

ORAL HEARING

CORRIB GAS PIPELINE

SAFETY REVIEW OF UPSTREAM, ONSHORE SECTION

HEARD BEFORE THE CHAIRMAN:

MR. JOHN GALLAHER

ON THURSDAY, 13 OCTOBER 2005

I hereby certify the following to be a true and accurate transcript of recordings of the evidence in the above-named action.

APPEARANCES

DEPARTMENT OF COMMUNICATIONS, MARINE AND NATURAL RESOURCES:

Mr. Bob Hanna, Chief Technical Officer

Mr. Koen Verbruggen, Principal Geologist, GSI

Mr. Dick McKeever, Assistant Chief Engineer

ADVANTICA:

Mr. Arwell Griffiths, Executive Director

Dr. Bob Andrews, Solution Consultant

Dr. Mick Acton, Solution Director

PUBLIC SPEAKERS:

Ms. Máire Bhreathnach

INDEX

<u>WITNESS</u>	<u>EXAMINATION</u>	<u>PAGE</u>
	DISCUSSION	4 - 5
	SUBMISSION - MR. B. HANNA	5 - 15
	SUBMISSION - MR. A. GRIFFITHS	16 - 18
	SUBMISSION - DR. M. ACTON	19 - 26
	SUBMISSION - DR. B. ANDREWS	26 - 27
	DISCUSSION	27 - 28
	ADJOURNMENT	28
	DISCUSSION	29 - 30
	CLOSING SUBMISSION - MS. MÁIRE BHREATHNACH	30 - 34
	THE HEARING WAS THEN CONCLUDED	34

1 THE HEARING CONTINUED AS FOLLOWS ON WEDNESDAY,
2 13 OCTOBER 2005

3
4
5 CHAIRMAN: Good morning ladies and 10:12
6 gentlemen. I waited until
7 now, 10:10, to give anybody who is travelling here an
8 opportunity of arriving.

9
10 My name is John Gallagher. I know that perhaps most 10:12
11 of you here yesterday, but for those who were not I
12 had better perhaps introduce myself and the people
13 who are on my right and on my left. As I say, my
14 name is John Gallagher, I am a senior counsel and I
15 was asked by the Minister to act as Chairman of this 10:13
16 meeting. I am a neutral in the sense that I have not
17 acted for any party connected with the Corrib Gas
18 Field and I have not acted for or advised the
19 Minister or any other person in relation to the
20 matter. 10:13

21
22 I will leave it to Bob Hanna who is the Chief
23 Technical Advisor and the Energy and Insulations
24 Inspector in the Department of Communications, Marine
25 and Natural Resources to outline the reason why this 10:13
26 meeting was called and the role that he and the other
27 gentlemen with him are performing for the Minister.
28 Mr. Koen Verbruggen is Senior Geologist with the
29 Geological Survey of Ireland and he is in the centre.

1 Mr. Richard McKeever is Assistant Chief Engineer in
2 the Engineering Division of the Department of
3 Communications, Marine and Natural Resources.
4
5 On my right is Dr. Michael Acton and Dr. Bob Andrews 10: 14
6 and Arwell Griffiths who is Director of Advantica,
7 the Consultants appointed by the Minister, is on the
8 extreme right.
9
10 Perhaps Bob Hanna, you would like to maybe introduce 10: 14
11 yourself and your colleagues on the Technical
12 Advisory Group?
13
14 SUBMISSION BY MR. BOB HANNA
15 10: 15
16 MR. HANNA: Thank you very much,
17 Chairman. Before I start,
18 I know some people were here yesterday but, just in
19 the interests of proper order and safety, the fire
20 exits from this room are behind you, the door you 10: 15
21 came in, on this side and over there. The fire exit
22 signal is a continuous bell. I hope it's not
23 necessary, but should you hear it, please do leave
24 the hotel quietly and assemble in the car park.
25 10: 15
26 As the Chairman said, I chair the Technical Advisory
27 Group within the Department and we have been tasked
28 with a particular job within the framework of
29 activities that the Department is undertaking in

