

**SECTION 131 FORM**

Appeal NO: PL 16.207212.

Defer Re O/H ☐

TO:SEO

Having considered the contents of the submission ~~and~~ received 30/06/04. from

Tom Phillips and assoc. I recommend that section 131 of the Planning and Development Act, 2000

~~is~~/not be invoked at this stage for the following reason(s): No new issues.

E.O.: Kieran Somers

Date: 06/07/04.

To EO: \_\_\_\_\_

Section 131 not to be invoked at this stage. ☒

Section 131 to be invoked – allow 2/4 weeks for reply. ☐

S.E.O.: M Dulan

Date: 7/7/04

S.A.O.: \_\_\_\_\_

Date: \_\_\_\_\_

M \_\_\_\_\_

Please prepare BP \_\_\_\_\_ - Section 131 notice enclosing a copy of the attached submission

to: \_\_\_\_\_

Allow 2/4weeks – BP \_\_\_\_\_

EO: \_\_\_\_\_

Date: \_\_\_\_\_

AA: \_\_\_\_\_

Date: \_\_\_\_\_

# CORRESPONDENCE FORM

Appeal No: PL 16 207212

M c Heffernon

Please treat correspondence received on 30/06/04 as follows:

1. Update database with new agent for Applicant/Appellant \_\_\_\_\_

2. Acknowledge with BP 20

3. Keep copy of Board's Letter ☐

Applicant's response to appeals

1. RETURN TO SENDER with BP \_\_\_\_\_

2 Keep Envelope: ☐

3. Keep Copy of Board's letter ☐

## Amendments/Comments

## 4. Attach to file

(a) R/S ☐

(d) Screening ☐

(b) Mapping ☐

(e) Inspectorate ☐

(c) Processing ☐

RETURN TO EO ☒

Plans Date Stamped ☐

Date Stamped Filled in ☒

EO: Kieron Somers

AA: Michael H

Date: 06/07/04

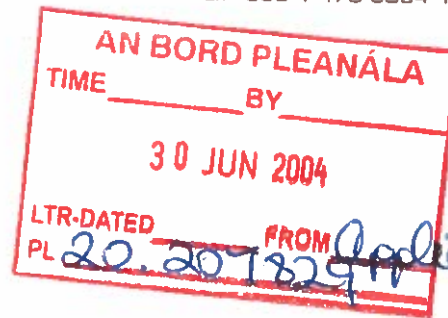
Date:



**PHILLIPS + ASSOCIATES**  
TOWN PLANNING CONSULTANTS

8 - 11 Lower Baggot Street, Dublin 2, Ireland  
Tel +353 1 478 6055 Fax +353 1 478 6054 info@tpa.ie www.tpa.ie

The Secretary  
An Bord Pleanála  
64 Marlborough Street  
Dublin 1



Wednesday, 30 June 2004

By Hand

**RE: BELLANABOY BRIDGE GAS TERMINAL, BELLAGELLY SOUTH AND ASSOCIATED PEAT DEPOSITION SITE AT SRAHMORE AND ATTAVALLY, BANGOR, CO. MAYO**  
**Mayo County Council Register Reference: P03/3343**

**An Bord Pleanála Ref: PL 16.207212**

## 1.0 INTRODUCTION

This submission is prepared by Tom Phillips + Associates, 8-11 Lower Baggot Street, Dublin 2 on behalf of the applicant, Shell E & P Ireland Limited ("Shell"), Corrib House, 52 Lower Leeson Street, Dublin 2, in response to the Third Party appeals submitted to An Bord Pleanála (the "Board") by the following appellants:

- Monica Muller
- Ballinaboy / Leenamore Residents (Jacinta Healy)
- Sean McDonnell and Others
- An Taisce
- Gerard McDonnell
- Foundation for the Economics of Sustainability (FEASTA) (Mark Garavan)
- Mary Corduff
- Brendan Philbin
- John and E. McAndrew (Leenamore/Ballinaboy Concerned Citizens)
- Brid & Teresa McGarry
- Maura Harrington
- Brian Coyle
- Micheál Ó Seighin and Others

The appellants object to the granting of Planning Permission by Mayo County Council for a gas terminal at Bellanaboy Bridge, Bellagelly South, Co. Mayo and a peat deposition site at Srahmore, Attavally, Bangor Erris, Co. Mayo.

In accordance with the Planning and Development Act, 2000, the applicant has been invited by An Bord Pleanála, by way of a letter dated 3 June 2004, to respond to the appeals submitted to the Board.

It is not proposed in this submission to repeat in detail the underlying matters which have been dealt with in the course of the planning application in this

case. This detail has already been comprehensively set out in the planning application documentation, the Environmental Impact Statement (the "EIS") and the documents submitted to Mayo County Council and to the Board.

Where factual inaccuracies have formed the basis of submissions or appeals on behalf of the appellants which are contradicted or unsupported by any evidence available before Mayo County Council and the Board it is not intended to deal with each of these in this submission since this will be clear from the documentation already before the Board.

It is proposed for the purpose of this response to deal with the objections and appeals on an issue-by-issue basis as follows:

- 1) Planning Issues
- 2) EIS / Environmental Issues
- 3) Health and Safety
- 4) Peat
- 5) Earthworks and Civil Engineering
- 6) Process Engineering
- 7) Traffic Issues
- 8) Socio-Economic Issues
- 9) Visual Impact
- 10) Miscellaneous

To provide further structure to the response, each issue is further classified into sub-issues.

In order to focus on the issues arising the details set out in the application documentation are not replicated here. Instead, we have given extensive references to the application documents where they serve to provide the necessary response to the issues raised by the appellants.

It should be noted that the applicant's entire project team expertise has been relied upon in the preparation of this response.

AN BORD PLEANÁLA	
TIME	BY
30 JUN 2004	
LTR-DATED	FROM
PL	

## 2.0 RESPONSE TO 3<sup>RD</sup> PARTY APPEALS

### 2.1 PLANNING ISSUES

The following appellants have raised specific concerns regarding planning issues:

- Monica Muller
- An Taisce
- Gerard McDonnell
- FEASTA (Mark Garavan)
- Mary Corduff
- Brendan Philbin
- John and E. McAndrew (Leenamore/Ballinaboy Concerned Citizens)
- Brid & Teresa McGarry
- Maura Harrington
- Brian Coyle
- Micheál Ó Seighin and Others

The concerns raised can be summarised under the following sub-headings:

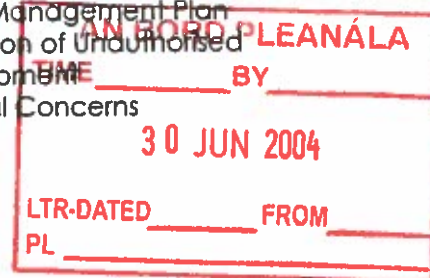
- |                                     |  |
|-------------------------------------|--|
| 1. Planning Authority Assessment    | 12. Proper Planning                        |
| 2. Validity Issues                  | 13. Strategic Issues                       |
| 3. Planning History                 | 14. Local Benefit                          |
| 4. Local Investment                 | 15. Conditions                             |
| 5. Sustainable Development          | 16. Climate Change                         |
| 6. Alternatives                     | 17. Traffic Management Plan                |
| 7. Need                             | 18. Allegation of Unauthorised Development |
| 8. Development Plan Compliance      | 19. General Concerns                       |
| 9. Pipelines                        |  |
| 10. Rural Housing                   |  |
| 11. Response to Further Information |  |

#### 2.1.1 Planning Authority Assessment

A number of appellants have raised questions concerning the planning authority's assessment of the application. While we trust that the planning authority will be making its own submissions on the issues raised, the applicant does wish to respond to a number of the issues raised.

Monica Muller in her appeal claims that the road and bridge survey was not included in the EIS and, as such, was not assessed by the planning authority. In response it should be noted that the road and bridge survey referred to by the appellant was one that was completed by Mayo County Council. This document was referred to in the preparation of the traffic management plan, which was submitted by the applicant in response to the planning authority's request for further information (RFI). As such, through the assessment of the traffic management plan, the planning authority has considered the findings of the roads and bridge survey.

A number of appellants have claimed that stated government commitments to the exploitation of the Corrib gas field do not inevitably lead to the conclusion that a terminal must be constructed at Bellanaboy Bridge and that the proposed terminal does not meet local and regional development criteria and consequently that Mayo County Council has failed to discharge its development objectives under the Mayo County Development Plan.



In response, we wish to refer the Board to Section 4 of Volume 1 of the EIS, which clearly establishes that the only feasible development option for exploiting the Corrib Gas reserve is the one chosen. Furthermore, this position has been fully endorsed by the relevant authority, the Minister for Communications, Marine and Natural Resources, through the approving of a Plan of Development on the 15th April 2002.

In his appeal, Micheál Ó Seighin claims that Mayo County Council's decision does not give due weight and cognizance to the rights and requirements of the local community and fails to discriminate between compatibility on a macro economic level and gross incompatibility on the micro human and socio-familial level, thereby resulting in potentially misleading assessment.

In the applicant's view, Mayo County Council has provided a very detailed and balanced assessment of the proposed development. As is evident from the Planning Officer's report, the issues relating to the micro human and socio-familial level have been considered. Having regard to the design of the proposed development and the mitigation measures proposed, it is clear that there will be no significant adverse impacts on the micro human level.

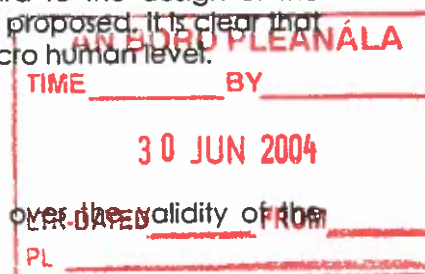
## 2.1.2 Validity Issues

A number of the appellants have raised concerns over the validity of the planning application as lodged.

In particular, Monica Muller claims that Mayo County Council drawings referred to in the conditions attached to Mayo County Council's decision did not form part of the application and the public has not been consulted on them, resulting in the consent given being invalid under EU Directive 87/337 (EIA Directive) as amended. Monica Muller also claims that the blue line boundary is not shown appropriately on the application, as it does not tally with the previous planning application and that the extent of lands for which Bord na Móna has an IPC licence has not been shown; Gerard McDonnell claims that not enough views of the development are given in the architectural preamble in respect of the administrative and maintenance buildings; and Mark Garavan claims that the proposed development is conceptual only and contains an unacceptable level of risk due to the wide margin of uncertainty contained in the proposal's methodologies.

In response to the issues raised by Monica Muller, it should be noted that the drawings referred to are in fact drawings completed by Mayo County Council to form part of conditions associated with the decision. In this regard, these drawings have been placed into the public domain and given that the Board is currently assessing the application from new, an opportunity has been given to all of those who may be concerned to give comment on them by way of the submission of an observation. Having regard to the issue of the blue line being inconsistent with the previous planning application, it should be noted that there is no inconsistency, as the applicant has acquired an option on further lands since the making of the previous application. With regard to the concern that the extent of lands for which Bord na Móna has an IPC licence is not being shown on the planning application drawings, it should be noted that there is no obligation to do so under the Planning and Development Regulations, 2001.

In response to Gerard McDonnell's concerns, it should be noted that the architectural preamble only refers to the administration and maintenance





buildings. The images of these buildings are given by way of illustration as the buildings themselves cannot be appreciated from outside of the site and are not visible in the photomontages that have been supplied as Appendix A of the EIS.

In response to Mark Garavan's claim that the proposed development is conceptual only, the significant and unprecedented level of detail given in the planning application about the proposed development should be considered.

### 2.1.3 Planning History

Brid & Teresa McGarry and Maura Harrington have made specific reference in their appeals to the previous planning application. In particular, they have commented on the Quantified Risk Assessment (QRA), the Health and Safety Authority's assessment of the previous application, the installation of mechanical refrigeration and the submission made by Jim Moore of Dúchas, on the previous application.

With regard to the comments made on the QRA and the Health and Safety Authority's assessment of the previous application, it should be noted that this application is different in certain respects from the previous one. In this regard, it is not appropriate to directly compare the QRA or the Health and Safety Authority's assessment of the previous application as the issues involved are complex and require detailed specialist input. The appropriate authority, the Health and Safety Authority, have carried out the required assessment on this application and found that they have no reason to recommend refusal on the basis of safety.

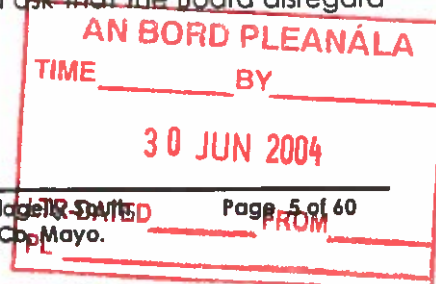
With regard to the issue of mechanical refrigeration raised by Brid & Teresa McGarry and Sean McDonnell, it should be noted that these facilities are not proposed as part of this application. However, space has been reserved for them within the site so as to avoid the need for future peat removal. Notwithstanding this, should mechanical refrigeration equipment need to be installed, planning permission will be required for it.

With regard to the submission from Jim Moore of Dúchas enclosed in Maura Harrington's appeal, it should be noted that all of the concerns raised have been satisfactorily addressed as is evidenced from the submission made by Dúchas' successor, who had no objection to the proposed development subject to a number of conditions being included.

### 2.1.4 Local Investment

Gerard McDonnell claims that the area of Erris is not offered a good enough return on its investment of its valuable resources (i.e. Corrib Gas) and requests that the Board should set strict conditions on the applicant on what it should do for the local community. While Mr. McDonnell's requests are made for the betterment of the local community, none of the items requested are the responsibility of the applicant and to make them so would be unduly onerous and without precedent. In this regard we would ask that the Board disregard the appellant's demands.

### 2.1.5 Sustainable Development



Micheál Ó Seighin claims that the proposed development is contrary to the principles of sustainable development under a number of headings relating to national or regional finances; local economic benefit; the quality of life of local residents (fear, noise, emissions); gas is not a renewable resource; pipelines from Ballinaboy or Castlebar to Glengad; contrary to the principles of the 'plan lead' spatial perspective promoted in the Development Plan.

In response, it is clear from the planning application documents and the EIS that the proposed development is sustainable and does not have any significant negative impacts on its environment. In this regard, we refer the Board to Section 19 of Volume 1 and Section 18 of Volume 2 of the EIS, which specifically objectively assesses the sustainability of the proposed development and finds that the Corrib project contributes positively to Ireland's national sustainable development objectives.

Having regard to Mr Ó Seighin's comments concerning the 'plan lead' spatial perspective promoted in the Development Plan and its objective to 'encourage the efficient use of land', we note that he dismisses the Development Plan's specific objective (TI-G 1, Page 42) to support the development of a land based terminal for the exploitation of the Corrib Gas Field. Clearly the intention of the Development Plan is to promote the development of the Corrib Gas Field in the manner proposed and as such the granting of permission for the proposed development is wholly consistent with the principles of the 'plan lead' spatial perspective promoted in the Development Plan.

#### 2.1.6 Alternatives

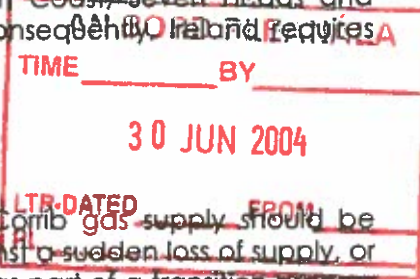
A number of the appellants claim the proposed development is not the best alternative and that other viable alternatives have been ignored. It should be noted by the Board that this is not in fact the case. The applicant has gone to considerable lengths since the determination of the last application to examine all viable alternatives and has found that the current solution is the only one which allows for the sustainable exploitation of the Corrib gas reserve. This fact is clearly set out in Section 4 of Volume 1 of the EIS, which deals specifically with alternatives.

#### 2.1.7 Need

A number of the appellants claim that there is no demonstrated need for the proposed development.

The need for the proposed development is clearly set out in Section 4.1 of Volume 1 of the EIS and Section 2.6 of the Planning Report. With gas consumption increasing annually and predicted to rise sharply in the future, demand for energy has outstripped Ireland's indigenous production. The two small newly developed gas fields off the South Coast, Seven Heads and Greensand, will not make up the short fall. Consequently, Ireland requires significant additional supplies of gas.

Mark Garavan in his appeal claims that the Corrib gas supply should be retained by the State as a strategic reserve against a sudden loss of supply, or that it should be retained until it can be utilized as part of a transition process





to construct and create new structures for the generation and dissemination of renewable energy systems.

It is our view that these statements fail to recognise the reality of the current gas market. In particular, it is untenable to suggest that the Corrib Gas reserve be retained by the state as a strategic reserve against a sudden loss of supply, given that it will take at least two years (excluding the planning and consents process) to realize gas from the Corrib Field under the current proposal. Furthermore, as is evident from an objective assessment of the Irish Gas market, Ireland is heavily dependent on imported gas supplies. As has been seen recently with the crisis in oil prices, such dependence can result in significant pressures being put on the national economy due to forces outside of our control. It is widely acknowledged that security of gas supply is both desirable and necessary for the national economy going forward. Notwithstanding the above, it is clear Government Policy to exploit the Corrib Gas reserve. As stated by Dermot Ahern, Minister for Communications, Marine and Natural Resources on the 15<sup>th</sup> July 2003:

*' It has been Government policy since the start of offshore exploration in the early 1970's that Ireland should become self sufficient to the greatest extent possible in supplying its own energy .....*

*Ireland needs to develop its indigenous petroleum resources to counteract its present security of supply exposure'.*

## 2.1.8 Development Plan Compliance

A number of the appellants claim that the proposed development does not comply with the Mayo County Development Plan. However, none of the appellants specifically states how the proposed development does not comply. As noted above, the Development Plan supports the proposed development of a land based terminal for the exploitation of the Corrib Gas reserve.

Micheál Ó Seighin claims in his appeal that Mayo County Council made a procedural error under EU Directive 2001/42/EC and the Planning and Development Act, 2000, in producing a specific objective to have an onshore gas terminal prior to undertaking a Strategic Environmental Assessment.

EU Directive 2001/42/EC (Strategic Environmental Assessment Directive) on the assessment of the effects of certain plans and programmes on the environment is required to be implemented by all Member States by 21 July 2004. The Directive has not yet been transposed into Irish law and is not and was not operative at the time of adoption of the Mayo County Development Plan. Section 10(5) of the Planning and Development Act, 2000 requires that a development plan shall contain information on the likely significant effects on the environment of implementing the plan. The Development Plan complies with this requirement and Section 3.2.3 of the Development Plan specifically addresses the likely significant effects on the environment of implementing the plan. Therefore, no procedural error was made by Mayo County Council in this regard.

