent analysis of failures in European gas pipelines (Bolt, R) indicates that the major causes of pipe rupture are external interference and ground movement" (3.4) …

The 22 landslides recently in this locality caught the media headlines in a dramatic way but instability of peat is an everyday fact of life which cannot be ignored with impunity. When taken in the context of the pipeline itself being alive with kinetic energy of enormous proportions, the potential dangers become inescapable. The 150bar pressure (1 tonne per square inch) contained within the pipeline can make it behave like a poorly secured high-pressure firehose, only magnified many fold. This phenomenon is specifically identified in the Minister's letter of 15th April 2002[3] in both Conditions 7: "to ensure that any pipeline lateral movement as a result of buckling has not left the pipeline exposed…" and Condition 8: "for mitigating upheaval buckling …". The instability of the peat added to the instability of

the pipe itself warrants credible assurances. The minimalist and evasive four short paragraphs tendered by Shell are gravely worrying.

- "There are a number of slugcatchers in operation worldwide, but the number of years operation without a failure is insufficient to derive a statistically valid failure frequency." (3.4) …

The whole concept of using a slugcatcher so far from the gasfield, and additionally so far from the shoreline, is highly questionable. The tendency for unmanageable slugs to form increases with distance from the gasfield. A comparison of alternative solutions[4], is legally required under EIS legislation - and ABP specifically requested such a comparison but to no avail. Shell refuses to consider any other option or to be forthright about the one chosen.

- "Table 3.1 Modes of Failure for Piping Systems: Out of a total of 1,014 failures, 303 defective pipe or equipment; 190 operator error; 129 overpressure; 92 Corrosion; 84 unknown; 49 impact; 44 wrong in-line equipment or location; 44 temperature (high or low); 35 external loading; 16 vibration; 17 other and 11 erosion." (3.4)

The information sought in Item 2 obviously had to do with safety yet the very little information supplied side-stepped this fundamental issue. DNV however did not evade the fact that accidents happen - and with far greater frequency than is acknowledged anywhere in Shell's EIS. What is significant in this table is that well over 50% of failures were due to human error or inadequate care.

- "Leak frequencies have always been a major source of uncertainty in risk analysis of onshore plants. No comprehensive collection of leak frequency experience has yet been published for onshore process equipment. Onshore risk analyses have traditionally used leak frequencies whose origin is obscure, typically dating from the 1970's and which cannot be traced to any actual data from any specific group of plants (e.g. USNRC 1975), but are nevertheless the only available onshore sources."(11.7)
- "Most of the available onshore leak frequencies come from obscure sources, with no information about the origin, quality or analysis of the data. It is even possible that they were judgmental sets of frequencies, not based on any data at all, which have become accepted by virtue of frequent repetition. They have never been corroborated by an onshore data set with defined hole sizes." (11.7)

These excerpts highlight the extraordinary bullishness which characterises the Exploration and Development side of the industry. It's typified by an attitude towards standards which treats them as obstacles to be overcome and, so long as the risks involved don't threaten Shell's 'costs' and 'deadline' targets, they'll drive ahead. Risks to the community and to the public at large are acceptable it seems – so long as they don't attract dramatic media interest.

Footnotes Item 2:

1. A distinction between Shell Ltd. and Shell E&P Ltd. is appropriate in that it is invariably the Exploration & Development arm of Shell which gives rise to negative criticism worldwide.
2. see An Bord Pleanala Report, *PL16 - 126073* (p. 76)
3. see footnote 1, Item 1, above
4. [There is in fact a revolutionary new process which uses gasfield pressure to create supersonic gas speeds within a 6ft long tube, thus separating out impurities. It was developed by a Shell subsidary, has passed all commercial testing and is already in use in Nigeria and Indonesia. It has been hailed in Exploration & Development circles as the biggest breakthrough in the past 40 years. Its significance for Corrib is that it would permit off-shore refining of gas on an unmanned rig which in turn would permit gas to be piped ashore without any methanol or other additive. http://www.twisterbv.com/, the website for this technology, is easily accessible and very user-friendly.]

Conclusion

Due to the time-constraints imposed by Shell/Mayo CC we were deprived of 10 of the 21 days allowed for reading through the very substantial volumes of the Response. Availability of copies and misinformation have thus caused our submission to be curtailed to the two most clearly incongruous Responses.

The common denominator highlighted by us is the arrogant inadequacy of Shell's Response and its disregard for the statutory jurisdiction of the Authority. Ironically, we welcomed Shell's take-over of Enterprise believing the enlightened attitude to stakeholders and the environment, as detailed at length on Shell's website. Experience has changed our expectations to the point of outright scepticism, and media reports in recent months amply reinforce this view. The following excerpt from the ABP Report says it all:

> ***"The Applicant's Response has unquestionably failed to address the further information requested by the Board. It was not a complicated request and in my view it was comprehensible."*** (P.207)

Edward & Imelda Moran
Belmullet & Bunowna

12 ✓

FAX TRANSMISSION

Laurel Villa, Chapel Street
Belmullet, Co Mayo,
Ireland

DE / FROM	Edward Moran
A / TO	Mayo Co Council Ian Douglas Planning Officer
Page(s)	2
/	02/04/04 17:20

Message

I phoned just now about the possibility of having a single typing error on page 1 of my submission re PL03/3343 re Further Information corrected. Attached is a copy of the first page with the error near the end of paragraph 2 struck-through and the correct word in brackets beside it: that is 'on' is to be deleted and 'which' substituted in its place. Both are underlined for your attention only.

With thanks,
Edward Moran

My Report
EPA — Put [illegible] Report dealing with EPA/Planning — S. ??? of 2000 Act.
— [illegible] of [illegible] can you cite Environmental [illegible].
— Check EPA submission re. environmental issues

Fax : 097 81225 Phone : 097 81225

3.22pm 2nd Apr. a

Mr Moran,

I phoned yesterday afternoon to clarify that the letter sent out by you of 16th March was not actually posted by MCC until 18th March and was received by us on 22nd March. We had 11 days to make a submission.

Will we get a receipt for this?

[signature]

PLANNING DEPARTMENT
MAYO COUNTY COUNCIL
ARAS AN CHONTAE
CASTLEBAR
CO. MAYO
094-24444

30-01-2004 13:40:48

Receipt No. : PLAN0/5611

EDWARD & IMELDA MORAN
CHAPEL STREET
BELMULLET
CO. MAYO

~~MISC RECEIPTS - PLANNING 4000~~
SUBMISSION ON P03/2343

Total 20.00 EUR
15.75 IEP

Tendered:
Cheque 20.00

Issued By : Orla Burns
From: PLANNING SECTION

Douglas Iain

From: Condon John
Sent: 09 April 2004 19:47
To: Douglas Iain; Moran Joe
Subject: FW: p03/3343

Iaindouglas080404.doc

-----Original Message-----
From: Edward Moran [mailto:edward.moran@ireland.com]
Sent: 08 April 2004 16:39
To: Co_Secretary
Subject: p03/3343

For the attention of Mr. Iain Douglas Senior Planning Officer.

faxed a copy of the attached letter to you a few moments ago and noted since that your name was misspelled. Please print this corrected copy for the Public File.

Regards,
Edward Moran

Laurel Villa,
Chapel Street,
Belmullet,
Co. Mayo.

Mr.Iain Douglas,
Senior Planning Officer.
Mayo County Council.

8th April, 2004.

Dear Mr. Douglas,

Re: **NPWS (Duchas) Submission**

I have checked Planning Regulations 2001, Section 28 which you invoked just now in our phone conversation. You stated that this is the basis for classing prescribed bodies as coming under Planning & Dev. Act 2000, Section 38.1. c) and consequently refusing to make their submissions available on the Public File. Section 28 does not make any reference to The Planning Authority as ***requesting*** a Report:

> **Notice to certain bodies.**
> **28. (1) Where a planning authority receives a planning application, the authority shall,** except in the case of an application in respect of which a notice in accordance with article 26(5) has been or will be given, **send notice in accordance with sub-article (2) as soon as may be after receipt of the application—**

This merely stipulates that they be informed. Thereafter the prescribed body makes a submission in response to its own statutory responsibilities ***and not***, as you claim, at your behest.

The wording of Section 31 bears out this point very clearly in that ***it draws no distinction*** between the submissions of prescribed bodies and members of the public:

> **Notification of decision on planning application.**
> 31. Notification of a decision by a planning authority in respect of a planning application shall be given to the applicant and to **any other person or body who made a submission or observation in accordance with articles 28 or 29** within 3 working days of the day of the decision and shall specify— ....

I call upon you therefore to make the submissions of prescribed bodies available on the Public File as a matter of right.

Thanking you for your attention,

Yours faithfully,

Edward Moran

Watters, Keith G SEPIL-EPE-T-IP
From: Carrigy, Mark W SEPIL-EPE-T-IP
Sent: 26 January 2004 10:52
To: Watters, Keith G SEPIL-EPE-T-IP
Subject: FW: BGE and pigging

-----Original Message-----
From: **Gallagher, Paul T SEPIL-EPE-T-IP**
Sent: 23 January 2004 14:15
To: 'Peter Clarke'; Eoghan Lynch - ARUP; Brendan Mangan
Cc: Carrigy, Mark W SEPIL-EPE-T-IP
Subject: RE: BGE and pigging

Peter,
Thanks a lot for that. It helps a lot.
Regards
Paul

Paul Gallagher
Onshore Pipeline Engineer
Shell E&P Ireland Ltd.
Corrib House, 52 Lower Leeson Street, Dublin 2, Ireland
Telephone: 353-(0)1-603-4810
Mobile: 353-(0)86-837-5879
E-mail: paul.gallagher@shell.com

-----Original Message-----
From: **Peter Clarke [mailto:PCLARKE@bge.ie]**
Sent: 23 January 2004 13:55
To: Gallagher, Paul T SEPIL-EPE-T-IP; Eoghan Lynch - ARUP; Brendan Mangan
Cc: Carrigy, Mark W SEPIL-EPE-T-IP
Subject: RE: BGE and pigging

Paul,
See attached wording.
regards
Peter Clarke

-----Original Message-----
From: Gallagher, Paul T SEPIL-EPE-T-IP [mailto:paul.gallagher@shell.com]
Sent: 23 January 2004 13:07
To: Eoghan Lynch - ARUP; Brendan Mangan - BGE; Peter Clarke - BGE
Cc: Carrigy, Mark W SEPIL-EPE-T-IP
Subject: FW: BGE and pigging

Eoghan / Brendan,

We recently received a request from the HSA as to the frequency of pigging of the BGE Linkline from the Corrib terminal. We would like to respond to this request in writing before Mayo County Council determines our Planning Application. Please

confirm if we could send a response along the lines of the following:

"BGE would carry out an initial pigging survey of the pipeline after installation and commissioning, which would determine a base line condition of the pipeline. Thereafter the Operations and maintenance of the pipeline would be undertaken in accordance with the recommendations of IS 328. Currently the frequency of internal inspection does not exceed 10 years but this is subject to ongoing review taking into account the good operating history on existing pipelines which have been internally inspected to date ."

Please advise if this is acceptable or alternate wording.
Regards
Paul

Paul Gallagher
Onshore Pipeline Engineer
Shell E&P Ireland Ltd.
Corrib House, 52 Lower Leeson Street, Dublin 2, Ireland
Telephone: 353-(0)1-603-4810
Mobile: 353-(0)86-837-5879
E-mail: paul.gallagher@shell.com

COMHAIRLE CHONTAE MHAIGH EO
MAYO COUNTY COUNCIL

TO: **County Manager** DATE: 29/04/04

FROM: Iain Douglas Senior Planner

SUBJECT: **Shell E&P Ltd. Gas Terminal at Bellanaboy and Peat Deposition Site Srahmore/Attavally.** **FILE:** P03/3343

I attach for your consideration my Report on the above Planning Application.

Having considered the Planning Application documents, the EIS, Further Information, the Technical Advice of the EPA and Health & Safety Authority, Reports and Submissions/Observations submitted I am satisfied that the proposed development is in accordance with the proper planning and sustainable development of the area. Accordingly, I Recommend that Permission be granted for the reason set out in the First Schedule and subject to the conditions specified in the Second Schedule attached.

Iain Douglas
Senior Planner

30/4/2004.

P03/3343 FIRST SCHEDULE.

Having regard to:

(a) the National policy with regard to the development of energy and natural gas resources in particular;

(b) the compatibility of the proposed development with the development strategies for the Border, Midlands and Western Region within the National Spatial Strategy;

(c) the Mayo County Development Plan 2003-2009;

(d) the character of the landscape of the site;

(e) the report of the National Authority for Occupational Safety and Health, being the competent authority in relation to land use planning under Article 12 of the Council Directive 96/82EC (Seveso II),

it is considered that, subject to compliance with conditions set out in the Second Schedule, the proposed development would not seriously injure the visual amenities or landscape character of the area, would not seriously injure the amenities or property values of residential properties or farms in the vicinity, would not be prejudicial to public health, would not endanger public safety or be otherwise contrary to the proper planning and sustainable development of the area.

P03/3343 SECOND SCHEDULE.

SCHEDULE OF CONDITIONS

GENERAL.

1. The development shall be carried out in accordance with plans and documentation submitted to Mayo County Council on 17th December 2003, 23rd December 2003 and additional information submitted to Mayo County Council on 11th March 2004, except where amended by the conditions set out hereunder.
   Reason: *In the interest of clarity and proper planning and development.*

2. The development shall be constructed in accordance with undertakings for measures to mitigate its impacts as set out in the Environmental Impact Statement lodged with Mayo County Council on 23rd December 2003 and in the additional information received by Mayo County Council on 11th March 2004 except where amended by the conditions hereunder.
   Reason: *To mitigate against any adverse environmental impacts resulting from the construction and operation of the development.*

3. Prior to the commencement of development the owners/developers (and their successors in title) shall enter into legally binding agreements and covenants with Mayo County Council pursuant to Section 47 of the Planning and Development Acts 2000 – 2002. These agreements and covenants shall provide inter alia for the following:

(i) To give effect to all undertakings given by the applicant and the requirements of Mayo County Council in relation to the landscaping of the site, to the maintenance and/or replacement of existing trees and provision of new planting to provide a permanent visual screen as shown on the Landscape Strategy (Shell Drawing No.'s COR-RS-LA-001, 002 and 003) submitted to Mayo County Council on 23rd December 2003.

(ii) The payment to Mayo County Council of all costs incurred by the Council on the repair, maintenance and rehabilitation of the road network arising from construction of the development and as determined by the road and bridge survey carried out prior to and post construction.

(iii) To ensure that all plant shall be disassembled and removed and that the site shall be restored to the satisfaction of Mayo County Council following the cessation of operations at the plant.

(iv) To ensure that the Transport Management Plan submitted on the 11th March 2004 and any amendments required by Mayo County Council is implemented.

(v) The acceptance by the developer of the composition, terms of reference and functions of the Project Monitoring Committee subject of Condition No. 16.

Reason: *To ensure the satisfactory completion of development authorised by the permission.*

ROADS & TRAFFIC MANAGEMENT.

Road Improvements.

4. Prior to the commencement of peat haulage operations and the importing of construction materials into the Bellanaboy site the developer shall, at its own expense, realign Regional Road R-314 in accordance with Mayo County Council Drawing No. 3225/04/02. The realignment shall be carried out under the supervision of Mayo County Council to an agreed design and specification.

Reason: *In the interest of traffic safety.*

5. The existing road side boundary along Regional Road R-314 at the proposed entrance to settlement ponds at the Bellanaboy site shall be set back in accordance with Mayo County Council Drawing No. 3225/04/03. The area between the edge of the carriageway and the new set back boundary shall be made level with the existing carriageway.

Reason: *In the interest of traffic safety.*

6. The maintenance, repair and upkeep of the strengthened haul routes Regional Road R-313, Local Roads L-12044, L-1204 and Regional Road R-314 from Bellanaboy Bridge to the main terminal entrance and all other roads in the region which are affected directly or indirectly by the proposed development throughout the construction period, shall be carried out by Mayo County Council and any costs incurred shall be paid by the Developer.

Reason: *To ensure the proper maintenance and upkeep of roads and bridges during construction.*

7. A road and bridge condition survey of the road network in the Erris region shall be undertaken by Mayo County Council, before and after the construction period. This survey shall determine the level of damage to the road network, if any, which would be attributable to the proposed development. The developer shall bear the cost of the survey and the cost of repairing any damage attributable to the proposed development.

Reason: *To ensure the proper maintenance and reinstatement of roads and bridges following construction.*

Traffic Management.

8. The developer shall comply with the provisions set out in the Traffic Management Plan submitted on the 11th March 2004 with regard to all aspects of transport generated by the proposed development. In particular the stated maximum number of 800 Heavy Commercial Vehicle (HCV) traffic movements per day along the primary haul route shall not be exceeded.

Reason: *In the interests of proper and efficient traffic management and residential amenity.*

9. The location of all road signs, advance warning signs, information signs according to the schedule set out in the Traffic Management Plan submitted on the 11th March 2004 shall be agreed with Mayo County Council prior to the commencement of haulage of any materials.

Reason: *In the interests of proper and efficient traffic management and traffic safety.*

Haul Routes.

10. Haulage of all materials required for the construction of the development at the Bellanaboy site shall be via Local Roads L-1204 and L-12044 and the section of the Regional Road R-314 from Bellanaboy Bridge to the main entrance to the terminal.

(i) Materials transported via Bangor shall use Regional Road R-313, the Local Road L-1204, the Local Road L-12044 and Regional Road R-314 as the haul route to the site.

(ii) Materials transported from Belmullet shall use the Regional Road R-313 the Local Road L-12044, the Local Road L-1204 and Regional Road R-314 as the haul route to the site.

Reason: *In the interests of proper and efficient traffic management and traffic safety during construction and to minimise damage to the public road system in the area.*

11. Haulage of all materials required for the construction of the development at the Srahmore site shall be via Regional Road R-313.
Reason: *In the interests of proper and efficient traffic management and traffic safety during construction and to minimise damage to the public road system in the area.*

12. The haul route and schedule of haulage for the construction phase of the development shall be clearly documented and published in a manner to be agreed with Mayo County Council. All vehicles hauling materials to the Bellanaboy or Srahmore sites shall have a clear notice visible to the public identifying that they are involved with the development.
Reason: *In the interests of proper and efficient traffic management and traffic safety during construction and to minimise damage to the public road system in the area.*

13. All vehicles leaving the construction area of the site shall pass through a wheel wash.
Reason: *In the interest of proper planning and sustainable development of the area.*

14. Vehicles transporting waste from the site shall operate under a Waste Collection Permit.
Reason: *In the interest of proper planning and sustainable development of the area.*

15. The developer shall ensure that no material shall leak or fall from vehicles while in transit transporting waste from the terminal site.
Reason: *In the interest of proper planning and sustainable development of the area.*

ENVIRONMENT

16. Prior to the commencement of development a Project Monitoring Committee (PMC) shall be established to monitor earthworks, surface-water run-off, drainage control, traffic management and road maintenance, implementation of the landscape plan and other environmental issues. The Project Monitoring Committee shall comprise of two representatives of the developer, two officials from Mayo County Council, one official from each of the North West Regional Fisheries Board, the Heritage and Planning Division of the Department of the Environment, Heritage and Local Government and the Environmental Protection Agency. The Committee shall be chaired by the Mayo County Manager (or his nominee) and the Committee may co-opt other members as required.
Reason: *To ensure effective monitoring during construction.*

Protection of Water Resources.

17. Prior to the commencement of development a maintenance programme for the silt traps and settling ponds shall be submitted to Mayo County Council for agreement. Any subsequent amendments arising from the construction phase or the requirements of Mayo County Council (following consultation with the Project Monitoring Committee) shall be agreed in writing. A record of all maintenance works shall be kept and made available to Mayo County Council and the Project Monitoring Committee. The developer or its contractors shall nominate the person responsible for the operation of the silt traps and settlement ponds.
Reason: *To prevent water pollution.*

18. All surface water discharges from the disturbed area of the site shall be through the regime of settling ponds and silt traps as set out in the plans and particulars submitted on 17th December 2003, the accompanying Environmental Impact Statement submitted 23rd December 2003 and Further Information submitted on the11th March 2004.
Reason: *To prevent water pollution.*

19. No lime/cement binder to be used for peat stabilisation or other deleterious matter as defined in the Fisheries (Consolidation) Act 1959 shall be allowed to discharge to surface waters.
Reason: *To prevent water pollution.*

20. All fuel storage areas and cleaning areas, particularly cleaning areas for concrete trucks shall be rendered impervious to the materials stored therein or substances cleaned there from and shall be constructed to ensure that no substance shall discharge from the area. In addition, tank and drum storage areas shall as a minimum be bunded, either locally or remotely, to a volume not less than the greater of the following:

(i) 100% of the capacity of the largest tank or drum within the bunded area; or
(ii) 25% of the total volume of substance which could be stored within the bunded area.

Reason: *To avoid the pollution of surface or ground waters.*

21. The developer shall maintain on site for the duration of the construction period an oil pollution abatement kit comprising of booms and absorbent materials. The nature and extent of the kit shall be agreed with Mayo County Council prior to the commencement of development.
Reason: *In order to prevent water pollution.*

22. The percolation area for the wastewater treatment system shall be located in position shown on Drawing No. COR-AR-SD-RF1-005 submitted on the 11th March 2004.
Reason: *In the interest of clarity and for the protection of public health.*

Rock Blasting.

23. Blasting of rock on the site shall be designed and operated so that

(i) Ground vibration arising from any blast carried out on the site shall not exceed a peak particle velocity of 12 mm/s in any one of three mutually orthogonal planes at the threshold of any house in the vicinity of the site.

(ii) The air over pressure arising from any blast carried out on the site shall not exceed 125 dB (linear) max peak level when measured outside the nearest house to the blast.

(iii) Blasting shall be confined to between the hours of 11.00am and 5.00pm, Monday to Friday

Reason: *In the interest of public health & safety.*

24. Arrangements for the advance notice of blasting shall be agreed with Mayo County Council, the details of which shall be made available to the general public by way of public advertisement.

Reason: *In the interest of public health & safety.*

Noise & Dust.

25. During the construction stage noise levels shall be kept to a minimum. Any activity which will elevate the pre-construction ambient noise levels by 5dB Leq shall be notified to the Project Monitoring Committee in advance. Any mitigation measures shall be put in place at least one week in advance before the scheduled activity. Advance notice of the schedule of planned activity which will elevate the pre-construction ambient noise levels by 5dB Leq shall be made available to the general public by way of public advertisement.

Reason: *In the interest of public health and residential amenity.*

26. Dust levels shall not exceed 130 mg/m² per day averaged over thirty days when measured at the site boundaries. Any activity which can reasonably be expected to exceed that dust level shall be notified to the Project Monitoring Committee in advance. Any mitigation measures shall be put in place at least one week in advance before the scheduled activity. Advance notice of the schedule of planned activity which will exceed the specified dust level shall be made available to the general public by way of public advertisement.

Reason: *In the interest of public health and residential amenity.*

Waste Disposal

27. No waste material, with the exception of waste material being transferred to a licensed waste facility, generated on site during the construction stage shall be removed off site without the prior agreement of Mayo County Council.

Reason: *In the interest of proper planning and sustainable development of the area.*

28. Adequate sanitary arrangements to the satisfaction of Mayo County Council

shall be installed for the duration of the construction period. All wastes generated from such arrangements shall be tankered off site.

Reason: *In the interest of public health.*

Natural Heritage.

29. The development shall be carried out so as to avoid disturbance to birds and their nesting habitat during the breeding season.

Reason: *For the protection of avian species in the area of the development.*

30. Prior to the commencement of development the developer shall carry out a baseline study of salmonid habitats in the area of the proposed development. The scope, nature and amount of monitoring of the baseline study shall be agreed with the North Western Regional Fisheries Board, the Marine Institute and Mayo County Council together with a schedule of follow-up surveys during the construction and immediate post-completion phases of the development.

Reason: *In order to provide comprehensive baseline data to permit monitoring and protection on salmonid habitats in the area.*

31. Within 6 months of the date of this decision the developer shall submit a report, including a survey (carried out at the appropriate time of year) into the presence or otherwise in the area of breeding hen harriers together with mitigation measures to minimise disturbance during the breeding season, if breeding is recorded.

Reason: *In order to establish if hen harriers are breeding in the area and to determine the nature and extent of any mitigation measures required.*

32. Removal of vegetation within the site to be carried out outside of the breeding season.

Reason: *To ensure the protection of avian wildlife.*

Health & Safety.

33. No development shall take place on the terminal site until an adequate water supply is installed.

Reason: *In the interest of the health of persons employed on the site.*

34. All relevant paved areas shall be extended to the proposed bund walls and arranged so that any accidental releases over the bund wall are diverted to the open drains sump.

Reason: *To ensure proper environmental control in the event of accidental spillage of hazardous material.*

35. The impermeable areas around the slug-catcher shall be extended so that any potential release of hazardous material can be contained.

Reason: *To ensure proper environmental control in the event of accidental spillage of hazardous material.*

36. Online Total Organic Carbon monitoring shall be installed at the proposed silt ponds with provision for automatic re-routing of flow to the contaminated firewater pond in the event of accidental discharge to the system.
Reason: *To ensure proper environmental control in the event of accidental spillage of hazardous material.*

Fire Safety.

37. A Fire Safety Certificate is required in respect of each building in accordance with the requirements of Part III of the Building Control Regulations, 1997. Application for a Fire Safety Certificate shall be made to the Building Control Authority. A Commencement Notice is also required in respect of each building. The Commencement Notice shall be submitted to the Building Control Authority in accordance with the requirements of Part II of the Building Control Regulations, 1997, S.I. No. 496 of 1997.
Reason: *In the interests of fire safety.*

38. Suitable and adequate provision for vehicle access to the terminal and all installations therein shall be provided to assist the Fire Service in the protection of life and property. Vehicular access for the Fire Service to each building shall be provided in accordance with Table 5.2 of Technical Guidance Document B of the Building Control Regulations 1991-2000.
Reason: *In the interests of fire safety.*

39 Fire and gas detection equipment complete with alarm systems shall be installed throughout the terminal and buildings to provide early warning of hazardous or potentially hazardous situations. The systems shall be installed in accordance with current best standards.
Reason: *In the interests of fire safety.*

40. Suitable Fire Fighting and Suppression Systems shall be installed appropriate to the various risks within the terminal in accordance with current best standards.
Reason: *In the interests of fire safety.*

41. All installations within the terminal shall be designed and installed to current acceptable standards and to be certified accordingly. Certification shall be made available for inspection by the Fire Authority upon request.
Reason: *In the interests of fire safety.*

42. A minimum of 6 hours water supply shall be provided on the site of the Terminal for fire fighting and cooling purposes in accordance with the requirements of the Fire Authority.
Reason: *In the interests of fire safety.*

43. The on site Emergency Plan and the Fire Safety Certificate Application will address the issue of forest proximity to the control building and plant. Active monitoring and active fire precautions shall be implemented as required.

Reason: *In the interests of fire safety.*

44. Management of the Terminal shall liase with the Fire Authority in the preparation of on-site emergency plans and general safety provisions.
Reason: *In the interests of fire safety.*

45. Prior to commissioning of the Terminal, management of the Terminal shall confirm in writing that all of the Fire Authority's requirements have been fully implemented.
Reason: *In the interests of fire safety.*

FINANCIAL

46. The developer shall pay an initial sum of €4,325,125 to Mayo County Council as a Special Development Contribution towards the expenditure that is proposed to be incurred by Mayo County Council in respect of road improvement works in the area facilitating the proposed development. The particular works to be carried out are;
(i) Widening and Strengthening of the Local Roads L-1204 and L-12044 along their entire length. *Estimated cost €3,500,125*
(ii) Strengthening of Regional Road R313 Bangor-Muinhin and Glencastle. *Estimated cost €675,000*
(iii) The provision of a right turning lane at the junction of Regional Road R313 and Local Road L-12044 in accordance with Mayo County Council Drawing No. 3225/04/04.
Estimated cost €150,000.
Reason: *To help defray the cost of road improvement works in the area which will facilitate the proposed development.*

47. The developer shall pay the sum of €1,394,361 as a Special Development Contribution towards the cost of upgrading the proposed extension of the Erris Regional Water Supply to facilitate the development.
Reason: *To help defray the cost of providing a public water supply to the development*

48. The developer shall pay to Mayo County Council a sum of €30,000 as a Special Development Contribution towards specialist infrastructure required by Mayo County Fire Service with respect to the development.
Reason: *In the interests of fire safety.*

49. The developer shall provide artwork to a maximum value of €64,000 in a location and form to be agreed with Mayo County Council.
Reason: *In the interests of visual amenity.*

Aviation Safety.