1 connection with this project. With my colleagues
2 Koen Verbruggen and Dick McKeever, we comprise the
3 Technical Advisory Group.
4 Just very briefly, some of the important features as
5 to why this project is so significant for all of us. 10:16
6 This is a project which is very interesting, but it
7 has followed a lot of work by a number of exploration
8 companies and a number of test wells in very
9 difficult terrain. But the prize for this, if you
10 like, is that we have a very large gas field on our 10:16
11 shores here with 900 billion standard cubic feet of
12 gas or thereabouts which is enough to power the
13 country for about 20 years at current rates of use in
14 the country. It's in difficult terrain, it's 65
15 kilometres offshore, and in very deep water of 10:16
16 350 metres and that brings with it a number of
17 technical challenges and a number of issues for us
18 all here today.
19
20 Very briefly, and not in any detail, these are some 10:17
21 of the legal and administrative arrangements that
22 have been necessary for supervision of the pipeline,
23 the function of my Department. The Continental Shelf
24 Act looks for things that happen under the sea. The
25 Petroleum Act is the major piece of legislation which 10:17
26 governs the major consent process and the Plan of
27 Development filed by the company, Shell, and its
28 predecessors was approved on 15 April 2002.
29

1 Under the Gas Act, this is the Act that allows for
2 pipelines to be constructed mainly on land, and
3 approval in principle was given on 15 April 2002 with
4 a number of conditions.
5
6 The Foreshore Act, which is the legislation which
7 governs bringing the pipeline onshore, the equivalent
8 was given around about the same time in May. As you
9 are probably are very aware, planning permission was
10 eventually granted by An Bord Pleanála on 21 October 10: 17
11 2004. There is one important piece of consent that
12 is outstanding administered by the Environmental
13 Protection Authority, and that is the IPPC license
14 which is pending.
15
16 Summary technical features of the project which
17 require our special attention are what is known as
18 the Sub-Sea Tie Back Project with an onshore
19 terminal, that the sub-sea facilities are controlled
20 and monitored by control from the onshore terminal at 10: 18
21 Bellanaboy, and that the wells involved are connected
22 to a manifold, a collection device, offshore before
23 pipeline onshore and that there are a number of
24 valves, one for each well and an additional valve,
25 which are what is known as "fail-safe" valves, that 10: 18
26 is they require a controlled pressure to keep them in
27 the open position. And if that controlled pressure
28 is lost for any reason, for example if the umbilical
29 should be severed, they will snap shut like a valve

1 held on a spring.

2

3 The route -- because this was the subject of some
4 discussion yesterday -- this is an indicative map.
5 But for those of you familiar with the area, it's as 10:19
6 accurate as we need for our purposes for the Safety
7 Review. Yesterday we had a pointer -- I don't know
8 where it went today. It went back in the box. Good
9 for you, Koen. So for the purposes of the Safety
10 Review, we're talking about the pipeline section from 10:19
11 landfall along and past Rossport and to the terminal
12 site in the woods. So it's that section only.

13

14 We're not primarily involved for the purposes of the
15 Safety Review with the offshore facilities or with 10:20
16 what happens inside the terminal with some limited
17 exceptions.

18

19 While the project has been on the go in the planning
20 and conception stage for a long time and my 10:20
21 Department has been involved for a long time in the
22 consenting process with approvals, the Technical
23 Advisory Group which looks after safety was only
24 established at the end of July 2005 specifically by
25 the Minister to do a number of things but primarily 10:20
26 to move the functions of petroleum and oil and gas
27 exploration and promotion activities, to separate
28 those from monitoring and supervision activities
29 because it has been recognised by the Department that

1 to look at anything. We do that through the
2 mechanism of legally appointed authorised officers.