## 2.1.9 Pipelines

AN BORD PLEANÁLA	
TIME	BY
30 JUN 2004	
LTR-DATED	FROM

The principal response in relation to all appeals referring to the pipelines, whether the upstream (i.e. import) or downstream (i.e. the export pipeline to be owned and operated by Bord Gáis Éireann) pipelines, is that these comprise wholly separate developments which are not only specifically declared to be exempted development but are also the subject of separate statutory approvals and the subject of Environmental Impact Statements.

The import pipeline for the terminal is to be constructed in accordance with the consent obtained by Shell on 15 April 2002 from the Department of Communications, Marine and Natural Resources, pursuant to Section 40 of the Gas Act, 1976. The consent is subject to technical and environmental conditions with which Shell is obliged to comply. Those technical conditions include a requirement for the provision of an onshore pipeline Quantified Risk Assessment to be reviewed and accepted by the relevant section of the Department of Communications, Marine and Natural Resources prior to the pipeline installation. Furthermore, Conditions 3, 8, 10, 11, 15 and 16 of that consent variously require the submission of documentation and the agreement and the approval of the Minister for certain pipeline works. Similarly, consent for the export pipeline has been granted to Bord Gáis Éireann pursuant to Section 8 of the Gas Act, 1976 and this consent requires that the pipeline be constructed in accordance with plans, specifications and other documents furnished to the Minister as part of the application for the consent.

In his appeal Micheál Ó Seighin requests the Board to determine if the entire upstream pipeline is exempted development. This is not a proper matter for consideration in relation to an appeal against a decision to grant planning permission.

However, for the avoidance of any doubt, the carrying out of development consisting of the construction of an underground pipeline for transmission of gas is exempted development, as it is development carried out in accordance with the requirements of the Minister for Communications, Marine and Natural Resources under section 40 of the Gas Act, 1976 (as per Article 6 and Class 25, of the Second Schedule of the Planning and Development Regulations, 2001). The fact that the pipelines to and from the proposed development comprise exempted development is not only established by the 2001 Regulations but is also outside the scope of the present appeal in relation to the proposed development.

Furthermore, whilst Section 225 of the Planning and Development Act, 2000 provides that permission is required for development on the foreshore that is not exempted development, Section 225 (3) provides that this requirement does not apply to development consisting of;

*"underwater cables, wires, pipelines and other similar apparatus used for the purpose of ..... carrying gas.....or development connected to land within the functional area of a planning authority solely by means of any such cable, wire, pipeline or apparatus"*

Micheál Ó Seighin has also raised a query that although the terminal does not involve the use of the Dooncarton-Glengad route for the haulage of materials, the pipeline does, and no planning permission has been applied for the road-building to facilitate it nor has a traffic management plan been applied for. In response it should be noted that no road building activities are anticipated for the upstream pipeline construction. The pipeline consent requires submission of such a traffic management plan to Mayo County Council and the current

AN BORD PLEANÁLA	TIME	BY	30 JUN 2004	FROM	
	LTR-DATED	PL			

traffic management plan submitted to Mayo County Council in response to the request for further information also incorporates the traffic management plan for the road usage envisaged for the pipeline construction.

Brid & Teresa McGarry, Mary Corduff and Mark Garavan have all referred to the upstream pipeline with reference to the Seveso II Directive (Directive 1996/82) (the "Seveso II Directive") implemented in Ireland by the provisions of the European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations, 2000 (the "COMAH Regulations") and the jurisdiction of the Department of Communications Marine and Natural Resources. It is to be noted that the COMAH Regulations fall to be policed by the National Authority for Occupational Safety and Health (the "NAOSH" or "HSA") which has furnished Land Use Planning Advice under Article 29 of the COMAH Regulations. The NAOSH has stated that "it does not advise against the granting of planning permission in relation to this development" (see Executive Summary of the Advice given by the NAOSH).

It is to be noted that both the COMAH Regulations and the Seveso II Directive specifically provide that they do not apply to the pipelines outside of the terminal footprint. Article 4 (2) of the COMAH Regulations provides inter alia:

*"These Regulations shall not apply to -*

*...(c) the occurrence outside an establishment of -*

*...(v) the transport of dangerous substances in pipelines and pumping stations".*

The establishment is the area within the security fence footprint where the hazardous substances are processed and stored. This has been confirmed also by the NAOSH in their Land Use Planning Advice to Mayo County Council (submitted with their letter of 8 April 2004 to Mayo County Council) which specifically stated that "the establishment is considered to be the terminal (the area within the security fence footprint where the hazardous substances are processed and stored)". This decision was taken in respect of the previous planning applications and has been retained following discussions between the authority and EU Commission Officials and representatives of the other EU Member States".

In relation to the proposed development, Shell, at the request of the NAOSH submitted a detailed Quantified Risk Assessment of the proposed terminal. It formed part of the NAOSH's Land Use Planning Advice to Mayo County Council. The Quantified Risk Assessment (QRA) included a consideration of the safety implications of the establishment, in full compliance with the legislative requirements.

It is to be noted that the requirements of the COMAH Regulations and the Seveso II Directive are not limited to land use planning. The terminal operations will be subject to ongoing compliance with the legislation and the NAOSH is the competent authority in connection therewith. Shell has been and will be complying with all statutory obligations in relation to health and safety aspects of the construction and operation of the Corrib project.

#### 2.1.10 Rural Housing

TIME	BY
30 JUN 2004	
LTR-DATED	FROM
PL	

Micheál Ó Seighin claims that the proposal would repel people from wanting to live in the rural areas in its vicinity. In response, it should be noted that as demonstrated in the EIS, the proposed development will have no significant impact on the residential amenity of the area. Allied to this the Health and Safety Authority has clearly concluded that the proposed development does not constitute a significant hazard or risk.

#### 2.1.11 Response to Further Information

A number of the appellants claim that there was not a full response to the request for further information. In response, we refer the Board to the response itself which is both detailed and exhaustive and addresses each of the items in full.

#### 2.1.12 Proper Planning

A number of appellants claim that the proposed development is contrary to the proper planning and sustainable development of the area. In response, it should be noted that as is evident from an objective assessment of the EIS and associated planning application documentation, the proposed development is of strategic national and regional importance. The development will contribute towards the realisation of Ireland's sustainability objectives, complies with the Mayo County Development Plan and can be developed without significant adverse impacts on the environment or the amenities of the local community. In this regard, it is clear that the proposed development is in keeping with the proper planning and sustainable development of the area.

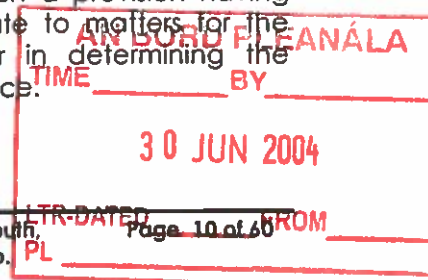
#### 2.1.13 Local Benefit

Micheál Ó Seighin claims in his appeal that the proposed development does not advance balanced regional development as, due to its short life span, there will be very limited infrastructural and socio-economic benefits. In response it should be noted that gas can flow both ways in the downstream pipeline and as such despite the fact that the Corrib Gas Reserve will eventually become exhausted gas can still be delivered to the area through the national gas grid, to which the terminal will be connected.

#### 2.1.14 Conditions

A number of appellants have raised concerns about the conditions attached to Mayo County Council's decision. These concerns are mainly dealt with elsewhere in this response under the relevant issues. However, An Taisce raises a specific concern about the bond required under the conditions. They claim that the bond fails to provide cover for any environmental damage. It is our view that no environmental damage will result from the operation of the proposed development. Notwithstanding this, we respectfully submit that the planning authority were precluded from including such a provision having regard to the fact that such a condition would relate to matters for the Environmental Protection Agency (EPA) to consider in determining the Integrated Pollution Prevention and Control (IPPC) Licence.

#### 2.1.15 Climate Change





Mark Garavan, in his appeal, claims that the exploitation of Corrib would merely continue the country's reliance on fossil fuels and further postpone transition to renewable energy resources. Furthermore, Mr Garavan claims that it conflicts with the thrust of national and international energy policy. Contrary to Mr. Garavan's appeal submission, National Policy clearly supports fuel switch from solid fuel and oil to natural gas and renewables and so contributes to Ireland's target to limit national greenhouse gas emissions while ensuring security of energy supply (see Section 19 of Volume 1 of the EIS).

#### 2.1.16 Traffic Management Plan

Monica Muller claims that the traffic management plan is in conflict with the requirements of the plan of development programme for the Corrib Gas field as laid down by the Department of the Marine.

There is no conflict between the requirement for the applicant in Condition no. 8 of the planning permission to comply with the traffic management plan submitted to Mayo County Council in its response to the RFI and the requirements of the approval of Shell's Plan of Development granted by the then Minister for the Marine and Natural Resources on 15 April 2002. Condition no. 6.1 of the Plan of Development approval requires an Environmental Management Plan to be drawn up for the approval of the Minister prior to commencement of works. The Environmental Management Plan is to address traffic management, both onshore and offshore. An Environmental Management Plan was drawn up and approved prior to any preparatory landfall works taking place. Due to changes in the Corrib development schedule the Environmental Management Plan will be revised and re-issued prior to commencement of works, as required. The traffic management aspects of the Environmental Management Plan will be taken from the traffic management plan provided to Mayo County Council and referred to in the decision to grant planning permission issued by the County Council.

#### 2.1.17 Allegation of Unauthorised Development

Monica Muller claims that the application is invalid, as it is an extension to an unauthorised development which she claims to be the works undertaken at the landfall site to date.

The appellant refers to works carried out at Dooncarton, which is the site of the landfall. Such works and development are wholly separate and distinct from the proposed development and are located some 8 kilometres away from the proposed terminal site. Those works which were carried out at that site in the summer of 2002, were carried out pursuant to the Foreshore Licence of 17 May 2002 which was granted pursuant to Section 3 of the Foreshore Act, 1933 and the consent of the 15<sup>th</sup> of April 2002 to construct the upstream pipeline granted pursuant to section 40 of the Gas Act 1976. The works consisted of preparatory works for the construction of an underground pipeline for the transmission of gas and are specifically declared to be exempted development (see Article 6 and Second Schedule of the Planning and Development Regulations 2001). See also Section 225 (3) of the Planning and Development Act, 2000 discussed in more detail above.

Monica Muller further claims that the drainage works carried out by Bord na Móna at the Srahmore peat deposition site (which she alleges to be contrary to the existing IPC licence) constitute unauthorised development. The

Srahmore site is subject to IPC licence 505 and drainage activities carried out by Bord na Móna on the Srahmore site are regulated by that licence. The drainage works are not contrary to the IPC licence. In addition, as the Board is aware drainage works are exempted development under Class 3 of Part 3 of the Second Schedule of the Planning and Development Regulations, 2001.

#### 2.1.18 General Concerns

There are a number of other planning related concerns raised by the third parties. These include a claim that the source of the rock for the proposed development has not been adequately addressed in the planning application and a query as to whether or not flares require planning permission.

In response to the rock issue it should be noted that the EIS states that it is anticipated that the rock will be sourced locally.

In response to the issue as to whether flaring will require planning permission, it is our view that it clearly will not as such an event will only occur in an emergency and flaring is an emergency activity ancillary to the operation of the proposed development, and as such will not require planning permission.

For inspection purposes only.  
Consent of copyright owner required for any other use.

<b>AN BORD PLEANÁLA</b>	
TIME _____	BY _____
<b>30 JUN 2004</b>	
LTR-DATED _____	FROM _____
PL _____	



## 2.2 EIS / ENVIRONMENTAL ISSUES

The following appellants have raised specific concerns regarding the EIS and environmental issues:

- Monica Muller
- Ballinaboy / Leenamore Residents (Jacinta Healy)
- Sean McDonnell and Others
- An Taisce
- Mary Corduff
- Brendan Philbin
- John and E. McAndrew (Leenamore/Ballinaboy Concerned Citizens)
- Brid & Teresa McGary
- Maura Harrington
- Brian Coyle
- Micheál Ó Seighin and Others

The concerns raised can be summarised under the following sub-headings:

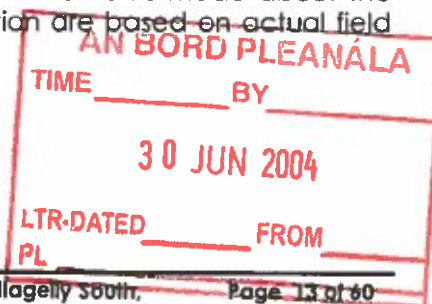
- |                                     |                   |
|-------------------------------------|-------------------|
| 1) Validity Issues                  | 10) Waste         |
| 2) Adequacy of EIS                  | 11) Working Hours |
| 3) Allegations of Project Splitting | 12) OSPAR         |
| 4) Water                            |                   |
| 5) Air & Noise                      |                   |
| 6) Human Beings                     |                   |
| 7) Flora & Fauna                    |                   |
| 8) Alternatives                     |                   |
| 9) European Sites                   |                   |

### 2.2.1 Validity Issues

A number of the appellants have made claims in relation to the validity of the EIS and the date of submission to Mayo County Council of the planning application documentation. The planning application was lodged on 17<sup>th</sup> December 2003 in full accordance with the provisions of the Planning and Development Act, 2000 and the Planning and Development Regulations, 2001.

Micheál Ó Seighin and others in their appeals claim that there are contradictions between what is contained in the Ballinaboy Bridge Terminal EIS of November 2000 and other EISs and what is presented in the EIS supporting the current planning application.

As this is a new planning application no reliance is placed on the earlier EISs. In particular reference is made by this appellant to the probable physical characteristics of the peat to be excavated from the terminal site. This matter was clearly dealt with in the applicant's response to Mayo County Council's RFI and in particular Volume 2, Section 7. The statements made about the consistency of the peat in the current application are based on actual field trials and as such are definitive.



## 2.2.2 Adequacy of the EIS

Several appellants expressed concerns regarding alleged omissions from the EIS. In particular, Monica Muller claims that the EIS submitted in respect of the proposed development does not contain all the likely effects and mitigation measures proposed as is required of it.

The application including the EIS contains all the required information stipulated under the Planning and Development Act 2000, and the Planning and Development Regulations 2001.

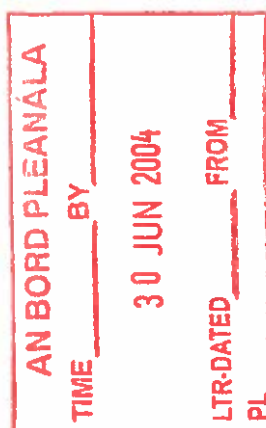
The EIS, as specified on Page 1 of the Preamble, in Volume 1, has been prepared having regard to the information requirements specified in the following legislation:

- Council Directive 85/337/EEC (amended by Council Directive 97/11/EC);
- Part X of the Planning and Development Act, 2000 and Schedules 5, 6, and 7 of the Planning and Development Regulations, (SI 1600 of 2001);
- Guidelines on the recommended information to be contained in Environmental Impact Statements, published by the Environmental Protection Agency (EPA) in 2002 and the EU Commission; and
- The requirements of Mayo County Council, as elaborated in the new County Development Plan (2003 – 2009), which came into force on 17<sup>th</sup> November 2003.

The applicant provided further information to Mayo County Council on 11<sup>th</sup> March 2004, in full response to a Request for Further Information (P03/3343) issued by the Council dated 17<sup>th</sup> February 2004.

In relation to the allegation by An Taisce that an excessive number of issues are left to post consent monitoring including the provisions of Conditions 52 to 63 and 69, it is noted that An Taisce seeks to rely upon Section 3.4.1 of the Commission's Reasoned Opinion which specifically recognises that post development consent environmental monitoring is not incompatible with the requirement that an EIS be provided before the planning permission is granted. In other words the monitoring and licensing of emissions to the environment by a separate consent process, after the planning permission is granted is not incompatible with the requirements of the Environmental Impact Assessment Directives. Section 256 of the Planning and Development Act, 2000 was introduced to redress previous concerns on the integrated assessment of EISs. Section 256 specifically provides that a Planning Authority or An Bord Pleanála may decide to refuse permission where the Planning Authority or An Bord Pleanála "consider that the development, notwithstanding the licensing of the activity, is unacceptable on environmental grounds having regard to the proper planning and sustainable development of the area in which the development will be situate". The concept of "sustainable development" inherently implies consideration of issues related to environmental pollution. Mayo County Council sent the planning application to the Environmental Protection Agency for its consideration, and it is clear from the decision and conditions attaching thereto that Mayo County Council has fully considered all relevant matters.

A full and adequate assessment has been carried out in connection with the preparation of the EIS. In relation to the Reasoned Opinion of the European Commission referred to by certain of the objectors it is to be noted that in providing also for post consent monitoring, the applicant is adding to the mitigation measures proposed and such monitoring does not in any way take



from the adequacy of the assessment carried out to date. The applicant moreover, refers to the provisions of Section 34 (2)(c) of the Planning and Development Act, 2000 which provides that the planning authority shall take into consideration that the control of environmental emissions from activities licensable pursuant to the Environmental Protection Agency Act, 1992 and the Protection of the Environment Act, 2003 is a function of the EPA. The extract of the Reasoned Opinion referred to, in fact supports such a procedure.

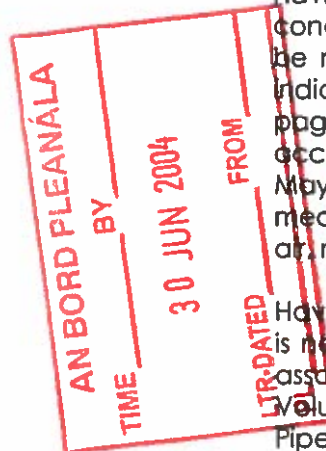
A comprehensive EIS including consideration of emissions from the IPC licensable activity was submitted with the planning application in compliance with the requirements of Article 5 of the 1985 EIA Directive and all statutory requirements. Mayo County Council was in possession of all of the required information and was thus enabled to carry out a fully informed assessment of the proposed development including a review of the proposed development as to its sustainability and impact on the environment. While the Planning Authority is constrained from imposing actual conditions relating to emissions from activities it is patently not constrained in its consideration of environmental matters. It is also worth noting that Section 99 (F) of the Protection of the Environment Act, 2003, (which Section will come into operation on 12<sup>th</sup> July, 2004) will repeal Section 98 of the Environmental Protection Agency Act 1992 but replace it with wording which largely restates Section 256 of the Planning and Development Act, 2000. It should furthermore be noted that the relevant European Directives (85/337/E.E.C. and 97/11/E.C.) clearly accept that there can be more than one body involved in the process of conducting an environmental impact assessment (See the decision of the Supreme Court in O'Connell v. The Environmental Protection Agency and others (2003 1 I.R. 530), which upheld the then more limited review of environmental impact assessment under Section 98 of the Environmental Protection Agency Act, 1992 now expanded by virtue of the amendment of Section 98 (1) of the 1992 Act by Section 256 of the Planning and Development Act, 2000).