50. Prior to the commencement of development the developer shall submit confirmation, in writing that the Irish Aviation Authority is satisfied that the development will not interfere with the radar, communications or navigation systems at Dooncarton radar station.

Reason: *In the interest of public safety and to ensure the development does not interfere with air navigation safety.*

MONITORING

51. The Developer shall maintain a record of all complaints made in writing relating to any aspect of the construction stage of the project. Each such record shall give details of the following
    (i) Date and time of the complaint
    (ii) The name of the complainant
    (iii) Details of the nature of the complaint
    (iv) Actions taken on foot of the complaint and results of such actions
    (v) The response made to each complainant

    Reason: *In the interest of proper planning and sustainable development of the area.*

Environment

52. The Project Monitoring Committee group shall meet at least monthly during the earthworks stage and as appropriate during the construction stage of the development to monitor progress. Any member of the monitoring group may request the Chairman of the Project Monitoring Committee to convene an urgent meeting at any time if they consider environmental damage has occurred or is likely to occur.

    Reason: *To ensure adequate protection of the environment during construction*

53. Mayo County Council may, at the request of the Project Monitoring Committee and by notification in writing, require the developer to provide additional environmental controls where necessary to prevent environmental damage.

    Reason: *To ensure adequate protection of the environment during construction.*

54. Mayo County Council may require the developer to cease certain activities during the construction stage if it is established that the activities are giving rise to environmental pollution.

    Reason: *To ensure adequate protection of the environment during construction.*

55. Prior to the commencement of development the developer shall submit an accredited Environmental Management System (EMS), specific to the construction stage of the development including all subcontractors, to Mayo County Council for agreement in writing. The Environmental Management System shall contain as a minimum:
    (i) A Schedule of environmental objectives and targets.
    (ii) An Environmental Management Programme.
    (iii) Corrective Action Procedures.
    (iv) Awareness and Training Programme.
    (v) A Management Structure.

(vi) A Communications Programme.

and shall contain a requirement for continuous improvement to the satisfaction of Mayo County Council

Reason: *To ensure adequate protection of the environment during construction.*

56. The developer shall implement the agreed Environmental Management System for the duration of the construction stage of the project.

Reason: *To ensure adequate protection of the environment during construction.*

57. The developer shall, during the construction stage and/or at the written request of Mayo County Council.

(i) amend the structure and makeup of the Environmental Management System,

(ii) submit a report on any environmental matter,

(iii) submit an environmental audit

Reason: *To ensure adequate protection of the environment during construction.*

58. Prior to commencement of development the developer shall submit a monitoring plan for surface water, ground water, dust and continuous noise. Such monitoring shall be carried out by the developer throughout the construction phase of the project and the monitoring regime shall be agreed with Mayo County Council. The monitoring plan shall, as a minimum, include:

(i) A list of monitoring locations.

(ii) The equipment to be used.

(iii) The identity and qualifications of those carrying out the monitoring.

(iv) The parameters to be used.

(v) Monitoring intervals.

(vi) Averaging times.

(vii) A proposal on how data observed is to be presented.

(viii) The codes of practice to be used.

(ix) The completion date of all monitoring up to the date of commissioning

Reason: *To ensure adequate protection of the environment during construction.*

59. The developer shall permit Mayo County Council access to the site to carry out environmental monitoring checks on surface water (including the silt traps and settlement ponds), ground water, dust and noise as required or as specified by the Project Monitoring Committee.

Reason: *To ensure adequate protection of the environment during construction.*

60. Prior to the commencement of development the developer shall submit a monitoring plan for the settlement ponds and discharges from the settlement ponds, to Mayo County Council for approval in writing. The parameters to be monitored shall be:

(i) temperature
(ii) turbidity
(iii) dissolved oxygen
(iv) electrical conductivity
(v) phosphate
(vi) nitrate
(vii) suspended solids

and any additional parameter required by the North West Regional Fisheries Board.

Reason: *To ensure adequate protection of the environment during construction*

61. A data management system shall be implemented by the developer to collect and process data during the course of the construction stage. The system shall consist of a computerised database to allow ease of access and interpretation of all monitoring data collected. Final details shall be submitted to Mayo County Council for agreement prior to commencement of development.

Reason: *To facilitate ease of interpretation of all monitoring data collected and recorded.*

62. The developer shall appoint a suitably qualified and experienced Environmental Officer during the construction stage of the project. The Environmental Officer shall contact the Chairperson of the Project Monitoring Committee in the event of

(i) any malfunction of any environmental system
(ii) any occurrence with the potential for environmental pollution
(iii) any emergency

and in addition to the Chairman, in the case of any malfunction, accident or other occurrence which could give rise to pollution of waters, shall contact a designated officer of the North West Regional Fisheries Board.

Reason: *To ensure proper environmental control during construction.*

63. The developer shall maintain a record of any occurrence specified in Condition No. 62 the record shall be made available to Mayo County Council at any time.

Reason: *To ensure proper environmental control during construction.*

Traffic.

64. The developer shall keep a record of all traffic movements into/out of the site and shall make the record available for inspection to the Project Monitoring Committee at any time and Mayo County Council during normal working hours.

Reason: *In the interests of proper and efficient traffic management.*

65. The Developer shall maintain a written record of all wastes leaving the site. Each record shall give details of the following

(i) The name of the carrier

(ii) The Waste Permit number
(iii) Name of the waste collector
(iv) Description of the waste

Reason: *In the interest of proper planning and development of the area.*

66. The developer shall reimburse Mayo County Council for all costs incurred in the carrying out of any monitoring, monitoring checks, inspections and environmental audits carried out by or for Mayo County Council in connection with the proposed development either inside or outside the site

Reason: *To help defray the cost of Mayo County Council in providing an independent monitoring service.*

67. The developer shall pay the sum of €80,000 per annum to Mayo County Council for the employment of environmental personnel to monitor the implementation of the Environmental Management System subject of Condition No.56 and shall provide office accommodation and telecommunications on site for this position for the duration of the proposed construction period.

Reason: *To help defray the cost of Mayo County Council in providing an independent monitoring service.*

68. The developer shall pay the sum of €120,000 per annum to Mayo County Council for the employment of transportation personnel to monitor the implementation of the Transportation Plan submitted on the 11th March 2004 and shall provide office accommodation and telecommunications on site for this position for the duration of the proposed construction period.

Reason: *To help defray the cost of Mayo County Council in providing an independent monitoring service.*

Landscape.

69. Prior to the commencement of development the developer shall submit to Mayo County Council for approval in writing, a monitoring plan to ensure that the detailed implementation of the proposed 5-year maintenance plan for the landscape and planting strategy is carried out.

Reason: *To ensure proper implementation of the landscape strategy*

Natural Heritage.

70. Prior to the commencement of development the developer shall submit to Mayo County Council for approval in writing, a monitoring plan to ensure that all mitigation measures proposed in the Environmental Impact Statement submitted on 23rd December 2003 relating to the protection of habitats, flora and fauna during the construction and operation phase are carried out. The monitoring shall be carried out by a suitably qualified ecologist, and the scale and level of detail of the monitoring shall be agreed with Mayo County Council, the Heritage and Planning Division of the Department of the Environment, Heritage and Local Government, and the North West Regional Fisheries Board prior to the submission of the monitoring plan.

Reason: *To ensure proper ecological monitoring is carried out.*

Archaeology

71. The developer shall, at its own expense, employ a suitably qualified archaeologist with relevant experience in Peatland Archaeology to carry out, under licence, monitoring of all groundworks (including enabling works and peat excavation) associated with the development at Bellagelly South, Bellanaboy Bridge, Co. Mayo and associated peat deposition site at Srahmore and Attavally, Bangor-Erris, Co. Mayo. No groundworks shall take place in the absence of the archaeologist.
Reason: *To ensure proper archaeological monitoring is carried out.*

72. In the event of archaeological material being found during the course of monitoring, work shall be suspended in the affected area pending a decision by the Heritage and Planning Division of the Department of the Environment, Heritage and Local Government on how to deal with the archaeology. The developer shall be prepared to be advised by the Heritage and Planning Division of the Department of the Environment, Heritage and Local Government with regard to any necessary mitigating action (e.g. preservation *in situ*, or excavation) and should facilitate the archaeologist in recording any material found.
Reason: *To ensure adequate protection of any archaeological material that may exist on site.*

73. The developer shall submit to Mayo County Council and the Heritage and Planning Division of the Department of the Environment, Heritage and Local Government, in writing, a report describing the results of the monitoring.
Reason: *To ensure proper archaeological records are kept.*

74. The decommissioning of the development shall be carried out generally in accordance with the plans and particulars in the Environmental Impact Statement submitted on 23rd December 2003 and a final detailed reinstatement programme shall be submitted to and agreed in writing with Mayo County Council. All decommissioned structures shall be removed within six months of decommissioning.
Reason: *To ensure the satisfactory reinstatement of the site.*

75. Prior to the commencement of development, the developer shall lodge with Mayo County Council a cash deposit, a bond from an insurance company, or other security to secure the satisfactory reinstatement of the site, upon the cessation of the project, coupled with an agreement empowering Mayo County Council to apply such security or part thereof to the satisfactory reinstatement of the site. The form and amount of the security shall be as agreed between Mayo County Council and the developer or, in default of agreement, shall be determined by An Bord Pleanala.
Reason: *To ensure the satisfactory reinstatement of the site.*

END OF SCHEDULE 2

MAYO COUNTY COUNCIL

Telephone No.:
(094) 24444

Planning and Development Section,
Aras An Chontae, Castlebar.

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS 1963-1999
PLANNING AND DEVELOPMENT ACTS 2000-2002
PLANNING AND DEVELOPMENT REGULATIONS 2001
NOTIFICATION OF DECISION TO GRANT PERMISSION

TO: SHELL E & P IRELAND LIMITED
C/O TOM R. PHILLIPS &
ASSOCIATES
8-11 LOWER BAGGOT STREET
DUBLIN 2

Ref. No. in
Planning Register:
P03/3343
Application Received
On: 17/12/2003
Validation Date:17/12/2003
Additional Information
Received On: 11/03/2004

Notice is hereby given that Mayo County Council has on 30th April 2004 decided to **GRANT PERMISSION** to the above named, for development of land, in accordance with documents lodged, namely

Re: Planning application for the development of a gas terminal for the reception and separation of gas from the Corrib Gas Field, and for a peat deposition site, respectively.

The development will consist of the concurrent development of two sites located 11 kilometres apart, approximately, and identified as the site of the gas terminal for the reception and separation of gas from the Corrib Gas Field in the townland of Bellagelly South, Bellanaboy Bridge, County Mayo (the Bellagelly South site) and the site of the peat deposition site in the townlands of Srahmore and Attavally, Bangor-Erris, County Mayo (the Srahmore site), respectively.

the development at the Bellagelly South site will consist of: a gas terminal for the reception and separation of gas including plant and equipment; provision of 4,935 sq m (gross floor area), approximately, of buildings; access roads; 40 no. car parking spaces; and ancillary developments, of which 13 ha, approximately, will be developed in respect of the gas terminal's footprint. The proposed development of the Bellagelly South site will also consist of: the excavation and removal of 450,000 cubic metres, approximately, of peat from the Bellagelly South site, off site, to the Srahmore site; civil works, inclusive of foundations and piling; the provision of a single storey control building with a gross floor area of 400 sq m, approximately, inclusive of a control room, offices, equipment rooms, kitchenette, locker room and toilets; the provision of a single storey administration building with a gross floor area of 1,015 sq m, approximately, inclusive of a gatehouse, offices, a conference room and an emergency response room, canteen, kitchenette, laboratory, archive room, first aid room, store rooms, lockers, changing rooms and toilets; the provision of a maintenance building with a gross floor area of 800 sq m, inclusive of a warehouse, stores, mechanical workshop, welding and fabrication shop, instruments and electrical workshops, a plant room, toilets and a maintenance vehicle shed; a weighbridge; and a lattice antenna structure of 22 m in height, approximately, for site-wide radio communications. The development of the Bellagelly South site will also consist of: a diesel storage tank of 75 cubic metres capacity, approximately; a nitrogen generation unit; an air compressor package; a utility area (for plant); a power generation and switchroom building with a gross floor area of 525 sq m, approximately, for the production of electricity for the proposed gas terminal, to include 3 no. generator sets each with a capacity of 1.3 MW; an emergency generator with a capacity of 650kW; 1 no. emergency generator diesel day-tank and 1 no.

diesel distribution pump; a high pressure and low pressure flare tower of some 40 m in height, approximately; a ground flare with a stack height of some 12 m, approximately; a transformer building with a gross area of 410 sq m, approximately, to include a 400v switchroom; a heating medium heater with a stack height of 20 m, approximately; 3 no. flare knock out drums; 2 no. low pressure gas compressors; a methanol recovery system comprising of 1 no. methanol still of 33 m in height, approximately; a heating medium storage tank with a capacity of 40 cubic metres, approximately; a sales gas compressor building with a gross floor area of 890 sq m, approximately, to include 2 no. sales gas compressors, each with a 7.7 MW ISO rated gas turbine driver; a gas-to-gas heat exchanger; a corrugated plate interceptor; effluent feed/treated water sumps; a water treatment building with a gross floor area of 235 sq m, approximately, containing a multi-media filter, ultrafiltration and nanofiltration membrane units, ion exchange beds, an activated carbon filter and a sludge treatment facility; 3 no. condensate storage tanks, of 10 m each in height, approximately, and 10 m each in diameter, approximately; 2 no. product methanol tanks of 8.4 m each in diameter, approximately, and 10 m each in height, approximately; 3 no. raw methanol storage tanks 13.5 m each in diameter, approximately, and 10 m high, approximately; a fire water pond with a capacity of 7,200 cubic metres, approximately; a used firewater pond with a capacity of 5,000 cubic metres, approximately; a firewater pump building with a gross floor area of 660 sq m, approximately, to include 4 no. fire water pumps, each with capacity of 600 cubic metres per hour, approximately, and 4 no. diesel engine drivers, each rated at 265kW (absorbed), approximately; a finger type Slug Catcher; an inlet pig receiver with a withdrawal footprint of 15 sq m, approximately; a sales gas metering unit with a footprint of 200 sq m, approximately; an odorant tank with a capacity of 10 cubic metres, approximately; a sales gas pig launcher with a loading / withdrawal footprint of 15 sq m, approximately; an Onshore Terminal Termination Unit (OTTU) measuring 2 m long by 1 m wide by 2.5 m high, approximately; an electricity substation; a Road Tanker Loading / Unloading area; a waste storage area occupying an area of 990 sq m, approximately; the provision of a number of pipetracks and piperacks joining elements of plant together; the provision of 2 no. settlement ponds and associated drainage arrangements; landscaping works; stock proof fencing around the perimeter of the proposed development; security fencing around the terminal and settlement ponds inside the stock proof fence; paved internal access roads; provision of vehicular access to the R314 via an improved forestry access road and the provision of entrance walls and gates; the reconfiguration of the existing entrance from the site to the R314 to include the widening of the entrance and the provision of a deceleration lane; realignment of the R314 to the south of its current location, at the site entrance, over a length of 115 m, approximately, to the west of the centreline of the existing site entrance and over a length of 80 m, approximately, to the east of the centreline of the existing site entrance (over a total length of 195 m, approximately); an emergency vehicular access road to the county road running between Pollatomish and the R314 via; an improved forestry access road; a new maintenance access and maintenance road from the R314 to the 2 no. settlement ponds; and all other site development works and landscaping above and below ground.

The development will simultaneously consist of the development of a peat deposition site of 117 ha, approximately, at the Srahmore site. The development of the peat deposition site will consist of: the construction of a hardstanding peat reception area of 5,112 sq m, approximately; the provision of a temporary administration building with a gross floor area of 108 sq m, approximately, inclusive of offices, canteen and toilets. The development of the peat deposition site will also consist of: the provision of a new entrance and access road to the peat deposition site from the R313; the construction of internal circulation routes; the construction of a surface water swale along the southern and western boundaries of the site; the provision of 5 no. surface water settlement ponds (2 no. ponds of 800 sq m each; 3 no. ponds of 400 sq m each, approximately). Deposition of peat will take place within an area of 63 hectares approximately. The peat deposition site will also entail the provision of a controlled overflow area of 12 hectares approximately; an oil interceptor; a settlement tank of 28 cubic metres approximately; the provision of a temporary weighbridge and a temporary wheelwash. The development of the peat deposition site will also consist of 5 no. car parking spaces located adjacent to the administration building and 20 no. parking spaces for haulage vehicles at the peat reception area at a site of 160 ha, approximately, in the townland of Bellagelly South, Bellanaboy Bridge, County Mayo, and a site of 117 ha, approximately, in the townlands of Srahmore and Attavally, Bangor-Erris, County Mayo - Shell E & P Ireland Ltd.

MAYO COUNTY COUNCIL

based on the reasons and considerations as outlined in the First Schedule and in accordance with the 75 condition(s) set out in the Second Schedule attached hereto entitled "Schedule of Conditions".

Signed On: **30th April 2004**

on behalf of Mayo County Council

for COUNTY SECRETARY

An appeal against a Decision of the Planning Authority under Part VI of the Planning and Development Act 2000 may be made to An Bord Pleanala. An appeal must be received by An Bord Pleanala within **4 weeks** beginning on the date of the making of the Decision by the Planning Authority. (N.B. not the date on which the Decision is sent or received).

Appeals should be addressed to **The Secretary, An Bord Pleanala, 64 Marlborough Street, Dublin 1** and all such appeals to the Board will be invalid unless accompanied by the appropriate appeal fee. (see attached Schedule of Fees). Persons who are not parties to an appeal must pay the appropriate fee (see attached Schedule of Fees) if their submissions or observations are to be considered by the Board.

The appeal, which must be in writing, must state name and address of appellant; the details of the nature and site of the proposed development, the full grounds of appeal and reasons, considerations and arguments on which they are based, the name of the Planning Authority and must include the appropriate appeal fee as mentioned above and the acknowledgement from Mayo County Council in respect of the submission. An appeal not complying with all the necessary requirements will be rejected as invalid by An Bord Pleanala.

An appellant shall **not** be entitled to elaborate in writing upon, or make further submissions in writing in relation to, the grounds of appeal stated in the appeal, or to submit further grounds of appeal, and any such elaboration, submissions or further grounds of appeal received by An Bord Pleanala shall not be considered by it. A grant of permission shall be issued as soon as may be, but not earlier than 3 working days after the expiration of the period for the making of an appeal if there is no appeal before An Bord Pleanala on the expiration of the said period.

Please Note: In the case of a valid planning application received by the Planning Authority prior to the coming into operation of the Planning and Development Regulations, 2001, i.e. 11th March 2002, the period within which an appeal can be made to An Bord Pleanala is one month from the date of the Decision of the Local Authority.

***NOTE:-** Commercial Development is defined as development for the purposes of any professional, commercial or industrial undertaking, development in connection with the provision for reward of services to persons or undertakings, or development consisting of the provision of two or more dwellings but excludes development for purposes of agriculture.

P03/3343 FIRST SCHEDULE.

Having regard to:

(a) the National policy with regard to the development of energy and natural gas resources in particular;

(b) the compatibility of the proposed development with the development strategies for the Border, Midlands and Western Region within the National Spatial Strategy;

(c) the Mayo County Development Plan 2003-2009;

(d) the character of the landscape of the site;

(e) the report of the National Authority for Occupational Safety and Health, being the competent authority in relation to land use planning under Article 12 of the Council Directive 96/82EC (Seveso II),

it is considered that, subject to compliance with conditions set out in the Second Schedule, the proposed development would not seriously injure the visual amenities or landscape character of the area, would not seriously injure the amenities or property values of residential properties or farms in the vicinity, would not be prejudicial to public health, would not endanger public safety or be otherwise contrary to the proper planning and sustainable development of the area.

P03/3343 SECOND SCHEDULE.

SCHEDULE OF CONDITIONS

GENERAL.

1. The development shall be carried out in accordance with plans and documentation submitted to Mayo County Council on 17th December 2003, 23rd December 2003 and additional information submitted to Mayo County Council on 11th March 2004, except where amended by the conditions set out hereunder.
   Reason: *In the interest of clarity and proper planning and development.*

2. The development shall be constructed in accordance with undertakings for measures to mitigate its impacts as set out in the Environmental Impact Statement lodged with Mayo County Council on 23rd December 2003 and in the additional information received by Mayo County Council on 11th March 2004 except where amended by the conditions hereunder.
   Reason: *To mitigate against any adverse environmental impacts resulting from the construction and operation of the development.*

3. Prior to the commencement of development the owners/developers (and their successors in title) shall enter into legally binding agreements and covenants with Mayo County Council pursuant to Section 47 of the Planning and Development Acts 2000 – 2002. These agreements and covenants shall provide inter alia for the following:

(i) To give effect to all undertakings given by the applicant and the requirements of Mayo County Council in relation to the landscaping of the site, to the maintenance and/or replacement of existing trees and provision of new planting to provide a permanent visual screen as shown on the Landscape Strategy (Shell Drawing No.'s COR-RS-LA-001, 002 and 003) submitted to Mayo County Council on 23rd December 2003.

(ii) The payment to Mayo County Council of all costs incurred by the Council on the repair, maintenance and rehabilitation of the road network arising from construction of the development and as determined by the road and bridge survey carried out prior to and post construction.

(iii) To ensure that all plant shall be disassembled and removed and that the site shall be restored to the satisfaction of Mayo County Council following the cessation of operations at the plant.

(iv) To ensure that the Transport Management Plan submitted on the 11th March 2004 and any amendments required by Mayo County Council is implemented.

(v) The acceptance by the developer of the composition, terms of reference and functions of the Project Monitoring Committee subject of Condition No. 16.

Reason: *To ensure the satisfactory completion of development authorised by the permission.*

ROADS & TRAFFIC MANAGEMENT.

Road Improvements.

4. Prior to the commencement of peat haulage operations and the importing of construction materials into the Bellanaboy site the developer shall, at its own expense, realign Regional Road R-314 in accordance with Mayo County Council Drawing No. 3225/04/02. The realignment shall be carried out under the supervision of Mayo County Council to an agreed design and specification.

Reason: *In the interest of traffic safety.*

5. The existing road side boundary along Regional Road R-314 at the proposed entrance to settlement ponds at the Bellanaboy site shall be set back in accordance with Mayo County Council Drawing No. 3225/04/03. The area between the edge of the carriageway and the new set back boundary shall be made level with the existing carriageway.

Reason: *In the interest of traffic safety.*

6. The maintenance, repair and upkeep of the strengthened haul routes Regional Road R-313, Local Roads L-12044, L-1204 and Regional Road R-314 from Bellanaboy Bridge to the main terminal entrance and all other roads in the region which are affected directly or indirectly by the proposed development throughout the construction period, shall be carried out by Mayo County Council and any costs incurred shall be paid by the Developer.

Reason: *To ensure the proper maintenance and upkeep of roads and bridges during construction.*

7. A road and bridge condition survey of the road network in the Erris region shall be undertaken by Mayo County Council, before and after the construction period. This survey shall determine the level of damage to the road network, if any, which would be attributable to the proposed development. The developer shall bear the cost of the survey and the cost of repairing any damage attributable to the proposed development.

Reason: *To ensure the proper maintenance and reinstatement of roads and bridges following construction.*

Traffic Management.

8. The developer shall comply with the provisions set out in the Traffic Management Plan submitted on the 11th March 2004 with regard to all aspects of transport generated by the proposed development. In particular the stated maximum number of 800 Heavy Commercial Vehicle (HCV) traffic movements per day along the primary haul route shall not be exceeded.

Reason: *In the interests of proper and efficient traffic management and residential amenity.*

9. The location of all road signs, advance warning signs, information signs according to the schedule set out in the Traffic Management Plan submitted on the 11th March 2004 shall be agreed with Mayo County Council prior to the commencement of haulage of any materials.

Reason: *In the interests of proper and efficient traffic management and traffic safety.*

Haul Routes.

10. Haulage of all materials required for the construction of the development at the Bellanaboy site shall be via Local Roads L-1204 and L-12044 and the section of the Regional Road R-314 from Bellanaboy Bridge to the main entrance to the terminal.

(i) Materials transported via Bangor shall use Regional Road R-313, the Local Road L-1204, the Local Road L-12044 and Regional Road R-314 as the haul route to the site.

(ii) Materials transported from Belmullet shall use the Regional Road R-313 the Local Road L-12044, the Local Road L-1204 and Regional Road R-314 as the haul route to the site.

Reason: *In the interests of proper and efficient traffic management and traffic safety during construction and to minimise damage to the public road system in the area.*

11. Haulage of all materials required for the construction of the development at the Srahmore site shall be via Regional Road R-313.
Reason: *In the interests of proper and efficient traffic management and traffic safety during construction and to minimise damage to the public road system in the area.*

12. The haul route and schedule of haulage for the construction phase of the development shall be clearly documented and published in a manner to be agreed with Mayo County Council. All vehicles hauling materials to the Bellanaboy or Srahmore sites shall have a clear notice visible to the public identifying that they are involved with the development.
Reason: *In the interests of proper and efficient traffic management and traffic safety during construction and to minimise damage to the public road system in the area.*

13. All vehicles leaving the construction area of the site shall pass through a wheel wash.
Reason: *In the interest of proper planning and sustainable development of the area.*

14. Vehicles transporting waste from the site shall operate under a Waste Collection Permit.
Reason: *In the interest of proper planning and sustainable development of the area.*

15. The developer shall ensure that no material shall leak or fall from vehicles while in transit transporting waste from the terminal site.
Reason: *In the interest of proper planning and sustainable development of the area.*

ENVIRONMENT

16. Prior to the commencement of development a Project Monitoring Committee (PMC) shall be established to monitor earthworks, surface-water run-off, drainage control, traffic management and road maintenance, implementation of the landscape plan and other environmental issues. The Project Monitoring Committee shall comprise of two representatives of the developer, two officials from Mayo County Council, one official from each of the North West Regional Fisheries Board, the Heritage and Planning Division of the Department of the Environment, Heritage and Local Government and the Environmental Protection Agency. The Committee shall be chaired by the Mayo County Manager (or his nominee) and the Committee may co-opt other members as required.
Reason: *To ensure effective monitoring during construction.*

Protection of Water Resources.

17. Prior to the commencement of development a maintenance programme for the silt traps and settling ponds shall be submitted to Mayo County Council for agreement. Any subsequent amendments arising from the construction phase or the requirements of Mayo County Council (following consultation with the Project Monitoring Committee) shall be agreed in writing. A record of all maintenance works shall be kept and made available to Mayo County Council and the Project Monitoring Committee. The developer or its contractors shall nominate the person responsible for the operation of the silt traps and settlement ponds.
Reason: *To prevent water pollution.*

18. All surface water discharges from the disturbed area of the site shall be through the regime of settling ponds and silt traps as set out in the plans and particulars submitted on 17th December 2003, the accompanying Environmental Impact Statement submitted 23rd December 2003 and Further Information submitted on the11th March 2004.
Reason: *To prevent water pollution.*

19. No lime/cement binder to be used for peat stabilisation or other deleterious matter as defined in the Fisheries (Consolidation) Act 1959 shall be allowed to discharge to surface waters.
Reason: *To prevent water pollution.*

20. All fuel storage areas and cleaning areas, particularly cleaning areas for concrete trucks shall be rendered impervious to the materials stored therein or substances cleaned there-from and shall be constructed to ensure that no substance shall discharge from the area. In addition, tank and drum storage areas shall as a minimum be bunded, either locally or remotely, to a volume not less than the greater of the following:

(i) 100% of the capacity of the largest tank or drum within the bunded area; or
(ii) 25% of the total volume of substance which could be stored within the bunded area.