3
4 Very briefly, I will outline the role of the
5 consultants that we have appointed. They will talk 10: 23
6 in more detail later about what they do and how they
7 go about their work. As I say, we had a rigorous
8 open tender process which took quite a period of
9 time. I was appointed Chair of the Technical Advice
10 Group in the first week of August and it took the 10: 23
11 month of August to go to tender to select to
12 interview, appoint and contract. And that actually
13 was quite a short time for the normal time for these
14 processes. And the consultants started work on
15 1 September. 10: 23

16
17 Their work is to find, identify and source all the
18 relevant documentation that relates to the design,
19 construction and operation of this section of the
20 pipe that I've showed you; what's known as the 10: 23
21 onshore upstream section, landfall to terminal, and
22 associated facilities. So that means anything that
23 relates to the design and operation of the pipeline,
24 so it could be that something in the terminal has
25 some impact on the operation of the pipeline. If so, 10: 24
26 it falls within the remit of the study. If it
27 doesn't, it falls outside the remit of the study.
28 Likewise anything that happens at sea if it relates
29 to the operation of the pipeline onshore, it's

1 included. If it doesn't have any bearing on
2 operation from a safety point of view, it's outside
3 the scope.

4 Having identified and sourced all the relevant
5 documentation, whether it exists within the 10: 24
6 Department or whether it's company propriety
7 information, to critically examine all that
8 information and then to use their professional
9 judgement and their expertise to conclude whether or
10 not these facilities, which either exist or are to 10: 24
11 exist, to comply to the appropriate standards, codes
12 of practice, regulations, operating procedures as may
13 be appropriate whether they've been originated by
14 Irish authorities or not, whether those facilities
15 current or planned would comply with what's deemed by 10: 25
16 our consultants to be international best practice,
17 and whether at the end of the day they will deliver a
18 facility which is properly constructed and what we
19 call fit for purpose; will it do the job that it was
20 proposed to do in an efficient and safe manner. 10: 25
21

22 Having done all of that, if they find anything that
23 they feel is not in compliance with best practice or
24 standards or what they consider to be proper order,
25 they will identify those deficiencies, they will make 10: 25
26 recommendations regarding those deficiencies and they
27 will provide detailed guidance on how to implement
28 any of the recommendations that they will make.
29

1 It was recognised from the outset that there's been a
2 bit of a democratic deficit in the way that the
3 Department the previous activities before the
4 establishment of this Group, the Technical Advisory
5 Group. And so it was important that anybody that had 10: 26
6 views on how the Safety Review should be conducted or
7 the things that should be looked at should be taken
8 into account. And we did from the word go provide
9 the facility for written submissions to be made to
10 the review process. 10: 26

11
12 But it was decided subsequently that this today,
13 opportunity for public input in an oral fashion, and
14 the opportunity to see, meet and understand a bit of
15 the work of the consultants should be provided. We 10: 26
16 are grateful to those who facilitated us in setting
17 us up and we are grateful to our esteemed Chairman
18 for conducting the proceedings.

19
20 We have invited both oral and written submissions. 10: 27
21 And it is important that you recognise that we have
22 professional stenographers present recording
23 everything for the Minister's attention and for
24 posterity.

25 10: 27
26 On the point of written submissions, I just want to
27 draw your attention to the fact that written
28 submissions should be addressed to my Department and
29 my Group. There are hard copies of this information

1 available from Richard, if you don't already have
2 this. So you will have the opportunity to know where
3 to send written submissions or comments that you may
4 have after today, and these should be received by us
5 by the close of business on Friday 28 October. 10: 27

6
7 It is important that people understand that written
8 submissions sent to us will be published as part of
9 the open and transparent nature of this process. A
10 point that I need to clarify, because it did cause 10: 28
11 some confusion yesterday, is that because the
12 Technical Advisory Group did not exist prior to the
13 end of July or beginning of August and prior to our
14 invitation of submissions which we issued by press
15 release on 10 August 2005, it is important that 10: 28
16 people understand that if there has been any
17 correspondence with the Department before 10 August,
18 it is not captured by my Safety Review process.
19 Therefore if you made observations before 10 August,
20 please do make them again directed to the Technical 10: 28
21 Advisory Group.