With regard to the proposal that an Environmental Management System (EMS) should be included in the EIS, it should be noted that an EMS has been proposed by the applicant, as described in Section 20, Volume 1 of the EIS. This is also a condition imposed by Mayo County Council in the grant of planning permission.

Having regard to Ms Muller's claim that the monitoring plan referenced in condition 58 of Mayo County Council's decision is not part of the EIS, it should be noted that Shell is committed to a detailed monitoring programme as is indicated throughout the EIS. A list of the monitoring is provided in table 20.2, page 20-6 of Volume 1 of the EIS. All monitoring will be undertaken in accordance with the relevant statutory consultees' requirements including Mayo County Council. Such monitoring will ensure proposed mitigation measures are effective and that strict environmental standards and limits (i.e. air, noise and water quality) are not breached.

Having regard to Ms Muller's claim that the application for the discharge pipe is not included in the EIS, it should be noted that the environmental impacts associated with the discharge from the pipeline are covered in Section 10 of Volume 1 of the EIS. Consent for the discharge pipeline was granted under a Pipeline Consent on 15<sup>th</sup> April 2002 and a Foreshore Licence on 17<sup>th</sup> May 2002.

Having regard to Sean McDonnell's claim in his appeal that the village of Bunowna was omitted from the EIS, it should be noted that the village of Bunowna lies approximately 2km to the north east of the proposed terminal site. It is not referred to directly within the EIS because it is not shown on any



published mapping with that name. The presence of the group of houses referred to as Bunowna has been recognised in that its location was used as a visual impact viewpoint.

An Taisce have claimed in their appeal that the EIS fails to adequately assess alternative sites and methods of gas processing and landfall and that the required information relating to environmental pollution is missing. In response it should be noted that a detailed review of the alternative sites and methods of gas processing and landfall are provided in Section 4 of Volume 1 of the EIS. In Section 4.4 the justification for locating the landfall at Broadhaven and the terminal at Bellanaboy Bridge is provided. The terminal technology options are discussed in Section 4.7, Pages 4-12 to 4-14.

Detailed assessments of the gaseous, aqueous and aural emissions resulting from the construction and operation of the terminal are provided throughout the EIS, but specifically in Section 10 Effluent, Section 11 Air Emissions, and Section 12 Noise.

Micheál Ó Seighin questions the adequacy of the EIS on a number of grounds:

1. The scientific basis for the stabilisation of peat on site
2. The risk inherent in the U-turn regarding the use of road L1204 from Bangor to Ballinaboy
3. The upgrading of the L1204, its pavement, its widening on peat foundations, its maintenance and inconvenience to the public
4. Leaking of acid silt bearing water from the HVT on the L1204 in the Carrowmore SAC and to the lake itself during the movement of peat
5. The proposed use of sheet piling, a new and uncertain technology in peat soils
6. The stability of incoming pipeline of raw gas on deep peat and within the site boundary i.e. the establishment is narrowly defined by the OHSA
7. The dangers and unquantified risk to the working public outside and to operatives within the site boundary posed by the high pressure, especially liquid pipes outgoing, high pressure raw gas incoming and the power cable in close proximity to one another, the traffic and road pavement implications for the L1203, L12035, L52453-0, L52453-25 posed by the construction of the pipeline from Glengad to Ballinaboy, and the servicing of same, including disposal of waste material extracted as a necessary result of the operation (source K)
8. The findings of EuroSoilStab project as regards peat reinforcing
9. No destination for non-peat waste
10. Lessons of Derrybrien landslide ignored

We have responded to each of these claims in turn below:

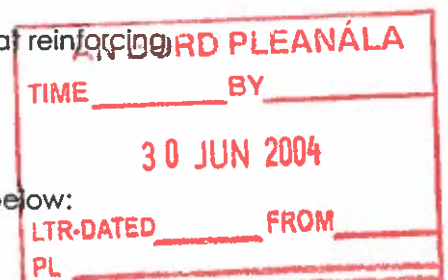
#### Item 1

The scientific basis for the stabilisation of peat on site is not a work in progress as is clear from our detailed response in Section 2.4 of this submission.

#### Item 2

The upgrade and use of the L1204 is dealt with in the Traffic Management Plan (Submitted as Appendix A of the Response to Request for Further Information).

#### Item 3



The Transport Management Plan (Appendix A of the response to RFI) includes plans for improving the roads, including the L1204, and consultation with local residents. Accordingly, it is proposed that with the agreement of Mayo County Council, a programme of route improvements would be carried out in advance of the main haulage operation at the expense of the applicant. These will follow guidance from the Department of Environment and Local Government, including "Guidelines on the Rehabilitation of Roads over Peat". Section 4.5 of the Traffic Management Plan details a methodology/mitigation for the road improvements.

**Item 4**

The Transport Management Plan (Appendix A of the response to Request for Further Information) details a methodology for the minimisation and mitigation of any leakages.

**Item 5**

Sheet piling is not a new technique and it is used on construction sites throughout the world in peat and mineral soil situations.

**Item 6**

The gas pipeline from the landfall to the terminal is not the subject of this application.

**Item 7**

General risk assessment – A summary of mitigation measures and potential impacts is presented in Section 17 of Volume 1 of the EIS. Traffic – A risk assessment is included in the Traffic Management Plan (Response to Request for Further Information Appendix A), which clearly identifies all of the likely risks and the proposed mitigation measures.

**Item 8**

Section 1.2 of the Peat Stabilisation Report (Volume 1 of the response to the RFI) explains that this up to date and well proven technology provides a more sustainable alternative to traditional excavate and replace methods. It should be noted that the use of this technology is not a misinterpretation of the EuroSoil Stab findings.

**Item 9**

Section 16 of the EIS Volume 1 provides details on waste disposal. A licensed waste contractor will dispose of residual waste at an appropriate facility within County Mayo.

**Item 10**

Shell have taken ground stability into consideration as demonstrated in the EIS.





### 2.2.3 Allegations of Project Splitting

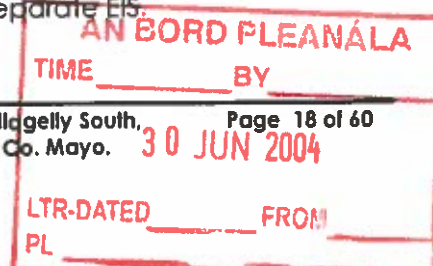
Micheál Ó Seighin and An Taisce claim that the proposed development involves 'project splitting'

A full Environmental Impact Assessment ("EIA") of this proposed development has been carried out and this EIA includes an acknowledgement of the likely cumulative effects of the construction of the pipelines to and from the terminal and of the development of the offshore field. The assessment of the impacts of the upstream pipeline and the offshore field has been comprehensively covered in the Corrib Field Development (Offshore Field to Terminal) Environmental Impact Statement ("Offshore EIS"). It would be inappropriate to carry out an assessment of the impacts of those proposed developments as part of the present Environmental Impact Assessment. An argument that such an assessment (i.e. an assessment of other developments) should occur was put forward, on behalf of objectors, at the oral hearing on a road scheme (the Dundalk By-pass) and was subsequently the subject of a High Court challenge where such an argument was rejected (see O'Connell v. O'Connell and the Minister of the Environment and Local Government (unreported, High Court, 29<sup>th</sup> March, 2001 and see also Mc Ardle and others v. An Bord Pleanála and Louth County Council and the National Roads Authority (unreported High Court 7<sup>th</sup> of March, 2003)).

The current proposed development is of a significant size and has been subject to its own EIA as indeed has the development of the offshore field together with the pipeline. Any suggestion that the proposed Corrib development is being split in order to avoid carrying out an EIA or for any other nefarious reason would be entirely incorrect.

It is to be noted that any cumulative effects of this proposed development with the neighbouring proposed developments have been considered. The overall context of the Corrib Project in the wider scenario is considered. The EIA involves co-ordination with and recognition of other relevant projects. The effects of this proposed development as cumulative to existing and proposed development has been considered at all stages of the EIA. The EIS for the proposed development application relates to the Bellanaboy and Srahmore sites and assesses the environmental impacts, including cumulative impacts of the development at both of those sites and the haul route between them as well as considering the cumulative impacts of development carried out pursuant to the construction of the gas pipelines and the offshore infrastructure. A separate offshore EIS was submitted in support of several other licence/consent applications. Different statutory consent procedures required different applications. However, the EIS submitted to Mayo County Council in support of this application extensively considered the cumulative impacts of this development and of the proposed Corrib Gas Project.

An integrated assessment of the development has occurred. The development of the offshore field and the pipelines between the field and the terminal measuring some 94 kilometres of which the vast majority will be offshore constitutes a separate development. It is also to be noted that the offshore field and the pipelines were not only the subject of separate consent applications but were also the subject of an EIS as required by Section 40A of the Gas Act, 1976 as amended and that the EIS was advertised and copies of same made available to the public. The Bord Gáis Éireann pipeline connecting the terminal to the existing gas transmission network is a separate development which has been the subject of a separate EIS.





## 2.2.4 Water

A number of appellants have raised concerns in relation to the impact of the proposed development on water quality particularly during the construction and on the proposed discharges to sea during operation.

Monica Muller in her appeal claims that the EIS is inadequate with regard to potential discharge to waters from the residues of the interaction between the cement and peat. The applicant's response to the RFI details the possible impacts on water quality, aquatic ecology and surrounding peatlands arising from the use of cement binder. A report on the proposed peat improvements works is provided in the response in Volume 1; Item 11 of the response. The report concludes that the peat improvement works will have no impact on the quality of groundwater or surface waters, or their associated ecosystems, outside the terminal boundary.

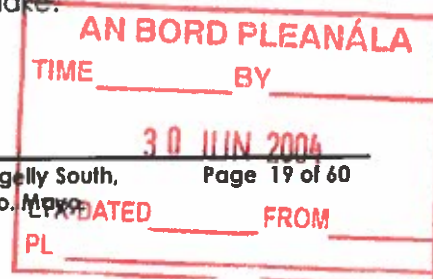
Sean McDonnell, Brid & Teresa McGarry and Micheál Ó Seighin make claims about the discharge pipe into Broadhaven Bay containing impurities including mercury and lead and unrecycled process chemicals and the dilution of the discharge.

In response it should be noted that Section 10 of Volume 1 of the EIS addresses issues related to the discharge of treated effluent arising from the proposed terminal development. This Section details the mitigation measures and predicted impacts of the discharge and predicts that no observable impacts will occur due to the discharge of treated waste water effluent from the terminal. It should also be noted that the discharge water quality will be subject to the terms of an IPPC Licence.

A number of the appellants claim the proposed development creates risks to the water quality of Carrowmore Lake which is used as the source for the local potable water supply. In particular reference is made to the potential leaching of phosphates into local watercourses resulting in the eutrophication of Carrowmore Lake and other waters.

The issue of water quality is treated in great detail in Section 9 of Volumes 1 and 2 of the EISs. All of the potential impacts and mitigation measures of the proposed development are discussed and it is concluded that the proposed development will have no adverse impact on water quality in Carrowmore Lake. Baseline environmental information is provided as a benchmark against which changes to the environment can be measured.

The issue of phosphate mobility and its potential release into local watercourses is addressed in Section 8.4.7 and 8.6.1 of volume 1 of the EIS. Additional information was provided in Volume 1 Item 6 as part of the response to the RFI. This information showed that only 1.6% of the total volume of peat to be excavated contained elevated leachable orthophosphate concentrations and as such, it is considered very unlikely that the excavated materials removed from the terminal site will impact on the water qualities of Carrowmore Lake and its in-flowing water course or to the water environment. The peat reception site at Srahmore is downstream of Carrowmore Lake and water draining from Srahmore cannot impact the lake.



At the Bord na Móna peat reception site at Srahmore, all water draining from the peat will be channelled via the drainage control and management system as detailed in Section 9.7 of the EIS (Volume 2). Information on the water settling ponds, including the hydraulic methodologies used and the hydrological calculations, are detailed in Section 9.7 of the EIS (Volume 2) to ensure that receiving waters are not impacted by the peat deposition. In short the mitigation systems have been designed in sympathy with the local aqueous environment - rainfall, surface water runoff and hydrology and hydrogeology to ensure no adverse impacts occur.

John and E. McAndrew claim that the proposed development will have a negative effect on Sruwaddacon Bay and beaches in the surrounding area. The works relating to the upstream and downstream pipelines have already been given consent by the Minister for Communications, Marine and Natural Resources under the Gas Act 1976. Notwithstanding this Section 7 of Volume 1 of the EIS assesses the likely impacts of the proposed development on the aquatic ecology of the terminal site and its surroundings. In summary, the magnitude of these impacts were assessed to be:

- trench construction – temporary, minor-negligible;
- pipe laying – temporary, minor-negligible; and
- outfall discharge – negligible.

The proposed terminal will be constructed and operated in accordance with the procedures described in Volume 1 of the EIS. The overall impact of the development will be negligible or minor in terms of effects on the aquatic ecology.

Brid & Teresa McGarry claim that a slick from an oil spill allegedly caused by Shell E&P Ireland Ltd (then called Enterprise Energy Ireland Ltd. (EEIL)) in September 2001 is still contained within the upper reaches of Sruwaddacon Bay. They also claim that this spill was never reported to the authorities and it was never cleaned up. We wish to point out that this allegation by the appellant is unsubstantiated and that there was no oil spill caused by EEIL in September 2001. There were allegations of such a spill at the time and this was reported to the then Department of the Marine and Natural Resources, who investigated the spill and concluded that it was not related to any of EEIL's activities.

Brid & Teresa McGarry also claim that there is a health and safety risk to water consumers from peat placed downstream of Carrowmore Lake. The Srahmore site is downstream of Carrowmore Lake and therefore can have no impact on the drinking water from Carrowmore Lake. Section 9.7 of the EIS (Volume 2) provides detailed descriptions on how water draining from the deposition area will be controlled and treated. These measures are proposed to ensure that the facility does not have a deleterious impact on the receiving waters. It should also be noted that drainage water quality from the Srahmore site will be subject to the terms of a waste licence.

## 2.2.5 Air & Noise

AN BORD PLEANÁLA	
TIME	BY
30 JUN 2004	
LTR-DATED	FROM
PL	

A number of appellants have made claims about emissions to air, noise and odour. These are addressed below.

### Emissions to Air

At the outset it should be noted that detailed atmospheric dispersion modelling of emissions from the terminal has been carried out incorporating representative weather conditions and local terrain. The modelling predicts that air quality standards designed for the protection of health and the environment will not be exceeded (see Section 11.18 of Volume 1 of the EIS).

In her appeal Monica Muller incorrectly claims that emissions to air have not been considered. The Ballinaboy / Leenamore Residents, Sean McDonnell and Brid & Teresa McGarry also express concern regarding air emissions in relation to the applied process technology and alleged toxic emissions and their impacts on human and animal health. Section 11 of Volume 1 of the EIS identifies and assesses the sources and potential impact of atmospheric releases resulting from the construction and operation of the terminal. Dispersion modelling using the latest generation of computer model has been carried out to predict how releases from the Gas terminal disperse in the atmosphere and to determine the potential levels of exposure at sensitive locations including nearby houses. This includes an assessment of the proposed emissions against air quality standards and guidelines.

The terminal design is designed to international standards and will be the subject of a BAT (Best Available Techniques) assessment. This ensures the minimisation of combustion products and fugitive releases. Such design considerations will minimise releases to air.

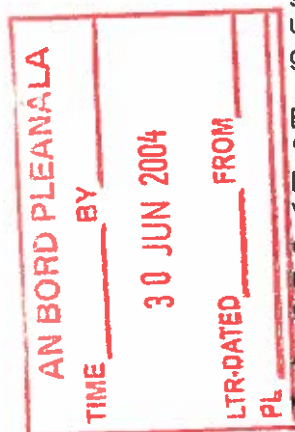
Combustion processes have been designed to be energy efficient and minimise the quantity of fuel used, thereby minimising releases of emissions. Gas is the main fuel used on site and is the lowest emission fuel available. Any out of specification gas will also be used as fuel for heating applications rather than be discharged to atmosphere. Low-NOx burners will be installed on the gas turbines and heating medium heater to reduce NOx releases further. The use of clean-burn gas engines will also minimise emissions from the power generators.

Emissions are listed in Table 11.1 of Volume 1 of the EIS under the heading 'Potential Emission Components and their Associated Effects on Health and Ecosystems'. The results of the modelling study (provided in Section 11, Volume 1 of the EIS) into predicted air quality concludes that 'Existing air quality is very good and will remain so with the terminal in operation. No residual air quality impacts are anticipated as a result of the terminal development.'

The plant is designed to operate within European Union air quality standards which are specified to ensure air emissions do not exceed levels that are designed to protect human health and ecosystems; these are detailed in Volume 1 of the EIS in Section 11.4.

Monitoring during the construction and operation of the terminal will assess the effectiveness of the mitigation measures introduced.

Releases to air will be regulated by the Environmental Protection Agency (EPA) and defined in the terminal site's IPPC Licence. An IPPC Licence application is currently being prepared for submission during 2004.



Having regard to the claims of a number of the appellants concerning the presence of hydrogen sulphide in the gas, we wish to state that it is not present and none is expected in the future (see Section 2.4.1 of Volume 1 of the EIS). This has been confirmed through the analysis of various samples of the Corrib Gas as described in the Offshore EIS 2001, Section 2.0.

Brid & Teresa McGarry claim that the environmental emission figures are significantly reduced from the previous planning application. They also claim that the burning of condensate instead of natural gas will affect the health of residents.

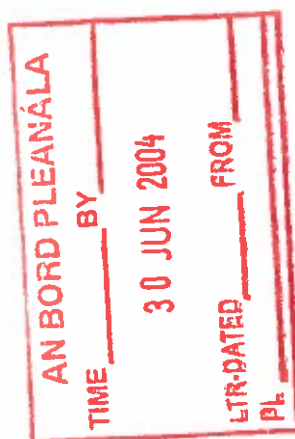
In response, it should be noted that there are variations between the emission figures for the applications, primarily because the previous application was based on Front End Engineering Design, whereas this application is based on Detailed Engineering Design.

Condensate arriving at the terminal from the Corrib gas field undergoes additional processing to remove volatile fractions and impurities. The processing generates a refined liquid similar to other distillate fuels used in industrial and domestic heating appliances (i.e. home heating oil). Whilst liquid fuels (condensate) do typically generate higher emissions than gaseous fuels such as natural gas, using the condensate within the Heating Medium Fired Heater represents a more efficient recovery of energy contained in the hydrocarbons arriving at the terminal. It also reduces the quantity of what otherwise would be a waste by-product and associated vehicle movements to remove it from the site.