Reason: *To avoid the pollution of surface or ground waters.*

21. The developer shall maintain on site for the duration of the construction period an oil pollution abatement kit comprising of booms and absorbent materials. The nature and extent of the kit shall be agreed with Mayo County Council prior to the commencement of development.
Reason: *In order to prevent water pollution.*

22. The percolation area for the wastewater treatment system shall be located in position shown on Drawing No. COR-AR-SD-RF1-005 submitted on the 11th March 2004.
Reason: *In the interest of clarity and for the protection of public health.*

Rock Blasting.

23. Blasting of rock on the site shall be designed and operated so that

(i) Ground vibration arising from any blast carried out on the site shall not exceed a peak particle velocity of 12 mm/s in any one of three mutually orthogonal planes at the threshold of any house in the vicinity of the site.

(ii) The air over pressure arising from any blast carried out on the site shall not exceed 125 dB (linear) max peak level when measured outside the nearest house to the blast.

(iii) Blasting shall be confined to between the hours of 11.00am and 5.00pm, Monday to Friday

Reason: *In the interest of public health & safety.*

24. Arrangements for the advance notice of blasting shall be agreed with Mayo County Council, the details of which shall be made available to the general public by way of public advertisement.

Reason: *In the interest of public health & safety.*

Noise & Dust.

25. During the construction stage noise levels shall be kept to a minimum. Any activity which will elevate the pre-construction ambient noise levels by 5dB Leq shall be notified to the Project Monitoring Committee in advance. Any mitigation measures shall be put in place at least one week in advance before the scheduled activity. Advance notice of the schedule of planned activity which will elevate the pre-construction ambient noise levels by 5dB Leq shall be made available to the general public by way of public advertisement.

Reason: *In the interest of public health and residential amenity.*

26. Dust levels shall not exceed 130 mg/m² per day averaged over thirty days when measured at the site boundaries. Any activity which can reasonably be expected to exceed that dust level shall be notified to the Project Monitoring Committee in advance. Any mitigation measures shall be put in place at least one week in advance before the scheduled activity. Advance notice of the schedule of planned activity which will exceed the specified dust level shall be made available to the general public by way of public advertisement.

Reason: *In the interest of public health and residential amenity.*

Waste Disposal

27. No waste material, with the exception of waste material being transferred to a licensed waste facility, generated on site during the construction stage shall be removed off site without the prior agreement of Mayo County Council.

Reason: *In the interest of proper planning and sustainable development of the area.*

28. Adequate sanitary arrangements to the satisfaction of Mayo County Council

shall be installed for the duration of the construction period. All wastes generated from such arrangements shall be tankered off site.
Reason: *In the interest of public health.*

Natural Heritage.

29. The development shall be carried out so as to avoid disturbance to birds and their nesting habitat during the breeding season.
Reason: *For the protection of avian species in the area of the development.*

30. Prior to the commencement of development the developer shall carry out a baseline study of salmonid habitats in the area of the proposed development. The scope, nature and amount of monitoring of the baseline study shall be agreed with the North Western Regional Fisheries Board, the Marine Institute and Mayo County Council together with a schedule of follow-up surveys during the construction and immediate post-completion phases of the development.
Reason: *In order to provide comprehensive baseline data to permit monitoring and protection on salmonid habitats in the area.*

31. Within 6 months of the date of this decision the developer shall submit a report, including a survey (carried out at the appropriate time of year) into the presence or otherwise in the area of breeding hen harriers together with mitigation measures to minimise disturbance during the breeding season, if breeding is recorded.
Reason: *In order to establish if hen harriers are breeding in the area and to determine the nature and extent of any mitigation measures required.*

32. Removal of vegetation within the site to be carried out outside of the breeding season.
Reason: *To ensure the protection of avian wildlife.*

Health & Safety.

33. No development shall take place on the terminal site until an adequate water supply is installed.
Reason: *In the interest of the health of persons employed on the site.*

34. All relevant paved areas shall be extended to the proposed bund walls and arranged so that any accidental releases over the bund wall are diverted to the open drains sump.
Reason: *To ensure proper environmental control in the event of accidental spillage of hazardous material.*

35. The impermeable areas around the slug-catcher shall be extended so that any potential release of hazardous material can be contained.
Reason: *To ensure proper environmental control in the event of accidental spillage of hazardous material.*

36. Online Total Organic Carbon monitoring shall be installed at the proposed silt ponds with provision for automatic re-routing of flow to the contaminated firewater pond in the event of accidental discharge to the system.
Reason: *To ensure proper environmental control in the event of accidental spillage of hazardous material.*

Fire Safety.

37. A Fire Safety Certificate is required in respect of each building in accordance with the requirements of Part III of the Building Control Regulations, 1997. Application for a Fire Safety Certificate shall be made to the Building Control Authority. A Commencement Notice is also required in respect of each building. The Commencement Notice shall be submitted to the Building Control Authority in accordance with the requirements of Part II of the Building Control Regulations, 1997, S.I. No. 496 of 1997.
Reason: *In the interests of fire safety.*

38. Suitable and adequate provision for vehicle access to the terminal and all installations therein shall be provided to assist the Fire Service in the protection of life and property. Vehicular access for the Fire Service to each building shall be provided in accordance with Table 5.2 of Technical Guidance Document B of the Building Control Regulations 1991-2000.
Reason: *In the interests of fire safety.*

39 Fire and gas detection equipment complete with alarm systems shall be installed throughout the terminal and buildings to provide early warning of hazardous or potentially hazardous situations. The systems shall be installed in accordance with current best standards.
Reason: *In the interests of fire safety.*

40. Suitable Fire Fighting and Suppression Systems shall be installed appropriate to the various risks within the terminal in accordance with current best standards.
Reason: *In the interests of fire safety.*

41. All installations within the terminal shall be designed and installed to current acceptable standards and to be certified accordingly. Certification shall be made available for inspection by the Fire Authority upon request.
Reason: *In the interests of fire safety.*

42. A minimum of 6 hours water supply shall be provided on the site of the Terminal for fire fighting and cooling purposes in accordance with the requirements of the Fire Authority.
Reason: *In the interests of fire safety.*

43. The on site Emergency Plan and the Fire Safety Certificate Application will address the issue of forest proximity to the control building and plant. Active monitoring and active fire precautions shall be implemented as required.

Reason: *In the interests of fire safety.*

44. Management of the Terminal shall liase with the Fire Authority in the preparation of on-site emergency plans and general safety provisions.
Reason: *In the interests of fire safety.*

45. Prior to commissioning of the Terminal, management of the Terminal shall confirm in writing that all of the Fire Authority's requirements have been fully implemented.
Reason: *In the interests of fire safety.*

FINANCIAL

46. The developer shall pay an initial sum of €4,325,125 to Mayo County Council as a Special Development Contribution towards the expenditure that is proposed to be incurred by Mayo County Council in respect of road improvement works in the area facilitating the proposed development. The particular works to be carried out are;
(i) Widening and Strengthening of the Local Roads L-1204 and L-12044 along their entire length. *Estimated cost €3,500,125*
(ii) Strengthening of Regional Road R313 Bangor-Muinhin and Glencastle. *Estimated cost €675,000*
(iii) The provision of a right turning lane at the junction of Regional Road R313 and Local Road L-12044 in accordance with Mayo County Council Drawing No. 3225/04/04.
Estimated cost €150,000.
Reason: *To help defray the cost of road improvement works in the area which will facilitate the proposed development.*

47. The developer shall pay the sum of €1,394,361 as a Special Development Contribution towards the cost of upgrading the proposed extension of the Erris Regional Water Supply to facilitate the development.
Reason: *To help defray the cost of providing a public water supply to the development*

48. The developer shall pay to Mayo County Council a sum of €30,000 as a Special Development Contribution towards specialist infrastructure required by Mayo County Fire Service with respect to the development.
Reason: *In the interests of fire safety.*

49. The developer shall provide artwork to a maximum value of €64,000 in a location and form to be agreed with Mayo County Council.
Reason: *In the interests of visual amenity.*

Aviation Safety.

50. Prior to the commencement of development the developer shall submit confirmation, in writing that the Irish Aviation Authority is satisfied that the development will not interfere with the radar, communications or navigation systems at Dooncarton radar station.

Reason: *In the interest of public safety and to ensure the development does not interfere with air navigation safety.*

MONITORING

51. The Developer shall maintain a record of all complaints made in writing relating to any aspect of the construction stage of the project. Each such record shall give details of the following
    (i) Date and time of the complaint
    (ii) The name of the complainant
    (iii) Details of the nature of the complaint
    (iv) Actions taken on foot of the complaint and results of such actions
    (v) The response made to each complainant

    Reason: *In the interest of proper planning and sustainable development of the area.*

Environment

52. The Project Monitoring Committee group shall meet at least monthly during the earthworks stage and as appropriate during the construction stage of the development to monitor progress. Any member of the monitoring group may request the Chairman of the Project Monitoring Committee to convene an urgent meeting at any time if they consider environmental damage has occurred or is likely to occur.

    Reason: *To ensure adequate protection of the environment during construction*

53. Mayo County Council may, at the request of the Project Monitoring Committee and by notification in writing, require the developer to provide additional environmental controls where necessary to prevent environmental damage.

    Reason: *To ensure adequate protection of the environment during construction.*

54. Mayo County Council may require the developer to cease certain activities during the construction stage if it is established that the activities are giving rise to environmental pollution.

    Reason: *To ensure adequate protection of the environment during construction.*

55. Prior to the commencement of development the developer shall submit an accredited Environmental Management System (EMS), specific to the construction stage of the development including all subcontractors, to Mayo County Council for agreement in writing. The Environmental Management System shall contain as a minimum:
    (i) A Schedule of environmental objectives and targets.
    (ii) An Environmental Management Programme.
    (iii) Corrective Action Procedures.
    (iv) Awareness and Training Programme.
    (v) A Management Structure.

(vi) A Communications Programme.

and shall contain a requirement for continuous improvement to the satisfaction of Mayo County Council

Reason: *To ensure adequate protection of the environment during construction.*

56. The developer shall implement the agreed Environmental Management System for the duration of the construction stage of the project.

Reason: *To ensure adequate protection of the environment during construction.*

57. The developer shall, during the construction stage and/or at the written request of Mayo County Council.

(i) amend the structure and makeup of the Environmental Management System,
(ii) submit a report on any environmental matter,
(iii) submit an environmental audit

Reason: *To ensure adequate protection of the environment during construction.*

58. Prior to commencement of development the developer shall submit a monitoring plan for surface water, ground water, dust and continuous noise. Such monitoring shall be carried out by the developer throughout the construction phase of the project and the monitoring regime shall be agreed with Mayo County Council. The monitoring plan shall, as a minimum, include:

(i) A list of monitoring locations.
(ii) The equipment to be used.
(iii) The identity and qualifications of those carrying out the monitoring.
(iv) The parameters to be used.
(v) Monitoring intervals.
(vi) Averaging times.
(vii) A proposal on how data observed is to be presented.
(viii) The codes of practice to be used.
(ix) The completion date of all monitoring up to the date of commissioning

Reason: *To ensure adequate protection of the environment during construction.*

59. The developer shall permit Mayo County Council access to the site to carry out environmental monitoring checks on surface water (including the silt traps and settlement ponds), ground water, dust and noise as required or as specified by the Project Monitoring Committee.

Reason: *To ensure adequate protection of the environment during construction.*

60. Prior to the commencement of development the developer shall submit a monitoring plan for the settlement ponds and discharges from the settlement ponds, to Mayo County Council for approval in writing. The parameters to be monitored shall be:

(i) temperature
(ii) turbidity
(iii) dissolved oxygen
(iv) electrical conductivity
(v) phosphate
(vi) nitrate
(vii) suspended solids

and any additional parameter required by the North West Regional Fisheries Board.

Reason: *To ensure adequate protection of the environment during construction*

61. A data management system shall be implemented by the developer to collect and process data during the course of the construction stage. The system shall consist of a computerised database to allow ease of access and interpretation of all monitoring data collected. Final details shall be submitted to Mayo County Council for agreement prior to commencement of development.

Reason: *To facilitate ease of interpretation of all monitoring data collected and recorded.*

62. The developer shall appoint a suitably qualified and experienced Environmental Officer during the construction stage of the project. The Environmental Officer shall contact the Chairperson of the Project Monitoring Committee in the event of

(i) any malfunction of any environmental system
(ii) any occurrence with the potential for environmental pollution
(iii) any emergency

and in addition to the Chairman, in the case of any malfunction, accident or other occurrence which could give rise to pollution of waters, shall contact a designated officer of the North West Regional Fisheries Board.

Reason: *To ensure proper environmental control during construction.*

63. The developer shall maintain a record of any occurrence specified in Condition No. 62 the record shall be made available to Mayo County Council at any time.

Reason: *To ensure proper environmental control during construction.*

Traffic.

64. The developer shall keep a record of all traffic movements into/out of the site and shall make the record available for inspection to the Project Monitoring Committee at any time and Mayo County Council during normal working hours.

Reason: *In the interests of proper and efficient traffic management.*

65. The Developer shall maintain a written record of all wastes leaving the site. Each record shall give details of the following

(i) The name of the carrier

(ii) The Waste Permit number
(iii) Name of the waste collector
(iv) Description of the waste

Reason: *In the interest of proper planning and development of the area.*

66. The developer shall reimburse Mayo County Council for all costs incurred in the carrying out of any monitoring, monitoring checks, inspections and environmental audits carried out by or for Mayo County Council in connection with the proposed development either inside or outside the site

Reason: *To help defray the cost of Mayo County Council in providing an independent monitoring service.*

67. The developer shall pay the sum of €80,000 per annum to Mayo County Council for the employment of environmental personnel to monitor the implementation of the Environmental Management System subject of Condition No.56 and shall provide office accommodation and telecommunications on site for this position for the duration of the proposed construction period.

Reason: *To help defray the cost of Mayo County Council in providing an independent monitoring service.*

68. The developer shall pay the sum of €120,000 per annum to Mayo County Council for the employment of transportation personnel to monitor the implementation of the Transportation Plan submitted on the 11th March 2004 and shall provide office accommodation and telecommunications on site for this position for the duration of the proposed construction period.

Reason: *To help defray the cost of Mayo County Council in providing an independent monitoring service.*

Landscape.

69. Prior to the commencement of development the developer shall submit to Mayo County Council for approval in writing, a monitoring plan to ensure that the detailed implementation of the proposed 5-year maintenance plan for the landscape and planting strategy is carried out.

Reason: *To ensure proper implementation of the landscape strategy*

Natural Heritage.

70. Prior to the commencement of development the developer shall submit to Mayo County Council for approval in writing, a monitoring plan to ensure that all mitigation measures proposed in the Environmental Impact Statement submitted on 23rd December 2003 relating to the protection of habitats, flora and fauna during the construction and operation phase are carried out. The monitoring shall be carried out by a suitably qualified ecologist, and the scale and level of detail of the monitoring shall be agreed with Mayo County Council, the Heritage and Planning Division of the Department of the Environment, Heritage and Local Government, and the North West Regional Fisheries Board prior to the submission of the monitoring plan.

Reason: *To ensure proper ecological monitoring is carried out.*

Archaeology

71. The developer shall, at its own expense, employ a suitably qualified archaeologist with relevant experience in Peatland Archaeology to carry out, under licence, monitoring of all groundworks (including enabling works and peat excavation) associated with the development at Bellagelly South, Bellanaboy Bridge, Co. Mayo and associated peat deposition site at Srahmore and Attavally, Bangor-Erris, Co. Mayo. No groundworks shall take place in the absence of the archaeologist.
Reason: *To ensure proper archaeological monitoring is carried out.*

72. In the event of archaeological material being found during the course of monitoring, work shall be suspended in the affected area pending a decision by the Heritage and Planning Division of the Department of the Environment, Heritage and Local Government on how to deal with the archaeology. The developer shall be prepared to be advised by the Heritage and Planning Division of the Department of the Environment, Heritage and Local Government with regard to any necessary mitigating action (e.g. preservation *in situ*, or excavation) and should facilitate the archaeologist in recording any material found.
Reason: *To ensure adequate protection of any archaeological material that may exist on site.*

73. The developer shall submit to Mayo County Council and the Heritage and Planning Division of the Department of the Environment, Heritage and Local Government, in writing, a report describing the results of the monitoring.
Reason: *To ensure proper archaeological records are kept.*

74. The decommissioning of the development shall be carried out generally in accordance with the plans and particulars in the Environmental Impact Statement submitted on 23rd December 2003 and a final detailed reinstatement programme shall be submitted to and agreed in writing with Mayo County Council. All decommissioned structures shall be removed within six months of decommissioning.
Reason: *To ensure the satisfactory reinstatement of the site.*

75. Prior to the commencement of development, the developer shall lodge with Mayo County Council a cash deposit, a bond from an insurance company, or other security to secure the satisfactory reinstatement of the site, upon the cessation of the project, coupled with an agreement empowering Mayo County Council to apply such security or part thereof to the satisfactory reinstatement of the site. The form and amount of the security shall be as agreed between Mayo County Council and the developer or, in default of agreement, shall be determined by An Bord Pleanala.
Reason: *To ensure the satisfactory reinstatement of the site.*

END OF SCHEDULE 2

The Department of the Environment, Heritage and Local Government,
4th Floor,
Dún Scéine,
Harcourt Lane
Dublin 2.

Direct Line: (01) 4117181
Fax No: (01) 4117120

facsimile transmittal

To: Planning Section : Fax No:094-21694

From: Noel Sheahan

Re: MA-MA-03/3343

Pages 11

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

A Chara,

Please find attached this Department's recommendations for the proposed development.

Mise le meas,

Noel Sheahan

AN ROINN COMHSHAOIL, OIDHREACHTA AGUS RIALTAIS ÁITIÚIL
DEPARTMENT OF THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT

3 February, 2004

Our Ref: DAU-2003-MA-MA-03/3343

County Secretary,
Mayo County Council,
Áras an Chontae,
Castlebar,
Co. Mayo.

AN ROINN COMHSHAOIL,
OIDHREACHTA AGUS
RIALTAIS ÁITIÚIL
DEPARTMENT OF THE
ENVIRONMENT, HERITAGE
AND LOCAL GOVERNMENT

DÚN SCEINE, LÁNA FHEARCAIR,
BAILE ÁTHA CLIATH 2, ÉIRE
DÚN SCÉINE, HARCOURT LANE,
DUBLIN 2, IRELAND

Teileafón: +353 1 647 3000
Locall: 1890 321 421

Re: Planning Application Reg. Reg. No. 03/3343 by Shell E & P Ireland Limited for the development of a Gas Terminal etc at Bellagelly South, Bellanaboy Bridge, Co. Mayo and associated peat deposition site at Srahmore and Attavally, Bangor-Erris, Co. Mayo.

A Chara,

We refer to the Council's notification in relation to the above-proposed development. Outlined below are the nature conservation, archaeological and architectural recommendations of the Heritage and Planning Division of the Department of the Environment, Heritage and Local Government.

Nature Conservation

We understand that the development comprises two main elements at two separate sites that are approximately 11km apart. These are:

1) Bellanaboy Bridge Terminal at Bellagelly South (160ha approx.): to accommodate gas separation facilities and equipment, conditioning and power generation equipment, utilities including a firewater and contaminated firewater pond, pipe racks, flare, administration block, maintenance building, equipment and plant buildings, paved areas, walkways, plant roads and open areas.

2) Peat deposition site at Srahmore (117ha approx.): site for deposition of approximately 450,000m^3 of peat from the Bellagelly South site to a Bord na Móna cutover peatland at Srahmore and Attavally, Bangor Erris (part of the Bord na Móna Oweninny Works).

Peat will be transported by road between the two sites. Some road improvements are to be carried out by Mayo County Council along the haul route for the peat between Bellagelly South and Srahmore. Our nature conservation comments on the planning application follow in four parts: (1) Bellagelly South site; (2) Srahmore site; (3) the haul route; (4) general. Any references to sections are to sections of the relevant volume of the EIS.

1. Bellagelly South site

The Bellagelly South site is not covered by any conservation designation. Most of the Bellagelly South site drains southwards into watercourses that enter Carrowmore Lake Complex cSAC about 1km downstream. Part of the site drains northwards into the Glenamoy River in Glenamoy Bog Complex (cSAC) No 000500 (site Synopsis attached) less than 1.5km north of the Bellagelly South site at the nearest point.

1.1. In comparison with the previous planning application for a terminal at Bellagelly South, the main new element of the proposed development at this site, with potential for impact on nature conservation concerns, is the stockpiling of peat for drying before removal to the Srahmore site. In any grant of planning permission, the planning authority should impose whatever conditions it deems necessary to ensure that run-off from this peat does not have any significant adverse impact on the quality of receiving waters flowing away from the site.

1.2. Clarification is required on the details of site drainage and silt control measures proposed at the construction and peat excavation stage. A clear and detailed map of the existing site drainage, and of the site drainage works and silt ponds proposed at the various stages of construction and peat excavation, should be provided in the event that permission is granted and appropriate action agreed on drainage and silt control.

1.3 Physico-chemical data should be collected to properly establish the baseline water quality conditions in and around the site, and to facilitate water quality monitoring at the construction and operation stages.

1.4 The EIS states that turbidity and phosphate levels will be measured in the settlement ponds. It is recommended that pH should also be measured. This should become a condition of monitoring.

1.5 The developer should be required to address the possible impacts of free water from excavated peat on water quality, including pH and loading of humic and other acids.

1.6 A pre-construction survey for badgers is stipulated as a mitigation measure (section 6.7.3), and will be carried out in conjunction with site clearance works. Results of this survey should be supplied to the National Parks and Wildlife Service (NPWS) of this Department. Licences should be sought from NPWS for the evacuations of setts if any are found within parts of the site that will be impacted by the development or associated activities. The survey should also record any observed presence of otter and pine marten, both of which are referred to in the EIS. Mitigation measures should be devised if necessary to minimise impacts on these species. NPWS staff will be available to advise on any such measures.

1.7 Hen harriers, a species listed on Annex 1 of the EU Birds Directive, were recorded over the site in March, June and November 2001. This suggests breeding in the locality. A survey should be carried out at the appropriate time of year, prior to the commencement of any works, to establish if hen harriers are breeding in the area, with a view to devising

mitigation measures to minimise disturbance during the breeding season, if breeding is recorded.

1.8 The developer should be required to prepare a schedule of sensitive periods for wildlife when works should cease or be curtailed, which are referred to in the EIS but are not specified.

1.9 For any landscaping of the cut (peat) and fill (mineral) slopes, and any other parts of the overall site, consideration should be given to the planting of native species, and invasive non-native plants should be avoided.

1.10 The improvement of peat will involve the introduction of 36,500 tonnes of lime/cement binder to comparatively small parts of the site. The impacts of the introduction and use of such large amounts of a highly alkaline material should be further considered from the point of view of impacts on water quality, aquatic ecology and surrounding peatlands. Technical information and assessments to support the use and appropriateness of this method of peat improvement in this location should be provided before any construction is commenced.

1.11 In relation to Section 10 of the EIS (Effluent), should permission be granted there should be a condition that the water treatment facilities at the terminal will be such that the discharge will be at or below the EQSs (EPA 1997) as stated in the EIS.

1.12 It is noted that the discharge is more saline than seawater and consideration should be given to ensuring that the discharge is at ambient salinity to minimise the impacts of the discharge.

1.13 It is also noted that since the licence granted by Department of Communications, Marine and Natural Resources required the extension of the pipeline to approximately 2.5 km north of Erris Head, the results of water modelling have not been expanded to determine the dissipation of the discharge.

2. Srahmore site

The Srahmore site is not covered by any conservation designation. The Srahmore site drains into the Munhin and Owenmore rivers, which converge and flow into Tullaghan Bay proposed Natural Heritage Area (pNHA) No. 001567, (Site Synopsis attached) and Blacksod/Broadhaven Bay Special Protection Area (SPA) No. 004037. The development site is approximately 2.5km north-east of the designated areas at the nearest point.

2.1 As in the case of development at the Bellagelly South site, the crucial issue from a nature conservation perspective is not the impact of peat deposition at the Srahmore site itself, but the avoidance of any adverse impact on downstream sites of conservation importance. In any grant of planning permission, the planning authority should impose suitable conditions to ensure that run-off from the peat deposited does not have any significant adverse impact on the quality of receiving waters flowing away from the site.

2.2 Three of the six water quality samples at Srahmore were taken as drainage maintenance works were being carried out on the main watercourse through the site. This would affect the physico-chemical analyses of these water samples as a baseline for establishing existing water quality. Sampling should be repeated to give a more accurate picture of water quality in the receiving environment, should permission be granted and before any works commence.

2.3 It is argued that settlement pond S5-2 is operating efficiently in lowering the sediment loading of run-off in that location. However, the total solids figure of 475mg/l seems high, and is comparable to the levels recorded in water samples taken from the main drain when drainage maintenance work was being carried out (249-632mg/l). In the event that permission is granted, the developer should be asked to agree appropriate action with the planning authority to ensure effective methods of removing silt and solids from run-off.

2.4 Total ammoniacal Nitrogen is high in the water samples taken. No indication is given as to whether these levels will increase with the introduction of peat from Bellagelly South and whether they will impact on marine waters in Tullaghan Bay pNHA and Blacksod Bay/ Broadhaven SPA downstream of the proposed development. In the event that permission is granted, further assessment of the impacts of high ammoniacal Nitrogen levels on the marine environment should be presented, and action agreed with the planning authority to mitigate any adverse effects.

2.5 It is important that there is no peat mobilisation arising from the deposition of peat. Counter measures must be put in place, inter alia, to protect natural habitats, if permission is granted. If necessary a plan should be agreed with the planning authority before any works commence.

2.6 If there will be refuelling on site at the reception area, and mobile refuelling of plant in the deposition area, rather than at the Bangor works, conditions should be imposed to ensure that no pollution will occur.

2.7 It should be noted that the reference to bird species on Annex II of the EU Habitats Directive is incorrect and should read 'Annex I of the Birds Directive'.

3. The Haul Route

The redevelopment of parts of the haul route, the L1204, and its usage for the transport of peat from Bellagelly South to Srahmore, is an integral part of the overall development which will contribute to its cumulative impacts. It is noted that this part of the project is not covered by the current planning application.

3.1 Full details of the works proposed, together with maps, drawings and an assessment of the ecological impacts, should be provided to NPWS for comment, prior to the commencement of any works on the haul route. The assessment should cover any potential impacts on Carrowmore

Lake Complex candidate Special Area of Conservation (cSAC) No. 00476, and on a known feeding area for Greenland White-fronted Geese, a species listed on Annex I of the Birds Directive, close to the proposed haul route at Glenturk More.

4. General

4.1 The results of any pre-construction surveys that are carried out at the sites should be provided to NPWS of this Department. A project ecologist should be present to oversee works at both sites and the implementation of mitigation and compensation measures.

4.2 In relation to environmental monitoring results, all relevant reports should be provided to NPWS.

Architectural Heritage

Given the nature of the sites at Bellanaboy and Srahmore, together with their location and locality, it may well be that there is little of architectural heritage merit at or in the vicinity of either site, or in either area generally. However, should structures of architectural heritage merit be encountered at or in the vicinity of either site it is recommended that this aspect should be specifically safeguarded by the way of general condition in any grant of permission.