22
23 Anything that's been received since 10 August is
24 already being considered by the consultants and
25 therefore it's not necessary to resubmit information 10: 28
26 submitted since 10 August.

27
28 Now very briefly what happens after today and after
29 the end of the consultation process on 28 October.

1 Well Advantica will prepare a draft report which will
2 be available in early November, and we will publish
3 that on our website so that anybody can see, can see
4 what they are recommending, can see what they have
5 concluded. Then anybody can make observations based 10: 29
6 on the draft report for a period which we will
7 determine later but which will be quite short, two
8 weeks or thereabouts.

9
10 Our consultants will consider what's being received 10: 29
11 by way of observations on the draft report and then
12 they will prepare a final report which will go to the
13 Minister and will also be published.

14
15 Following that, the Technical Advisory Group, we have 10: 29
16 to then report separately to the Minister based on
17 the consultant's observations. All of that means
18 that we are talking about a period towards the end of
19 November, beginning of December before we have
20 concluded the complete gamut of events that's 10: 30
21 contained within the Safety Review.

22
23 So that is all of the background. The important
24 thing for today is that this is open public
25 consultation. We will be inviting your views. 10: 30
26 Mr. Gallagher will be inviting statements and
27 comments from the floor later on, but now it's
28 appropriate for me to invite Advantica to come and
29 tell you a little bit about who they are and what

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29

they are doing. I'll invite Mr. Arwell Griffiths to come and take over. He is an Executive Director of Advantica Limited.

END OF SUBMISSION BY MR. BOB HANNA

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29

SUBMISSION BY MR. ARWELL GRIFFITHS

MR. GRIFFITHS: Thank you Bob. Good morning. My name is Arwell Griffiths.

10:31

In our session this morning, I'm going to first of all cover very briefly an outline and background to Advantica in order to read the layouts, the background and the credentials for us doing this work. But most of the time -- if you can just move onto the first slide, Mike? Most of the time we are going to be spending on looking at the safety scope of the Safety Review, how we propose going about it and how we propose structuring the report.

10:31

10:31

But just let me also say that we are here, we were here yesterday and today, and we will clearly answer any questions of clarification on any of this. But our primary reason for being here is to hear and to listen to the views and points being expressed so that they can be taken into account fully in our report and recommendations.

10:31

Now first of all just some context background; what is Advantica, what do we do. Well we're an engineering consultancy. We focus on the energy industry particularly with expertise in the gas industry where we're involved in giving advice

10:32

1 throughout the project life cycle.

2

3 Our origins are in British Gas and we have since then
4 added to that knowledge base through growth and also
5 by acquisition of other engineering consultancies in 10: 32
6 the UK and North America.

7

8 We have approximately 500 scientists and engineers
9 covering various areas of expertise including that of
10 hazard and risk management. 10: 32

11

12 We do operate around the world. Particularly
13 important countries for us are Europe, North America,
14 the Middle East and China. What this does give us,
15 of course, is wide access to and involvement in 10: 33
16 International best practice which is one of the
17 things we can then bring to any work assignment that
18 we are asked to carry out.

19

20 Our areas of expertise are widely recognised 10: 33
21 throughout the industry and that has been the case
22 for many years. Most recently we have been
23 specifically recognised for our engineering skills in
24 the last two consecutive years by the International
25 Institution of Gas Engineers and Managers. 10: 33

26

27 This recognition is, of course, based on the
28 expertise of our consultants and engineers, and I'm
29 now just going to introduce my two colleagues who

1 will be leading the Safety Review. Sitting on my
2 left is Dr. Bob Andrews whose particular area of
3 expertise is in the structural integrity of pipelines
4 and other structures gained from over 20 years
5 experience in the industry. 10:34

6
7 Sitting in the centre is Dr. Mike Acton whose
8 particular area of expertise has involved studying
9 the consequences and investigation of accidental gas
10 release and based, again, from 17 years experience in 10:34
11 the oil and gas industry. Mike will be taking us
12 through the rest of our presentation and I would now
13 like to hand over to him.