The emissions using condensate, however, are still relatively low and are discharged to air at a suitable release height to ensure safe and adequate dispersion. Emissions generated from the Heating Medium Fired Heater were included in the detailed assessment of air quality described in Chapter 11 of Volume 1 of the EIS. This included atmospheric dispersion modelling to predict the future impact of not just the heater but all significant emission sources associated with the development.

Brid & Teresa McGarry raise concerns about carbon release during the disturbance of peat. This objection indicates that the removal of the peat from the site will result in increased carbon releases. The rationale for such a statement is not explained. The EIS states that the release of carbon is small in comparison to the carbon stored in the peat (EIS Volume 2, Section 14.8.1). The peat bog is expected to be a net carbon sink once rehabilitated.

Micheál Ó Seighin claims that the proposal is contrary to Ireland's commitments under the Kyoto Protocol. It should be noted that the Climatic Impact of the proposed development is discussed in Section 14 of the EIS Volume 1. Section 14.7.2 of the EIS states that 'If the natural gas distributed into the national network by the gas terminal displaced an equivalent amount of crude oil in energy terms, this would lead to a potential reduction of 2.4 million tonnes of CO<sub>2</sub> equivalent ignoring minor leaks of gas from the transmission system'. This figure is nearly fifty times greater than the projected releases from the terminal and does not take into account the higher efficiency of use associated with gas at the end-user. In reality the displacement (or emission reduction) will be less than 2.4 million tonnes of CO<sub>2</sub>-equivalent as the gas supplied will supplement applications where natural gas is already used or is required to meet rising energy demand to a certain extent. The calculation however demonstrates that when considered on a national level, the benefits of a secure, indigenous source of natural gas





more than outweigh the effect of emissions with global warming potential generated from the site itself.

Micheál Ó Seighin also claims in Source N of his appeal that the terminal is within a basin and makes reference to the risk of lodging emissions during inversion conditions. Contrary to these claims it is obvious that the terminal is not sited in a basin with contiguous hills on all sides, the hills referred to are located at some significant distance from the site. The terminal site is elevated in comparison to land to the south west (towards Carrowmore Lake) and only a gentle incline exists to the north and north east with the height of terrain increasing by only up to 20 metres over a distance of one to several kilometres in these directions. The terrain features and their influences are described in Section 11.17 of Volume 1 of the EIS.

As described in Section 11 of Volume 1 of the EIS potential air quality impacts during construction include releases to air from construction and haulage vehicles and the generation of dust. Traffic emissions will be minimised through appropriate vehicle maintenance and route selection to and from the terminal. Dust will be mitigated by the application of best practice dust suppression and containment techniques including the prevention of dust accumulation and ensuring dusty materials are either moist or sheeted.

#### Noise

Monica Muller claims in her appeal that the likely significant effects of noise are not assessed in the EIS having regard to the provisions of Condition 25 attached to Mayo County Council's decision to grant permission for the proposed development. Ms Muller also states that the provisions of this condition are incompatible with the proposal to have 800 HCV passing by noise sensitive receptors.

The applicant would agree with the second part of this comment. Almost all construction activities will raise the pre-construction ambient noise level at the location of the activity by 5dB Leq. This is not considered a significant increase. In this regard, the applicant has appealed this Condition.

Notwithstanding the above, it should be noted that the significant effects of noise have been assessed, as provided in Sections 12 of Volumes 1 and 2 of the EIS which predicts that during the construction period, there will be, due to the very nature of the construction activities, an increase in the ambient noise levels from site activities and from construction related traffic. The assessment states that noise levels will not be constant, but vary from activity to activity, and also vary with the combination of machinery to be applied at one time. They will also vary from location to location, depending on the proximity of the activities to the receptors.

The EIS goes on to propose, that, in addition to standard mitigation measures applied to minimise the noise at source, communication with the affected residents will be essential to minimise the adverse impact of the noise disturbance.

The Ballinaboy / Leenamore Residents, Micheál Ó Seighin and Sean McDonnell have expressed concerns regarding general noise from the proposed development and in the case of the Ballinaboy / Leenamore Residents, particularly noise due to emergency use of the flare. As noted above, a detailed noise impact assessment covering the various stages of the

proposed terminal development is provided in Section 12 of Volume 1 of the EIS.

Shell is committed to minimising noise impacts on local residents as is indicated throughout the EIS, in particular in Section 3.12 and 17 of Volume 1 of the EIS. The terminal design includes a small ground flare to avoid non-emergency use of the flare stack. The ground flare will be used for the combustion of the non-recoverable gas prior to a maintenance activity. This has been configured to minimise noise impact, as part of the normal operational noise control strategy for the terminal.

The flare stack will only be used during the operation of the proposed development in an emergency situation, such as a gas leak or a fire, where safety considerations would require the rapid removal of gas inventory from certain sections of plant by the combustion of vented gas from the emergency flares. Operation would be a highly unusual occurrence.

### Odour

The appeal by the Ballinaboy / Leenamore Residents expresses concerns regarding odour as a result of the odourisation of the sales gas with particular reference made to the operation of the gas terminals at Inch in Cork and Bacton in the UK. In response it should be noted that the prevention of releases to atmosphere of the mandatory odourant is fully described in Volume 1 of the EIS, in particular in Section 11.9. We cannot comment on the operation of odourisation facilities by Bord Gáis Éireann at Inch in Co. Cork. The issue of vapour recovery systems, reference Bacton, is entirely separate. We are aware of vapour recovery systems having been installed in recent years at various terminal sites, including Bacton, to prevent the release of hydrocarbon vapours from tankage to atmosphere. As described in Volume 1 of the EIS, Section 11.7.2, the tanks on the terminal site have been designed to minimise releases to air through a combination of internal floating roofs and use of nitrogen blanketing. In this regard, the appellants' concerns are unfounded.

### 2.2.6 Human Beings

A number of the appellants have expressed concerns relating to the impact that the proposed development would have on human beings.

In response we wish to note that throughout the EIS the impact of the proposed development on the health and well being of people in the area has been considered. In particular:

- Section 9 covers issues of water quality and site hydrogeology and drainage.
- Section 11 covers air emissions.
- Section 12 covers noise.
- Section 13 covers impacts on visual amenity.
- Section 16 covers issues of traffic generation.

None of the assessments have identified any significant residual health or safety impacts attributable to the proposed development.

### 2.2.7 Flora & Fauna



A number of the appellants raise concerns regarding the impact of the proposed development on flora and fauna.

The Ballinaboy / Leenamore Residents express concerns as to habitat loss as a result of the proposed development. It can be confirmed that the loss of habitat will be small and, as is shown in the planning documentation and the EIS (Section 6.5.2 of Volume 1 of the EIS), only the habitats under the terminal footprint and under the construction laydown area will be lost together with some marginal vegetation along the main access road also. Any native trees affected, such as willow, will be translocated where possible.

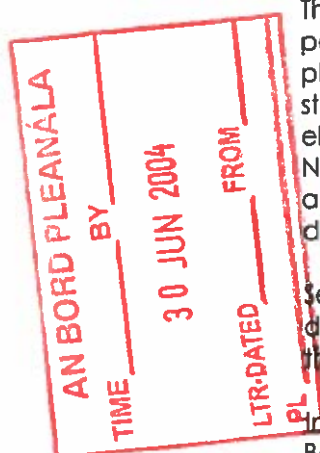
While the existing drainage system of narrow channels and small streams within the terminal footprint will also be affected, the affected habitats, wet grassland, coniferous plantation and small pockets of scrub, are all widespread and common. They support a limited range of generally common species and the forest belts provide limited aesthetic appeal. These habitats are generally of low ecological interest. The overall impacts on fauna as a result of the loss of habitat is therefore considered as Minor.

Monica Muller, Micheál Ó Seighin and Brian Coyle claim that the proposed development would further constitute an unacceptable risk of pollution to surrounding salmonid waters that an adequate baseline does not exist and adequate mitigation measures are not proposed. Reference is also made to silting from Bord na Móna workings.

In response, it should be noted that Section 7 of Volume 1 of the EIS provides a thorough review of the baseline conditions, proposed mitigation and predicted impacts of the proposed development on the aquatic ecology of the terminal site and its surroundings. The same assessment is made of the Srahmore deposition site in Section 7 of Volume 2 of the EIS. Section 7.2.1 of Volume 1 describes how Shell commissioned biological and chemical analyses of the watercourses in the locality of the terminal site and electrofishing operations in the northern region of the Ballina fishery area. These studies consisted of monthly surface water samples over a one year period for the determination of river water quality, data logging for continuous physico-chemical properties (information is presented in Section 9), quarterly standard kick sampling for macroinvertebrate analysis and annual electrofishing sampling. All surveys were carried out in consultation with the North Western Regional Fisheries Board (NWRFB), the fisheries protection authority for this area. In this regard, it is clear that adequate baseline data does exist.

Sections 7 of the EIS describe proposed mitigation measures to be adopted during the construction and operation of the development to ensure that there are no significant adverse effects on the surrounding aquatic ecology.

In relation to the comments made by certain appellants alleging silting from Bord na Móna workings, it is to be noted that the current drainage system within the Srahmore cut-over bog is operated by Bord na Móna under IPC Licence 505. Reference to Section 7.3.2 of Volume 2 of the EIS shows the water quality of the Owenmore Catchment, from samples obtained by the EPA between 1981 and 2002. The biotic index of the water indicates that the water within the Owenmore Catchment is generally unpolluted downstream of the Srahmore cut-over bog. The water quality information suggests satisfactory functioning of the drainage system without any significant impacts on salmonids.



The EIS establishes that the development will not have any significant effect on the functioning of ecosystems, the habitats, flora and faunal diversity of adjoining afforested and blanket bog areas. Effects on the fauna of surrounding terrestrial areas have been assessed as negligible to minor.

Monica Muller and Maura Harrington make claims concerning the presence of protected bird species on the site and in particular the Hen Harrier. In response we refer the Board to our first party appeal and in particular our comments on Condition 31.

Micheál Ó Seighin makes reference to Condition 29 of Mayo County Council's decision concerning bird nesting. In relation to his allegations regarding the destruction of nests at the landfall site at Dooncarton, notwithstanding the fact that this relates to a separate development, it should be noted that no nests were destroyed by the applicant during these works, as witnessed by local Dúchas representatives.

## 2.2.8 Alternatives

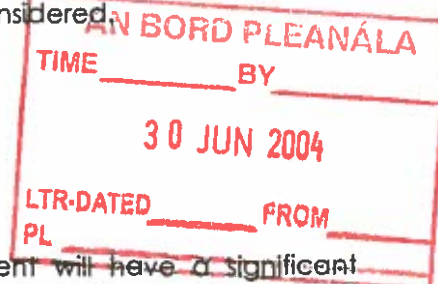
A number of the appellants have made claims with regard to alternatives and alternative technologies that they claim are available for the proposed development.

Brendan Philbin and Brian Coyle claim alternatives are available for the development of the Corrib Gas Field and in particular that the applicant should use the latest technology that is available regarding cleaning the gas at the wellhead offshore where they claim the technology is well advanced and used by other companies. In response, it should be noted the determination of engineering issues, technologies and methodologies for the development of the Corrib gas field are complex. The reasons for the selection of the proposed development scheme and the elimination of alternatives were carefully considered by the applicant, who, with their co-venturers have considerable experience in the development of oil and gas infrastructure. In this regard, it is the applicant's view that the chosen option is the best. This view is most clearly confirmed by the numerous new offshore deepwater gas fields that are under development with untreated gas produced to an onshore terminal for treatment. These include Ormen Lange and Snøhvit in Norway, Scarab/Saffron in Egypt and Otway in Australia.

The applicant has undertaken extensive research into the assessment of alternative landfall locations, pipeline routes, terminal locations etc, (see section 4 of the EIS). The current terminal location was selected taking into account all safety engineering and environmental constraints. These matters are addressed in Volume 1 of the EIS, Section 4 Alternatives and in particular in Section 4.2 Development Concept Alternatives Considered.

## 2.2.9 European Sites

An Taisce claims that the proposed development will have a significant impact on candidate Special Area of Conservation (SAC) 000472 (Broadhaven Bay cSAC) as a result of the alleged discharge of toxic waste at its border. They also claim that the development affects machair (Annex 1 Priority Habitat) and marine SACs.



In response, we refer the Board to our earlier comments in section 2.1 of this response. Allied to these comments, it should also be noted that the proposed development will not result in the production of aqueous toxic waste; therefore there is no contravention of the Habitats Directive or the Quality of Water for Shellfish Directive.

The impacts associated with the installation of the pipeline across the SAC have been addressed in the Offshore EIS. We also wish to note that no part of the Corrib gas field development will impact machair.

Micheál Ó Seighin claims that the proposed development counters the principles of nature conservation, especially with regard to pipelines routes which pass through SACs and SPAs. In response it should be noted that the presence of protected areas was incorporated into the design of the pipeline route. Details of the SACs/SPAs etc can be found in Section 6.3.7 of the EIS Volume 1. As noted previously, consent has been given under Section 40 of the Gas Act 1976 for the construction of the onshore pipeline.

Micheál Ó Seighin claims that the ecological impact of the proposed development is unfathomable having regard to his claim that it will plough through European designated areas and will cause habitat damage to machair habitat in the cSAC and SPAs, risking listed riparian systems. It should be clearly noted that the proposed development is not located in any European designated areas. In this regard, we presume that the appellant is referring to the upstream gas pipeline, which is not the subject of this application.

Irish legislation applies in determining the interpretation of the implementation of the measures contained in Council Directive 92/43/EEC, the 'Habitats Directive'. These are contained in the European Communities (Natural Habitats) Regulations, 1997 (S. No. 94 of 1997). Article 27 transposes the provisions of Article 6 of the Habitats Directive on the conservation of natural habitats and of wild fauna and flora in relation to development of the type now being proposed.

AN BORD PLEANÁLA	TIME	BY	30 JUN 2004	FROM	
	LTR-DATED	PL			

Article 27 provides that where a proposed development is neither directly connected with nor necessary to the management of a candidate special area of conservation but likely to have a significant effect thereon, the planning authority and on appeal the Board is required to ensure that an appropriate assessment of the implications for the European Site in view of the site's conservation objectives is undertaken. It is expressly provided that an environmental impact statement is an appropriate assessment for the purposes of the Regulations. As noted in Section 6.5.2 of Volume 1 of the EIS, it is not anticipated that the proposed construction and operation of the terminal facility will impact on the terrestrial habitats and constituent species of the nearby designated conservation areas - Pollatomish Bog pNHA, Genamoy Bog Complex cSAC, Carrowmore Lake Complex cSAC and Slieve Fyagh Bog cSAC or specifically on the machair.

The proposed development will not have significant effects on any European site whether a Special Protection Area, a cSAC or a pNHA. Even if, contrary to all of the evidence, any such significant effect was apprehended, the proposed development can still be approved if either of two conditions are satisfied:

- i. The Board is satisfied that the Proposed development will not adversely affect the integrity of the European Site. In considering

whether the Proposed development will adversely affect the integrity of the European Site, the Board is required to have regard to the manner in which the proposed development will be carried out and to any conditions or restrictions subject to which approval will be given. It is, thus, open to the Board to approve the Proposed development on the basis that, although the Proposed development would potentially have a significant effect on the European Site, it will not do so because of the mitigating measures that have been proposed. It is, therefore, submitted that, having regard to the mitigation and compensatory measures proposed, there is compelling evidence that the Proposed development will not adversely affect the integrity of the European Site.

- ii. the Board is satisfied that there are no alternative solutions and that the proposed development has to be carried out for imperative reasons of overriding public interest. Those reasons may include reasons of a social and economic nature. Considerable evidence has been made available as to the social and economic reasons for the proposed development which justify the construction of the proposed development. In the circumstances, it is submitted that notwithstanding the fact that it is clear that there will be no impact on any European site that this test has also been satisfied.

#### 2.2.10 Waste

Monica Muller claims that there is no calculation of the sewage volumes to be produced during construction in the EIS. Contrary to this, a breakdown of all the expected wastes generated during construction (including chemical toilet waste) is provided in Table 16.1 of Section 16 of Volume 1 of the EIS.

#### 2.2.11 Working Hours

Both the Ballinaboy / Leenamore Residents and Micheál Ó Seighin claim that there is no restriction on working hours. This is not the case. As is stated in Section 12 of Volume 1 of the EIS, the applicant is committed to minimising impacts on local residents, by restricting working hours as indicated.

#### 2.2.12 OSPAR

Maura Harrington claims that the Mayo County Council Senior Planner neglects to mention the OSPAR recommendation in his report and further claims that it is not possible for the applicant to meet the requirements set out by OSPAR. In response we wish to state that the appellant has made no reference to any specific OSPAR recommendation. This is not a relevant planning issue.

### 2.3 HEALTH AND SAFETY

The following appellants have raised specific concerns regarding health and safety:

- Monica Muller
- Ballinaboy / Leenamore Residents (Jacinta Healy)

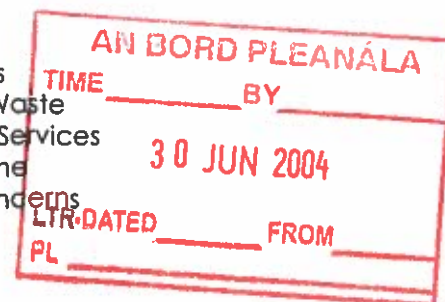
<b>AN BORD PLEANÁLA</b>	
TIME _____	BY _____
<b>30 JUN 2004</b>	
LTR-DATED _____	FROM _____
PL _____	



- Sean McDonnell and Others
- FEASTA (Mark Garavan)
- Mary Corduff
- Brendan Philbin
- John and E. McAndrew (Leenamore/Ballinaboy Concerned Citizens)
- Brid & Teresa McGarry
- Maura Harrington
- Brian Coyle
- Micheál Ó Seighin and Others

The concerns raised can be summarised under the following sub-headings:

- |                                     |                        |
|-------------------------------------|------------------------|
| 1. Planning History                 | 7. Mercaptan           |
| 2. Health & Safety Authority Report | 8. Leaks & Spills      |
| 3. Major Accident Assessment        | 9. Hazardous Waste     |
| 4. Domino Effect                    | 10. Emergency Services |
| 5. Pipelines                        | 11. Exclusion Zone     |
| 6. Terrorism                        | 12. General Concerns   |



### 2.3.1 Planning History

Brid & Teresa McGarry claim in their appeal that the National Authority for Occupational Health and Safety's (NAOSH) report has been toned down considerably in comparison to the previous application (Reg. Ref. P01/900).

While this is a matter for the NAOSH to address, we wish note to that in our view the changes reflect a greater understanding of the design and operation of the proposed facilities on the part of the NAOSH, as a result of the applicant providing further detailed information.