Archaeology

We wish to concur with the archaeological mitigatory recommendations outlined in Volume 1 Section 15 Cultural Heritage subsections 15.7 and 15.9 and Volume 2 Section 15 Archaeology and Cultural Heritage subsections 15.7 and 15.9. It is our recommendation that the following condition pertaining to Archaeological Monitoring be included in any grant of planning permission that may issue:

Archaeological Monitoring

1. The applicant is required to employ a suitably qualified archaeologist with relevant experience in Peatland Archaeology to monitor all groundworks (including enabling works and peat excavation) associated with the development at Bellagelly South, Bellanaboy Bridge, Co. Mayo and associated peat deposition site at Srahmore and Attavally, Bangor-Erris, Co. Mayo.

2. Should archaeological material be found during the course of monitoring, the archaeologist may have work on the site stopped, pending a decision as to how best to deal with the archaeology. The developer shall be prepared to be advised by the Heritage and Planning Division of the Department of Environment, Heritage and Local Government with regard to any necessary mitigating action (e.g. preservation *in situ*, or excavation) and should facilitate the archaeologist in recording any material found.

3. The Planning Authority and the Heritage and Planning Division shall be

furnished with a report describing the results of the monitoring.

Reason: To ensure the continued preservation (either *in situ* or by record) of places, caves, sites, features or other objects of archaeological interest."

Conclusion

In dealing with this application, the Department considers that the planning authority should be satisfied that the above issues can be dealt with adequately should it decide to grant permission for this development.

In addition kindly forward a copy of any further information or a copy of the decision in the event of one been made to the following address:

The Manager
Development Application Unit,
Department of the Environment, Heritage and Local Government.
Dún Scéine,
Harcourt Lane,
Dublin 2

In addition please acknowledge receipt of this letter as required under the Planning & Development regulations 2001 and forward the relevant receipt to the address above.

Mise le meas,

Noel Sheahan,
Development Application Unit.

SITE SYNOPSIS

SITE NAME : GLENAMOY BOG COMPLEX

SITE CODE : 000500

This large site is situated in the extreme north-west of County Mayo where the climate is wet oceanic and gales from the Atlantic are frequent. This area is underlain by metamorphic rocks, comprising mainly schists and quartzites of Moinian age. From sea-level, the site reaches 379m O.D. at Maumakeogh. The soils are predominantly peats, with underlying glacial tills usually only visible along water channels and roads. Four main river systems drain the site: the Glenamoy, the Muingnabo, the Belderg and the Glenglassra Rivers. One medium-sized lake, Lougherglass, occurs on the site.

Blanket bog, a priority habitat under Annex I of the E.U. Habitats Directive, dominates the site. Glenamoy Bog is a prime example of the extreme oceanic form of lowland blanket bog and is one of the most extensive tracts of bog in the country. The bog occupies a gently undulating plain, but extends uphill to cover the slopes of Maumakeogh and Benmore in the eastern sector of the site, and northward, out toward the sea cliffs of the north-west Mayo coastline. Peat depth reaches 6 metres in the low-lying areas. A large flush occurs at Rathavisteen, which supports species-rich vegetation, including Cranberry (*Vaccinium oxycoccos*) and a moss (*Homalothecium nitens*) which is nationally rare. Four other Annexed habitats occur in close association with the blanket bog - dystrophic lakes, wet heath, Juniper heath and transition mires. Dystrophic lakes, which lie in peaty basins and have peat-stained water, are a common feature of lowland blanket bog. At Glenamoy, the lakes are particularly well-developed. Juniper (*Juniperus communis* subsp. *nana*) occurs scattered over the blanket bog, often in association with Crowberry (*Empetrum nigrum*) and hummocks formed of mosses (*Racomitrium lanuginosum*). On steep slopes where the peat is shallow, the blanket bog grades into wet heath. Here, Ling Heather (*Calluna vulgaris*), Cross-leaved Heath (*Erica tetralix*), Tormentil (*Potentilla erecta*) and Purple Moor-grass (*Molinia caeruiea*) are found. Where the heath is drier, and especially towards the northern coastal zone of the site, scattered Bearberry (*Arctostaphylos uva-ursi*) occurs with Ling and Juniper.

Transition mires or quaking bogs occur where the bog vegetation merges with flush type vegetation influenced by base enrichment, and also at the interface between large pools/small lakes and adjacent blanket bog. The vegetation is characterised by lawns of *Sphagnum*, with abundant small sedges (especially *Carex limosa*, *C. paniculata*, *C. rostrata* and *C. lepidocarpa*), Bogbean (*Menyanthes* trifoliata) and White-beaked Sedge (*Rhynchospora alba*). Diagnostic bryophytes (other than *Sphagnum*) include *Aneura pinguis*, *Drepanocladus revolvens* and *Calliergon giganteum*. A rare moss, *Drepanocladus vernicosus*, has been recorded from an area of poor fen habitat

within the blanket bog complex. This is only one of 11 known sites for the plant in Ireland. This species is listed on Annex II of the EU Habitats Directive.

The coastal habitats at Glenamoy are extensive and varied. Sea cliffs extend for about 20 km along the north coast and achieve a height of 253m, at Benwee Head. They vary in physical character from sheer cliff-face to slopes of varying gradients. Typical cliff-face vegetation includes Thrift (*Armeria maritima*), Sea Campion (*Silene vulgaris* subsp. *maritima*) and Red Fescue (*Festuca rubra*). Sea stacks and several islands occur, of which Illaunmaistir is the most notable. A feature of the cliffs is the well developed cliff-top vegetation, which ranges from typical Plantain-dominated vegetation (*Plantago* sward) to coastal heath. South of Benwee Head, the rocky coastline grades into an estuarine system, Sruwaddacon Bay, which contains sand dunes and a machair system. Machair is a form of sandy, flat, coastal grassland, and this particular machair is unusual in that it extends upslope at Garter Hill - most machairs occupy flat, low-lying plains. It is, however, now very degraded owing mainly to over-grazing by sheep. *Petallophyllum ralfsii*, a rare bryophyte, listed on Annex II of the E.U. Habitats Directive, occurs abundantly on the machair habitat. This is thought to be the second largest colony (after Slyne Head in Co. Galway) of this species in Ireland.

The sea cliffs and islands provide excellent habitat for breeding seabirds. An internationally important population of Storm Petrel (7,500 - 10,000 pairs, pre-1987), occurs on Illaunmaistir . A large Puffin colony (c.2,000 pairs, pre 1987) and a small colony of Manx Shearwaters (c.100 pairs) also occurs on Illaunmaistir. The mainland cliffs was the first breeding site in Ireland for Fulmar and now has a very substantial colony (c.2,000 pairs, pre 1987). There is a sizeable Kittiwake colony (c.400 pairs pre 1987) and small colonies of Guillemots and Razorbills (less than 100 individuals of each). Peregrine Falcon and Chough, both Annex I Bird Directive species, breed on the cliffs. Another Annex I species, Merlin, breeds on the blanket bog, as does Golden Plover . In winter, a small flock (less than 50 individuals) of Barnacle Geese visit Illaunmaistir and Kid Island.

Otter, an EU Habitats Directive Annex II species, occurs on the site, as well two other Red Data Book mammal species: Badger and Irish Hare. The Glenamoy River holds Salmon and Sea Trout.

A number of landuse practices have damaged parts of this site. Grazing by sheep and cattle is widespread and over-grazing, which leads to soil erosion, has caused damage to parts of the blanket bog, heath and machair habitats. Peat cutting, by hand and to a lesser extent by mechanised means, is widespread throughout though mostly confined to near roads and tracks. The region in general has been heavily afforested with conifers and much of the site is bounded by plantations. Within parts of the site afforestation continues and poses a threat to the blanket bog.

This site is of immense ecological importance because of the presence of a number of E.U. Annex I habitats, including two priority habitats - blanket bog and machair. It supports populations of an Annex II mammal species, two

Annex II plant species and six Annex I Birds Directive species. It also has nationally important populations of other seabirds. Despite serious damage to parts of the site in recent years, large areas remain in good condition. Considerable archaeological interest is contained within the site, including the renowned Céide Fields. Furthermore, the site is of outstanding scenic value.

15.10.2001

SITE SYNOPSIS

SITE NAME: TULLAGHAN BAY

SITE CODE: 001567

Tullaghan Bay is situated approximately 10km south-west of Bangor on the west coast of County Mayo. It is a large shallow sea bay with small estuarine rivers surrounded by low-lying farmland and areas of blanket bog. The site shows a range of habitat types including coastal systems of sandy beaches, pebble shores, saltmarsh, sand dunes, and machair, as well as large areas of intertidal mudflats, sandflats and estuarine channels which are frequented by wintering waterfowl.

The bay is fringed by saltmarsh vegetation in many places. In some places the saltmarsh vegetation adjoins areas of machair. The large saltmarsh areas are grazed by cattle and sheep. Sand dunes are limited to the southern entrance of the bay.

Areas of blanket bog adjoining the bay are included in the site, displaying vegetation characteristic of the western seaboard with pools and quaking areas. Notable plant species of these blanket areas include Cranberry (Vaccinium oxycoccus), Mediterranean heath (Erica erigena) and the moss Sphagnum fuscum. There are also some small lake/ponds within the site.

The site is important because of the variety of coastal habitat types occurring within the bay and the proximity of areas of blanket bog. Transitions between saltmarsh and machair vegetation are also of interest.

Tullaghan Bay is part of the proposed Special Protection Area called Broadhaven/Blacksod Bay Complex.

Tullaghan Bay is internationally important for Brent Geese and is visited by Greenland White-fronted Geese. It is also widely used by several other waterfowl, including Wigeon, Teal, Ringed Plover, Golden Plover, Oystercatcher, Curlew, Bar-tailed Godwit, Redshank, Dublin and Sanderling.

15th February, 1995.

□

FEHILY TIMONEY & COMPANY

CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES

Our Ref: Q:/Prop-2004/046/Let001/MT

Mr. Ian Douglas
Senior Planner
Mayo County Council
Aras an Chontae
Castlebar
Co. Mayo

04 February 2004

RE: Corrib Gas Terminal and Peat Disposal Site

Dear Mr. Douglas

Further to our recent meeting and subsequent telephone conversation I confirm that Fehily Timoney & Company (FTC) will be pleased to carry out an assessment of the Geotechnical information incorporated in the Environmental Impact Statements submitted to Mayo County Council for the above sites. This assessment will be carried out by Dr. Michael Creed who is a retained sub-consultant to FTC.

We understand that your main concerns are the stability of the peat on both sites and also its transportability. Dr. Creed will carry out a thorough examination of the documents and give his opinion on:-

- the adequacy of the information supplied;
- the impacts of the peat excavation, transportation and disposal;
- the investigative methods used;
- the mitigation measures proposed; and
- the conclusions drawn.

FTC's estimate to carry out this work is €5,800. This estimate will not be exceeded without prior client approval. We will record the professional time involved and if the recorded time is less than the above figure Mayo County Council will be invoiced the lesser amount.

Cont'd.....

CORE HOUSE POULADUFF ROAD CORK IRELAND
TEL.: +353 21 4964133 FAX.: +353 21 4964464 E.MAIL: info@ftco.ie Web Site: www.fehilytimoney.ie
Directors: E. Timoney BE CEng FIEI MICE MCIWEM RConsEI D. O'Sullivan BE CEng MIEI RConsEI G. O'Sullivan BE CEng FIEI RConsEI W. Quirke Dip Ag
Company Secretary: A. Keohane. Associate: D. Egan MSc.
Registered in Dublin, Ireland, Fehily Timoney & Co. Ltd. Number 180497 Registered Office: Core House, Pouladuff Road, Cork. VAT Registration Number: IE 6580497 D

We trust the above meets with your approval. If you require any further information or clarity on the above please contact the undersigned.

Yours sincerely

Gerry O'Sullivan
for and on behalf of **Fehily Timoney & Company**

Reports 03/3343

DUCHAS – returned report. On Planners file.

NWRFB – returned report. On Planners file

AN TAISCE – returned report. On Planners file.

EPA - Wexford – confirmed they are not dealing with report. 4th February.

EPA – Dublin – told me to contact Castlebar office of EPA. Rang them and left message for someone to ring me back. 4th February.

DEPT OF THE MARINE - rang office. Left message on voicemail requesting report be returned. 4th February.

Fiona Fay
4/2/04

P03/3343

Ms. Maura Harrington,
Doohoma,
Ballina,
Co. Mayo.

13th February, 2004.

Re: P03/3343 – Shell E & P Ireland Ltd.,

Dear Ms. Harrington,

I refer to your e-mail of the 12th February, 2004 to Mr. J. Condon, County Secretary.

In reply to your queries:

1. The decision due dated on P03/3343 is 19th February, 2004.
2. Any submissions made by 30th January, 2004 can be supplemented by additional observation up to the decision due date.

Yours sincerely,

J. Moran, S.S.O.,
Planning

Moore Martina

From: Moore Martina
Sent: 13 February 2004 09:00
To: 'maurah.ias@eircom.net'

P03-3343.doc

Moore Martina

From: Moore Martina
Sent: 13 February 2004 09:07
To: 'maurah.ias@eircom.net'

P03-3343.doc

Planner's file

MAYO COUNTY COUNCIL

MEMO

To : **File P03/3343**
From : **Tanya Stanaway EP**
Date : **12/02/2004**
RE : **Phone call from Ms. Harrington in relation to P03/3343**

Ms. Harrington phoned today in relation to P03/3343, as approximately 11:50am. Ms. Harrington wished to speak to a competent person in relation to such file. As the Senior Planner, Iain Douglas, was not in the office I took the phone call.

I explained to Ms. Harrington that Iain Douglas, as Senior Planner, was dealing with the file but as he was not available could I have been of assistance to her or take a message and pass it on to Iain Douglas. She requested to know the decision date of P03/3343 and I informed her that it was 19/02/2004, as on the I-Plan System. She asked me did I know about the confusion as to the C.D. I informed her that I did not and she said that although I may be willing to assist her I was incompetent. I asked her for a contact number that I could get Iain Douglas to phone her back on, to answer her queries but as I could not give her a time scale as to when this could be, she did not leave me a number.

She requested if I was taking notes of this conversation, to which I replied I was. She asked to me tell her what I had written and I explained that as we do not recorded our phone calls, I did not have such conversation word for word but outlined what I had noted. She requested me to record this conversation on file.

I informed her that I would inform Iain Douglas of her call. I spoke to Iain Douglas and informed him of her request to contact her.

T Stanaway

T. Stanaway EP
Date: 12/02/04

Moran Joe

From: Condon John
Sent: 12 February 2004 16:53
To: 'Maura Harrington'
Cc: Moran Joe
Subject: RE: P03/3343 DECISION DATE

Ms Harrington,
Thankyou for your email. I have forwarded same to Mr. Joe Moran in the planning office who will reply to you directly.

With best regards,

John Condon
County Secretary

[Condon John]

-----Original Message-----
From: Maura Harrington [mailto:maurah.ias@eircom.net]
Sent: 12 February 2004 14:07
To: Condon John
Subject: P03/3343 DECISION DATE

Mr. Condon,

Pursuant to our brief telephone conversation, 12.55p.m. 11:02:'03, as County Secretary please reply in writing to the following legitimate queries from a citizen of this benighted State on behalf of which State you are supposed to 'be doing some service':

(i) What is the decision date in respect of P03/3343?

(ii) What is the position under the relevant sections of Planning Law with respect to the CD Rom element of P03/3343 which, we were led to believe, had extended the date for submissions to February 19th 2004?

I look forward to your prompt response. Please be advised that this email is copied to my files.

Maura Harrington. Receipt No. PLAN/0/6532- P03/3343

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.580 / Virus Database: 367 - Release Date: 06/02/04

13/02/2004

MAYO COUNTY COUNCIL

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_____
T. Stanaway EP
Date:_____

Erris Players

BANGOR-ERRIS. 097 - 83568

"Cnoc na Scallop"
Gortmore,
Bangor-Erris

€20-
Rno 6577
2/2/04

MAYO COUNTY COUNCIL
27 JAN 2004
Co. Manager's Office

22. 1. 2004.

MR Desmond Mahon,
Co. Manager,
Mayo Co. Council
Castlebar.

03/3343

At the A.G.M of the above group on Jan 21st 2004 - the following motion was passed unanimously.

"Every effort must be made to assure the Planning Authorities that the Corrib Gas Project is welcomed + is essential for the welfare & progress of Erris"

Erris is an area devoid of any serious industry & has suffered from the scourge of emigration as well as the lack of opportunities to keep families in the area for more than a century.

Any opportunity to give Erris a boost must not be overlooked provided its wild natural scenery is protected.

Sec. Bridie Quinn
Chair. Jay Carey

AN TAISCE – THE NATIONAL TRUST FOR IRELAND

Our ref: 20040130-16-3343

BY FAX
2 PAGES
TO FOLLOW

Director of Services for Planning,
Mayo Co. Council,
Aras and Chontae,
Castlebar
Co Mayo

2 February 2004

Ref: 03/3343
For: Proposal by Shell E & P Ireland for a gas refinery in Bellanaboy, County Mayo and ancillary and related development

Dear Sir,

Thank you for forwarding copy of EIS and other documentation for comment

This application must be considered with regard to previous An Bord Pleanala refusal 01/900 (ABP PL 16.126073) .

1. Council Directive 85/337/EEC as amended by 97/11/EC

There is a change of circumstances now applying . Ireland has been subject to legal proceedings by the EU commission for breach of Council Directive 85/337/EEC as amended by 97/11/EC . The grounds include failure to provide for integrated assessment of projects subject to assessment by planning authorities and EPA. .

Part of the development is subject to an EPA Waste Licence application199- 1 for deposition of peat at Srahmore. Other parts are or will be subject to other licence and consent procedures raising concern at lack of integrated assessment as required by Council Directive 85/337/EEC as amended by 97/11/EC .

However there is a change in legislation which must be addressed, namely the provisions of Sections 256 and 257 Planning and Development Act 2000, which allows environmental grounds relating to Waste Licence and IPC applications to be considered by planning authorities . The previous application was made under the Local Planning and Development Act 1963 as amended, the current application P03/3343 is made under the Planning and Development Act 2000.

The required information relevant to environmental pollution is missing from the EIS. The EIS does not fully address the discharge from this development to the environment

The disposal location of 50,000 m3 of waste material is not identified . No licensed landfill site has been identified.

The Tailors' Hall Back Lane Dublin 8 Telephone 01 4541786 Fax 01 4533255 Website: www.antaisce.org
Company Registration No: 12469; Charity Reference No: CHY 6741

2. Impact on SAC and SPA designated and shellfish areas.

The discharge of toxic waste at the border of a marine SAC 000472 and designated grade A shellfish area contravenes the Habitats Directive and the Quality of Water for Shellfish Directive. The development of this gas refinery requires a pipeline, which materially affects an Annex I Priority Habitat (Machair) and a marine SAC. The requirement under the EIA and Habitats Directive to adequately assess viable alternatives has not been complied with.

3. Source of rock required

The source of imported 78,000 m3 rock required for the development has not been identified, or the traffic implications assessed. It is not adequate to state that the rock would be sourced from licensed quarries when it has been clearly stated by the developer at the ABP Oral Hearing for the previous application that the 'local source' is Lennon's quarry, a development for which there is no valid planning permission.

4. Peat removal and relocation

The implications of removing 450,000 m3 of wet peat will cause suspended solids to be released into the Owenmore River which will then be released into Tullaghan Bay, SPA Site Code 037. This is not been assessed in the EIS. There is a conflict between the EIS for the terminal site and the Srahmore deposition site. The Srahmore EIS requires that there shall be a significant moisture reduction in the peat for deposition. The terminal site EIS states that this will be done by creating a three metre high window, and leaving it for eight days. It is evident from the previous Oral Hearing that the moisture reduction in this windrow, will be negligible.

The developer states that there are no SACs within the vicinity of the proposed developments. They do not submit the relevant maps of the SACs which are likely to be directly affected by the proposed developments which include the impact on haulage between the two sites, Carrowmore Lake Complex SAC 000476 . The Carrowmore Lake Complex includes the road to be upgraded in agreement with Mayo County Council as the proposed route for transport of 450,000 m3 of wet peat to the peat depository in Srahmore. A significant length of this road is included in the SAC and any works to this road requires full environmental impact assessment under the Habitats Directive and Regulations.

Any works on this road will have a direct significant affect on the SAC and are likely to cause significant deterioration on the water quality of Carrowmore Lake. Leakage from the lorries will be substantial with a high suspended solid content and will drain directly into Carrowmore Lake causing further deterioration of the quality of the only source of potable water for the whole Erris area and damage to the SAC.

5. Material Contravention of Mayo County Development Plan 2003

The application site and proposed structures would affect scenic views designated in the " Scenic Routes and Protected Views Map in the Mayo County Development Plan 2003., namely the views from the west side of Carrowmore lake to the north and north west. These views were designate under the previous 1992 plan. The inspectors report on the previous re be a fusal stated that the previous proposal would accordingly be a Material Contravention of Mayo County Development Plan 1992. The same applies to the current plan.

RECOMMENDATIONS

The proposed development should be refused planning permission because the site is unsuitable, the proposal impossible to implement and would have significant negative affect on the environment. The total traffic implementations have not been assessed and will pose a traffic hazard and major disruption in this tourist orientated area during the tourist season clashing with the envisaged transportation of peat time-window. The cumulative affects have not been stated or assessed in the EIS.

Yours sincerely,

Ian Lumley
Heritage Officer

AN TAISCE – THE NATIONAL TRUST FOR IRELAND

Our ref: 20040130-16-3343

Director of Services for Planning,
Mayo Co. Council,
Aras and Chontae,
Castlebar
Co Mayo

2 February 2004

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For: Proposal by Shell E & P Ireland for a gas refinery in Bellanaboy, County Mayo and ancillary and related development

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1. Council Directive 85/337/EEC as amended by 97/11/EC

There is a change of circumstances now applying . Ireland has been subject to legal proceedings by the EU commission for breach of Council Directive 85/337/EEC as amended by 97/11/EC . The grounds include failure to provide for integrated assessment of projects subject to assessment by planning authorities and EPA. .

Part of the development is subject to an EPA Waste Licence application199- 1 for deposition of peat at Srahmore. Other parts are or will be subject to other licence and consent procedures raising concern at lack of integrated assessment as required by Council Directive 85/337/EEC as amended by 97/11/EC .

However there is a change in legislation which must be addressed, namely the provisions of Sections 256 and 257 Planning and Development Act 2000, which allows environmental grounds relating to Waste Licence and IPC applications to be considered by planning authorities . The previous application was made under the Local Planning and Development Act 1963 as amended, the current application P03/3343 is made under the Planning and Development Act 2000.

The required information relevant to environmental pollution is missing from the EIS. The EIS does not fully address the discharge from this development to the environment

The disposal location of 50,000 m3 of waste material is not identified . No licensed landfill site has been identified.

The Tailors' Hall Back Lane Dublin 8 Telephone 01 4541786 Fax 01 4533255 Website: www.antaisce.org
Company Registration No: 12469; Charity Reference No: CHY 4741

2. Impact on SAC and SPA designated and shellfish areas.

The discharge of toxic waste at the border of a marine SAC 000472 and designated grade A shellfish area contravenes the Habitats Directive and the Quality of Water for Shellfish Directive. The development of this gas refinery requires a pipeline, which materially affects an Annex I Priority Habitat (Machair) and a marine SAC, The requirement under the EIA and Habitats Directive to adequately assess viable alternatives has not been complied with.

3. Source of rock required

The source of imported 78,000 m3 rock required for the development has not been identified, or the traffic implications assessed. It is not adequate to state that the rock would be sourced from licensed quarries when it has been clearly stated by the developer at the ABP Oral Hearing for the previous application that the 'local source' is Lennon's quarry, a development for which there is no valid planning permission.

4. Peat removal and relocation

The implications of removing 450,000 m3 of wet peat will cause suspended solids to be released into the Owenmore River which will then be released into Tullaghan Bay, SPA Site Code 037. This is not been assessed in the EIS. There is a conflict between the EIS for the terminal site and the Srahmore deposition site. The Srahmore EIS requires that there shall be a significant moisture reduction in the peat for deposition. The terminal site EIS states that this will be done by creating a three metre high window and leaving it for eight days. It is evident from the previous Oral Hearing that the moisture reduction in this windrow, will be negligible.

The developer states that there are no SACs within the vicinity of the proposed developments. They do not submit the relevant maps of the SACs which are likely to be directly affected by the proposed developments which include the impact on haulage between the two sites, Carrowmore Lake Complex SAC 000476 . The Carrowmore Lake Complex includes the road to be upgraded in agreement with Mayo County Council as the proposed route for transport of 450,000 m3 of wet peat to the peat depository in Srahmore. A significant length of this road is included in the SAC and any works to this road requires full environmental impact assessment under the Habitats Directive and Regulations.

Any works on this road will have a direct significant affect on the SAC and are likely to cause significant deterioration on the water quality of Carrowmore Lake. Leakage from the lorries will be substantial with a high suspended solid content and will drain directly into Carrowmore Lake causing further deterioration of the quality of the only source of potable water for the whole Erris area and damage to the SAC.

5. Material Contravention of Mayo County Development Plan 2003

The application site and proposed structures would affect scenic views designated in the " Scenic Routes and Protected Views Map in the Mayo County Development Plan 2003., namely the views from the west side of Carrowmore lake to the north and north west. These views were designate under the previous 1992 plan. The inspectors report on the previous re be a fusal stated that the previous proposal would accordingly be a Material Contravention of Mayo County Development Plan 1992. The same applies to the current plan.

RECOMMENDATIONS

The proposed development should be refused planning permission because the site is unsuitable, the proposal impossible to implement and would have significant negative affect on the environment. The total traffic implementations have not been assessed and will pose a traffic hazard and major disruption in this tourist orientated area during the tourist season clashing with the envisaged transportation of peat time-window. The cumulative affects have not been stated or assessed in the EIS.

Yours sincerely,

Ian Lumley
Heritage Officer

AN TAISCE – THE NATIONAL TRUST FOR IRELAND

Our ref: 20040130-16-3343

BY FAX
2 PAGES
TO FOLLOW

Director of Services for Planning,
Mayo Co. Council,
Aras and Chontae,
Castlebar
Co Mayo

2 February 2004

Ref: 03/3343
For: Proposal by Shell E & P Ireland for a gas refinery in Bellanaboy, County Mayo and ancillary and related development

Dear Sir,

Thank you for forwarding copy of EIS and other documentation for comment

This application must be considered with regard to previous An Bord Pleanala refusal 01/900 (ABP PL 16.126073) .

1. Council Directive 85/337/EEC as amended by 97/11/EC

There is a change of circumstances now applying . Ireland has been subject to legal proceedings by the EU commission for breach of Council Directive 85/337/EEC as amended by 97/11/EC . The grounds include failure to provide for integrated assessment of projects subject to assessment by planning authorities and EPA. .

Part of the development is subject to an EPA Waste Licence application199- 1 for deposition of peat at Srahmore. Other parts are or will be subject to other licence and consent procedures raising concern at lack of integrated assessment as required by Council Directive 85/337/EEC as amended by 97/11/EC .

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The required information relevant to environmental pollution is missing from the EIS. The EIS does not fully address the discharge from this development to the environment

The disposal location of 50,000 m3 of waste material is not identified . No licensed landfill site has been identified.

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Yours sincerely,

Ian Lumley
Heritage Officer

Westport
Chamber
of Commerce

Bridge Street, Westport, Co. Mayo
Telephone (098)27375. Fax (098) 27916.
Email: info@westportireland.com Website: www.westportireland.com

Planning Section
Mayo County Council
Aras an Chontae
The Mall
Castlebar
Co. Mayo

21 January 2004

Dear Sir/Madam,

I enclose the Westport Chamber of Commerce submission to Mayo County Council Planning Department – Planning Application Reference Number P03/3343 (Shell E & P Ireland Ltd. – Bellagelly South Srahmore Attavally) for your attention.

If you require any further information please do not hesitate to contact me.

Yours sincerely

Pat Prendergast

Mr. Pat Prendergast
Director
Westport Chamber of Commerce

Westport
...Ireland's Tidiest Town 2001

MEMBER OF THE CHAMBERS OF COMMERCE OF IRELAND.