14
15 END OF SUBMISSION BY MR. ARWELL GRIFFITHS 10:34

16
17
18
19
20
21
22
23
24
25
26
27
28
29

1 using our own models and data to verify aspects of
2 the pipeline design and undertake our own independent
3 risk calculations. That will include looking at what
4 the key sources of uncertainty are in those analyses.
5 We will be looking at the reasonably practicable risk 10: 36
6 reduction measures which have been considered.

7
8 Our report will very much give an independent
9 professional opinion on the proposed design
10 construction and operation of the pipeline and, as 10: 36
11 Bob says, we will be discussing any deficiency that
12 we identify and making recommendations on how they
13 should be addressed.

14
15 Just to be clear about what is included and what is 10: 37
16 not, we are covering the health and safety aspects of
17 the proposed onshore pipeline in terms of its
18 engineering design and the risk to public safety, and
19 we are reviewing the available documentation for
20 completeness and suitability. 10: 37

21
22 We are not assessing the environmental impact of the
23 pipeline, that is being addressed elsewhere. We are
24 not addressing the risk to workers during
25 construction and we are not reviewing in any detail 10: 37
26 the onshore terminal, offshore pipeline or the
27 sub-sea equipment.

28
29 The process that we are following in undertaking the

1 review, firstly evaluating an initial set of
2 documents that were supplied to us by the Technical
3 Advisory Group. Then following our initial analysis
4 of what we had received, identifying and requesting
5 additional information from Shell. 10: 38
6
7 We held a meeting with Shell to cover points of
8 clarification in those documents and to discuss the
9 background to the project design selection process.
10 10: 38
11 We have received over 100 documents in all and we
12 have processed that by classifying them as either
13 technical documents that have been subjected to a
14 detailed technical review by an appropriate or as
15 documents that provide important background 10: 38
16 information but particularly covering the project
17 history. Some of those documents, as outlined
18 before, fell outside the scope of the review.
19
20 We have already undertaken a site visit to confirm 10: 38
21 our understanding of the pipeline route and also the
22 sort of local conditions including the ground
23 conditions.
24
25 We are obviously currently involved in a two-day oral 10: 39
26 hearing to hear people's concerns and input to the
27 process, and there's also an opportunity for written
28 submissions.
29

1 In early November our draft report will be due to be
2 issued for comment followed, in due course, by a
3 final report reflecting comments on the draft.

4
5 The last section of the presentation is really just 10: 39
6 to run through the proposed report structure so
7 people have a little bit more of an idea of what's
8 going to be in it. The idea is to structure the
9 report in seven main sections with detail contained
10 in two or more appendices. The report will include 10: 39
11 an introduction, the background to the project and
12 the reasons for the Safety Review.

13
14 We will describe in some detail the Safety Review
15 process that we have followed. The bulk of the 10: 40
16 report rely on the four sections that are highlighted
17 in blue, and I will speak a little more about what is
18 in those in a minute and obviously concluding with
19 our recommendations.

20 10: 40
21 The appendices will include, for example, the summary
22 of the comments that we have received and technical
23 details of the risk assessment calculations that we
24 have carried out.

25 10: 40
26 Section 3, which is one of those that I highlighted,
27 will discuss the overall project development plan.
28 This essentially is covering the reason why the
29 pipeline is there at all and the constraints that

1 have governed the design of the pipeline and its
2 route. So it's covering things like the selection of
3 the sub-sea tie-back option, the selection of the
4 landfall and terminal locations and the proposed
5 route. It is important to say that our review of 10: 40
6 that will assess the consideration given to safety
7 issues, not any other aspect.