### 2.3.2 Health & Safety Authority Report

In his appeal Mark Garavan claims that no comprehensive Health and Safety audit has been conducted. In response to this we wish to note that a rigorous and detailed study of the terminal has been conducted by the NAOSH. The report from the NAOSH to Mayo County Council is a result of this examination and the recommendation of the NAOSH is that it does 'not advise against the granting of planning permission'.

Brid & Teresa McGarry claim that the development is not in compliance with the requirements of the Seveso II Directive as propane quantities have not been included in determining the inventories, and in this regard that the NAOSH's assessment is inadequate. This is not the case. Propane inventories kept onsite are detailed in Appendix VI of the Quantified Risk Assessment (QRA) as prepared by DNV (as presented to the NAOSH). Moreover, these inventories are available in the NAOSH report to Mayo County Council (see appendix VI, 'issue 2'). It is stated in Section 3.3.4 of the NAOSH report to Mayo County Council that, 'The major accident hazard predicted from failure of the cylinders is significantly less than other scenarios already modelled. These other scenarios modelled have adequately addressed the effects of this type of incident and for this reason this event was excluded from the risk analysis'.

Brian Coyle claims that the NAOSH has refused to consider or provide advice on the health and safety of the local people at work. This is not the case.

Offsite risks to local personnel are detailed in Section 3.4 of the NAOSH report to Mayo County Council and validate those presented in the DNV QRA to Mayo County Council. As stated in the summary of the NAOSH report, this risk is not exceeded at the nearest residential property and accordingly, the NAOSH does not advise against the granting of planning permission in relation to the Bellanaboy gas terminal.

Mr. Coyle also makes numerous references to the safety of the upstream pipeline and claims concerning its integrity and the risk of landslide affecting it. As noted previously, the pipeline has already been approved under Section 40 of the Gas Act 1976 and does not form part of this application. The issues raised by Mr. Coyle with regard to the risks to the pipeline have already been adjudicated on by the Minister for Communications, Marine and Natural Resources in the determination of the upstream pipeline consent. Notwithstanding this, we have commented on a number of the claims made by Mr. Coyle where they relate to the proposed development.

The stability of the surrounding peat as a result of a hypothetical explosion at the terminal has been assessed and reported in accordance with the requirements of the NAOSH. Suitably experienced engineers have assessed the stability of surrounding slopes in their natural condition, and in the event of an explosion and they have been found to be stable under these conditions.

The appellant claims that there is a risk of further ground instability being caused at Dooncarton Hill. In response it should be noted that the proposed terminal is in excess of 5km from Dooncarton Hill.

The risk of explosion is, in the first instance, extremely remote, and is by industry design standards within extremely low limits. Given that context and premise, vibration as such does not necessarily lead to ground instability, as the environs of any rock quarry will attest. Ground vibrations during construction of the magnitude that might reasonably be expected, will not cause slope instability. It should also be noted that the instability at Dooncarton Hill (Pollathomas) occurred on significantly steep slopes with an average slope angle of 45 degrees and was triggered by an exceptionally heavy localised rainfall event. It has been documented that slopes as low as 2 degrees have become unstable as a result of non-engineered/ man interference. In instances where slopes as low as 2 degrees have failed there is no evidence that ground vibrations due to blasting have caused the instability.

Mr. Coyle claims that the proposed development and pipeline route has the potential to create a major accident as the proposed gas terminal and its installations are surrounded in blanket bog that can fail at slopes of 2 degrees and above as stated by the applicant.

In response it should be noted that the proposed development and ancillary works will be engineered to prevent the occurrence of a bog slide. The peat and underlying soils at the site of the proposed gas terminal have been extensively investigated and assessments have been carried out to demonstrate the stability of the peat with respect to the proposed working strategy (See Volume I, Sections 8 and 9 and the Technical Appendices of the EIS).

Furthermore, an independent review of the EIS and the response to the RFI was carried out by an expert consultant retained by Mayo County Council with particular reference to issues relating to the proposed works on the general stability of the peat. This review found that the proposed strategy for construction 'will minimize any impact on the in situ peat surrounding the site'.

AN BORD PLEANÁLA	BY	30 JUN 2004	FROM
TIME			
LTR-DATED			



Having regard to Mr Coyle's claims concerning blasting and piling on site, and the health and safety risks associated with them in terms of the risk of land slides, it should be noted that blasting will not be required as part of the construction work for the proposed gas terminal. The vibrations resulting from the piling operations would not be significantly greater than general construction activity.

Brian Coyle claims that the conclusions of the NAOSH report dated 8th April 2004 under land use planning are 'template' statements and do not address site specific issues. This statement is factually incorrect. In response it should be noted that Sections 3 and 5 and Appendix 6 of the NAOSH report to Mayo County Council demonstrate the high level of project-specific detail that was considered by the NAOSH in its assessment of the terminal facilities. To state that the assessment, as performed by the NAOSH, was not site-specific is not consistent with the detailed report submitted by the NAOSH to Mayo County Council.

Brian Coyle claims that neither the NAOSH nor the Local Authority have considered all the toxic substances that can be present in untreated gas (specific mention is made of Hydrogen Sulphide (H<sub>2</sub>S)) and therefore excludes the appropriate assessment and advice in relation to the presence of anticipated substances. This statement is based on the premise that H<sub>2</sub>S is present in Corrib Gas. The NAOSH have considered all toxic substances in their report (Appendix VI, query No. 3). Corrib gas does not contain H<sub>2</sub>S (this is by no means unusual, e.g. gas currently produced from the Kinsale Head and Seven Heads gas fields does not contain H<sub>2</sub>S). This is clearly stated in Section 2.4.1 of Volume 1 of the EIS.

Brian Coyle and others claim that the NAOSH are required to assess the possibility of an upstream pipeline gas explosion under the provisions of Seveso II and SI 476/2000. As noted in Section 2.1.9 of this response, the Seveso II Directive and the COMAH Regulations, specifically exclude from their ambit "the transmission of dangerous substances in pipelines".

Micheál Ó Seighin criticises the analysis method used by NAOSH as being of no relevance to the day to day danger imposed by the project on local people because it uses the 'extreme value analysis' method. He also claims that the risk of a slow accumulation of dangers is not considered by the NAOSH. In response it should be noted that the analytical technique used by both the NAOSH and DNV is known as quantified risk analysis (QRA). This technique has been used to predict risks in many industries (e.g. aircraft, pharmaceutical and chemical) for many years and is widely accepted by both companies and regulatory authorities as being a useful, sometimes vital, input to risk decision making. The technique of risk assessment mentioned by Mr. Ó Seighin is not an industrially recognised technique.

Micheál Ó Seighin notes that there is no schedule of conditions attached to the NAOSH Report. The role of the NAOSH in the context of this planning application is to provide land use planning advice to the planning authority. They have no obligation to recommend conditions within the planning process. Recommended conditions are in fact included in the conclusion Section of the NAOSH report and have been implemented as part of the planning permission granted by Mayo County Council. However, it should be noted that the applicant has appealed these conditions for the reasons set out in our first party appeal, which is already before the Board.

AN BORD PLEANÁLA	TIME	BY	30 JUN 2004	FROM
	LTR-DATED			

Micheál Ó Seighin claims in his appeal that the rate of release modelling does not consider the possibility of the build up of gas in ground channels such as drainage channels. In response, it should be noted that because the gas is predominantly methane and has a molecular weight less than that of air, any release above ground would disperse and any release below ground will rise and will not accumulate in drainage channels.

Micheál Ó Seighin claims in his appeal that spontaneous or other combustion of dried peat is not considered having regard to the ground stabilisation techniques proposed. In response it should be noted that peat at 20% moisture content needs to reach a temperature in excess of 225°C before initial signs of combustion (i.e. white smoke) are observed, and must exceed 400°C before ignition occurs. The increase in temperature due to cement hydration is less than 30°C, therefore it is not considered feasible to have spontaneous combustion of stabilised peat.

The proposed peat stabilisation process involves the in situ mixing of cement or cement/sand with peat. As a result of hydration of cement there will be an increase in temperature within the stabilised peat mass. The amount of cement likely for this process is typically 200kg/m<sup>3</sup>; the temperature increase for this amount of cement is less than 30°C. Higher temperatures are produced where lime is used in the mix. Lime will not be used for stabilising peat at the site. However, even if lime were to be used it would not be possible to reach the spontaneous combustion temperature of the peat as noted above.

Micheál Ó Seighin claims that the justification used for the reduction of predicted failure frequency in the NAOSH report is not evident and further that the risk assessment process is questionable. In response it should be noted that the methodology, and justification of the methodology, is detailed in Appendix I of the DNV report submitted to the NAOSH. Section 4 of the NAOSH report to Mayo County Council provides a commentary on the DNV report, stating that the independent assessment by the NAOSH yielded 'similar results'.

### 2.3.3 Major Accident Assessment

AN BORD FLEANÁLA	TIME	BY	30 JUN 2004	FROM	
	LTR-DATED	PL			

Monica Muller claims that the proposed development will lead to exposure to mortal danger. In the NAOSH report to Mayo County Council, section 3.1, the NAOSH states that the 'dangerous dose or greater' is used for land use planning purposes, which it considers to be 'a very conservative approach'. The criteria used by the NAOSH with regard to land use planning, is that an individual risk of a dangerous dose to the residential public arising from new establishments should not exceed  $1 \times 10^{-6}$  (1 in 1 million per year) (Appendix 3). As stated in the summary of the NAOSH report, this risk is not exceeded at the nearest residential property and accordingly, the NAOSH does not advise against the granting of planning permission in relation to the terminal.

Brid & Teresa McGarry claim in their appeal that the residents in the area will live in constant fear of the unknown and will be in constant fear passing along the R314 and secondary roads because of the potential for an explosion to occur at the plant and/or at the associated pipeline positioned under roads. This claim has already been refuted in the response to Monica Muller's appeal earlier in this section (Section 2.3.3). Allied to this, while the pipelines associated with the proposed development are not part of this application, it should be noted that the downstream pipeline crossing the R314 is designed in

full compliance with international pipeline standards and is a Bord Gáis Éireann transmission line similar to many other such pipelines which exist under roads and streets in Ireland and generally do not cause concern for those passing over them.

The Ballinaboy / Leenamore Residents claim in their appeal that there is a high risk of a major accident occurring from leaks from high pressure gas pipelines. In response it should be noted that the NAOSH conducted a QRA of the terminal facilities which included leaks from high pressure gas pipes (see section 3.3.2 of the NAOSH report). On the basis of this assessment, the NAOSH concludes in the summary of their report (see section 2) that the risk criteria used for land use planning is not exceeded and accordingly, the NAOSH does not advise against the granting of planning permission in relation to the terminal.

Sean McDonnell claims in his appeal that his residence in Bunowna is the first village to be encountered downwind and if an explosion occurred within or around the plant the lives of local residents would be at extreme risk of suffering fatalities.

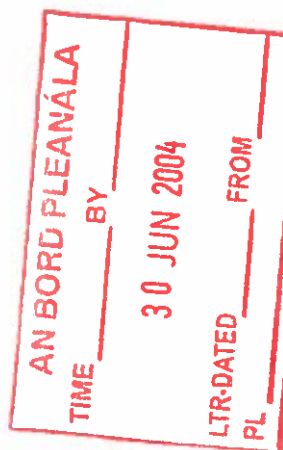
In the NAOSH report to Mayo County Council, section 3.1, the NAOSH states that the 'dangerous dose or greater' is used for land use planning purposes, which it considers to be 'a very conservative approach'. The criteria used by the NAOSH with regard to land use planning, is that an individual risk of a dangerous dose to the residential public arising from new establishments should not exceed  $1 \times 10^{-6}$  (Appendix 3). Figure 1 in the report shows that this level of risk does not exist in Bunowna.

Sean McDonnell also claims that his residence is located within the consultation distance of 1000 meters. In response it should be noted that there is no mention of a consultation distance of 1000 metres within the NAOSH report. Furthermore, it should also be noted that this appellant lives some two or more kilometres from the proposed terminal.

Sean McDonnell claim that an explosion at the terminal would flatten mature trees all the way down to the Glenamoy River. In response it should be noted that trees are more resistant to blast overpressure than buildings. The risk to and from trees has been fully assessed in Section 3.4.3.2 of the NAOSH report which states that "no tree fire would jeopardise the containment integrity of the plant" and "the increase in risk of forest fire initiated from events at the terminal is extremely low".

Brid & Teresa McGarry present a scenario in their appeal concerning a landslide around the site and the wider area which they claim would result in the displacement of watercourses, and clogging of fire fighting equipment. In response it should be noted that Appendix VI, ('query 1') of the NAOSH report to Mayo County Council details the examination conducted into global stability in the case of an overpressure event and summarises the likelihood of such an event. In this regard, we submit that the scenario presented is unrealistic.

Brid & Teresa McGarry also claim that the scenario of chimney fires from houses igniting a vapour cloud has not been assessed. This is not the case. Section 3.3 of the NAOSH report details credible scenarios considered that could give rise to vapour clouds, and conservatively assumes that each release results in a flammable cloud which is ignited (within the boundaries of the flammability limits). Accordingly, chimney fires from neighbouring houses have been considered as potential ignition sources. This has been



incorporated into the dangerous dose calculations performed in the QRA. On the basis of this assessment, the NAOSH concludes in the summary of their report (see Section 2) that the risk criteria used for land use planning is not exceeded and accordingly, the NAOSH does not advise against the granting of planning permission in relation to the terminal.

Brid & Teresa McGarry claim in their appeal that the fact that the terminal buildings are blast proof reflects the real risk to residents. In response it should be noted that recently published guidance from the UK Chemical Industries Association (CIA) recommends maximum allowable risk levels for people onsite who occupy buildings on oil/chemical/gas processing facilities. The risk levels determined by the QRA are below the levels recommended by the CIA even without the blast resisting and thermal radiation enhancements to the control building, i.e. site buildings do not need to have enhanced construction to comply with current guidance. Notwithstanding this, this design feature is standard practice and ensures the integrity of emergency shut down systems.

Brid & Teresa McGarry claim that if an explosion were to occur it would cause burst eardrums in residents and that this issue has not been assessed by the NAOSH. This is not the case. Table 3 of Appendix 3 of the NAOSH report to Mayo County Council details the effects of overpressure on humans. This table states that the threshold of eardrum damage occurs at an overpressure of 340 mbar. The NAOSH have used 140 mbar as the 'dangerous dose' (considerably lower than the threshold for eardrum damage) and find that the risk of such a dangerous dose posed by the establishment is less than  $1 \times 10^{-6}$  per year to the nearest residential neighbour. Accordingly, the risk of an explosion causing burst eardrums in residents has been assessed.

Brid & Teresa McGarry claim in their appeal that the effect of forest fires is not taken into account by the NAOSH. This is not the case. Forest fires have been assessed by the NAOSH (see section 3.4.3.2 of NAOSH report to Mayo County Council).

Brid & Teresa McGarry also claim that the biological laboratory located adjacent to the proposed development was not taken into account by the Health and Safety Authority with regard to the safe distance of workers. In response it should be noted that, as stated in the summary of the NAOSH report, this risk is not exceeded at the nearest residential property, which is closer to the terminal than the laboratory.

Micheál Ó Seighin claims that regular inspections from the NAOSH are of no value as they are announced. In response, it should be noted that NAOSH Inspectors have the powers as laid down in the Safety, Health and Welfare at Work Act, 1989 section 34 (1)(a)) - Powers of inspectors 'to enter, inspect, examine and search at all times, any place which he has reasonable cause to believe is used as a place of work'. and as detailed in the COMAH Regulations, regulation 32 (1(a)) - General Powers of inspectors 'to enter, inspect, examine and search at all times, any place which he or she has reasonable cause to believe to be an establishment'.

Micheál Ó Seighin claims that potential major accidents are the only ones considered by the NAOSH and that no other scenario is envisaged. In response to this it should be noted that the DNV QRA has considered a wide range of possible releases of fluids from the terminal (from very large failure - full bore - to very small failure - 2mm diameter holes). Accordingly, the spectrum from minor to major accidents has been assessed.

AN BORD PLEANÁLA	
TIME	BY
30 JUN 2004	
LTR-DATED	FROM
PL	



Micheál Ó Seighin also claims that the existing forestry and topography are ideal agents for congestion of gas in high pressure conditions. In response it should be noted that the gas being processed in the terminal is predominantly methane and is lighter than air. Consequently any release will disperse and rise from the ground rather than remain at ground level.

### 2.3.4 Domino Effect

Micheál Ó Seighin and Brid & Teresa McGarry make reference to the domino effect, claiming that it has not been properly taken into account. They claim that the Bellanaboy site characteristics and its surroundings (blanket bog, streams, rivers, bog heather, forestry, Carrowmore Lake, natural ground instability, etc.) can all lead to a major accident domino effect during the operational phase.

Article 8 of the Seveso II Directive explicitly defines the 'domino effect'. It is only relevant to establishments/groups of establishments and the possible increase in consequences of a major accident resulting from the location/proximity of these establishments to each other. In the case of the proposed terminal, there are no other 'establishments' in close proximity to the terminal and accordingly, the domino effect is not relevant. This point is stated in Section 3.8 of the DNV report as submitted to the NAOSH.

Notwithstanding the above, it is incorrect to say that blanket bogs, streams, rivers, bog heather, forestry, Carrowmore Lake, (natural ground instability) can all lead to a major accident domino effect. These are essential features of an evolved natural environment, and it is only uncontrolled interventions from outside this stable natural environment that can cause accidents. All interventions by man required for the site development have been, and will be, assessed and controlled on an ongoing basis during the course of the project lifetime as required by Health and Safety legislation, to ensure they do not cause accidents.

The appellants further claim regarding the factors of safety used and their assessment of how this relates to the stability of the rock gabions on site in the event of an explosion do not make engineering sense. The appellants have misrepresented the factor of safety principle.

### 2.3.5 Pipelines

The pipelines that are connected to the proposed development do not form part of this application and have already received their necessary consents under the Gas Act 1976. Notwithstanding this fact, we have provided a commentary on the concerns raised by the appellants for the information of the Board so far as they relate to the proposed development.

The Ballinaboy / Leenamore Residents question the safety of the pipeline within the terminal footprint. The QRA performed by DNV includes an assessment of a leakage of the incoming pipeline upstream of the terminal as a worst case scenario (see Appendix 8 of DNV report as submitted to the NAOSH). This QRA has been verified by the NAOSH. Accordingly, the safety of the pipelines within the boundaries of the terminal footprint has been examined.

A number of the appellants raise concerns about the risks posed by the upstream pipeline. All of these risks are either unfounded or significantly

AN BORD PLEANÁLA	
TIME	BY
	30 JUN 2004
LTR-SAVED	FROM
PL	



overstated. The upstream pipeline is to be constructed to a recognised specification. The safety of the public is addressed in the pipeline QRA which is subject to the approval of the Department of Communications Marine and Natural Resources as part of the ongoing compliance processes under the pipeline consent as noted in Section 2.1.9. The stability of the pipeline in peat areas will be assured by locating the pipe below the peat or else supporting the pipeline in areas of deep peat.