WESTPORT CHAMBER OF COMMERCE

PLANNING APPLICATION REFERENCE NUMBER: P03/3343

(SHELL E & P IRELAND LTD – BELLAGELLY SOUTH SRAHMORE ATTAVALLY)

SUBMISSION TO

MAYO COUNTY COUNCIL PLANNING DEPARTMENT

January 2004

INTRODUCTION

Mayo County Council planning office has recently received a planning application from Shell E & P Ireland Ltd to construct a Gas Terminal for the reception and separation of gas from the Corrib Gas Field and for a Peat Deposition Site.

The Westport Chamber of Commerce is a business representative organisation that works in the interest of Westport business for the development of the area. It represents all business sectors from sole traders to multi-nationals. The Chamber monitors issues, develops proposals and based on feedback from membership lobbies local and national government to ensure that the interests of the members are represented.

This is Westport Chamber of Commerce submission to Mayo County Council Planning Authority and it outlines the Chamber's support of the proposed project.

CHAMBER OBJECTIVES

It is the Chamber's objective to support the development of the Corrib Natural Gas Field and the development of a natural gas network throughout the high population areas throughout the county.

The Chamber believes the development of this gas network will be beneficial to the entire region. It recommends that Westport be connected to the new Bord Gais Pipeline as:

(a) The energy requirement of Westport currently exceeds that of Castlebar.

(b) It will allow for the reduction of energy costs for Tourism, in particular the Hotels, and the manufacturing industry.

(c) It would enable industries such as Allergan Pharmaceuticals to facilitate the development of a power plant for their own use and to supply energy to the electricity network. (Allergan had seriously considered to undertake such a development in 2001).

(d) It would facilitate the development of a power generation such as a CHP (combined heat and power plant) which could be fuelled by the gas network.

CONCLUSION

Westport Chamber of Commerce would welcome the development, as it would enable industry to reduce their energy costs and it would provide the necessary power supply to attract intensive industry to Westport, and other towns in County Mayo.

The Chamber believes the development must be done in accordance with the appropriate planning and environmental guidelines.

COMHAIRLE CHONTAE MHAIGH EO
MAYO COUNTY COUNCIL

TO: SSO Planning and Development **DATE:** 16/02/04

FROM: Iain Douglas Senior Planner

SUBJECT : **Further Information.** **FILE :**P03/3343

Please request the attached Further Information

Iain Douglas
Senior Planner

Bellanaboy Gas Terminal P03/3343

Further Information Request

Please submit the following further information:

Volume 1.

1. A fully detailed traffic management plan.

2. Written conformation from the relevant regulatory authority that the design of the proposed gas pipelines from the terminal compound to the site boundary is suitable to ensure the structural stability of the pipelines constructed in deep peat soil.

3. Proposals for system of collection and storage of any pumped water containing deleterious substances, including concrete, separate from the surface drainage network and settlement ponds, and to provide for its safe disposal.

4. A map showing the location of the septic tank, the puraflo unit and the percolation area, in relation to the Bellanaboy River, the Leanamore Stream and any tributary of the Glenamoy River.

5. Full details of the proposed sewage disposal system, including any water-table and percolation tests and the design of a suitably sized percolation area.

6. Submit a map outlining phosphate hot-spots, quantities of contaminated material, details of the analysis of the occasional occurrence of high levels of phosphorous detected in peat samples on the site and proposals to deal with the same including disposal. The format of the response shall include a comparison between the total concentrations (above background levels), that may theoretically, result from the development works and other land use activities that regularly occur in the area, e.g. afforestation, clearfelling etc.

7. Details of site drainage of terminal and silt control measures proposed at the various stages of construction and peat excavation. A clear and detailed map of the existing site drainage, and of the site drainage works and silt ponds proposed at the various stages of construction and peat excavation, should be provided.

8. Baseline physico-chemical data on water quality conditions in and around the site.

9. Information and proposals to address the possible impacts of free water from excavated peat on water quality, including pH and loading of humic and other acids.

10. A schedule of sensitive periods for wildlife when construction works on the terminal should cease or be curtailed (these are referred to in the EIS but are not specified).

11. Information on the possible impacts on water quality, aquatic ecology and surrounding peatlands arising from the use of the highly alkaline lime/cement binder to comparatively small parts of the site. The information should include technical information and assessments to support the use and appropriateness of this method of peat improvement in this location.

12. The basis for all assumptions used in relation to the drainage calculations provided and the design of the settlement ponds.

13. Investigation of the feasibility of only allowing surface water which is actively pumped from the site entering the settlement ponds and ensuring that site drainage during construction is a totally pro-active hydrometric process rather than a semi passive one. (Parameters would involve setting a maximum allowable output flow rate from the site an in the event that this flow rate is exceeded flooding of the site is the end result, rather than dealing with the risk of overloading of the settlement ponds.

14. Examine the practicability of relocating the settlement ponds further to the north of the site allowing a greater distance for any surcharge of the ponds to flow over ground and examine how this would affect the stability of the underlying peat.

15. A data history set setting out the hydrological dynamics of the site to date. In particular the relationships between rainfall events, flows in perimeter drains and levels of phosphates and suspended solids.

16. Proposals to deal with the storage of peat on site in the event of adverse weather conditions preventing sufficient de-watering of the peat to allow transportation to the deposition site.

17. A detailed waste management plan setting out all wastes expected to be generated by the project both during construction and operation. The expected quantities of each waste type and their probable disposal routes.

18. Figures 12.1 to 12.4 at a size sufficient to show all noise sensitive receptors and to allow their individual numbering.

19. Figure 11.3 Concentration Contour at a size sufficient to allow the individual numbering of the nearby houses.

20. Plates 13.1 and 13.2 reproduced at improved resolution on A4 size photographic paper.

Volume 2.

1. Additional water quality samples including physico-chemical analyses of these water samples as a baseline for establishing existing water quality. (please note that three of the six water quality samples at Srahmore were taken as drainage maintenance works were being carried out on the main watercourse through the site and would not be representative of baseline conditions).

2. Reconcile the fact that the EIS states that settlement pond S5-2 is operating efficiently in lowering the sediment loading of run-off at that location, a total solids figure of 475mg/l, (this figure itself appears high) when the level of total solids recorded in water samples taken from the main drain when drainage maintenance work was being carried out (249-632mg/l).

3. Indicate whether the level of Total ammoniacal Nitrogen (which already high in the water samples taken) will increase with the introduction of peat from Bellagelly South and whether it will impact on marine waters in Tullaghan Bay pNHA and Blacksod Bay/ Broadhaven SPA downstream of the proposed development. Details shall include proposals to mitigate any adverse effect.

4. A map showing noise sensitive receptors and indicating existing and predicted noise levels at those sites by means of noise contours.

5. Figure 6.1 Habitats Map

6. Proposals to deal with excess water seepage from stockpiled peat

7. An assessment of the impact of mineral soil being overlain on the existing peat soil.

Other Matters.

1. Please submit an assessment of the cumulative effects of (a) the gas terminal (b) the deposition site and (c) the haul route.

P03/3343

PER REGISTERED POST

17th February 2004

Mr Tom R. Philips
Tom Philips & Associates
8 – 11 Lower Baggot Street
Dublin 2

Re: Planning application for the development of a gas terminal for the reception and separation of gas from the Corrib Gas Field, and for a peat deposition site, respectively.

The development will consist of the concurrent development of two sites located 11 kilometres apart, approximately, and identified as the site of the gas terminal for the reception and separation of gas from the Corrib Gas Field in the townland of Bellagelly South, Bellanaboy Bridge, County Mayo (the Bellagelly South site) and the site of the peat deposition site in the townlands of Srahmore and Attavally, Bangor-Erris, County Mayo (the Srahmore site), respectively.

The development at the Bellagelly South site will consist of: a gas terminal for the reception and separation of gas including plant and equipment; provision of 4,935 sq m (gross floor area), approximately, of buildings; access roads; 40 no. car parking spaces; and ancillary developments, of which 13 ha, approximately, will be developed in respect of the gas terminal's footprint. The proposed development of the Bellagelly South site will also consist of: the excavation and removal of 450,000 cubic metres, approximately, of peat from the Bellagelly South site, off site, to the Srahmore site; civil works, inclusive of foundations and piling; the provision of a single storey workshop building with a gross floor area of 400 sq m, approximately, inclusive of a control room, offices, equipment rooms, kitchenette, locker room and toilets; the provision of a single storey administration building with a gross floor area of 1,015 sq m, approximately, inclusive of a gatehouse, offices, a conference room and an emergency response room, canteen, kitchenette, laboratory, archive room, first aid room, store rooms, lockers, changing rooms and toilets; the provision of a maintenance building with a gross floor area of 800 sq m, inclusive of a warehouse, stores, mechanical workshop, welding and fabrication shop, instruments and electrical workshops, a plant room, toilets and a maintenance vehicle shed; a weighbridge; and a lattice antenna structure of 22 m in height, approximately, for site-wide radio communications. The development of the Bellagelly South site will also consist of: a diesel storage tank of 75 cubic metres capacity, approximately; a nitrogen generation unit; an air compressor package; a utility area (for plant); a power generation and switchroom building with a gross floor area of 525 sq m, approximately, for the production of electricity for the proposed gas terminal, to include 3 no. generator sets each with a capacity of 1.3 MW; an emergency generator with a capacity of 650kW; 1 no. emergency generator diesel day-tank and 1 no. diesel distribution pump; a high pressure and low pressure flare tower of some 40 m in height, approximately; a ground flare with a stack height of some 12 m, approximately; a transformer building with a gross area of 410 sq m, approximately, to include a 400v switchroom; a heating medium heater with a stack height of 20 m, approximately; 3 no. flare knock out drums; 2 no. low pressure gas compressors; a methanol recovery system comprising

of 1 no. methanol still of 33 m in height, approximately; a heating medium storage tank with a capacity of 40 cubic metres, approximately; a sales gas compressor building with a gross floor area of 890 sq m, approximately, to include 2 no. sales gas compressors, each with a 7.7 MW ISO rated gas turbine driver; a gas-to-gas heat exchanger; a corrugated plate interceptor; effluent feed/treated water sumps; a water treatment building with a gross floor area of 235 sq m, approximately, containing a multi-media filter, ultrafiltration and nanofiltration membrane units, ion exchange beds, an activated carbon filter and a sludge treatment facility; 3 no. condensate storage tanks, of 10 m each in height, approximately, and 10 m each in diameter, approximately; 2 no. product methanol tanks of 8.4 m each in diameter, approximately, and 10 m each in height, approximately; 3 no. raw methanol storage tanks 13.5 m each in diameter, approximately, and 10 m high, approximately; a fire water pond with a capacity of 7,200 cubic metres, approximately; a used firewater pond with a capacity of 5,000 cubic metres, approximately; a firewater pump building with a gross floor area of 660 sq m, approximately, to include 4 no. fire water pumps, each with capacity of 600 cubic metres per hour, approximately, and 4 no. diesel engine drivers, each rated at 265kW (absorbed), approximately; a finger type Slug Catcher; an inlet pig receiver with a withdrawal footprint of 15 sq m, approximately; a sales gas metering unit with a footprint of 200 sq m, approximately; an odorant tank with a capacity of 10 cubic metres, approximately; a sales gas pig launcher with a loading / withdrawal footprint of 15 sq m, approximately; an Onshore Terminal Termination Unit (OTTU) measuring 2 m long by 1 m wide by 2.5 m high, approximately; an electricity substation; a Road Tanker Loading / Unloading area; a waste storage area occupying an area of 990 sq m, approximately; the provision of a number of pipetracks and piperacks joining elements of plant together; the provision of 2 no. settlement ponds and associated drainage arrangements; landscaping works; stock proof fencing around the perimeter of the proposed development; security fencing around the terminal and settlement ponds inside the stock proof fence; paved internal access roads; provision of vehicular access to the R314 via an improved forestry access road and the provision of entrance walls and gates; the reconfiguration of the existing entrance from the site to the R314 to include the widening of the entrance and the provision of a deceleration lane; realignment of the R314 to the south of its current location, at the site entrance, over a length of 115 m, approximately, to the west of the centreline of the existing site entrance and over a length of 80 m, approximately, to the east of the centreline of the existing site entrance (over a total length of 195 m, approximately); an emergency vehicular access road to the county road running between Pollatomish and the R314 via; an improved forestry access road; a new maintenance access and maintenance road from the R314 to the 2 no. settlement ponds; and all other site development works and landscaping above and below ground.

The development will simultaneously consist of the development of a peat deposition site of 117 ha, approximately, at the Srahmore site. The development of the peat deposition site will consist of: the construction of a hardstanding peat reception area of 5,112 sq m, approximately; the provision of a temporary administration building with a gross floor area of 108 sq m, approximately, inclusive of offices, canteen and toilets. The development of the peat deposition site will also consist of: the provision of a new entrance and access road to the peat deposition site from the R313; the construction of internal circulation routes; the construction of a surface water swale along the southern and western boundaries of the site; the provision of 5 no. surface water settlement ponds (2 no. ponds of 800 sq m each; 3 no. ponds of 400 sq m each, approximately). Deposition of peat will take place within an area of 63 hectares approximately. The peat deposition site will also entail the provision of a controlled overflow area of 12 hectares approximately; an oil interceptor; a settlement tank of 28 cubic metres approximately; the provision of a temporary weighbridge and a temporary wheelwash. The development of the peat deposition site will also consist of 5 no. car parking spaces located adjacent to the administration building and 20 no. parking spaces for haulage vehicles at the peat reception area at a site of 160 ha, approximately, in the townland of Bellagelly South,

Bellanaboy Bridge, County Mayo, and a site of 117 ha, approximately, in the townlands of Srahmore and Attavally, Bangor-Erris, County Mayo - Shell E & P Ireland Ltd.

Dear Mr Philips

I refer to the above and I am to inform you that you must submit the following:

Volume 1.

1. A fully detailed traffic management plan.

2. Written confirmation from the relevant regulatory authority that the design of the proposed gas pipelines from the terminal compound to the site boundary is suitable to ensure the structural stability of the pipelines constructed in deep peat soil.

3. Proposals for system of collection and storage of any pumped water containing deleterious substances, including concrete, separate from the surface drainage network and settlement ponds, and to provide for its safe disposal.

4. A map showing the location of the septic tank, the puraflo unit and the percolation area, in relation to the Bellanaboy River, the Leanamore Stream and any tributary of the Glenamoy River.

5. Full details of the proposed sewage disposal system, including any water-table and percolation tests and the design of a suitably sized percolation area.

6. Submit a map outlining phosphate hot-spots, quantities of contaminated material, details of the analysis of the occasional occurrence of high levels of phosphorous detected in peat samples on the site and proposals to deal with the same including disposal. The format of the response shall include a comparison between the total concentrations (above background levels), that may theoretically, result from the development works and other land use activities that regularly occur in the area e.g. afforestation, clearfelling etc

7. Details of site drainage of terminal and silt control measures proposed at the various stages of construction and peat excavation. A clear and detailed map of the existing site drainage, and of the site drainage works and silt ponds proposed at the various stages of construction and peat excavation, should be provided.

8. Baseline physico-chemical data on water quality conditions in and around the site.

9. Information and proposals to address the possible impacts of free water from excavated peat on water quality, including pH and loading of humic and other acids.

10. A schedule of sensitive periods for wildlife when construction works on the terminal should cease or be curtailed (these are referred to in the EIS but are not specified).

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14. Examine the practicability of relocating the settlement ponds further to the north of the site allowing a greater distance for any surcharge of the ponds to flow over ground and examine how this would affect the stability of the underlying peat.

15. A data history setting out the hydrological dynamics of the site to date. In particular the relationships between rainfall events, flows in perimeter drains and levels of phosphates and suspended solids.

16. Proposals to deal with the storage of peat on site in the event of adverse weather conditions preventing sufficient de-watering of the peat to allow transportation to the deposition site.

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20. Plates 13.1 and 13.2 reproduced at improved resolution on A4 size photographic paper.

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3. Indicate whether the level of Total ammoniacal Nitrogen (which already appears high in the water samples taken) will increase with the introduction of peat from Bellagelly South and whether it will impact on marine waters in Tullaghan Bay pNHA and Blacksod Bay/ Broadhaven SPA downstream of the proposed development. Details shall include proposals to mitigate any adverse effect.

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5. Figure 6.1 Habitats Map

6. Proposals to deal with excess water seepage from stockpiled peat

7. An assessment of the impact of mineral soil being overlain on the existing peat soil.

Other Matters.

1. Please submit an assessment of the cumulative effects of (a) the gas terminal (b) the deposition site and (c) the haul route.

Pending receipt of the above further consideration of this application is deferred.

As this request for further information represents significant further information, the applicant is required to re-advertise the proposed revisions in an approved newspaper marked 'Further Information' or 'Revised Plans' in accordance with Section 35 of the Planning and Development Regulations 2001.

In addition to the standard requirements of planning notices published, the notice should also:

(a) include the reference number of the application on the register (i.e. P03/3343), and

(b) state clearly that 'submission or observation in relation to the further information / revised plans may be made to the planning authority in writing, on payment of €20.00, within three weeks beginning on the date of publication of the notice'.

Please note that under the Planning and Development Regulations, 2001, failure to comply with the above within a period of six months from the date of this letter, will result in a declaration that the planning application has been withdrawn.

Yours sincerely,

FOR COUNTY SECRETARY

Copy to: Shell E & P Ireland Ltd., Corrib House, 52 Leeson Street, Dublin 2

ID/MM

Moran Joe

From: Condon John
Sent: 28 January 2004 12:29
To: Moran Joe; Douglas Iain
Subject: FW: attention Mr. Ian Douglas

Corrib Plan of Development.pdf...

-----Original Message-----
From: Monica Muller
To: Co_Secretary
Sent: 27/01/2004 20:11
Subject: attention Mr. Ian Douglas

Dear Mr Douglas,
find attached extract from the Corrib Plan of Development as approved by
ıe (then) Minister of marine and Natural Resources.

And yes, you are right about the site notice.

Yours sincerely,
MONICA MULLER
ROSSPORT
BALLINA
CO. MAYO
<<Corrib Plan of Development.pdf>>

COPA
gave to
Ian

APPENDIX A

PLAN OF DEVELOPMENT FOR CORRIB GAS FIELD

RECOMMENDATION AND CONDITIONS

This recommendation is made on the understanding that safety zones of 500m radius would be established around the subsea installations in the field and the diffuser at the end of the terminal water discharge pipe.

This approval should be subject to the following conditions:

1) Commencement of commercial production operations in January, 2004;

2) Compliance with all relevant national and international statutory requirements, regulations in force at the time for a particular location and all directions given by the relevant national or local competent authorities, including:

- obtaining all necessary Planning Permissions;
- obtaining a Foreshore Licence;
- obtaining an IPCL Licence;
- compliance with all requirements and regulations applying to offshore petroleum production operations concerning safety and environmental protection;
- conducting all operations in relation to the Corrib Gas Field in accordance with the Rules and Procedures for Offshore Petroleum Production Operations as may be amended from time to time; and
- compliance with terms of Corrib Lease.

3) Approval by the Minister for First Gas (commencement of commercial production operations). Such approval will be subject to the following conditions:

- Satisfactory fulfilment of the Conditions Precedent to the Commencement of Commercial Production Operations (Clause 5, Corrib Petroleum Lease);
- All production operations in relation to Corrib being conducted according to all requirements of the Rules and Procedures for Offshore Petroleum Production Operations, as may be amended from time to time;
- Prior to commencement of gas production (for commissioning or commercial operations) the receipt of a Letter(s) of Acceptance for all Corrib installations, pipelines and associated engineering infrastructure from the Minister's auditor indicating that 3rd Party Independent Verification has been carried out and completed satisfactorily in relation to the development.

4) The Minister will liaise with the Environmental Protection Agency in the determination of an IPC licence application for the operation of the terminal. As part of this consultation process, he will have the environmental matters

P03/3343

PER REGISTERED POST

17th February 2004

Mr Tom R. Philips
Tom Philips & Associates
8 – 11 Lower Baggot Street
Dublin 2

Re: Planning application for the development of a gas terminal for the reception and separation of gas from the Corrib Gas Field, and for a peat deposition site, respectively.

The development will consist of the concurrent development of two sites located 11 kilometres apart, approximately, and identified as the site of the gas terminal for the reception and separation of gas from the Corrib Gas Field in the townland of Bellagelly South, Bellanaboy Bridge, County Mayo (the Bellagelly South site) and the site of the peat deposition site in the townlands of Srahmore and Attavally, Bangor-Erris, County Mayo (the Srahmore site), respectively.

The development at the Bellagelly South site will consist of: a gas terminal for the reception and separation of gas including plant and equipment; provision of 4,935 sq m (gross floor area), approximately, of buildings; access roads; 40 no. car parking spaces; and ancillary developments, of which 13 ha, approximately, will be developed in respect of the gas terminal's footprint. The proposed development of the Bellagelly South site will also consist of: the excavation and removal of 450,000 cubic metres, approximately, of peat from the Bellagelly South site, off site, to the Srahmore site; civil works, inclusive of foundations and piling; the provision of a single storey control building with a gross floor area of 400 sq m, approximately, inclusive of a control room, offices, equipment rooms, kitchenette, locker room and toilets; the provision of a single storey administration building with a gross floor area of 1,015 sq m, approximately, inclusive of a gatehouse, offices, a conference room and an emergency response room, canteen, kitchenette, laboratory, archive room, first aid room, store rooms, lockers, changing rooms and toilets; the provision of a maintenance building with a gross floor area of 800 sq m, inclusive of a warehouse, stores, mechanical workshop, welding and fabrication shop, instruments and electrical workshops, a plant room, toilets and a maintenance vehicle shed; a weighbridge; and a lattice antenna structure of 22 m in height, approximately, for site-wide radio communications. The development of the Bellagelly South site will also consist of: a diesel storage tank of 75 cubic metres capacity, approximately; a nitrogen generation unit; an air compressor package; a utility area (for plant); a power generation and switchroom building with a gross floor area of 525 sq m, approximately, for the production of electricity for the proposed gas terminal, to include 3 no. generator sets each with a capacity of 1.3 MW; an emergency generator with a capacity of 650kW; 1 no. emergency generator diesel day-tank and 1 no. diesel distribution pump; a high pressure and low pressure flare tower of some 40 m in height, approximately; a ground flare with a stack height of some 12 m, approximately; a transformer building with a gross area of 410 sq m, approximately, to include a 400v switchroom; a heating medium heater with a stack height of 20 m, approximately; 3 no. flare knock out drums; 2 no. low pressure gas compressors; a methanol recovery system comprising

of 1 no. methanol still of 33 m in height, approximately; a heating medium storage tank with a capacity of 40 cubic metres, approximately; a sales gas compressor building with a gross floor area of 890 sq m, approximately, to include 2 no. sales gas compressors, each with a 7.7 MW ISO rated gas turbine driver; a gas-to-gas heat exchanger; a corrugated plate interceptor; effluent feed/treated water sumps; a water treatment building with a gross floor area of 235 sq m, approximately, containing a multi-media filter, ultrafiltration and nanofiltration membrane units, ion exchange beds, an activated carbon filter and a sludge treatment facility; 3 no. condensate storage tanks, of 10 m each in height, approximately, and 10 m each in diameter, approximately; 2 no. product methanol tanks of 8.4 m each in diameter, approximately, and 10 m each in height, approximately; 3 no. raw methanol storage tanks 13.5 m each in diameter, approximately, and 10 m high, approximately; a fire water pond with a capacity of 7,200 cubic metres, approximately; a used firewater pond with a capacity of 5,000 cubic metres, approximately; a firewater pump building with a gross floor area of 660 sq m, approximately, to include 4 no. fire water pumps, each with capacity of 600 cubic metres per hour, approximately, and 4 no. diesel engine drivers, each rated at 265kW (absorbed), approximately; a finger type Slug Catcher; an inlet pig receiver with a withdrawal footprint of 15 sq m, approximately; a sales gas metering unit with a footprint of 200 sq m, approximately; an odorant tank with a capacity of 10 cubic metres, approximately; a sales gas pig launcher with a loading / withdrawal footprint of 15 sq m, approximately; an Onshore Terminal Termination Unit (OTTU) measuring 2 m long by 1 m wide by 2.5 m high, approximately; an electricity substation; a Road Tanker Loading / Unloading area; a waste storage area occupying an area of 990 sq m, approximately; the provision of a number of pipetracks and piperacks joining elements of plant together; the provision of 2 no. settlement ponds and associated drainage arrangements; landscaping works; stock proof fencing around the perimeter of the proposed development; security fencing around the terminal and settlement ponds inside the stock proof fence; paved internal access roads; provision of vehicular access to the R314 via an improved forestry access road and the provision of entrance walls and gates; the reconfiguration of the existing entrance from the site to the R314 to include the widening of the entrance and the provision of a deceleration lane; realignment of the R314 to the south of its current location, at the site entrance, over a length of 115 m, approximately, to the west of the centreline of the existing site entrance and over a length of 80 m, approximately, to the east of the centreline of the existing site entrance (over a total length of 195 m, approximately); an emergency vehicular access road to the county road running between Pollatomish and the R314 via; an improved forestry access road; a new maintenance access and maintenance road from the R314 to the 2 no. settlement ponds; and all other site development works and landscaping above and below ground.

The development will simultaneously consist of the development of a peat deposition site of 117 ha, approximately, at the Srahmore site. The development of the peat deposition site will consist of: the construction of a hardstanding peat reception area of 5,112 sq m, approximately; the provision of a temporary administration building with a gross floor area of 108 sq m, approximately, inclusive of offices, canteen and toilets. The development of the peat deposition site will also consist of: the provision of a new entrance and access road to the peat deposition site from the R313; the construction of internal circulation routes; the construction of a surface water swale along the southern and western boundaries of the site; the provision of 5 no. surface water settlement ponds (2 no. ponds of 800 sq m each; 3 no. ponds of 400 sq m each, approximately). Deposition of peat will take place within an area of 63 hectares approximately. The peat deposition site will also entail the provision of a controlled overflow area of 12 hectares approximately; an oil interceptor; a settlement tank of 28 cubic metres approximately; the provision of a temporary weighbridge and a temporary wheelwash. The development of the peat deposition site will also consist of 5 no. car parking spaces located adjacent to the administration building and 20 no. parking spaces for haulage vehicles at the peat reception area at a site of 160 ha, approximately, in the townland of Bellagelly South,

Bellanaboy Bridge, County Mayo, and a site of 117 ha, approximately, in the townlands of Srahmore and Attavally, Bangor-Erris, County Mayo - Shell E & P Ireland Ltd.

Dear Mr Philips

I refer to the above and I am to inform you that you must submit the following:

Volume 1.

1. A fully detailed traffic management plan.

2. Written confirmation from the relevant regulatory authority that the design of the proposed gas pipelines from the terminal compound to the site boundary is suitable to ensure the structural stability of the pipelines constructed in deep peat soil.

3. Proposals for system of collection and storage of any pumped water containing deleterious substances, including concrete, separate from the surface drainage network and settlement ponds, and to provide for its safe disposal.

4. A map showing the location of the septic tank, the puraflo unit and the percolation area, in relation to the Bellanaboy River, the Leanamore Stream and any tributary of the Glenamoy River.

5. Full details of the proposed sewage disposal system, including any water-table and percolation tests and the design of a suitably sized percolation area.

6. Submit a map outlining phosphate hot-spots, quantities of contaminated material, details of the analysis of the occasional occurrence of high levels of phosphorous detected in peat samples on the site and proposals to deal with the same including disposal. The format of the response shall include a comparison between the total concentrations (above background levels), that may theoretically result from the development works and other land use activities that regularly occur in the area e.g. afforestation, clearfelling etc

7. Details of site drainage of terminal and silt control measures proposed at the various stages of construction and peat excavation. A clear and detailed map of the existing site drainage and of the site drainage works and silt ponds proposed at the various stages of construction and peat excavation, should be provided.