### 2.3.6 Terrorism

A number of the appellants refer to the risk of a terrorist attack on the pipeline or the terminal. In response we wish to note that all Shell oil and gas processing terminals and associated equipment are subjected to Shell Security Policy guidelines which requires them to have a 'threat assessment' carried out. This assessment is carried out in collaboration with the country's governmental and security agencies for national interest considerations, and Shell senior management considerations. The Shell Security Policy considers a wide range of threats, from high-level violence at one end to low-level petty theft at the other end, and includes terrorism. As a result of this security assessment, appropriate measures will be implemented. These requirements can and are modified from time to time depending on the change of 'threat level'.

### 2.3.7 Mercaptan

A number of the appellants make reference to the risk posed by the ignition of mercaptan from a cigarette.

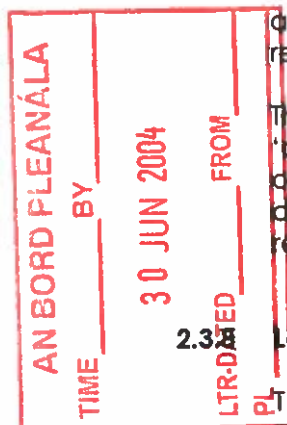
As is normal for gas plants, smoking throughout the plant is strictly forbidden. With respect to a cigarette butt thrown from a passing car being a possible source of ignition on the plant, such is the distance between the plant and adjacent public roads, that it is not plausible that such a cigarette butt could reach the plant.

The NAOSH have assessed the design of the odourant storage tank (which is 'double-skinned'). The nature of the design means that the failure frequency of the storage tank is so low that the risk of a leak leading to a fire is not deemed a credible scenario. This is detailed in section 3.3.4 of the NAOSH report to Mayo County Council.

### 2.3.8 Leaks & Spills

The Ballinaboy / Leenamore Residents claim that pipeline leaks are a normal occurrence, while Micheál Ó Seighin claims that it is normal for holes to occur in high pressure gas pipelines. In response it should be noted that examination of the databases used (see 3.4.2 of the NAOSH report to Mayo County Council) demonstrates that pipeline leaks are not a 'normal occurrence'.

The Ballinaboy / Leenamore Residents (Jacinta Healy) claim that the issue of spills has not been properly assessed. In response it should be noted that Section 2.5.11 of Volume 1 of the EIS details the facilities that will be provided to mitigate against onsite spillages.



### 2.3.9 Hazardous Waste

The Ballinaboy / Leenamore Residents claim that there will be additional dangers arising from the use of hazardous waste lorries and from diesel being brought to the site.

The transportation of diesel/methanol to the terminal and hazardous waste from the terminal will be carried out by registered carriers, in compliance with the Carriage of Dangerous Goods by Road Regulations, (SI 492), 2001 and the Waste Management Acts, 1996 - 2003 respectively.

### 2.3.10 Emergency Services

Monica Muller claims that the safety of residents is dependent on the adequacy of Mayo County Fire Service.

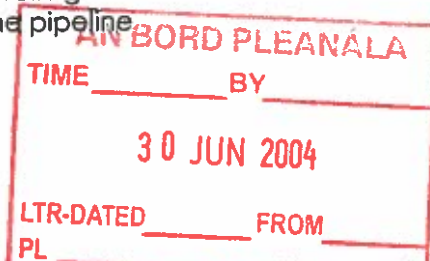
The NAOSH report to Mayo County Council outlines that the safety of residents is not dependent on the adequacy of Mayo County Fire Brigade. In the NAOSH report to Mayo County Council, section 3.1, the NAOSH states that the 'dangerous dose or greater' is used for land use planning purposes, which it considers to be 'a very conservative approach' (with respect to thermal doses, 1000 thermal dose units has been used as the criteria for a dangerous dose). The criteria used by the NAOSH with regard to land use planning, is that an individual risk of a dangerous dose to the residential public arising from new establishments should not exceed  $1 \times 10^{-6}$  (Appendix 3). As stated in the summary of the NAOSH report, this risk is not exceeded and accordingly, the NAOSH does not advise against the granting of planning permission in relation to the terminal. Notwithstanding the above, as noted in Section 2 of Volume 1 of the EIS procedures equipment and arrangements will be in place to ensure the terminal operations are safe. A fire fighting strategy, which is not reliant on the Mayo County Fire Service, is also included in this Section of the EIS.

### 2.3.11 Exclusion Zone

Brid & Teresa McGarry claim that the safety of animals and people cannot be guaranteed as it will not be possible to ensure that they remain at a distance of 70 meters from the upstream pipeline. Notwithstanding that the pipeline is not part of this application, it should be noted that the pipeline is buried throughout its entire length. The proximity distance referred to by the appellants refers to normally occupied dwellings. There is no restriction on livestock or persons passing over or along the pipeline.

### 2.3.12 General Concerns

The appellants have raised a number of other more general health and safety concerns. In particular, Mary Corduff and Brendan Philbin claim that the proposed development will endanger public health. In response, it should be noted that the emissions to air, mitigation measures used at the terminal, and conclusions are covered in Volume 1, section 11 of the EIS (see also Section 2.2.5 above). The conclusion states that 'no residual air quality impacts are anticipated as a result of the terminal development'. Moreover, the EPA as



part of the IPPC licence will condition emissions from the terminal to provide for the protection of health and ecosystems.

Micheál Ó Seighin questions why Best Available Means was not used instead of recommended best practicable means in the minimization of risk. In response it should be noted that the assessment carried out by NAOSH is in accordance with standard practice.

For inspection purposes only.  
Consent of copyright owner required for any other use.

AN BORD PLEANÁLA	
TIME _____	BY _____
30 JUN 2004	
LTR-DATED _____	FROM _____
PL _____	

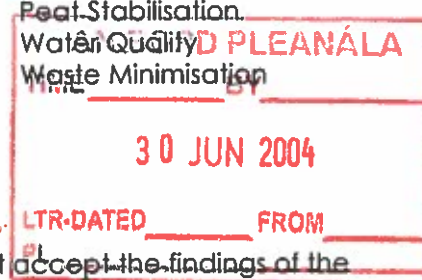
## 2.4 PEAT

The following appellants have raised specific concerns regarding issues related to peat:

- Brian Coyle
- Micheál Ó Seighin and Others
- FEASTA
- Monica Muller
- Ballinaboy/Leenamore Residents (Jacinta Healy)
- An Taisce
- Sean McDonnell and Others

The concerns raised can be summarised under the following sub-headings:

- |                          |                       |
|--------------------------|-----------------------|
| 1) Fehily Timoney Report | 4) Peat Stabilisation |
| 2) Moisture Content      | 5) Water Quality      |
| 3) Peat Removal          | 6) Waste Minimisation |



### 2.4.1 Fehily Timoney Report

Micheál Ó Seighin and Brian Coyle generally do not accept the findings of the Fehily Timoney Report.

In response, it should be noted that Fehily Timoney are reputable independent expert consultants who have clearly stated that the proposed methodologies are both sound and valid. In this regard, both of the appellants' criticisms are unfounded.

### 2.4.2 Moisture Content

Several appellants expressed concerns regarding the peat extraction and removal process particularly with relevance to the peat's moisture content.

A number of appellants refer to the handling and extraction of 'saturated peat'. As a point of clarification, this is incorrect. The moisture content levels of peat at Bellanaboy are generally below the saturation level of 93%. The current moisture content of the in-situ peat averages 88.8% and will be reduced further as a result of pre-excavation drainage works.

Several appellants question the feasibility of reducing the moisture content of the peat. FEASTA asks several questions regarding peat drying methodologies, specifically questioning the target moisture content, whether it will be measured, by what methods, and by whom.

The targets of peat moisture contents for spreading at the Shramore site are outlined in the response to the RFI Volume 1 Item 9. Measurement of these levels is an operational issue to be dealt with by the on-site laboratory. With respect to the issue raised regarding the feasibility of reducing the moisture content of the peat, this information has been addressed in full in the

<sup>1</sup> The Feasta objection states that it will 'be obliged to remove half a million tonnes of saturated peat'

Response to the RFI, Volume 2, Item 7. The information provided in the RFI includes details of relevant field trial investigations and outlines comparable activities undertaken by Bord na Móna in the past.

Brian Coyle and Micheál Ó Seighin question the methodology of covering milled peat stockpiles with plastic sheeting against adverse weather conditions. In particular, Brian Coyle states that the proposed method of peat extraction is weather dependent, that it will entail waterproofing sheeting being placed over the peat every time it rains, and that it could take years to remove saturated blanket bog in order to meet criteria put forward by the applicant.

In response, it should be noted that all earthworks operations are weather dependent. The methodologies of peat extraction, preparation and transport, have been developed taking into account the site presence and input of Bord na Móna engineers and the field testing and advice of Bord na Móna. Bord na Móna successfully windrow and dry peat in the Irish climate, with due allowance for periods of wet weather. It will not be necessary to cover the working area as envisaged by the appellant, however, if Bord na Móna determines that interruption of loading and transport is necessary as a result of adverse weather conditions, this will be complied with.

The proposed moisture reduction technique is standard practice and can be seen on Bord na Móna operated sites across Ireland. Bord na Móna currently cover milled peat stockpiles with plastic sheeting to protect them against adverse weather conditions. In windrowing, full advantage of air drying will be taken unless prolonged bad weather is predicted. The windrows will not be covered for every transient shower.

Both Micheál Ó Seighin and Monica Muller question how peat can lose 10 per cent of its moisture in 8 days.

In response, it is not stated that the moisture content of the peat material, extracted from the Bellanaboy Bridge terminal site, will be reduced by 10% in 8 days. The total moisture content reduction of 2-3% from the in-situ level will be due to existing drainage, pre-excavation drainage and windrowing. This moisture reduction will not result merely due to eight days of windrowing.

FEASTA claims that no scientifically adequate peat drying methodology or standards are provided, that the proposed methodologies have not been rigorously tested over a sufficiently lengthy period, and that there are no precedents cited in the Bord na Móna application for the removal of this quantum of peat.

The scientific theory, which formed the basis for devising the observational field trials, are detailed in full in the response to the RFI Volume 2, Item 7. Furthermore, proposed methodologies have been thoroughly tested. Bord na Móna's methodologies for handling peat at Bellanaboy have been developed from extensive in-house experience in peat handling over the last 58 years. Bord na Móna's Oweninny works has been operational for over 40 years and much research has been carried out during that time by Bord na Móna into the nature of West of Ireland blanket bog. In recent years Bord na Móna has converted many sod peat bogs for production of milled peat. This involves bulldozing and spreading of large amounts of peat (>450,000m<sup>3</sup>). One such example is cited in the document submitted in response to the RFI Volume 2, Item 7. It should also be noted that the scale of the earthworks and ground works is not unusual, in comparison with other major civil engineering projects in Ireland.



An Taisce states that peat removal will cause suspended solids to be released into the Owenmore River and Tullaghan Bay SPA and that this issue has not been addressed in the EIS. This statement is incorrect. Section 9 of the EIS (Volume 2) provides information on the surface water environment, including catchment drainage and existing water quality. Section 9.7 of the EIS (Volume 2) deals specifically with the surface water controls and treatment proposals for all water captured within the site and the measures proposed to prevent impacts on the Tullaghan Bay SPA.

### 2.4.3 Peat Removal

A number of appellants express concerns regarding Bord na Móna's ability to deal with the mixture of peat coming from the terminal site, claiming that Bord na Móna is only experienced in dry milled peat operations.

In response, it should be noted that Bord na Móna is expert in the handling of peat in all its forms. Bord na Móna has a range of experience as outlined in the EIS (Volume 2). The company has contributed learned papers on this topic to the Institution of Engineers of Ireland, and has been consulted by sister agencies in other countries on the engineering characteristics of peat. Bord na Móna, through its sod peat and milled peat activities has extensive experience in handling peat at high moisture contents (up to circa 90% in the case of sod peat operations and up to circa 85% in the case of milled peat operations).

Monica Muller claims that it is a pre-requisite that the peat be dried prior to transport and that Bord na Móna has stated peat deposits can only be done in a safe manner if the peat is pre-dried.

In response, it should be noted that it is not a pre-requisite that the peat be dried prior to transport. Bord na Móna have not stated that the peat can only be transported in a safe manner if it is pre-dried. Bord na Móna have stipulated that the peat must not be saturated. The material to be transported to Srahmore will not be saturated.

Brian Coyle claims that there is no known example of successful large deposition of saturated blanket bog.

In response large-scale excavation, transport and deposition of natural peat and soft soils in general, has taken place on several projects in Ireland, for example Pollen Dam in Donegal, Lisheen/Galmoy Mines in Tipperary and the ongoing Kilcock-Kinnegad N4/N6 motorway works.

The Ballinaboy/Leenamore Residents express concerns regarding the removal and deposition of a large quantity of peat to the Srahmore site.

The peat excavation methodology and water management infrastructure is detailed in full in the EIS. The water management infrastructure proposed for both the terminal site and the peat deposition site will manage all water draining from the site and control discharges to ensure there are no adverse impacts on the receiving environment, in terms of water discharge rate and quality.

With respect to water quality issues raised in this appeal, the current drainage system within the Srahmore cut-over bog is operated by Bord na Móna under IPC Licence 505. Reference to Section 7.3.2 of Volume 2 of the EIS shows the

AN BORD FLEANÁLA	TIME	BY
	30 JUN 2004	
LTR-DATED	FROM	PL

water quality of the Owenmore Catchment, from samples obtained by the EPA between 1981 and 2002. The biotic index of the water indicates that the water within the Owenmore Catchment is generally unpolluted downstream of the Srahmore cut-over bog. The water quality information suggests satisfactory functioning of the drainage system.

The proposed peat deposition site is downstream of Carrowmore Lake. The deposition of peat at Srahmore cannot directly impact on the quality of water in the lake.

#### 2.4.4 Peat Stabilisation

Brian Coyle makes a number of claims about the proposed peat stabilisation, the risk of slope failure and factors of safety used in the engineering for the proposed development. In response it should be noted that neither the terminal nor deposition sites have virgin peat conditions. Both sites have been extensively drained and modified for in excess of 40 years. The appellant's suggestion that slope stability is directly proportional to slope angle is incorrect. The appellant's assessment of factor of safety against sliding is also incorrect. Slope stability depends on the tangent of the slope angle. Other parameters of consideration for stability analyses are drainage condition, shear strength, geology and potential pathways for movements, all of which and more have been considered in the design of all earthworks for the terminal development. This matter is discussed in great detail in Volume 1, Technical Appendices 1,2 and 3 of the EIS.

Brian Coyle also claims that there will be a build up in pore pressures and that the peat at the Srahmore site could become destabilised due to water lodging in periods of prolonged rainfall.

In response, it should be noted that the excavated peat will not be placed on virgin in-situ peat at Srahmore. Excavated peat will be placed on a layer of thin, strong, well drained peat and in some areas directly on mineral soil. In this way the stability of this site will be ensured. For further information on this matter refer to Appendices 4,5,6,7,8 & 9 of Volume 2 of the EIS. The surrounding peat bog will not be affected by the proposed works and its stability will remain unchanged.

Brid & Teresa McGarry claim that the removal and deposition of peat to an area of cutaway peat will distort the underside and the surrounding peat structure, potentially leading to a sink leading to a bog burst and potential pollutants effecting local catchments. The appellants claim that the Derrybrien event in County Galway is one such example of a bog burst.

In response, the cutaway site at Srahmore originally comprised 3m to 4m of thickness of peat. Typically about 0.5-1m of peat remains in situ. It is proposed to place 1.4 to 1.8m of peat at Srahmore. As the proposed placed peat would have a similar density to the peat that has been removed, there will be no net increase in load. Therefore there will be no distortion of the underside of the peat and surrounding peat as result of peat placement. With regard to the Derrybrien event, it should be noted that this was not a bogburst and did not occur as a result of a "sink" in the peat.

Micheál Ó Seighin claims that the information provided regarding bog restoration is defective. In response, it should be noted that research into the after-use of cutaway industrial peatlands has been carried out by Bord na Móna since the 1960s. A number of alternative after-uses have been explored

at the Oweninny Works, including coniferous forestry, biomass, agricultural grassland, wind-energy and wetland creation. The former options have not been considered commercially viable while the latter two options are deemed viable and beneficial to the area. The development of the rehabilitation plan for the Oweninny Works has been ongoing since 1996 and the key issues of rehabilitation were identified between 1996 and 1999 through postgraduate research work conducted through the Botany Department at University College Dublin (Farrell 2001). The work has provided an ecological understanding of the cutaway bog, and an insight into the future landscape development of the Oweninny holdings post-industrial peat extraction (Farrell 2001). The rehabilitation plan can be found in Appendix 2 of Volume 2 of the EIS.

Micheál Ó Seighin claims that the deposition of 450,000m<sup>3</sup> of peat at the Srahmore site would adversely affect the water absorption capacity of the ecosystem and dramatically redefine the drainage system. In response it should be noted that the Srahmore site has been used as an industrial peatland for a prolonged period and that this required significant drainage works. This drainage work and peat harvesting have significantly reduced the water absorption capacity. The deposition of peat within the deposition site will not result in significant change in the existing water absorption capacity of the industrial peatland.

#### 2.4.5 Water Quality

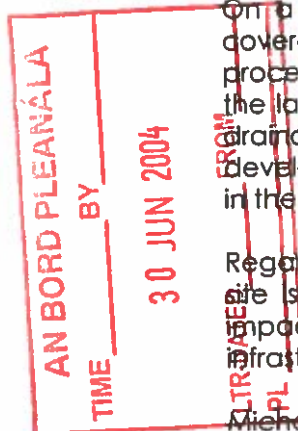
Several appellants express concerns regarding water pollution resulting from peat deposition.

Brian Coyle expresses concern that the deposition of acidic peat to the South of Carrowmore Lake could have an effect on the water supply of Eris. In response it should be noted that, peat, like any other material capable of capillary action and absorption processes, has a natural field capacity. If it did not, then it would drain down completely in situ and the appellant's premise would be invalid. Peat certainly holds large quantities of water in its undrained state, but that is not the state in which it will be transported. It is clear from the EIS that it will be pre-drained and windrowed before transport, to a dry solids content, which is appropriate for transport and placing.

On a regional scale the catchment of Carrowmore Lake is predominantly covered in blanket peat. Almost all rainfall on this catchment goes through a process of percolation through peat as part of its natural drainage route to the lake. It is naturally acidic, but over the entire process of percolation and drainage it reaches its ultimate natural pH in Carrowmore Lake. Nothing in the development proposal affects this process, and the deposition site itself is not in the catchment of Carrowmore Lake.

Regarding the drinking water supply, the deposition of peat at the Srahmore site is downstream of Carrowmore Lake and therefore can have no direct impacts on the public water supply. Nevertheless the proposed drainage infrastructure is designed to prevent impact on receiving waters.

Micheál Ó Seighin claims that water pollution potentially resulting from peat removal is contrary to the objective of the Development Plan 'to improve the quality of our water resources and avoid further decline in water quality resulting from eutrophication as a result of excessive phosphorous input'.



In response, it should be noted that the issue of phosphate mobility and its potential release into local watercourses is addressed in Section 8.4.7 and 8.6.1 of Volume 1 of the EIS. Additional information was provided as Volume 1 Item 6 as part of the Response to RFI which concluded that any potential leaching of phosphate in local water courses will be insignificant.

Background water quality data is included in Section 9.3.2 of Volume 2 of the EIS. The drainage control system for the peat deposition site, detailed in Section 9.7 of Volume 2 of the EIS, has been designed to ensure that all discharges from the site are controlled and that the quality of the outfall will not impact on receiving waters.

#### **2.4.6 Waste Minimisation**

Micheál Ó Seighin claims that peat removal and deposition is contrary to the strategy of waste minimisation. FEASTA also raises issues regarding the classification of peat as waste. In response, it should be noted that in terms of waste minimisation it is the applicant's view that the proposal to place the surplus peat arising from the development onto a cutover peatland area is a sound solution. The reason for this is that there is no impact on existing waste management infrastructure and the material is being effectively recycled in the rehabilitation of a depleted cutover peatland area.

#### **2.5 EARTHWORKS AND CIVIL ENGINEERING**

The following appellants have raised specific concerns regarding earthworks and civil engineering:

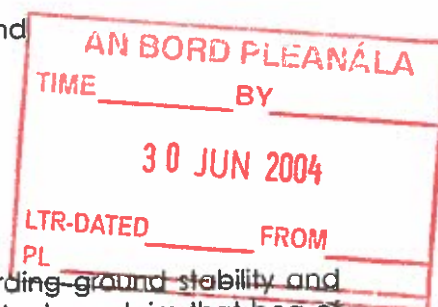
- Monica Muller
- Ballinaboy / Leenamore Residents (Jacinta Healy)
- Sean McDonnell and Others
- An Taisce
- FEASTA (Mark Garavan)
- John and E. McAndrew (Leenamore/Ballinaboy Concerned Citizens)
- Brid & Teresa McGarry
- Maura Harrington
- Micheál Ó Seighin and Others

The concerns raised can be summarised under the following sub-headings:

- |                           |                                    |
|---------------------------|------------------------------------|
| 1) Ground Stability       | 4) Water Pollution from Stabiliser |
| 2) Earthworks             | Wastewater                         |
| 3) Drainage/Water Quality | 5) Flooding                        |
|                           | 6) Contaminated Land               |

##### **2.5.1 Ground Stability**

Several appellants have expressed concerns regarding ground stability and the risk of landslides. In particular, John and E. McAndrew claim that bog of this type is unsuitable for industrial development, referencing the Pollathomas





and Derrybrien landslides as examples of the hazards associated with such blanket bog terrain.

The comment that bogs of this type are totally unsuitable for major industrial developments is unfounded. A number of major industries of national importance are located in such settings, such as the ESB plant at Bellacorick.

The peat and underlying soils at the site of the proposed gas terminal have been extensively investigated and an assessment carried out to demonstrate the stability of the peat with respect to the proposed working strategy (refer to the EIS and the response to the RFI).

Furthermore, an independent review of the EIS and the response to the RFI by a consultant to Mayo County Council, was carried out with particular reference to issues relating to the proposed works on the general stability of the peat. This review found that the proposed strategy for construction 'will minimize any impact on the in situ peat surrounding the site'.

With respect to the recent landslides at Pollathomas and Derrybrien, to ensure that any pertinent lessons learnt from these events are duly considered and incorporated into the terminal development, the applicant engaged the consultants involved in investigating these failures, namely AGECE (Pollathomas and Derrybrien) and Tobin (Pollathomas) to aid in the design of the proposed development.

The appellant quotes the recent landslides at Pollathomas and at Derrybrien as reasons for not developing a peatland site. The appellant implies that because there are failures on peat sites therefore all peat sites are unstable is incorrect. The landslides at Pollathomas and Derrybrien occurred due to specific adverse combinations of contributory factors. Micheál Ó Seighin claims that rainfall alone did not cause the Dooncarton landslides and that the published rate of rainfall on the night of the landslide (44mm/hr) is inaccurate. In response, it should be noted that the consultants report to Mayo County Council did identify rainfall as the primary causative factor of the landslide. The noted rate of 44mm/hr is accurate; the meteorological office has confirmed this.

Investigations of these landslides, which identified contributory factors, are included in reports made public. A summary of salient factors for the landslides at Pollathomas and Derrybrien based on published reports, is given below.

The Pollathomas landslides occurred on a hillside used for grazing and were triggered by an extreme rainfall event. The landslides were not peat failures, as the basal failure surface generally did not occur in peat but within underlying mineral soil (weathered rock). Furthermore, the landslides were located in steep upper slope inclined at typically between 30 and 60°.

The Derrybrien landslide occurred during construction of a windfarm. The failure appeared to be triggered by loading of natural peat 1.5m to 2m thick on slope of 3 to 5°. The failure occurred within a shallow valley within a zone of weaker peat. The construction method for the terminal proposed takes full cognisance of this.

Micheál Ó Seighin made various references to sections of the AGECE report on the Derrybrien landslide and attempted to compare the situation with Bellanaboy. In response, it should be noted that the extracts have been isolated from their context and misrepresent these detailed technical reports.

AN BORD PLEANÁLA	TIME	BY	30 JUN 2004	FROM	PL
	LTR-DATED				



Micheál Ó Seighin makes a number of claims regarding a publication by Samir Hebib & Eric R. Farrell concerning the stabilisation of peat and in particular claims that this technology is in its infancy. In response it should be noted that in depth discussion of the use of stabilised peat is given in the response to the RFI Volume 1, Item 11. This shows that soil stabilisation has been used successfully on major construction projects over the past 20 years. Allied to this, the appellants' statement regarding laboratory testing is misleading, as significant sampling and testing for peat stabilisation has been undertaken for the terminal site as part of the design proposed in the EIS (see RFI Volume 1 Item 11).

Micheál Ó Seighin claims that the use of steel sheet piles is a new, uncertain technology in peat that creates a risk of peat slide when the sheet piles are removed. In response, it should be noted that sheet piling in peat and soft ground in general is considered an acceptable practice and has been used in such conditions for many years. The effect of removal of sheet piles on the stabilised peat and all other retained soils and the drainage effects as a result of the piles, have been considered, and as a matter of course have been included in the design. It should also be noted that there is no mention of sheet piles in the Derrybrien Reports or Hebib and Farrell's paper.

Micheál Ó Seighin claims that the risk of bog bursts on the site at Bellanaboy has not been addressed. In response, it should be noted that the peat and underlying soils at the site of the proposed gas terminal have been extensively investigated and assessments carried out to demonstrate the stability of the peat with respect to the proposed development strategy.

Brian Coyle claims that the terminal imposes a risk to the stability of the surrounding landscape, including Dooncarton Hill, having regard to explosions causing ground vibrations and consequently ground instability. This matter is discussed in Section 2.3.2 of this response. Also, it should be noted that the risk to stability of the surrounding landscape has been assessed in the applicants numerous documents (EIS Volumes 1 & 2 appendices and response to RFI).

## 2.5.2 Earthworks

An Taisce claim that there is inadequate information regarding the construction work specification, as the nature and extent of blasting is unknown. In response, it should be noted, as stated in Section 3 of Volume 1 of the the EIS, that blasting will not be required as part of the construction work for the proposed gas terminal. Furthermore blasting is to be specifically precluded from the construction works contracts for the terminal. Notwithstanding the above, earthworks are designed to take into account the effects of blasting.

## 2.5.3 Drainage/Water Quality

A number of appellants express concerns regarding the efficiency of the silt lagoons used as part of the site drainage.

AN BORD PLEANÁLA	
TIME	BY
30 JUN 2004	
LTR-DATED	FROM

The design rationale for the surface water management infrastructure and the settlement ponds is detailed in Section 9 of the EIS. Detailed drainage calculations are presented in Technical Appendix 3 of Volume 1 and Section 9 of Volume 2 of the EIS.

Micheál Ó Seighin's statement that the "ballpark changes when the flow of water to the settlement ponds speeds up after heavy rain – the kind we get normally" is true in only one sense, that the flow of water speeds up after heavy rain. As shown extensively in the site drainage report calculations the ponds have been designed to cater for such changes in weather.

#### 2.5.4 Water Pollution from stabiliser

Micheál Ó Seighin Brian Coyle and An Taisce claim that no information is provided regarding how the bog will cope with alkaline runoff from stabiliser. In response, it should be noted that this information was supplied in Item 7 of Volume 1 of the response to RFI. The use of cement binders draws water inwards from the host peat, and binds it in a stable matrix whose permeability is as low as that of the surrounding peat itself. This process represents no threat whatsoever to the water supply from Carrowmore Lake, any more than the concrete intake walls, sump walls and reservoir walls of the water treatment plant at Carrowmore Lake.

#### 2.5.5 Wastewater

Monica Muller claims that a waste water treatment system cannot be percolated in a bog and further claims that environmental protection measures regarding fuel storage and other areas of fuel use have not been adequately addressed.

In response, it should be noted that the waste water treatment percolation system is thoroughly addressed in the EIS and the response to RFI Volume 1, Item 4&5. Regarding fuel storage areas, the suggestion that environmental protection measures were not included in the EIS is incorrect. As detailed in EIS, all proposed fuel storage areas will be bunded.

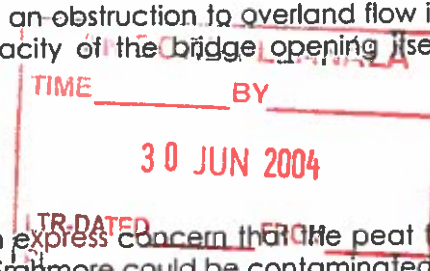
#### 2.5.6 Flooding

Jacinta Healy notes that Bellanaboy Bridge was flooded in September 2003 and expressed concern that the proposed safety works to Bellanaboy Bridge will increase the risk of the flooding of public roads and properties in the area.

It is not entirely clear as to why the appellant considers that the proposed safety works will affect the flood risk status of their property. Regarding the bridge, the erection of a steel rail barrier to prevent a vehicle leaving the road and falling into the river by accident will not obstruct the free opening of the Bellanaboy Bridge nor will it, per se, present an obstruction to overland flow in extreme flood conditions even if the capacity of the bridge opening itself should be exceeded.

#### 2.5.7 Contaminated Land

Brid & Teresa McGarry & Micheál Ó Seighin express concern that the peat to be transported from the Bellanaboy site to Srahmore could be contaminated.



These objections state that there are buried carcasses on the terminal site. It should be highlighted that the areas where such materials were found are unrelated to the present development; the area where carcasses were identified belongs to Coillte and will not form part of this development proposal. However, during the ground preparation works, if any potentially polluted material is excavated, it will be reported to the relevant authorities, and will be deposited in a licensed waste facility.

## 2.6 PROCESS ENGINEERING

The following appellants have raised specific concerns regarding process engineering:

- Brid & Teresa McGarry
- Micheál Ó Seighin and Others

The concerns raised can be summarised under the following sub-headings:

- Johnson Report
- General Concerns

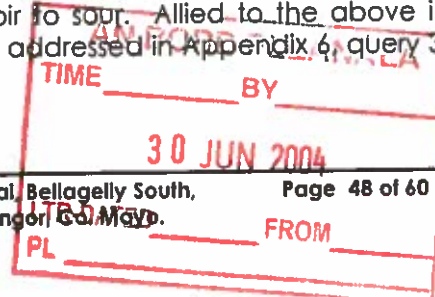
### 2.6.1 Johnson Report

Micheál Ó Seighin and Brid & Teresa McGarry claim that the definition of the gas as dry and sweet is not consistent with the report by A Johnson for the Department of Communications, Marine and Natural Resources on the pipeline consents which says the gas is not dry and therefore should be considered corrosive. They also claim that future wells could yield Hydrogen Sulphide and so therefore the gas could be sour.

There is no contradiction. Sweet gas is gas that contains no  $H_2S$ ; that does not mean that the gas is not corrosive. Dry gas is gas that is relatively free from liquid hydrocarbons. Corrib gas contains no  $H_2S$ , i.e. it is sweet, and contains very small quantities of hydrocarbon liquids, i.e. it is dry. It is important to emphasise that "dry" here is a relative term. The applicant has never stated that the gas produced from the Corrib Field is absolutely free from hydrocarbon liquids and water. The applicant has always stated that it contains small amounts of both and is hence classed as a (relatively) dry produced gas.

Corrib gas contains a small amount of  $CO_2$  (0.3%), which, together with the small quantity of water, makes the gas mildly corrosive. Hence the need for corrosion inhibitor to be added offshore to the production fluids.

"Reservoir souring", or the gradual appearance of increasing quantities of  $H_2S$  in the production fluids over the life of a field is a phenomenon that sometimes occurs in oil fields or fields producing a mixture of oil and gas, when production has been stimulated by the injection of water into the reservoir to enhance recovery. The Corrib gas will be produced by natural pressure depletion with no water injection into the reservoir. There is therefore no mechanism which could cause the reservoir to sour. Allied to the above it should be noted that the issue of sour gas is addressed in Appendix 6, query 3 of the HSA report to Mayo County Council.



## 2.6.2 General Concerns

Brid & Teresa McGarry claim that the pressure in the upstream pipeline will be 345 bar, not 150 bar as stated in the EIS. In response, it should be noted that at the start of production from the Corrib field the shut-in pressure at the wellheads can be up to 345 bar, although the flowing pressure will be considerably lower. These pressures will decline quite rapidly as production progresses. In the first 3 years of production, pressure will be reduced through "choke valves" at the wellheads to provide a normal, flowing, arrival pressure at the terminal of 110 bar. It should also be noted that the offshore pipeline should never be exposed to wellhead shut-in pressure as this would require the failure of several valves in series at the wellheads. However, to maximise the safety of the installation, the offshore pipeline, from subsea manifold to onshore pig receiver, is designed to withstand just such an eventuality. Beyond the first 3 years, the choke valves will no longer be required to control the arrival pressure at the terminal (they will be fully open) and that pressure will continue to decline from 110 bar down to 25 bar or less at the end of field life.

Brid & Teresa McGarry claim that a report by Peter Rossington's on the process equipment proposed for Bellanaboy is damning with regard to the proposed process. We completely disagree with and reject Peter Rossington's unsubstantiated statements that the proposed terminal "incorporates some of the worst gas terminal design, that actually maximises emissions, minimises energy efficiency and maximises disturbance for local residents." We wish to point out that Peter Rossington did not have access to the detailed process data required to determine the appropriate plant design and his comments must therefore must be regarded as largely conjecture.

No two gas terminals are identical. Each gas terminal has to be specifically designed and its process and equipment specifically selected to convert a feed gas with a unique set of characteristics, e.g. composition, temperature, pressure, flowrate, etc, some of which change with time, into a gas product that meets a particular set of specifications, e.g. composition, dew point, calorific value, Wobbe number, pressure, temperature, flowrate, turndown capability, etc.

The design of the proposed production scheme and terminal has been selected and developed to be the most energy efficient overall for Corrib gas to meet Corrib export specifications over the life of the field.



## 2.7 TRAFFIC ISSUES

The following appellants have raised specific concerns regarding traffic issues:

- Monica Muller
- Ballinaboy / Leenamore Residents (Jacinta Healy)
- Sean McDonnell and Others
- An Taisce
- John and E. McAndrew (Leenamore/Ballinaboy Concerned Citizens)
- Brid & Teresa McGarry
- Brian Coyle
- Micheál Ó Seighin and Others

The concerns raised can be summarised under the following sub-headings:

- |   |   |
|---|---|
| 1) Inadequate EIS Assessment of Work Outside Site Boundary    | 7) Haul Route                               |
| 2) Baseline Studies   | 8) Pollution from traffic                   |
| 3) Cumulative Traffic Impacts and Impacts of Pipeline Traffic | 9) Risk to Road Users from Transfer of Peat |
| 4) Impact on Basic Infrastructure                             | 10) Noise                                   |
| 5) Use of Local Road L1204                                    | 11) Vibration                               |
| 6) Impact on Residents and Risks to Road users                | 12) Stability                               |
|   | 13) Traffic Accidents                       |
|   | 14) Emergency Services                      |
|   | 15) Minibus Services                        |

### 2.7.1 Inadequate EIS Assessment of Work Outside Site Boundary

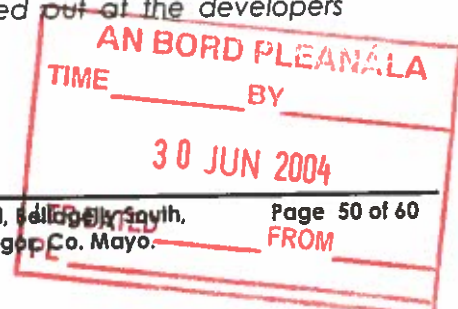
An Taisce claims that there is not adequate data in the application or in the EIS on the impacts of the realignment of Regional Road R314 and other works to roads and bridges outside the site, thus contravening the Council Directive 85/337 (as amended by Council Directive 97/11/EC) and the public consultation requirements of that Directive.

In response, the realignment of the R314 is indicated on the planning application drawings. Where relevant, specific mention is made of the associated impacts in the EIS (See Sections 6.5.2 of Volume 1).

With regard to other road and bridge improvements as stated in Volume 1 of the EIS, Section 16.4.8:

"A joint survey has been carried out by Tobin Consulting Engineers and Mayo County Council of the proposed haul route. This survey identifies areas where road realignment is required to ensure a minimum road width is provided to allow vehicles to pass in a safe manner. This geometrical survey is supported by a road pavement design analysis and pavement strengthening proposals. The extent of bridge and culvert strengthening work has also been agreed with Mayo County Council as part of pre-planned discussions and will be carried out at the developers expense".

### 2.7.2 Baseline Studies





Monica Muller claims that baseline studies were not carried out for the haul route upgrading works.

The relevant baseline surveys are described in the EIS and in the response to the RFI.

### 2.7.3 Cumulative Traffic Impacts and Impacts of Pipeline Traffic

An Taisce and Monica Muller state that the Transport Management Plan does not address all of the traffic issues posed by the project, including parts of the project which are subject to a foreshore licence and other consents from the Minister for Communications, Marine and Natural Resources. Micheál Ó Seighin states that there is no treatment of the implications of the HGV traffic servicing the upstream pipeline on the social and physical environments.