8. Baseline physico-chemical data on water quality conditions in and around the site.

9. Information and proposals to address the possible impacts of free water from excavated peat on water quality, including pH and loading of humic and other acids.

10. A schedule of sensitive periods for wildlife when construction works on the terminal should cease or be curtailed (these are referred to in the EIS but are not specified).

11. Information on the possible impacts on water quality, aquatic ecology and surrounding peatlands arising from the use of the highly alkaline lime/cement binder to comparatively small parts of the site. The information should include technical information and assessments to support the use and appropriateness of this method of peat improvement in this location.

12. The basis for all assumptions used in relation to the drainage calculations provided and the design of the settlement ponds.

13. Investigation of the feasibility of only allowing surface water which is actively pumped from the site entering the settlement ponds and ensuring that site drainage during construction is a totally pro-active hydrometric process rather than a semi passive one. (Parameters would involve setting a maximum allowable output flow rate from the site and in the event that this flow rate is exceeded, flooding of the site is the end result, rather than dealing with the risk of overloading of the settlement ponds).

14. Examine the practicability of relocating the settlement ponds further to the north of the site allowing a greater distance for any surcharge of the ponds to flow over ground and examine how this would affect the stability of the underlying peat.

15. A data history setting out the hydrological dynamics of the site to date. In particular the relationships between rainfall events, flows in perimeter drains and levels of phosphates and suspended solids.

16. Proposals to deal with the storage of peat on site in the event of adverse weather conditions preventing sufficient de-watering of the peat to allow transportation to the deposition site.

17. A detailed waste management plan setting out all wastes expected to be generated by the project both during construction and operation. The expected quantities of each waste type and their probable disposal routes.

18. Figures 12.1 to 12.4 at a size sufficient to show all noise sensitive receptors and to allow their individual numbering.

19. Figure 11.3 Concentration Contour at a size sufficient to allow the individual numbering of the nearby houses.

20. Plates 13.1 and 13.2 reproduced at improved resolution on A4 size photographic paper.

Volume 2.

1. Additional water quality samples including physico-chemical analyses of these water samples as a baseline for establishing existing water quality (please note that three of the six water quality samples at Srahmore were taken as drainage maintenance works were being carried out on the main watercourse through the site and would not be representative of baseline conditions).

2. Reconcile the fact that the EIS states that settlement pond S5-2 is operating efficiently in lowering the sediment loading of run-off at that location, a total solids figure of 475mg/l, (this figure itself appears high) when the level of total solids recorded in water samples taken from the main drain when drainage maintenance work was being carried out (249-632mg/l).

3. Indicate whether the level of Total ammoniacal Nitrogen (which already appears high in the water samples taken) will increase with the introduction of peat from Bellagelly South and whether it will impact on marine waters in Tullaghan Bay pNHA and Blacksod Bay/ Broadhaven SPA downstream of the proposed development. Details shall include proposals to mitigate any adverse effect.

4. A map showing noise sensitive receptors and indicating existing and predicted noise levels at those sites by means of noise contours.

5. Figure 6.1 Habitats Map

6. Proposals to deal with excess water seepage from stockpiled peat

7. An assessment of the impact of mineral soil being overlain on the existing peat soil.

Other Matters.

1. Please submit an assessment of the cumulative effects of (a) the gas terminal (b) the deposition site and (c) the haul route.

Pending receipt of the above further consideration of this application is deferred.

As this request for further information represents significant further information, the applicant is required to re-advertise the proposed revisions in an approved newspaper marked 'Further Information' or 'Revised Plans' in accordance with Section 35 of the Planning and Development Regulations 2001.

In addition to the standard requirements of planning notices published, the notice should also:

(a) include the reference number of the application on the register (i.e. P03/3343), and

(b) state clearly that 'submission or observation in relation to the further information / revised plans may be made to the planning authority in writing, on payment of €20.00, within three weeks beginning on the date of publication of the notice'.

Please note that under the Planning and Development Regulations, 2001, failure to comply with the above within a period of six months from the date of this letter, will result in a declaration that the planning application has been withdrawn.

Yours sincerely,

FOR COUNTY SECRETARY

Copy to: Shell E & P Ireland Ltd., Corrib House, 52 Leeson Street, Dublin 2

ID/MM

MONICA MULLER
ROSSPORT
BALLINA
CO. MAYO

Mayo County Council
Planning section
The Mall
Castlebar
Co. Mayo

16 February 2004

Planning Application 03/3343

Addition to my Submission/Objection dated 02/01/2004:

Mayo County Council took more than 5 weeks to reacted to my first request for information and forwarded me the relevant documents subject to a fee of Euro 65 on 9 Jan 04.
My second request for information relating to traffic has not resulted in Mayo County Council sending me the information I requested.
Mayo County Council obstructed me in fulfilling my duty to make my observation to the above planning application.

I wish to submit the following observation:

1. Bord Na Mona states categorically in the EIS that the transportation of the peat is only feasible after the peat has been "extensively drained" and "windrowed" and "pre-treatment" has reduced the peat to a dry consistency for safe haulage and storage.

2. The Tobin Draft Peat Haulage Transportation Plan clearly states that it is intended to transport "peat-slurry" in enclosed vehicles with water-tight tailgates.
   This is not feasible according to Bord Na Mona, "peat-slurry" is effectively 90 % water.

3. The EIS, Shell E&P Ireland Limited submitted to Mayo County Council would appear to contain untrue statements, namely that the road/traffic/transportation plan has been agreed with Mayo County Council.

   a) Mayo County Council confirmed to me in writing that I got and paid for a complete copy of the pre-planning documentation. There is no evidence in any document, signature or anything else to indicate and confirm that Mayo County Council has agreed the road/traffic and transportation plan.

b) The Tobin report is clearly marked as 'DRAFT' only and as such can only be viewed as a discussion document.

c) Road, traffic and transportation plans are part of the EIS and can not be pre-approved by the developer or Mayo County Council prior to lodging of planning application and the legally required environmental assessment process by the planning section. This would make an EIS redundant.

I submit that the above planning application and EIS should be rejected for the following reasons:

a) it is not 'feasible' as stated by Bord na Mona that 'peat-slurry' can be safely transported and stored in the Owenwinny boglands.
b) The EIS contains untrue statements.
c) The reference to 'agreed' traffic related matters are tantamount to building a project first and apply for permission later, the EIS a matter of window dressing only.
d) The L 1204 is part of SAC 476. The developer did not include the fact in the EIS.
e) The application is invalid because the extent of the Bord na Mona land for which the application may apply has not been shown on the relevant maps outlined in blue.

The transportation of "peat-slurry" will endanger and have significant impact on a SAC, public health and safety, Carrowmore Lake as drinking water reservoir and its aquatic life and road traffic.
Using 'closed vehicles' (water-tight) to prevent spillage will deliver 'peat-slurry' to the Ownewinny boglands which is not feasible or sustainable as waste take-in as stated by Bord na Mona and would endanger the restoration plan, aquatic life in adjacent rivers and yet again Carrowmore Lake.

I submit that it is clear from the above that this development is neither sustainable nor economic for either Shell or in particular for Bord na Mona who shall incur further costs arising from the proposal.

Monica Muller

HEALTH AND SAFETY AUTHORITY

10 Hogan Place, Dublin 2, Ireland.
Telephone: 01-614 7000 Fax: 01-614 7020 Website: http://www.hsa.ie/osh

County Secretary,
Mayo County Council,
Aras an Chontae,
Castlebar,
Co. Mayo

16th Feb. 2004

Re: Development Plan (Ref: Your letter dated 26th January 2004)

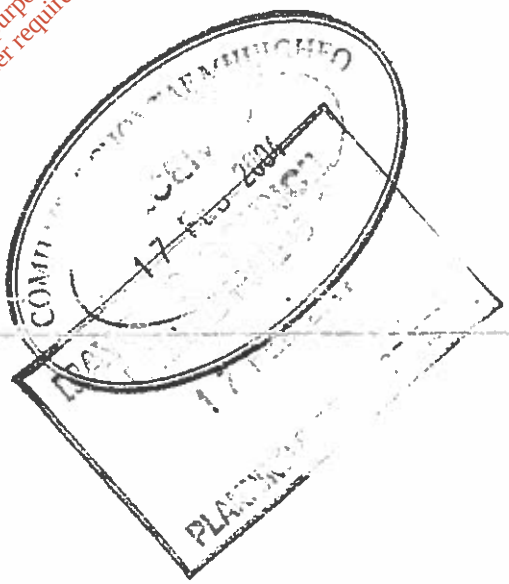
A Chara

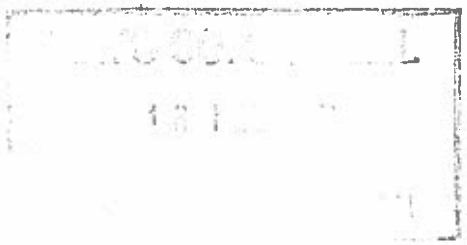
We acknowledge receipt of your letter dated 26th January 2004. We will forward our comments in due course.

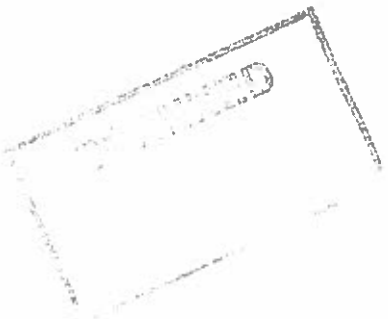
If you have any questions please contact the undersigned, or in my absence, John Colreavy, if you require further information.

Yours sincerely

John Sheeran
Process Industries Unit







Chapel Street,
Belmullet.

20th Feb. 2004.

Mr. Iain Douglas,
Senior Planning Officer,
Mayo County Council.

Dear Mr. Douglas,

Re: **P03/3343 Shell E & P Gas Terminal at Bellanaboy**

I faxed a letter to you dated 22nd Jan.'04 and delivered a hard copy by hand on 29th Jan. but as yet I have received neither reply nor acknowledgement. I noted on visiting your offices this week that it is 'on file' in the Public File re P03/3343 but I do not consider that to be an adequate response.

Most especially I require a precise answer to the query raised in paragraph 3 *"as to the steps being taken by the Planning Authority of Mayo County Council re commissioning an independent, expert evaluation of the application in respect to its diverse implications, as reflected in the wide-ranging EIS."*

In paragraph 4, I intimated that at the Oral Hearing there had been a lengthy, intense and revealing enquiry into Mayo Co. Council's failure to commission an independent, expert evaluation in respect to the previous application. This questioning was done on the basis that such evaluations are the norm (e.g. the **ERM Report** re P01/900 EIS and the overall **Posford Haskoning Report**) - it is their omission which is exceptional.

While I note your extensive request (17th Feb.) for further information from the Applicant, it is clear that most items relate to water contamination concerns. Were the same rigour to be extended to the technical processes and storage provisions on-site for inflammable/explosive substances, confidence would be proportionately increased.

For instance, in respect to the c. 60,000 t. levels of methanol and condensate storage on-site the ABP Report was trenchantly critical of the Health & Safety Authority: : "***Despite the NAOSH, as the designated competent authority, being required by "Seveso II" and the 2001 Regulations to undertake consultation procedures... (it) has submitted no such technical advice on the risks to the community and the environment .... (it)leaves An Bord Pleanala in a position whereby an informed decision on this most significant public safety issue cannot be made***" (ABP Report p. 159 – with italics, bolding & underlining added for emphasis.]

It is in this light that I require a written answer to my original query (22nd Jan. '04) as specifically stated in paragraph 2 above.

Thanking you for your attention,

Yours faithfully,

Edward Moran.

Monica Muller
Rossport
Ballina
Co. Mayo
Tel 097 88011
Email: monicamuller@eircom.net

Mayo County Council
The Mall
Castlebar
Co. Mayo

Monday, 29 March 2004

Submission to 03 / 3343 planning application, request for further information

Dear Sir / Madam,

I submit that the developer has not complied with the requested further information.

- The developer did NOT include the consent documents in the further information, the "Dear Brian letter" has no legal standing.
  The developer did not address the question "*that the design of the proposed gas pipelines ...is suitable to ensure the structural stability of the pipeline constructed in deep peat soil.*" I attach a letter from the Marine Licence Vetting Committee, which refers to an onshore gas pipeline report commissioned by the Department for (then) Marine and Natural Resources as part of the EIA process and justification for the onshore upstream gas pipeline. The report makes no reference to 'deep peat' or indeed any soil type and associated issues and no assessment appears to have been carried out regarding construction in deep peat soil.
  The developer has denied Mayo County Council the information contained in that report and indeed has not submitted the report.

  The developer did NOT include the Compulsory Acquisition Orders for the wayleave of upstream (incoming) gas pipeline.

- It is worth pointing out that in relation to traffic, it would appear that one of the condition (listed in the letter) and presumably in the consent document (not submitted) to build the pipeline is: condition 19. *"Construction traffic management shall be such as to avoid peak hours and particularly those hours when children will be likely to be going to or from school."*
  The traffic management plan as submitted by the developer ignores that condition and intending to endanger public safety.

- An EIS shall contain all likely significant impacts generated by the development, direct and indirect, and has to propose mitigating measures.

The statement by the developer that the road chosen for the peat haulage and all other traffic generated by the project is the responsibility of Mayo County Council, does not excuse the developer from responsibility to list all direct and indirect likely impacts on the environment, in particular on SACs in the EIS.

- The developers opinion that the project will "encroach slightly" on Carrowmore SAC is avoiding the fact that the road is part of the SAC. The developer's opinion of the SAC is irrelevant being not the authority to decide on the designation of SACs.

- Noise
  The further information makes no reference to vibration impacts by the generated traffic on local family homes. There appear to have been no tests conducted of the impact of such an amount of HGVs on the stability of local houses or farm buildings or indeed on the local water supply pipeline which is running parallel to the road L 1204.

- Cumulative impacts
  The developer has failed to provide a listing of the cumulative traffic related to the project, i.e. building of gas refinery, peat depository area, transport and construction of down stream and upstream gas pipelines, waste disposal to not stated reception locations other than peat slurry.

- The developer is project splitting which is not allowable under current legislation by isolating the building of the gas refinery and peat depository area from the building of the two gas pipeline not only associated with the project but not sustainable without such. As far as the assessment of cumulative impacts go, the gas pipelines don't seem to exist.

Yours sincerely,
Monica Muller

MARINE LICENCE VETTING COMMITTEE
Meetings: Marine Institute Laboratory
Abbotstown Laboratory Complex
Snugboro Road
Dublin 15
Correspondence: c/o Coastal Zone Administration Division
Dept. of the Marine and Natural Resources
Leeson Lane
Dublin 2

Ms. Monica Muller
Rossport
Ballina
Co. Mayo

May 31, 2002

Dear Ms. Muller

I acknowledge receipt of your letter of 24th May 2002.

Safety aspects of the proposed development were addressed by the Department of the Marine and Natural Resources itself and not directly by the MLVC.

I refer you to the MLVC report (Paragraph 6.2.2.2, page 22) which states that:

The MLVC understands that the Minister has commissioned a study in relation to the onshore section of the pipeline system proposed by the developer to establish that the selection of the relevant design codes and standards is accordance with best public safety considerations and is in accordance with best national and international industry practice and specifications.

I have copied your request for information to the Petroleum Affairs Division of the Department of the Marine and Natural Resources and I understand that a reply has issued today, 31st May, which includes a copy of a report entitled "Evaluation of Onshore Pipeline Design Code.

Yours sincerely

Dr. Terry McMahon
Chairman
Marine Licence Vetting Committee

03/3343

Mayo County Council
Aras An Chontae
Castlebar

Ref No.: P03/3343

06/01/2004

Ms. Monica Muller
Rossport
Ballina
Co. Mayo

A Chara

I wish to acknowledge receipt of submission received from you on 02/01/2004 in connection with planning application by SHELL E & P IRELAND LIMITED for CONSTRUCT GAS TERMINAL FOR THE RECEPTION AND SERAPATION OF GAS FROM THE CORRIB GAS FIELD, AND FOR A PEAT DEPOSITION SITE, RESPECTIVELY. THE DEVELOPMENT WILL CONSIST OF THE CONCURRENT DEVELOPMENT OF TWO SITES LOCATED 11 KILOMETRES APART, APPROXIMATELY, AND IDENTIFIED AS THE SITE OF THE GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS FROM THE CORRIB GAS FIELD IN THE TOWNLAND OF BELLAGELLY SOUTH AND THE SITE OF THE PEAT DEPOSITION SITE IN THE TOWNLANDS OF SRAHMORE AND ATTAVALLY, BANGOR ERRIS. THE DEVELOPMENT AT THE BELLAGELLY SOUTH SITE WILL CONSIST OF: A GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS INCLUDING PLANT AND EQUIPMENT; PROVISION OF 4,935 SQ M (GROSS FLOOR AREA), APPROXIMATELY, OF BUILDINGS; ACCESS ROADS; 40 NO. CAR PARKING SPACES; AND ANCILLARY DEVELOPMENTS, OF WHICH 13 HA, APPROX, WILL BE DEVELOPED INRESPECT OF THE GAS TERMINAL'S FOOTPRINT. THE PROPOSED DEV. WILL OF THE BELLAGELLY SOUTH SITE WILL ALSO CONSIST OF; THE EXCAVATION AND REMOVAL OF 450,000 CUBIC M at BELLAGELLY SOUTH SRAHMORE ATTAVALLY.

The matters referred to by you will be taken into consideration by the Council before a decision is made on the application. Notice of the Council's decision on the

application will be given in accordance with the requirements of the Planning and Development Regulations, 2001. This may be in the form of:

(a) posting the notice directly to you; or

(b) publishing the notice in a newspaper circulating in the area where the proposed development is situated.

I enclose herewith Receipt. **Please note that in the event of an appeal being lodged by you, An Bord Pleanala will require a copy of this letter of acknowledgement.**

Mise, le meas

RUNAI CHONDAE

ANNING DEPARTMENT
MAYO COUNTY COUNCIL
ARAS AN CHONTAE
CASTLEBAR
CO. MAYO
094-24444

06-01-2004 15:42:42

Receipt No. PLAN/0/6005

MONICA MULLER
ROSSPORT
BALLINA
CO. MAYO

MISC RECEIPTS - PLANNING 40001
TO PL03/3343

Total	20.00 EUR 15.76 IEP
Tendered: Cash	20.00

Issued By : Orla Burns
From: PLANNING SECTION

Mayo Co. Council
Planning authority

MAYO COUNTY COUNCIL
RECEIVED
29 MAR 2004
PLANNING & DEVELOPMENT

Ballinaboy
Barnatra
Ballina
Co. Mayo
29-3-04

Dear Sir.

In regard to the further information (Ref: po3 / 3343) submitted by Shell E&P Ireland to the planning authority concerning the Ballinaboy Bridge gas terminal and associated Srahmore peat deposihon site I make the following submission on behalf of my family and the Ballinaboy / leenamore residents.

(1) With regard to the huge amount of lorries, road widenings , the main route L1204 to Castlebar general hospital will become impossible to travel. As a parent of an asthmatic child. I am not looking forward to been delayed behind a convoy of lorries or delayed by bridge building or other road works. Should my child be rushed to Castlebar hospital following a serious asthma attack as has happened already. This is also the experience of other residents regarding other serious illness and serious accidents. I assure you Mr Douglas a woman in child labour finds it difficult and extremely painful travelling from Ballinaboy to Castlebar general hospital under normal circumstances (As it's a 45 mile journey) without having to endure delays that have been put in place to facilitate Shell and residents will also have major problems in gaining access to their properties with lorries passing every minute.

(2) In regard to road widenings Shell once more assumes that landowners will allow their private land to be used to facilitate their works without having approached the landowners or is C.P.O the way they intend to go. (Look at drawing 2044-1000).

(3) With regard to flag men been situated at our driveway at junction R314 and L1204 12 hours a day my family and I feel this is an invasion of our privacy and also worry for our children's welfare considering strangers. This junction is also a bus stop for our local secondary school's students.

(4) Each resident as his or her own timetable or we now expected to take a new timetable to suit a minibus driver.

(5) With regard to drawing 2044 –1005 indication of barrier for 40m to both sides of the bridge structure (Barrier: concrete? steel? or what?) my husband and I feel that this will cause flooding to our property should the level of this road be altered by barriers or associated works.

On September the 19th 2003 this section of road where the proposed barriers are intended for was impassable due to the Ballinaboy Bridge been unable to take the flow of water. Gardaí blocked the road. My family and I sat in our home that night with two Gardaí should we need to be evacuated as the existing flood was 2ft

away from our side door. Not a very pleasant experience .If the road was a little higher and the barrier in place on that night our home would have been swamped.

(6) From reading the risk assessment the residents believe that Bord Na Mona and Mayo Co. Council are to take responsibility for everything and anything and Shell take on little or no responsibility should things go belly up.

On a final note where in the further information submitted by Shell do they answer your question pipeline stability in bog. I cannot find the answer or is it a case of passing the book over to the Department of Marine.
During a recent visit to the site (Facilitated by shell) residents were informed that it is around 12m in depth from the ground to bedrock in south west corner of site. This forms no part of the answer you received to item No.2 by Shell.

At this stage I would like to state that the Ballinaboy/Leenamore residents have no confidence in Shell's ability to carry out this proposed development safely as their methods seems to be mostly experimental.
We are asking the planning authority to take our genuine concerns on board and refuse planning permission for the Ballinaboy bridge gas terminal.

Yours Sincerely
Mio Jacinta Healy

On behalf of the Ballinaboy/Leenamore residents.

Mayo County Council
Aras An Chontae
Castlebar

Ref No.: P03/3343

28/01/2004

Ms Jacinta Healy & Others
Ballinaboy
Barnatra
Co. Mayo

MAYO COUNTY COUNCIL
RECEIVED
1 APR 2004
PLANNING & DEVELOPMENT

A Chara

I wish to acknowledge receipt of submission received from you on 28/01/2004 in connection with planning application by SHELL E & P IRELAND LIMITED for CONSTRUCT GAS TERMINAL FOR THE RECEPTION AND SERAPATION OF GAS FROM THE CORRIB GAS FIELD, AND FOR A PEAT DEPOSITION SITE, RESPECTIVELY. THE DEVELOPMENT WILL CONSIST OF THE CONCURRENT DEVELOPMENT OF TWO SITES LOCATED 11 KILOMETRES APART, APPROXIMATELY, AND IDENTIFIED AS THE SITE OF THE GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS FROM THE CORRIB GAS FIELD IN THE TOWNLAND OF BELLAGELLY SOUTH AND THE SITE OF THE PEAT DEPOSITION SITE IN THE TOWNLANDS OF SRAHMORE AND ATTAVALLY, BANGOR ERRIS. THE DEVELOPMENT AT THE BELLAGELLY SOUTH SITE WILL CONSIST OF: A GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS INCLUDING PLANT AND EQUIPMENT; PROVISION OF 4,935 SQ M (GROSS FLOOR AREA), APPROXIMATELY, OF BUILDINGS; ACCESS ROADS; 40 NO. CAR PARKING SPACES; AND ANCILLARY DEVELOPMENTS, OF WHICH 13 HA, APPROX, WILL BE DEVELOPED INRESPECT OF THE GAS TERMINAL'S FOOTPRINT. THE PROPOSED DEV. WILL OF THE BELLAGELLY SOUTH SITE WILL ALSO CONSIST OF; THE EXCAVATION AND REMOVAL OF 450,000 CUBIC M at BELLAGELLY SOUTH SRAHMORE ATTAVALLY.

The matters referred to by you will be taken into consideration by the Council before a decision is made on the application. Notice of the Council's decision on the

Application will be given in accordance with the requirements of the Planning and Development Regulations, 2001. This may be in the form of:

(a) posting the notice directly to you; or

(b) publishing the notice in a newspaper circulating in the area where the proposed development is situated.

Please note that in the event of an appeal being lodged by you, An Bord Pleanala will require a copy of this letter of acknowledgement.

Mise, le meas

RUNAI CHONDAE

The Planning Officer,
Mayo County Council,
Castlebar,
Co. Mayo.

Rathmichael Lodge,
Shankill,
Co. Dublin
26th March 2004

Your Ref P03/3343

Re: Shell Ireland - Corrib Project
and relating Bord-na-Mona peat disposition at Shrone

Dear Sir/Madam,

Thank you for your letter dated 16th March 2004, in which further details of the proposed developments are given. My original submission centred on the effects of the developments on the water quality in Carrowmore lake and on the Owenmore and Munhin rivers, & the adequacy of the plans to ensure that the water quality in the lake and the rivers is not impaired and also the necessity to have all barricades, filters, settling ponds etc fully in place on site before any work on the terminal or the disposition takes place. I also proposed that an independant outside agency (or Mayo Co. Council) should be a requirement to report:-

a) That all the required water quality work is in place, prior to the main work starting
b) On a regular (daily during the depositioning?) basis that the flow of water, in the lakes and rivers is of a satisfactory standard.

I have to say that the additional information which was contained in your letter greatly increases my concerns on the ~~loss~~ potential damage to the Fishery. It purports for example (all with potential damage to the water) the provision of:-

- Maintenance building
- Mechanical workshop
- Welding and other shops
- A maintenance vehicle shed.
- A diesel storage tank
- Emergency generator diesel day tank.

Cont'd over

P.T.O.

- Heating medium storage tank
- effluent feed / treated water sumps
- A water treatment building
- Effluent feed / treated water sumps
- A sludge treatment facility
- a Road Timber loading / unloading area
- A waste storage area.
- Drainage arrangements for settlement ponds and at Shrawnea's
- Construction of internal circulation routes
- ... of a surface water swale (S. & W boundaries)
- Provision of 5 surface water settlement ponds
- Controlled overflow area.
- Oil interceptor.
- Temporary wheel wash.

Many of the above items are obviously being provided to deal with the water quality aspects (and are therefore to be commended), but their existing does draw attention to the potential dangers, in the event that the precautionary measures are either:-

a) inadequate, or not properly maintained/monitored

or b) are not in place prior to commencement of the site development / disposition.

I am not ~~as~~ an engineer or technical expert, but trust that Mayo Co. Council will ensure that whatever development is approved, and the conditions attached thereto, fully protect the water quality of the lake and the rivers for the fishery.

Yours faithfully,

J R B Hewat.