Cumulative traffic flows were addressed in the Transport Management Plan. Section 5.6 of the Transport Management Plan addresses traffic flows associated with the onshore pipeline to the terminal, including the detailed scheduling in Table 5.1 of the origin, volume and route of all the different classes of materials associated with the onshore pipeline, and covering all sections of this pipeline which are to be built using materials hauled overland to the point of assembly and trenching. Figures 5.7(a) and 5.7(b), as well as the complete schedule in Appendix 4 of the Transport Management Plan, are the cumulative traffic flows, and the pavement design standard axes in Table 4.1 are the cumulative figures for all traffic associated with the terminal and the pipelines.

The traffic associated with the upstream pipeline construction was also addressed in the Offshore EIS.

An appellant claims that the cumulative traffic implications will pose a traffic hazard and be a disruption in this tourist-orientated area during the tourist season, which will coincide with the envisaged peak transportation of peat.

Peat haulage coincides with the tourism season because it is preferable to undertake the bulk earthworks activities in the summer season. The implications of the peat haulage operation for tourism and tourist traffic are addressed in Section 5.5.1 of Volume 1 of the EIS.

### 2.7.4 Impact on Basic Infrastructure

John and E. McAndrew and Micheál Ó Seighin have expressed concern regarding the potential destruction of road infrastructure. Others have stated that the haul routes are unsuitable.

As explained in the EIS and Transport Management Plan, if the terminal is given planning permission by An Bord Pleanála, Mayo County Council will upgrade the haul roads, at the expense of the applicant, in advance of the bulk haulage commencing. The pavement design was set out in detail in Section 4.2 of the Transport Management Plan.

### 2.7.5 Use of Local Road L1204

TIME	BY
30 JUN 2004	
LTR-DATED	FROM

Micheál Ó Seighin queries the use of the L1204 for truck traffic in the current proposal when it was not to be used in a previous application. The previous proposal did not involve the removal of peat to Srahmore. The L1204 was not required as a haul route for that proposal.

#### **2.7.6 Impact on Residents and Risks to Road users**

The Ballinaboy/Leenamore Residents state a concern regarding disruption to residents due to the frequency of the trucks on the haul routes.

The applicant is committed to minimising impacts on local residents as is indicated throughout the EIS. The relevant commitments are listed in Section 3, 11, 12, 16, 17 and 18 of Volume 1 of the EIS.

The mitigation measures to be adopted to minimise the noise impacts on neighbouring residents, are as detailed in the EIS, Volume 1, Section 12.6.1.

Particular safety aspects have been addressed in the Traffic Management Plan. The measures to be implemented are listed Volume 1 Section 3.5.7 of the EIS.

#### **2.7.7 Haul Route**

Appellants expressed various concerns regarding the haul route.

An Taisce claims that the haul route directly affects the Carrowmore Lake Complex SAC 000476 and that road works require an EIS under the Habitats Directive and regulations.

As explained in the response to the RFI, the upgrading of the haul routes and the transportation of peat along the routes is not likely to have a significant effect on the Carrowmore Lake Complex cSAC.

#### **2.7.8 Pollution from traffic**

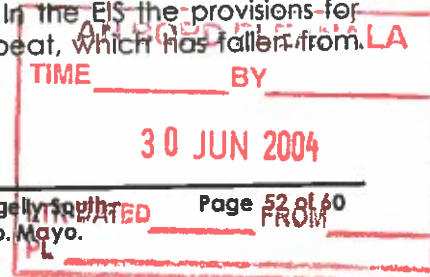
John and E. McAndrew have stated that the pollution from traffic has not been addressed.

Section 11 of the EIS addresses the potential air pollution from traffic. Noise is addressed in Section 12 and the risk of spills or leaks is addressed in Section 7.6 of volume 1 of the EIS and the response to the RFI.

#### **2.7.9 Risk to Road Users from Transfer of Peat**

Sean McDonnell claims that there is an unacceptable risk to road users from the transfer of liquid peat to Srahmore. The nature of the risk is not specified.

It is stated in the response to the RFI (Volume 2, Item 7) that no liquid peat will be transported to the Srahmore site as such material will not meet Bord na Móna's acceptance criteria for peat deposition. In the EIS the provisions for monitoring the haul route and cleaning up any peat, which has fallen from the trucks, are described.



### 2.7.10 Noise

Several appellants have expressed concern regarding noise from lorries.

The measures to minimise noise impacts on local residents are indicated throughout the EIS. The Transport Management Plan (Appendix A of the response to the RFI) provides further details of the lorry movements, including a risk matrix for the main haul route.

The applicant's commitments to noise reduction are listed in Sections 3 and 12 of Volume 1 of the EIS and the mitigation measures to be adopted to minimise the impacts on neighbouring residents (Volume 1 Section, 12.6.1).

### 2.7.11 Vibration

Ballinaboy/Leenamore Residents and Monica Muller have expressed a concern that vibration from traffic could damage homes.

Trucks using the haul roads, currently, may cause vibrations, which are felt in roadside houses. However the haul roads will be upgraded before the bulk peat removal operation commences. The upgraded pavement of the haul routes will have an overall thickness of 200mm-250mm, with Foam Mix Macadam, and it will be designed to operate as a flexible pavement, spanning over the peat sub-base where this occurs. Section 4.2 of the Transport Management Plan details the engineering design of this pavement. This pavement specification will ensure that vibrations will not cause damage to houses along the route.

### 2.7.12 Stability

Brian Coyle expresses concern that the overall impact of the road improvement works on existing land, embankments, slope stability, drainage and private property is not fully assessed.

The improvement works proposed are within existing fence lines. The proposed upgraded pavement has taken full account of slope stability along the haul route. No change is proposed to existing surface water drainage patterns, and strengthening works to existing culverts are all part of the proposed upgrade works.

### 2.7.13 Traffic Accidents

The Ballinaboy/Leenamore Residents have expressed concern that there is the risk of trucks crashing into roadside houses.

The Transport Management Plan sets out the precautions to be taken to ensure that truck drivers drive safely and at moderate speeds.

### 2.7.14 Emergency Services

<b>AN BORD PLEANÁLA</b>	
TIME _____	BY _____
<b>30 JUN 2004</b>	
DATE	FROM

A number of appellants express concerns regarding potential delays to emergency vehicles or to private transport en route to Mayo General Hospital.

Possible emergencies have already been discussed with the Gardaí, and the issue is addressed in Section 5.4.17 of the Transport Management Plan.

### 2.7.15 Minibus Services

The Ballinaboy/Leenamore Residents state that the schedule of the minibus proposed for residents may not suit.

Use of the minibus will not be mandatory, it is proposed for the convenience of the residents.

## 2.8 SOCIO-ECONOMIC ISSUES

The following appellants have raised specific concerns regarding socioeconomic issues:

- Ballinaboy / Leenamore Residents (Jacinta Healy)
- Sean McDonnell and Others
- Gerard McDonnell
- Mary Corduff
- Brendan Philbin
- John and E. McAndrew (Leenamore/Ballinaboy Concerned Citizens)
- Brian Coyle
- Micheál Ó Seighin and Others

The concerns raised can be summarised under the following sub-headings:

- 1) Property Devaluation
- 2) Local Employment
- 3) Cultural Impact
- 4) Contribution to Local Economy
- 5) Gaeltacht

### 2.8.1 Property Devaluation

A number of appellants claim that the proposed development would affect property values of the residential properties and farms in the vicinity. These claims are predicated on the appellants' other concerns regarding the impact of the proposed development. As is demonstrated in this response, all of these concerns are unfounded. In this regard, there is no reason to believe that the appellants' property values will be negatively affected.

Section 5 of the EIS Volume 1 discusses the key issues affecting people, and the potential impacts of the proposed terminal upon them. Whilst the impact on property values is not specifically mentioned, the assessment found the net economic impact of the proposed terminal is expected to be positive in terms of increased income, especially in the out-of-season tourism months.

### 2.8.2 Local Employment

Micheál Ó Seighin makes a number of claims in his appeal about the content and conclusions of Section 5 of Volume 1 of the EIS.

In particular, he questions how many of the c.500 construction jobs will be available to the locally available unemployed workforce, and what is the skills match for these temporary positions. He also claims that no effort has been made to see if the 50 permanent jobs at the terminal would match the available skills in the area. These claims are unfounded.

The applicant has established a local skills database, this facility is described in the EIS. This database is to be made available to all of the contractors appointed to construct the terminal with a view to maximizing the accessibility of the local labour force. This database has also been extended to cover the operation of the terminal so as to ensure that Shell are fully aware of all those with the necessary qualifications or skills (as described in the EIS) who might be seeking employment in the terminal.

Micheál Ó Seighin also makes mention of the ERM report to MLVC (Annex A), on the previous EIS. ERM stated that there has been no original research into employment patterns and all judgements of significance are qualitative with little justification for impact predictions that were made.

In response, we wish to note that significant information has been gathered by the applicant, since the submission of the previous application, through the community liaison office set up in Bangor. In this regard the findings in the EIS are based on the best available data.

An integral part of the assessment on human beings involved quantitative, qualitative and documentary research. The quantitative research involved the examination and assessment of information supplied by the Central Statistics Office. The Qualitative research was informed through public consultation and attendance at the oral hearing for a previous application for the proposed development. Allied to this, further qualitative information has been gathered by Shell staff based in the community information office in Bangor. The County Enterprise Board and Udaras Na Gaeltachta were also consulted and provided some baseline information.

### 2.8.3 Cultural Impact

Micheál Ó Seighin makes the claim in his appeal that the proposed development would destroy the local community. The comprehensive assessment of the potential environmental impacts contained in the EIS clearly shows that predicted impacts to the environment from the proposed development are not significant. The introduction of the proposed terminal will help to reduce the outflow of the indigenous population from the local areas within the vicinity of the proposed terminal. It is expected that non-locally based contract specialists recruited for the start-up phase, will be leaving within 12 months of the start of operations. This will give opportunities of employment to the people living in the immediate area as well as encouraging those who might have migrated away from the area to return. In this regard, it is expected that the proposed terminal will have a significant positive impact on the population levels, local language and culture of the local area.

### 2.8.4 Contribution to Local Economy

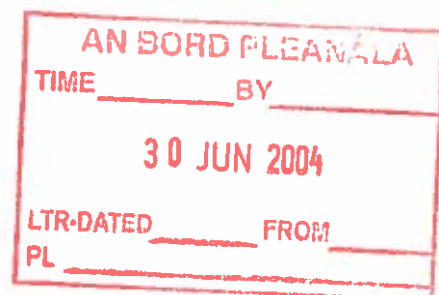


Gerard McDonnell claims that the EIS and application give no information on what or how the Barony of Erris and towns beyond would benefit from the construction of terminal. This is not correct. These issues are addressed clearly in Section 5 of Volume 1 of the EIS. Notwithstanding this fact, it is widely recognised that industries create a multiplier effect in the areas in which they choose to locate, there is no reason to assume that this development will have any less of a positive impact on the local economy than other such industrial developments elsewhere in the Country.

#### 2.8.5 Gaeltacht

Micheál Ó Seighin claims that the proposed development does not help ensure that the population in the Gaeltacht is stabilised and that it thereby is contrary to the policies of the Development Plan. This statement is a clear misuse of the Development Plan Policy. Clearly the applicant cannot be held singularly responsible for ensuring that the population in the Gaeltacht is stabilised. Notwithstanding this, as noted above, the development will help to reduce the outflow of the indigenous population from the local areas within the vicinity of the proposed terminal.

For inspection purposes only.  
Consent of copyright owner required for any other use.



## 2.9 VISUAL IMPACT

Micheál Ó Seighin and others have raised concerns regarding visual impact:

- |                               |                                     |
|-------------------------------|-------------------------------------|
| 1) General Visual Impact      | 5) Light Pollution                  |
| 2) Local Visual Impact        | 6) Assessment by Planning Authority |
| 3) Previous Submissions       | 7) Amenity & Landscape              |
| 4) Tourism & Outdoor Pursuits |                                     |

### 2.9.1 General Visual Impact

Micheál Ó Seighin states a number of concerns about the visual impact of the proposed development. In response, it should be noted that the proposed development will not result in any appreciable or significant impact on the amenities and landscape character of the area. The site is located within a robust coniferous landscape and was previously used as a plantation research station. The site itself while part of the wider landscape setting has no formal amenity or recreation use and is indistinct in visual terms from its plantation surrounds.

### 2.9.2 Local Visual Impact

Micheál Ó Seighin and Monica Muller raise concerns with regard to use of the existing trees on the site as a visual screen. In response we wish to note that Coillte has over the past 40 years been planting trees on the site and continue to successfully grow trees in this area. As can be seen in a comparison of the photomontages from the previous application and the current application the trees on the site are continuing to grow. The landscape mitigation proposals as outlined in Sections 13.13.3 of Volume 1 of the EIS describe the proposed methodology for the landscape planting proposals. The range of native tree species to be planted are consistent with those species that are currently growing successfully around the proposed terminal site. Figure 13.7 of Volume 1 of the EIS includes a plantation schedule to indicate both older and recently planted plantations and their average heights since the time of planting. As can be seen from the photomontages these trees provide a significant visual screen for the proposed development ensuring that the local visual impacts are negligible.

### 2.9.3 Previous Submissions

Micheál Ó Seighin makes reference to the submission he made under the previous application on visual impact. In response we wish to simply state that all of the concerns raised are dealt with fully in the EIS which demonstrates that the proposed development will not have any significant adverse impacts on the landscape character or on protected views.

### 2.9.4 Tourism & Outdoor Pursuits

Micheál Ó Seighin and John and E. McAndrew claim in their appeals that the proposed development will result in the degradation of the amenity value of area for tourists, especially those seeking outdoor pursuits as it will put off limits a substantial acreage.

AN BORD PLEANÁLA	TIME	BY	30 JUN 2004	FROM
	LTR-DATE	PL		

As noted above, the proposed development will not result in any appreciable or significant impact on the amenities and landscape character of the area.

The potential impact of the proposed development on local tourism is discussed in Section 5.5 of Volume 1 of the EIS. In this regard the EIS clearly identifies that the proposed terminal site does not affect any known recreational routes and that given the proposed mitigation measures outlined in this EIS it is not expected that there will be any significant negative impact on local recreation or sporting activities or facilities

## 2.9.5 Light Pollution

Micheál Ó Seighin claims that there will be a significant visual impact as a result of night lighting. This is not correct. The issue of light pollution is clearly dealt with in Section 13.10.6 of Volume 1 of the EIS which concludes that for both the local road users and the local residents the lighting arrangements proposed will appear little different from the existing isolated property lighting within the wider landscape.

## 2.9.6 Assessment by Planning Authority

Micheál Ó Seighin claims that the Landscape Sensitivity Matrix has not been properly applied by the planning authority. While it is not a matter for the applicant to comment on we do wish to point out that the planning authorities assessment of the visual impact is consistent with the assessment made by the applicant's own experts and as such Mr Ó'Seighin is misconstruing the intent of the Landscape Sensitivity Matrix.

## 2.9.7 Amenity & Landscape

Micheál Ó Seighin and John and E. McAndrew claim that the proposed development will seriously injure the amenities and landscape character of the area

As noted above, the proposed development will not result in any appreciable or significant impact on the amenities and landscape character of the area.

The principal amenity activities in the area are walking on surrounding roads and hills, and fishing the local streams and Lake Carrowmore. The fifteen-piece North Mayo Sculpture Trail, 'Tír Sáile', has one sculpture in the local area: 'Stratified Sheep'. The visual impacts on these amenity areas are addressed in Section 13 of Volume 1 of the EIS, whilst impacts on local fisheries are addressed in Section 7.

The site of the proposed terminal has been carefully chosen to take maximum advantage of extensive coniferous plantations, which will provide immediate, significant and effective screening. The inherent screening provided, combined with careful attention to the design, layout and colour treatments applied to component parts of the facility, will ensure that the vast majority of the development will not be readily discernible in the landscape.

In conclusion, from the principal amenities of the coastal fringe, this site is distant and screened by topography. At a local level the site has a high level of in-situ and developing screening in the form of coniferous plantation.

AN BORD PLEANÁLA	BY	30 JUN 2004	FROM
TIME			
LTR-DATED			
PL			

## 2.10 MISCELLANEOUS

Micheál Ó Seighin dedicates almost 14 pages of his appeal to a critique of the provisions of Licensing Terms for Hydrocarbon Exploration in Ireland. The issues raised are not relevant to the Board's determination and we do not wish to comment on them other than to state that the views expressed are not consistent with the applicant's understanding.

Micheál Ó Seighin also claims in his appeal that the gas pipeline to serve towns in the west has no basis in reality as An Bord Gáis has ruled out Ballina as an item in its planning, as per its conference in Galway. In response, it should be noted that the Mayo Galway link line is a significant addition to Ireland's gas transmission network. It will facilitate the provision of gas in the West of Ireland which otherwise would not be commercially possible as it is being almost fully funded by the Corrib co-venturers through a tariffing arrangement with BGE. It is too early to say what towns will or will not benefit from this transmission network and this area is a matter for BGE but the Corrib co-venturers believe that it remains a highly significant development in terms of the overall energy infrastructure in the west of Ireland.

For inspection purposes only.  
Consent of copyright owner required for any other use.

AN BORD FLEANÁLA	
TIME	BY
30 JUN 2004	
LTR-DATED	FROM
PL	

### 3.0 CONCLUSION

The proposed development is of national significance and benefit and, as this response to the Third Party appeals illustrates, accords fully with the provision of the proper planning and sustainable development of the area.

Specifically, it is contended that the proposed development:

- Complies with all relevant planning considerations,
- Will facilitate the achievement of the stated policies and objectives of the current Mayo County Development Plan relating particularly to improvements to the provision of infrastructure
- Will have minimal local impact,
- Will provide good quality employment both in the construction and operation phases for people in an area of low employment opportunities,
- Is designed in a manner which is sympathetic to and takes into account the requirements of its environment,
- Will act as a regional catalyst for development,
- Is in accordance with national strategies to utilise natural resources and to reduce reliance on imported sources of energy,
- Is in compliance with the principles of sustainable development,
- Will provide a clean energy supply,
- Will help ensure the security of supply of natural gas to Ireland for the next 15 years; and
- Will improve Ireland's balance of trade position by reducing the need for gas imports.

Finally, following a thorough reassessment and redesign of the project by the applicant and Design Team responding to An Bord Pleanála's previous decision on the previous application, Mayo County Council Reg. Ref. 01/900, it is contended that the current modified planning application for the terminal has thoroughly addressed the Board's previous concerns.

Yours sincerely



Gavin Lawlor  
Associate  
Tom Phillips + Associates