J R B HEWAT
GLENALT FISHERY

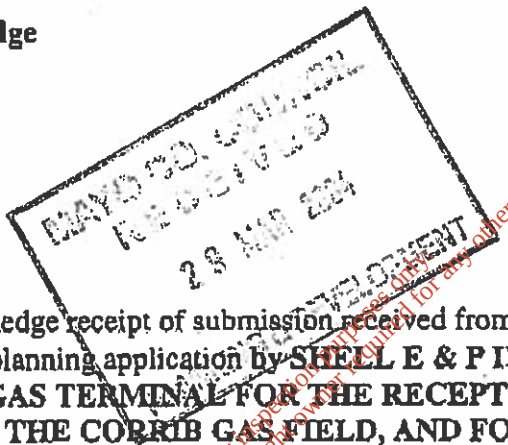
P.S. I attach the acknowledgment from Mayo Co. Council dated 20/01/1000

Mayo County Council
Aras An Chontae
Castlebar

Ref No.: P03/3343

20/01/2004

Glenalt Fishing Syndicate
C/O JRB Hewat
Rathmichael Lodge
Shanhill
Co. Dublin



A Chara

I wish to acknowledge receipt of submission received from you on 20/01/2004 in connection with planning application by **SHELL E & P IRELAND LIMITED for CONSTRUCT GAS TERMINAL FOR THE RECEPTION AND SERAPATION OF GAS FROM THE CORRIB GAS FIELD, AND FOR A PEAT DEPOSITION SITE, RESPECTIVELY. THE DEVELOPMENT WILL CONSIST OF THE CONCURRENT DEVELOPMENT OF TWO SITES LOCATED 11 KILOMETRES APART, APPROXIMATELY, AND IDENTIFIED AS THE SITE OF THE GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS FROM THE CORRIB GAS FIELD IN THE TOWNLAND OF BELLAGELLY SOUTH AND THE SITE OF THE PEAT DEPOSITION SITE IN THE TOWNLANDS OF SRAHMORE AND ATTAVALLY, BANGOR ERRIS. THE DEVELOPMENT AT THE BELLAGELLY SOUTH SITE WILL CONSIST OF: A GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS INCLUDING PLANT AND EQUIPMENT; PROVISION OF 4,935 SQ M (GROSS FLOOR AREA), APPROXIMATELY, OF BUILDINGS; ACCESS ROADS; 40 NO. CAR PARKING SPACES; AND ANCILLARY DEVELOPMENTS, OF WHICH 13 HA, APPROX, WILL BE DEVELOPED INRESPECT OF THE GAS TERMINAL'S FOOTPRINT. THE PROPOSED DEV. WILL OF THE BELLAGELLY SOUTH SITE WILL ALSO CONSIST OF; THE EXCAVATION AND REMOVAL OF 450,000 CUBIC M at BELLAGELLY SOUTH SRAHMORE ATTAVALLY.**

The matters referred to by you will be taken into consideration by the Council before a decision is made on the application. Notice of the Council's decision on the

application will be given in accordance with the requirements of the Planning and Development Regulations, 2001. This may be in the form of:

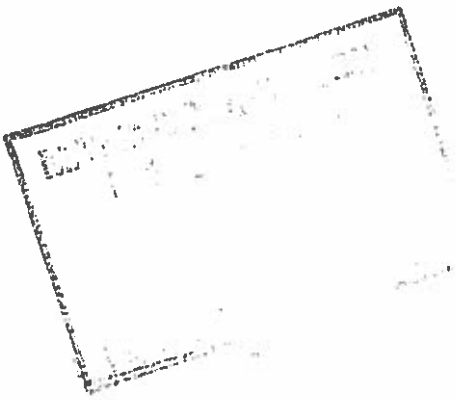
(a) posting the notice directly to you; or

(b) publishing the notice in a newspaper circulating in the area where the proposed development is situated.

I enclose herewith Receipt. **Please note that in the event of an appeal being lodged by you, An Bord Pleanala will require a copy of this letter of acknowledgement.**

Mise, le meas

RUNAI CHONDAE



Submission regarding Further Information on Ref. No. P03/3343

School of Health Science,
GMIT,
Westport Road,
Castlebar,
Co. Mayo.

30.03.04

Dear Mr. Douglas,

I wish to make two comments regarding the Further Information submitted by Shell E. & P.

1. In outlining the regulatory regime for the upstream pipeline (i.e. from Glengad to Bellanaboy) the applicant fails to make reference to the various above-ground structures that will be required. For instance, will there be a small reception facility required at landfall as had been indicated in the previous application? Will there be above-ground structures required along the pipeline route? Will there be a requirement for temporary roads in order to gain access to the pipeline? In the event of any of these being the case, then planning permission will be required. If these are indeed planned, the present application has failed to make reference to them and would therefore be incomplete. This important point would need to be determined before you arrive at your decision.
2. Perhaps the most important technical undertaking proposed by the applicant is the safe removal and deposition of 450,000 cubic metres of peat. In support of the viability and safety of doing this, the applicant has furnished a six page Report from Bord na Mona. This Report is so extraordinarily inadequate and amateurish that it borders on the humorous. It in no way can constitute an adequate pre-

planning study of an enormously complex engineering undertaking. A number of aspects can be briefly noted:

2.1 It makes no reference to any precedent for this undertaking.

2.2 It makes no reference to any desk-top survey of peat removals, experiences in handling peat, or prevailing scientific knowledge of the behaviour of cut peat.

2.3 It makes no reference to the wealth of hydro-geological data presented by the applicant at the previously conducted oral hearings.

2.4 It fails to include anecdotal and local knowledge regarding peat in the area.

2.5 It is not signed by any scientist.

2.6 It has not been peer reviewed by any scientific body.

2.7 It reports the 'results' of three facile experiments and declares this 'proof' of the proposed peat removal methodology. The results of three crude tests do not, in any regard, constitute 'proof'. There is a complete failure to understand, and hence apply, the most basic scientific method.

2.8 The three tests outlined are not supported by a comprehensive scientific methodology. In one case they rely on 'visual inspection' and declare results as 'favourable'. In all cases they fail to indicate the depth from which the peat was extracted; the moisture content of that peat; the moisture content following the test. There is no independent verification of the procedures employed; no pre-test statements of criteria; no presentation of tests done on other sites for comparability purposes or for scientific control purposes.

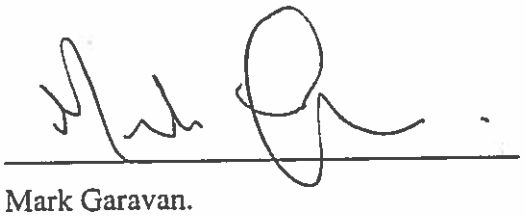
2.9 The conclusion reached in the final line of the Report amounts to an assertion – *it has not been scientifically established.* That Bord na Mona could apparently stand over such a Report is embarrassing from a body of their reputation.

In summary, this Report could not possibly serve as a testing of the proposed peat removal undertaking. Indeed, the Report definitively establishes the extraordinary lack of understanding the applicant has of the properties of peat in the area. Once again, the applicant has presented a general conceptualisation of how peat will be removed but this is not anywhere near the detail required in a planning application.

The precautionary principle must apply. It is demonstrably unsafe to entrust the applicant to this operation and planning permission must accordingly be refused.

There are a great number of additional concerns with the applicant's further information. These can await the likely consideration by An Bord Pleanala of this application. The further information provided fails to establish the planning appropriateness or general viability of the proposal.

Yours sincerely,



Mark Garavan.

COMHAIRLE CHONTAE MHAIGH EO
MAYO COUNTY COUNCIL

TO: File **DATE:** 30/03/2004

FROM: Iain Douglas Senior Planner

SUBJECT: **Further Information submitted 11th March 2004.** **FILE:**P03/3343

Attached is my assessment of the response submitted by Shell E&P Ltd on the 11th March 2004 to our letter requesting Further Information on the EIS.

Iain Douglas
Senior Planner

VOLUME 1.

Item 1. **A fully detailed traffic management plan.**
Response *Submitted as Appendix 1*

Item 2. **Written confirmation from the relevant regulatory authority that the design of the proposed gas pipelines from the terminal compound to the site boundary is suitable to ensure the structural stability of the pipelines constructed in deep peat soil.**
Response *Submission of pipeline consents.*

Item 3. **Proposals for system of collection and storage of any pumped water containing deleterious substances, including concrete, separate from the surface drainage network and settlement ponds, and to provide for its safe disposal.**
Response *Refers to Report under Item 11 & Sections of EIS*

Item 4. **A map showing the location of the septic tank, the puraflo unit and the percolation area, in relation to the Bellanaboy River, the Leanamore Stream and any tributary of the Glenamoy River.**
Response *Map submitted.*

Item 5. **Full details of the proposed sewage disposal system, including any water-table and percolation tests and the design of a suitably sized percolation area.**
Response *Details submitted.*

Item 6. **Submit a map outlining phosphate hot-spots, quantities of contaminated material, details of the analysis of the occasional occurrence of high levels of phosphorous detected in peat samples on the site and proposals to deal with the same including disposal. The format of the response shall include a comparison between the total concentrations (above background levels), that may theoretically, result from the development works and other land use activities that regularly occur in the area e.g. afforestation, clearfelling etc**
Response *Map & details submitted.*

Item 7. **Details of site drainage of terminal and silt control measures proposed at the various stages of construction and peat excavation. A clear and detailed map of the existing site drainage, and of the site drainage works and silt ponds proposed at the various stages of construction and peat excavation, should be provided.**
Response *Drawings submitted & refers to Sections of EIS*

Item 8. **Baseline physico-chemical data on water quality conditions in and around the site.**
Response *Details submitted.*

Item 9. **Information and proposals to address the possible impacts of free water from excavated peat on water quality, including pH and loading of humic and other acids.**
Response *Details submitted.*

Item 10. **A schedule of sensitive periods for wildlife when construction works on the terminal should cease or be curtailed (these are referred to in the EIS but are not specified).**

Response *Details submitted.*

Item 11. **Information on the possible impacts on water quality, aquatic ecology and surrounding peatlands arising from the use of the highly alkaline lime/cement binder to comparatively small parts of the site. The information should include technical information and assessments to support the use and appropriateness of this method of peat improvement in this location.**

Response *Report submitted.*

Item 12. **The basis for all assumptions used in relation to the drainage calculations provided and the design of the settlement ponds.**

Response *Details submitted & refers to Sections of EIS.*

Item 13. **Investigation of the feasibility of only allowing surface water which is actively pumped from the site entering the settlement ponds and ensuring that site drainage during construction is a totally pro-active hydrometric process rather than a semi passive one. (Parameters would involve setting a maximum allowable output flow rate from the site and in the event that this flow rate is exceeded, flooding of the site is the end result, rather than dealing with the risk of overloading of the settlement ponds).**

Response *Refers to Sections of EIS.*

Item 14. **Examine the practicability of relocating the settlement ponds further to the north of the site allowing a greater distance for any surcharge of the ponds to flow over ground and examine how this would affect the stability of the underlying peat.**

Response *Explanation submitted*

Item 15. **A data history setting out the hydrological dynamics of the site to date. In particular therelationships between rainfall events, flows in perimeter drains and levels of phosphates and suspended solids.**

Response *Details submitted & refers to Sections of EIS.*

Item 16. **Proposals to deal with the storage of peat on site in the event of adverse weather conditions preventing sufficient de-watering of the peat to allow transportation to the deposition site.**

Response *Explanation submitted*

Item 17. **A detailed waste management plan setting out all wastes expected to be generated by the project both during construction and operation. The expected quantities of each waste type and their probable disposal routes.**

Response *Details submitted & refers to Sections of EIS.*

Item 18. **Figures 12.1 to 12.4 at a size sufficient to show all noise sensitive receptors and to allow their individual numbering.**

Response *Submitted.*

Item 19. **Figure 11.3 Concentration Contour at a size sufficient to allow the individual numbering of the nearby houses.**

Response *Submitted.*

Item 20. **Plates 13.1 and 13.2 reproduced at improved resolution on A4 size photographic paper.**

Response *Submitted.*

VOLUME 2.

Item 1. **Additional water quality samples including physico-chemical analyses of these water samples as a baseline for establishing existing water quality, (please note that three of the six water quality samples at Srahmore were taken as drainage maintenance works were being carried out on the main watercourse through the site and would not be representative of baseline conditions).**

Response *Submitted.*

Item 2. **Reconcile the fact that the EIS states that settlement pond S5-2 is operating efficiently in lowering the sediment loading of run-off at that location, a total solids figure of 475mg/l, (this figure itself appears high) when the level of total solids recorded in water samples taken from the main drain when drainage maintenance work was being carried out (249-632mg/l).**

Response *Submitted.*

Item 3. **Indicate whether the level of Total ammoniacal Nitrogen (which already appears high in the water samples taken) will increase with the introduction of peat from Bellagelly South and whether it will impact on marine waters in Tullaghan Bay pNHA and Blacksod Bay/ Broadhaven SPA downstream of the proposed development. Details shall include proposals to mitigate any adverse effect.**

Response *Submitted.*

Item 4. **A map showing noise sensitive receptors and indicating existing and predicted noise leveis at those sites by means of noise contours.**

Response *Submitted.*

Item 5. **Figure 6.1 Habitats Map**

Response *Submitted.*

Item 6. **Proposals to deal with excess water seepage from stockpiled peat**

Response *Details submitted & refers to Sections of EIS.*

Item 7. **An assessment of the impact of mineral soil being overlain on the existing peat soil.**

Response *Details submitted & refers to Sections of EIS.*

Other Matters.

Item 1. **Please submit an assessment of the cumulative effects of (a) the gas terminal (b) the deposition site and (c) the haul route.**

Response *Submitted.*

Moran Joe

From: David Mullarkey [S00014217@itsligo.ie]
Sent: 31 March 2004 12:22
To: Planning
Subject: In relation to planning application no. 033343

Importance: High

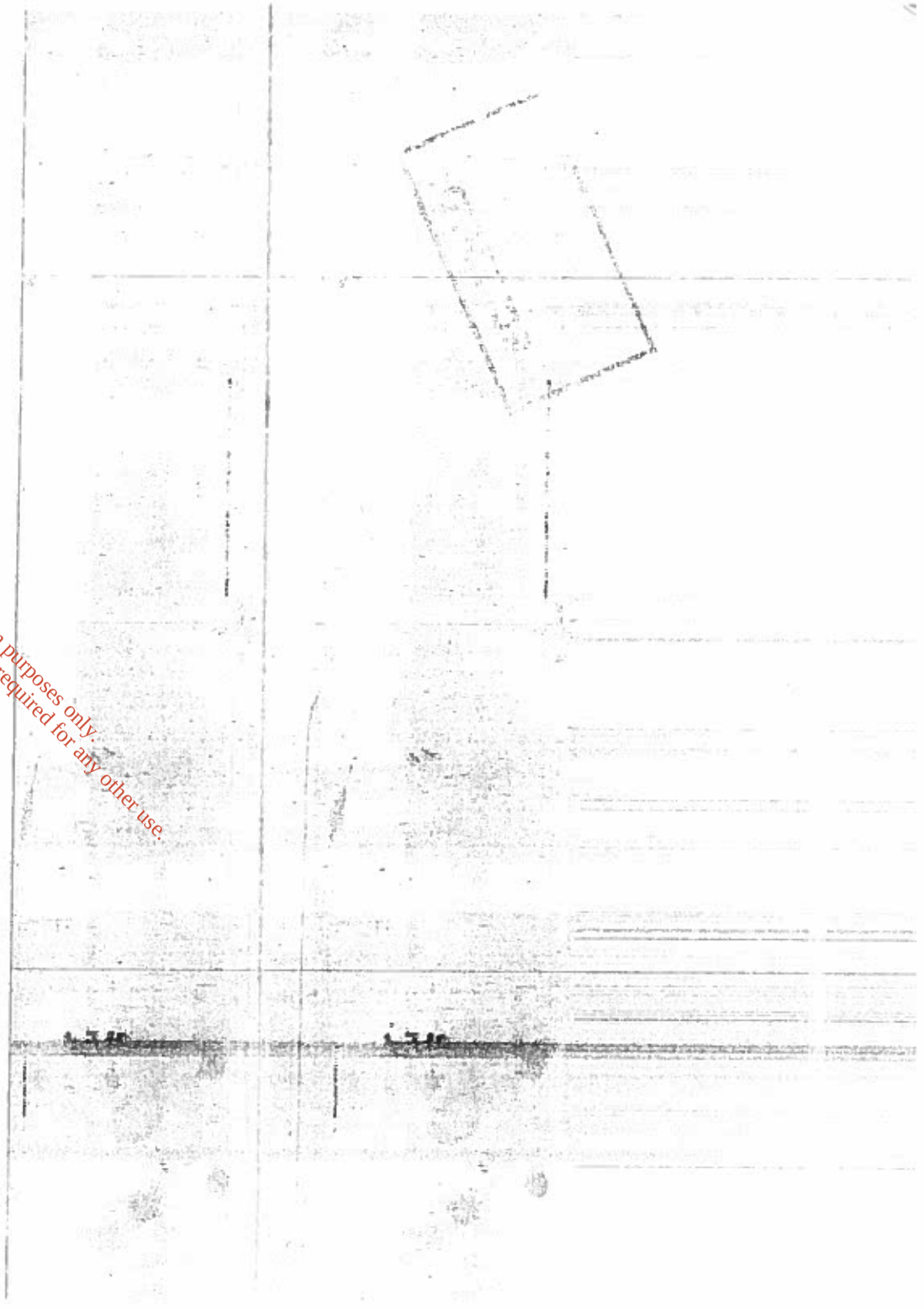
Dear Sir/ Madam,

I would be grateful if you could tell me the deadline for submissions for application no. 033343 as you have requested further info. on it.

(SHELL E & P IRELAND LIMITED, CORRIB HOUSE, 52 LOWER LEESON STREET, DUBLIN 2) in relation to CONSTRUCT GAS TERMINAL FOR THE RECEPTION AND SERAPATION OF GAS FROM THE CORRIB GAS FIELD, AND FOR A PEAT DEPOSITION SITE, RESPECTIVELY. THE DEVELOPMENT WILL CONSIST OF THE CONCURRENT DEVELOPMENT OF TWO SITES LOCATED 11 KILOMETRES APART, APPROXIMATELY, AND IDENTIFIED AS THE SITE OF THE GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS FROM THE CORRIB GAS FIELD IN THE TOWNLAND OF BELLAGELLY SOUTH AND THE SITE OF THE PEAT DEPOSITION SITE IN THE TOWNLANDS OF SRAHMORE AND ATTAVALLY, BANGOR ERRIS. THE DEVELOPMENT AT THE BELLAGELLY SOUTH SITE WILL CONSIST OF: A GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS INCLUDING PLANT AND EQUIPMENT; PROVISION OF 4,935 SQ M (GROSS FLOOR AREA), APPROXIMATELY, OF BUILDINGS; ACCESS ROADS; 40 NO. CAR PARKING SPACES; AND ANCILLARY DEVELOPMENTS, OF WHICH 13 HA, APPROX, WILL BE DEVELOPED INRESPECT OF THE GAS TERMINAL'S FOOTPRINT. THE PROPOSED DEV. WILL OF THE BELLAGELLY SOUTH SITE WILL ALSO CONSIST OF; THE EXCAVATION AND REMOVAL OF 450,000 CUBIC M

Yours Sincerely,

David Mullarkey.



Planning Office

AN TAISCE
The National Trust for Ireland
The Tailors' Hall, Back Lane, Dublin 8
Tel: 01-454 1786 Fax 01-453 3255 e-mail info@antaisce.org

Fax

To: DIRECTOR OF SERVICES, PLANNING MAYO CO. Council
From: IAN LUMLEY
Fax: 094-9023937
Pages: 1+1
Phone:
Date: 31/3/04
Re:
CC:

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐

Please Recycle

● Comments:

AN TAISCE – THE NATIONAL TRUST FOR IRELAND

Director of Services
Mayo County Council
CASTLEBAR
Co Mayo

30 March 2004

REF: 03/3343
RE: Further information submitted on application by Shell E & P Gas Terminal at Bellanaboy, Co Mayo

Dear Sir,

We refer to the further additional information submitted on this proposal.

1. **Council Directive 85/333/EEC as amended by 97/11/EC**
The application particulars do not address the "project splitting" issues in relation to this development, for example the separation and consideration of gas pipelines through a separate consent procedure

2. **The applicant's response to questions with regard to design of pipelines and deep peat have not been assessed**

3. **Traffic impact assessment is inadequate. There is no adequate traffic management plan or assessment of impacts.**

4. **Letter on file from Frank Fahey TD stating that construction traffic would avoid peak hours is insufficient in addressing impacts**

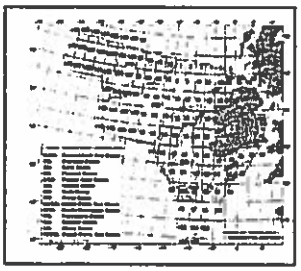
5. **SAC area on Carrowmore Lake**
The application particulars are inadequate in assessing a range of impacts. The haul route runs through the SAC.

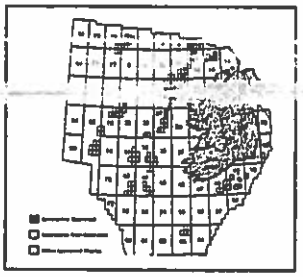
6. **Impact on houses**
There is inadequate response with regard to impacts of vibrations and houses in proximity to haul route.

Yours sincerely

IAN LUMLEY
Heritage Officer

THE BRIAN COYLE OBSERVATION & OBJECTION REPORT TO THE FURTHER INFORMATION RESPONSE





By Brian Coyle,
BE, CEng, MIEI, MIStructE

Chartered Consulting
Civil & Structural Engineer

Director of
COYLE KENNEDY LTD
Consulting Engineers

REFUSAL SHOULD BE GRANTED

TO THE SITE CHOSEN FOR CORRIB GAS TERMINAL

THE PROPOSED CONSTRUCTION TECHNIQUES & ROUTES

THE PEAT DEPOSITION SITE AT SRAHMORE

THE UPSTREAM HIGH PRESSURE PIPELINE ROUTE

BASED ON ITS WORLD RECORDS AND THE FURTHER INFORMATION RESPONSE

Should we allow the Corrib Gas Field to be Connected:

- To an Inland Terminal

03/3343

And

- Becomes the only Inland Terminal In the WORLD?
- Surrounded in BLANKET BOG that can become unstable at an angle of 2degrees or more
- Connected from a Landfall at the Base of a Hill that is Unstable
- Residents as close as 60m to the High Pressure Untreated Pipeline
- Residents within the Explosion/Gas Vapour Exclusion Zone from the Terminal and High Pressure Pipeline
- Streams and Rivers within an exclusion zone feeding into a major drinking water supply
- The only World Wide Deposition of 450,000m3 of Acidic Blanket Bog
- Causing in excess of 100,000 traffic turning movements during its development
- Resulting in the removal and discharge of at least 400,000,000 litres (Four hundred million) litres of acidic water to the North and South of Carrowmore Lake, the only drinking water supply for the entire region
- In an Area of Natural Ground Instability

Why should we?
- when all the other World Wide Authorities have done different

As We Are Lead To believe by the Applicant That There Are No Other Alternatives! When in fact there are!

Is it the lack of experience in our Representatives and Authorities that they do not know the difference between right and wrong?

We do not want an Emis EU Directive to be written similar to the Seveso II directive that was written following the disaster and the ultimate consequence to people in the small town called Seveso in Italy.

The Content of this report is written without prejudice

Index

Observer and Objector

The observations and the reasons given for refusal contained in this document are compiled and written by Brian Coyle BE, CEng, MIEI, MIStructE Chartered Consulting Engineer and are the observations of many of my immediate family and friends that reside throughout the Erris community. These observations and objections are contained within the full text of this document and are supported with references from standards, publish documents and from the applicant's response to the further information request issued by the Planning Authority, dated 17th Feburary 2004.

Proposed Development Planning Text

Bellagelly South & Srahmore Attavally Proposed Development.

PLANNING REFERENCE NO. 033343

LOCATION BELLAGELLY SOUTH
SRAHMORE ATTAVALLY

PERMISSION SOUGHT FOR
CONSTRUCT GAS TERMINAL FOR THE RECEPTION AND SERAPATION OF GAS FROM THE CORRIB GAS FIELD, AND FOR A PEAT DEPOSITION SITE, RESPECTIVELY. THE DEVELOPMENT WILL CONSIST OF THE CONCURRENT DEVELOPMENT OF TWO SITES LOCATED 11 KILOMETRES APART, APPROXIMATELY, AND IDENTIFIED AS THE SITE OF THE GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS FROM THE CORRIB GAS FIELD IN THE TOWNLAND OF BELLAGELLY SOUTH AND THE SITE OF THE PEAT DEPOSITION SITE IN THE TOWNLANDS OF SRAHMORE AND ATTAVALLY, BANGOR ERRIS. THE DEVELOPMENT AT THE BELLAGELLY SOUTH SITE WILL CONSIST OF: A GAS TERMINAL FOR THE RECEPTION AND SEPARATION OF GAS INCLUDING PLANT AND EQUIPMENT; PROVISION OF 4,935 SQ M (GROSS FLOOR AREA), APPROXIMATELY, OF BUILDINGS; ACCESS ROADS; 40 NO. CAR PARKING SPACES; AND ANCILLARY DEVELOPMENTS. OF WHICH 13 HA, APPROX, WILL BE DEVELOPED INRESPECT OF THE GAS TERMINALS FOOTPRINT. THE PROPOSED DEVELOPMENT WILL OF THE BELLAGELLY SOUTH SITE WILL ALSO CONSIST OF; THE EXCAVATION AND REMOVAL OF 450,000 CUBIC M

Summary

- The applicants own recommendations are not been meet along the entire stretch of the public haul road even after upgrading works.
- The proposed road width of 5.5m is not verified in accordance with NRA standards or any other published documents and therefore it effectiveness and safety cannot be addressed for such large volumes of heavy traffic.
- Emergencies and contingencies have not been fully considered, addressed or resolved by this recent submission.
- The applicant has identified that the haul route is supported on 2-3m of peat
- The overall impact of the road improvement works on existing land, embankments, slope stability, drainage and private property is not fully assessed.
- Published documents state that there is a statutory requirement to provide for the health, safety and welfare of all employees and members of the public in connection with the design, construction operation and maintenance of pipelines
- Published documents state that it is desirable to avoid a route where the pipeline might be subject to heavy external stresses or where the consequences of a leak, if one did occur, might be particularly serious. In practice, all cross-country pipelines and some local pipelines will have to be subjected to a detailed safety evaluation as part of its consideration.
- The highly flammable liquid transported in the pipeline under pressure creates forces at bends, junctions, valves and all restrictions to, and changes in, direction of flow.
- Additional transient forces may be generated by pump starts or stops, valve closures etc. The vector analysis arising from high-pressure fluid in the pipeline must be resolved and hence the pipeline effectively supported or else it will fail.
- Section 2.2 in the EIS report states that the terminal is designed to throughput of 10 million cubic meters per day (350 million standard cubic feet per day).

- Taking account of the 10 million cubic meters per day and on the basis that 'volume in' equates to 'volume out' then the speed of flow through a 508mm diameter pipeline with a 25.4mm wall thickness will be a whooping c. 2,500km/hr (two thousand five hundred kilometres per hour).

- The applicant has stated the orthophosphate impact to surface watercourses from phosphate-impacted soils is widely recognised as being a major concern in certain parts of Ireland, because it can lead to eutrophication of lakes and rivers. The orthophosphate concentrations recorded by the applicant in the blanket bog is approximately 250-10,000 times greater than the allowable concentration in lake waters.

- The milling of peat commonly associated with the work that Bord Na Mona does is better compared to harvesting crops than removing saturated blanket bog. This statement is supported with picture evidence in the Bord Na Mona Website.

- The proposed construction work (grouting) resulting in the injection of chemicals into the ground where surface water run-off will flow into rivers and streams and then into a major drinking water supply for the entire region should undoubtedly be avoided. Published documents states that this process should be independently investigated.

- The applicant has now identified that the proposed process of removing the peat is weather dependent. Waterproofing sheeting will have to be placed over the peat every time it rains. Can you imagine acres of peat to be covered with sheets ever time it rains. Therefore, it could take many months and even years to remove the saturated blanket bog in order to meet the criteria put forward by the applicant.

Further Information Request Volume 1 No.1
Fully detailed traffic management plan.

Observation to Applicants Response

The applicants response to this request identifies that their own recommendations are not been meet along the entire stretch of road even after upgrading. The road geometry survey details submitted are extremely limited and do not convey the impacts of the road improvement works.

The proposed road width of 5.5m is not verified in accordance with NRA standards or any other published documents and therefore it effectiveness cannot be addressed. The applicant has raised their own concern in relation to the proposed road width when they suggest in Section 4.3 Par. 4.3.1

"where physically possible and where land between fences permits, a width greater than 5.5m is recommended."

It is physically possible and land does exist to meet this recommendation.

As previously identified the proposed haul route is the shortest route available to many people residing the North Erris area. The applicant has assumed that all emergences will be transported using an emergency vehicle.
This is seldom the case and often local residents transport their own medical emergences to Castlebar general hospital. Local residents have used this haul route to transport very sick people or a pregnant woman by private car to Castlebar general hospital. Once again peoples lives are at risk with this proposed development.

The time taken to travel along this section of road. with its envisaged poor quality slippery surface, "*noticeable settlement*" surrounded with large vehicles carrying saturated and dusty material is a matter of great concern for the general public in this area. Trucks queuing at junctions to gain access onto major and minor roads will inevitably impede local traffic flow.
Therefore, emergencies and contingencies have not been fully considered, addressed or resolved by this recent submission.

There is insufficient information on the drawings submitted in addressing this request to determine the extent of the proposed road improvements.

It is obvious to anyone that drives along the proposed haul route that the existing pavement and road side embankments are not capable of supporting the local traffic that use this road. The applicant has identified that this road is supported on approx 2.0 -3.0m of Peat. Some roadside embankments are currently failing.

The drawings submitted to address this request (e.g. Drg. No. 2044-1010) contains limited information. The existing road geometry survey information included on the drawing is extremely limited and therefore the extent and impact that the upgrade works will have on adjoining land and existing land drains, water flow is not addressed effectively. The existing road is very narrow in some locations with steep unstable embankments, mainly consisting of peat. The survey information does not identify the gradient of this embankment or the location of existing land drains.
Therefore the overall impact of the road improvement works on existing land, embankments, slope stability, drainage and private property is not fully assessed.

Further Information Request Volume 1 No.2
Written confirmation from the relevant regulatory authority that the design of the proposed gas pipelines from the terminal compound to the site boundary is suitable to ensure the structural stability of the pipelines constructed in deep peat soil.

Observation to Applicants Response

The text of the applicant's response to Further Information Item No. 2 does not contain the necessary text to independently qualify the structural stability of the pipelines constructed in deep peat soil.

The applicant and/or regulatory authority has not justified or provided the qualitative assessment, analysis and design to justify that the pipeline is structurally adequate in poor ground conditions especially when it is surrounded in peat and/or mineral soil in an area of natural ground instability surrounded with heather and woodland that is susceptible to fires during prolonged periods of dry weather. We are all familiar with the intensive heat, rapid spread and uncontrollable damage caused by gorse fires. This risk exists and is more imminent as climate changes are expected to become more severe (Longer Dry Periods and Longer Wet Periods).

The pipeline route chosen should have been assessed based on its functionality, surrounding ground geology and its long-term performance in this environment. The structural stability of this pipeline and hence the Health and Safety aspects of this section of pipeline and indeed the entire pipeline must be considered.

Sections of the submitted documentation by the applicant from the Department of the Marine and Natural Resources dated 15th April 2002 is only a partial reproduction of some sections of text contained in the following British Standards.

BS 8010 Part 1: Pipelines on Land
BS 8010 Part 2: Pipelines on land; design, construction and installation
Section 2.8: 1992 Steel for oil and gas

A reproduction of part or any part of a standard is certainly not a means of justifying the structural stability of the pipeline. These standards are also referenced in Mr. Andrew Johnston report on the evaluation of Onshore Pipeline Design Codes dated 28th March 2002. Some of the design standards mentioned in Mr. Johnston report are now withdrawn or superseded. However, the safety aspects of the standards usually become more stringent as events and failures of pipelines occur.

Like most relevant standards or publish documents associated with the transportation of materials in pipelines, these documents contain specific references to safety requirements. Section 1.3 of BS 8010 Part 1 states that;

" There is a statutory requirement to provide for the health, safety and welfare of all employees and members of the public in connection with the design, construction operation and maintenance of pipelines"

The published document titled 'Guidance Notes for Applications and Notifications for Onshore Pipelines under the Pipelines Act 1962' published in 1993 also considers Pipeline Safety.

It states that

"It is desirable to avoid a route where the pipeline might be subject to heavy external stresses or where the consequences of a leak, if one did occur, might be particularly serious"
"In practice, all cross-country pipelines and some local pipelines will have to be subjected to a detailed safety evaluation as part of its consideration. This is particularly the case for high pressure gas pipelines and a pipeline conveying toxic or highly volatile fluids, such as liquid petroleum gas (LPG), natural gas liquids (NGL) or ethylene."

The applicant and/or regulatory authority must consider and provide design details and calculations to justify the structural stability and hence the health and safety aspects of the pipeline including the surrounding landscape.

The section of pipelines queried in the further information request, and indeed any other section of pipeline should have been and must be assessed on the basis of structural stability, safety and integrity as there are various uses/work carried out on the surrounding landscape. The Health and Safety authority has a statutory obligation (under the health and safety at work act) to consider the health and safety of people at work. The long-term Health and Safety and people's livelihoods working at home and on the land (Agricultural use, building etc) prior to, during or after any possible failure/explosion event of the pipeline must be considered.

This information should be made available for independent verification. Design standards are often withdrawn or superseded by more stringent requirements. The current safety requirements in current standards will only become more stringent as more and more pipe failures occur. The statutory safety requirement will always be there and will be further enhanced as pipe failures keep occurring and environments and lives damaged and lost. Refer to 'Observation to Applicant's Response' Volume 1 No. 3 of this report for published documented facts.

The text contained in Section 8 of the Department of the Marine and Natural Resources letter dated 15th April 2002 acknowledge that upheaval buckling will occur when it states that

"the proposed measures for mitigating upheaval buckling of the flexible in-field flowlines should be subject to review."

Upheaval buckling is only part of the overall problem associated with this pipeline route. Surrounding ground settlement and movement in any direction mainly lateral and vertical around the pipeline will considerably increase the pipe loading and thus excessive stresses in the wall of the pipe will occur that can cause fractures and ultimate failure of the pipeline. This can occur in an area of natural ground instability close to a major drinking water supply for the entire region. The length of the pipeline that can become unsupported during differential ground movement can increase the shear, longitudinal and bending stresses in the pipeline. When a pipe passes through/supported on adverse ground conditions e.g. waterlogged ground, peat, and mineral soil the likelihood and consequences of differential ground movement and settlement is inevitable.

The applicant specifically states in Section 4.5.1 of the EIS report;

*"that **minimal** differential movement of the ground is essential because*

- *for **safety** and operability, particularly for equipment operating under high pressure, piping and equipment require very tight tolerances on differential settlement.*

- *Piperacks, piping and equipment design and installation would be very complex in a plant subject to differential settlement.*

- *excessive settlement would create operability difficulties for equipment such as pumps, turbines and compressors*

The highly compressible and variable characteristics of the surrounding landscape (peat, mineral soil) surrounded in an area of natural ground instability places this pipeline at great risk.

The highly flammable liquid transported in the pipeline under pressure creates forces at bends, junctions, valves and all restrictions to, and changes in, direction of flow.
Additional transient forces may be generated by pump starts or stops, valve closures etc. The vector analysis arising from high-pressure fluid in the pipeline must be resolved and hence the pipeline effectively supported.

BS 8010: Part 1 Section 1.4 'Insurance' states that;

"Promoters should ensure that there is adequate third party insurance in force during design, installation and subsequent operation of pipelines."

The published CIRIA Report 164 states that the *HSE data for the period 1980-1990 showed that of some 600 incidents world-wide there were 128 incidents in the UK involving gas, including both fuel gases such as LPG and chemical gases such as chlorine. The major incident in the UK was the Piper Alpha disaster in 1990 in which 167 people were killed as a result of an explosion of LPG. Incidents have occurred as a result of the transfer of gas in pipelines, the build up of gas in sewers and natural gas accumulation in buildings (e.g Abbeystead)*

I request that the applicant and/or regulatory authority submit/provide details and design calculations for the structural stability of the high pressure pipeline taking account that it is sited in an area of natural ground instability surrounded in blanket bog and its failure could destabilise the ground even more. Further more since this pipeline is within an establishment a proper HSA zoning should be applied to the pipeline, identifying safety and risks to each zone.

The applicant has submitted the design calculations for the site drainage but has not provided sufficient details to demonstrate how the pipeline will be adequately supported. How does the applicant intend to support and stabilise the foul and surface water pipe network and prevent from excessive settlement, back fall and ultimate failure? Is the pipe network going to be piled and supported on beams? Bearing in mind that both networks will contain harmful contaminated substances.

The structural design, installation, operation, performance and safety of all pipelines supported on and surrounded in an area of natural ground instability should be adequately indemnified and collateral warranties given from each relevant regulatory authority and project member. The pipelines and any other element should not fail for the life of the structure, as the consequences of such can be dramatic.

This information should be publicly available and independently verified. Otherwise the application should be refused.
The applicant and regulatory/local authorities must justify and be aware of the consequences of their intended objectives and decisions.

Section 2.2 in the EIS report states that the terminal is designed to throughput of 10 million cubic meters per day (350 million standard cubic feet per day).

Offshore Technology Website indicated that well tests have confirmed a flow rate of 60 million ft³/day. Six wells are intended to operate at first. This is comparable to the 350 million standard cubic feet per day quoted in the applicant's submission. Offshore Technology Website states that the reserves in the Corrib field are around One trillion ft³.

Taking account of the 10 million cubic meters per day and on the basis that 'volume in' equates to 'volume out' then the speed of flow through a 508mm diameter pipeline with a 25.4mm wall thickness will be a whooping
c. 2,500km/hr two thousand five hundred kilometres per hour.

We are all aware of how difficult it is to restrain and support a fire fighting hose, what will restrain this high-pressure pipeline? The blanket bog certainly will not.

Further Information Request Volume 1 No. 3
Proposals for system of collection and storage of any pumped water containing deleterious substances, including concrete, separate from

the surface drainage network and settlement ponds and to provide for its safe disposal.

Observation to Applicants Response
Grouting for Ground Engineering CIRIA C514. 2000 indicates and outlines the risk assessment and environmental impact assessment of grouting.

It states that

'it is an offence under the Water Resources Act, 1991 to cause or knowingly permit any poisonous, noxious or polluting matter or any solid waste matter to enter any controlled waters. Failure to comply with the above Act may lead to a criminal prosecution. Lacks of intent or negligence are no defence. In addition, expensive civil law suits may follow if harm is caused to someone else's person or property.
December 1997 the Environmental Agency had no defined policy on groundwater pollution caused by grouting in the ground.

It also states; *that any environmental impact assessment and especially the decision about admissible limits should be based on two largely independent investigations.'*

There should be an independent assessment made by an accredited body (with adequate PI insurance) as to the potential consequences arising from this method of construction. The EPA, WHO, Agrément Board bodies, should also confirm their acceptance.

This response should also deal with the safe collection and disposal of 'fire fighting' water. In the event of a fire, bunds around tanks can fill with fire fighting water and reach capacity prior to tank failure; the tank containing the dangerous substance can fail either during or after a fire thus there will be no containment volume for the dangerous substance. The applicant must address this potential problem. Settlement ponds will not remove dissolved solids or chemicals in water. Containment bunds containing fire-fighting water will provide less storage volume for the dangerous substance.

The table below extracted from CIRIA Report 164 summarises the causes of loss of containment of liquids, which occurred at one large chemical complex in NW England. There were a 170 such incidents at the complex over a three-year period.

The cause of these incidents is listed below;

Transfer of materials through on-site pipework	37%
Failure of Storage Tanks	7%
Tankers (loading and off-loading)	7%
Compressor / oil bowsers	6%
Valves	5%
Pumps	2%
Other plant and Equipment	7%
Human Error	10%
Miscellaneous	19%

Note: the high percentage of pipe failures, storage tank failures and human errors. The risks of equipment failure alone associated with this development are very high and to further enhance these risks it is sited on poor ground, in natural ground instability, the only inland 8km upstream pipeline in the world, surrounded in blanket bog covered in heather, rush and forest that can quite easily ignite in the expected prolonged dry weather periods.

There are other onshore sites available that do not pose these risks.

The application should therefore be refused.

Further Information Request Volume 1 No. 5
Full details for the proposed sewage disposal system, including any water-table and percolation tests and the design of a suitably sized percolation area.

Observation to Applicants Response
The applicant response to this request states

"*the site investigation indicated that there is a perched water table in the peat and that the peat is relatively impermeable*"

This was also evident last Friday (26th March 2004) when local residents went to investigate and walk the land. The whole area was waterlogged and it was almost impossible to walk the site as people were sinking to there knees in the peat.

A soil percolation test at the location of the proposed puraflo modules / percolation area must be carried out as the effluent from the treatment system will only pond on the peat surface. This is not acceptable or adequate by any standard and the applicant's response to this request is inadequate. We are all aware how long it takes water to percolate through peat (weeks and even months).

Further Information Request Volume 1 No. 6
Submit a map outlining phosphate hot-spots, quantities of contaminated material, details of the analysis of the occasional occurrence of high levels of phosphorous detected in peat samples on the site and proposals to deal with the same including disposal. The format of the response shall include a comparison between

the total concentration (above background levels), that may theoretically, result from the development works and other land use activities that regularly occur in the area e.g. afforestation, clearfelling etc.

Observation to Applicants Response
The applicant indicates that numerous phosphorous soil sample points were located throughout the site. The maximum reported orthophosphate concentration was 219mg/l at a specific location but generally the concentrations were below 50mg/l in a zone close to the surface. They have stated that orthophosphate concentrations decrease significantly with depth and at greater depths (5.1m) decreased below 5mg/l.

The applicant has stated that the maximum limit for orthophosphate in river waters is 0.05-0.07mg/l and 0.02-0.05mg/l in lake waters. This implies that test results have indicated that orthophosphate concentrations in the blanket bog is approximately 250-10,000 times greater than the allowable concentration in lake waters.

It is imperative to realise that peat consists of approximately 90-95% moisture content (by weight) and now we are informed of its high phosphorus concentrations.

The applicant has stated on Volume 1 Item 6 Page 2 that

"Orthophosphate impact to surface watercourses from phosphate-impacted soils is widely recognised as being a major concern in certain parts of Ireland, because it can lead to eutrophication of lakes and rivers. The principal migration pathway via which orthophosphate typically impacts surface watercourses is via surface runoff."

The applicant once again ignores his own advice and proposes to perform work that will increase the risk of water contamination. The proposed work is the highly saturated and highly concentrated phosphorus blanket bog (containing 405million litres of acidic water) to place it in windrows and to deposit it at the Srahmore site following many mechanically loading, moving and unloading operations is dramatically increasing the surface area of the peat and thus allowing free water containing high concentrations of phosphorous to escape into the surface water streams, rivers, ponds and Carrowmore Lake via *surface runoff.*

The proposed blanket bog operations are;

excavating blanket bog to remove it from its current position at the terminal site,

loading to transport it to windrows at the terminal site,
transport it to the windrows at the terminal site
unloading to form windrows at the terminal site,
moved into windrows at the terminal site,

loaded again to be transported to Srahmore,
transported c. 11km to Srahmore
unloaded again at the Srahmore Site

loaded onto Bord Na Mona Haku trailer
transported to the final depositon site at Srahmore
unloaded at the final deposition site at Srahmore

and finally **compacted** at the deposition site at Srahmore. The compaction alone will cause water to escape.

The proposed [loading, transport, unloading] peat operations occurs at least three times, coupled with this is mechanically moving and compacting operations.

This sequence of operations is certainly not acceptable when one considers that there are alternatively sites available without any peat excavation or disposal requirements and outside the catchment area of a major drinking water supply for the entire Erris region. Water will continue to fall-on and escape from the peat when it is placed at the deposition site at Srahmore, (located to the south of Carrowmore Lake). The deposited peat will eventually absorb water thus reducing the shear strength and can ultimately cause peat failure. Remember the applicant has previously clamed that peat slopes can fail at angles of two degrees and above and their proposal have identified that water reduction is necessary for deposition of peat at the Srahmore site. Peatlands that have remained in place for thousands of years have failed, What make this site any different? Shear planes (2 degree and above) could occur within the main body of the peat.

Further Information Request Volume 1 No. 9 and Volume 2 No. 7
Information and proposals to address the possible impacts of free water from excavated peat on water quality, including PH and loading of humic and other acids.

An assessment of the impact of mineral soil being overlain on the existing peat soil.

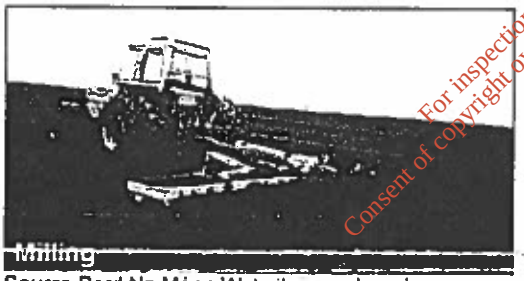
Observation to Applicants Response
This observation also comments on information submitted by the applicant in relation to

Request for further information Volume 2; Items 7.

The content of the applicant's response to these items are misleading. On the afternoon of the 26th of March 2004 at approximately 5:00pm representatives from the Leenamore and Ballinaboy residents group and representatives from Shell walked the proposed gas terminal site. It was obvious to all that walked the site on that day that it was completely waterlogged and extremely soft sometimes people sinking to their knees in soft peat. It was reported that one of Shells representatives actually turned back as the conditions were so bad. Worked had commenced on site without providing any obvious protection/prevention of water pollution. It has been reported that, on site Shell's representative were informed of this and did not provide any evidence to demonstrate otherwise.

How then can the applicant suggest that the site is well drained? It may be well drained but the drains are not drying/draining the peat. The statement '*well-drained nature of the peat*' is misleading as this site visit suggested otherwise.

Bord Na Móna involvement with peat through the years is dealing with milled peat i.e. they effectively scrape the top 10-15mm from the surface and put it into windrows.



Source Bord Na Móna Website www.bnm.ie

Source Bord Na Móna Website www.bnm.ie

The dust like peat particles blow in the wind while this work is been carried out. This process or the works and any mitigation measures carried out during this process should not be compared with the removal of approx 450,000m3 of saturated blanket bog at Ballinaboy.

Source Bord Na Móna Website www.bnm.ie

This process and the main work carried out by Bord Na Móna is better compared to harvesting crops than removing saturated blanket bog. Comparing such process, works and mitigation measures is somewhat worrying and is an indication of the lack of knowledge in this area.

The applicant has already pointed out that water will escape from the blanket bog when it is excavated etc. Windrowing of the blanket bog will only affect the immediate surface of the windrowed peat. The impermeable nature of the blanket bog with its low voids ratio (unlike milled dust like peat) will not allow air to pass through the windrowed blanket bog and thus air drying is not effective. The blanket bog at low depth is inevitably in its virgin state. I welcome an on-site demonstration at Ballinaboy to prove different.

Bord Na Mona shows and states on their website that Peat cut with a hand held slane (winning) has a moisture content of 95%. This is after the bank of turf has been exposed to the elements for a full year. This is stated on http://www.ipcc.ie/cbwinning.html. How can they qualify then that windrows of blanket bog mainly in its virgin state will result in an effective reduction of the moisture content.

The Bord Na Móna submitted documentation contained in Volume 2 Item 7 is questionable for the following reasons.

- It is obvious from last Fridays site visit that the drainage system in place is not sufficient.
- Bord Na Mona has indicated that restoration of the drainage system is required implying that the existing drainage system is insufficient and hence the poor conditions experienced at last Fridays site visit.
- Blanket Bog below the invert levels of the drains should be considered to be in its virigin state and hence greater moisture content is expected.
- The water table was reported to be high

- They state that the free water in the peat drains away rapidly. Isn't the blanket bog very impermeable with very little voids?

- They have indicated that "depending on the prevailing weather condition such windrowing could lower the moisture content of the peat to approximately 80% over 8 days but would typically achieve 82-87%.

- The intended bulldozing and compaction of the peat will increase the risk of contaminated water escaping from peat and will increase the oxidation of the peat thus contradicting the statement made by the Applicant in Volume 2; Item 3 that "Nitrogen is reduced to Ammonia rather than oxidised to Nitrate" It is no wonder the second paragraph in Volume 2; Item 3 begins with the uncertainty statement that "It is not expected that the level of Ammoniacal Nitrogen will increase..". The submission requires more reassurance than that.

The industrial field trials should be observed and reported by an independent accredited body with adequate PI insurance, independent to companies involved with this application as the consequences of their report could have an overwhelming effect on the quality of water and surrounding environment. Evidence from the photographs (taken during this trial and submitted in the content of the applicants response) shows that this (one-off not independently verified test trial) was carried out in very good (sun shinning, blue sky) weather conditions.

The applicant states without technical support that

" the settlement ponds will provide a more than adequate buffer for any minor differences between the quality of the water released from the peat, and that present in the drains from other sources."

The quality of water in the drains at present is from surface water runoff and should not be compared to acidic water contained in the peat. Organic fibres arising from the disturbed peat may take many months to settle. Therefore, the capacity of the settlement ponds and the detention/attenuation time required is directly related to the suspended solid characteristics in the water and the rate at which they settle.
Settlement ponds will not remove any dissolved solids.

Sudden surges from heavy rainfall will also disturb the settled solids. How does the applicant intend to cater for these events?
In the interest of the health and safety and for the control and monitoring of water quality I request that water sampling and testing should be undertaken by an approved independent testing authority not linked to the applicant. This water sampling and testing should be carried over a period of months to obtain an effective baseline existing water quality in the drains etc.

There are other alternatives available to the applicant that does not unearth such vast quantities of saturated blanket bog, containing up to 10,000 times the allowable quantities of pollutants in lake waters, posing a high risk to the water quality and surrounding environment.

For this and many other reasons, I request that a refusal to this application be granted.

Further Information Request Volume 1 No. 11

Information on the possible impacts on water quality, aquatic ecology and surrounding peatlands arising from the use of the highly alkaline lime/cement binder to comparatively small parts of the site. The information should include technical information and assessments to support the use and appropriateness of this method of peat improvement in this location.

Observation to Applicants Response
Construction work resulting in the injection of chemicals into the ground where surface water run-off will flow into rivers and streams and then into a major drinking water supply for the entire region should undoubtedly be avoided.

In the interest of protecting a major drinking water supply for the entire region, there should be an independent certificate of approval to demonstrate (Agrement Cert or a Cert from the WHO or EPA) that the proposed method of construction including the cement binder to improve the load bearing capacity of the peat will not affect the quality of the water. If this is not forthcoming then this method of construction should be avoided.

It is noted in CIRIA C514. 2000 'Grouting for Ground Engineering' was not part of the applicant research references. This document indicates and outlines the risk assessment and environmental impact assessment of grouting.

It states that

'it is an offence under the Water Resources Act, 1991 to cause or knowingly permit any poisonous, noxious or polluting matter or any solid waste matter to enter any controlled waters. Failure to comply with the above Act may lead to a criminal prosecution. Lacks of

intent or negligence are no defence. In addition, expensive civil law suits may follow if harm is caused to someone else's person or property.
At December 1997 the Environmental Agency had no defined policy on groundwater pollution caused by grouting in the ground.

It also states *that*

'any environmental impact assessment and especially the decision about admissible limits should be based on two largely independent investigations.'

It is inconceivable to think that the applicants 'Mitigation Measures' to prevent the escape of a leachate is done by blocking drains. *Can you imagine on site someone saying, 'there goes the leachate lets block the drain!' Oh hang on, its about to rain!*

Without prejudice, RSK ENSR general notes states that where any data supplied by the client or from other sources have been used it has been assumed that this information is correct. Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work. There are too many assumptions and restrictions in order to achieve their client's objectives in their response.

I therefore request that the recommendations made in the CIRIA document be adhered too and that two independent investigations be carried out for the grouting proposal. This proposed method of construction should have an approved accredited status for this particular environment.
The attitude of the applicant to block drains is absolutely ridiculous. What happens in the event of heavy rainfall? What happens when grouting occurs below the invert level of the drain?

Based on the current submitted information and without independent verification of the impacts of this proposed method of construction, I request that this application be refused as there are other construction alternatives available including sites the will not require this construction technique.

Further Information Request Volume 1 No 13.
Investigation of the feasibility of only allowing surface water which is actively pumped from the site entering the settlement ponds and ensuring that site drainage during construction is a totally pro-active hydrometric process rather that a semi passive one. (Parameter would involve setting a maximum allowable output flow rate from the site and in the event that this flow rate is exceeded, flooding of the site is the end result, rather that dealing with the risk of overloading of the settlement ponds.)

Observation to Applicants Response
Certainly the surface water runoff to the settlement ponds should be limited to ensure that they perform their intended function. Turbulence in the settlement/silt ponds should be eliminated. A surcharge of water (high flow of water) entering the settlement/silt ponds will cause turbulence and an imbalance in the settlement pond and hence the solids will become suspended in the water.
Remember the applicant has submitted information to show that c. 2.25mm of rainfall caused an increase of flow from 25 l/s to 275 l/s within a couple of hours. This is a very low rainfall event and would occupy almost 1000m^3 in one hour.
An intense rainfall event could be 40-60mm of rainfall in one hour. The specific gravity of the suspended substances will vary and therefore the time taken for them to settle will vary. Any extreme event and its consequences should be accommodated and resolved within the site boundaries.

For this reason the response to this request is insufficient and therefore this application should be refused, as construction methods exist that will prevent this from occurring. Alternatively there are other sites available in less sensitive areas.

Further Information Request Volume 1 No 15.
A data history setting out the hydrological dynamics of the site to date. In particular the relationships between rainfall events, flows in perimeter drains and levels of phosphates and suspended solids.

Observation to Applicants Response
The applicant's response to item No. 15 states that phosphate levels have not been continuously measured even though it has been quoted by the applicant in FI Volume 1; Item 6 page 2 that

"Orthophosphate impact to surface watercourses from phosphate-impacted soils is widely recognised as being a major concern in certain parts of Ireland, because it can lead to eutrophication of lakes and rivers."

I am sure that this part of Ireland is no different!

Also, the applicant has not qualified the type of suspended solids, some solids will settle quicker than others and the settlement ponds must be designed to accommodate the settlement of all types of suspended solids not

just silt alone. Otherwise the chemically rich suspended solids will escape into the streams and rivers and hence into Carrowmore lake.

The complete excavation and operations carried out thereafter to unearth a huge volume of saturated blanket bog in a relatively deep and confined area cannot be compared to work already carried out by Bord na Mona. This work will unleash an abundance of organic material with high concentrations of containments into the water; some of it will remain in suspension for a long time while other materials (roots, timber, heather fibrous material etc.) will float on the surface of the water. Sudden surcharges of rainfall will also affect the settled solids.

The expected surcharge of water flow from only 2.25mm of rainfall is evident. FI request Volume 1: Item 15 Figure 1a shows that a c 2.25mm of rainfall caused a sudden surcharge flow of 275 l/s in drain 22 within a two hour period. This indicates a very quick high flow response arising from a rainfall event, which ultimately can disturb the settled solids.

Further Information Request Volume 1 No 16.
Proposals to deal with the storage of peat on site in the event of adverse weather conditions preventing sufficient de-watering of the peat to allow transportation to the deposition site.

Observation to Applicants Response
Dewatering of blanket bog covered with waterproofing sheeting cannot be compared to the dewatering process usually carried out by Bord Na Mona. The loose powder like material harvested by Bord Na Mona with a high degree of voids allows any moisture to percolate through the milled peat thus allowing it to dry shed water and hence effectively dry.
This will not happen with the windrowed insitu blanket bog, as there are little or not voids in peat hence its low permeability. Furthermore, any waterproofing sheeting will need to be anchored down tight to the peat surface further preventing water drying of the blanket bog.
It is insufficient and impractical to suggest that the windrowed blanket bog will be covered every time it rains. Is the peat going to be covered if a small shower of rain comes along? If its not going to be covered then the water content will increase etc etc. The covers on Bord Na Mona milled peat are usually on for months at a time.

The applicant has now identified that the proposed process of removing the peat is weather dependent.

Therefore, the applicant's response and proposal is insufficient, impractical as it could take many months and even years to remove this peat in order to meet the criteria put forward by the applicant.

It is imperative to remember that the peat will contain in excess of 405,000,000 litres (four hundred and five million litres) of acidic water with high concentrations of phosphorus.
This is not acceptable as the peat contains high levels of chemicals that will undoubtedly escape into the surface water streams and rivers and eventually into Carrowmore lake thus affecting water quality.

It is for these reasons also that I request that this application be refused. There are other sites available that do not require the excavation, removal and high risks that are associated with such large volumes of peat removal.

THIS IS SIMPLY THE WRONG SITE FOR THIS PROJECT.