8
9 Engineering design is very much Bob Andrews area of
10 the report. It's essentially to do with how the 10: 41
11 pipeline has been designed to do the job that it's
12 intended to do, and we will be reviewing the
13 engineering documents which will cover essentially
14 the threats to the pipeline and how they are being
15 addressed. So those kind of things like the 10: 41
16 mechanical integrity of the pipeline, fatigue loading
17 to the pipeline, protection against impact, the
18 possibility basically of somebody hitting a pipeline,
19 ground movement and then materials, so what the pipe
20 is made from and how it's welded, corrosion control, 10: 41
21 construction and installation, testing before the
22 pipeline is put into operation and operations and
23 maintenance procedures.

24
25 The risk assessment section will look at the hazard 10: 42
26 identification process. So the hazards that have
27 been identified in connection with the pipeline and
28 how they're being managed.

29

1 Part 1 of the risk assessment process itself actually
2 goes through a fairly sort of structured process from
3 identifying the relevant causes of failure for the
4 pipeline, looking at how it might fail in that event.
5 And if it did fail, basically how much gas comes out 10: 42
6 and how quickly and how likely it is to ignite. If
7 it does ignite, the characteristics of the fire that
8 is produced and the effect of that fire on the
9 surroundings. And those elements are combined in a
10 logical process which is illustrated by the flowchart 10: 42
11 there.

12
13 Then following that risk assessment process, we will
14 look at risk reduction measures and what effect on
15 risk adopting those measures could have. 10: 43
16

17 The discussion section will obviously identify issues
18 that we have picked up in the course of our review,
19 but importantly those that have been raised in the
20 consultation process. So I would like to emphasise 10: 43
21 that we are very much here to listen to views that
22 are being expressed so that we can take those into
23 account.

24
25 But issues that we had already identified that will 10: 43
26 be included in this discussion include the selection
27 of Design code, comparison with international
28 standards, the high design pressure of the pipeline
29 that's much higher than is common for onshore

1 pipelines and certainly the full design pressure
2 outside the range of validation of many of the
3 models, proximity of the pipeline to housing and the
4 possible consequences of a failure, the influence on
5 the safety aspects of the untreated gas composition, 10: 44
6 the fact that the pipeline route crosses areas of
7 deep peat which can be prone to ground movement and
8 risk mitigation options.

9
10 My last slide is just to sort of summarise really and 10: 44
11 to say that we do recognise the real concerns that
12 people have over the safety of the pipeline, and we
13 are offering independent professional people with a
14 lot of experience in dealing with these issues.

15 Advantica has access to a lot of historical 10: 44
16 information from its involvement with the British Gas
17 industry but also through collaboration with
18 companies from around the world and we have developed
19 sophisticated tools and methods for assessing risk
20 from gas pipelines. Importantly those are validated 10: 44
21 by comparison with data from very large and full
22 scale experiments and with information gained from
23 incidents.

24
25 Finally, we are at the cutting edge of development of 10: 45
26 new methodologies. Both Bob and I and our colleagues
27 have been involved in the development of the relevant
28 design codes and standards that we will be referring
29 to in the Safety Review. Thank you, Mr. Chairman.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29

END OF SUBMISSION BY MR. MIKE ACTON

CHAIRMAN: Thank you, gentlemen. For those of you who were not here yesterday I should explain that there is a stenographer present, this young lady on my left. Her function is to record everything that is said at this meeting, to transcribe it and present it in printed form in due course so that it can be made available to the Minister. And the Minister has told me that he will consider every representation and submission that is made here. I now would ask anybody who wishes to make a submission perhaps to put up their hand and to start the proceedings this morning.

10: 45
10: 45
10: 46

SUBMISSION BY MR. BOB ANDREWS

MR. ANDREWS: Mr. Chairman, Bob Andrews from Advantica. Mr. Chairman, for the record I would like just to clarify one issue from yesterday afternoon's discussion. I referred to some information that Advantica had received on depth of cover. In this I was referring to the depth of soil or peat above the top of the pipe, not to any depth below the pipe above bedrock. There was a bit of a jargon problem, I'm afraid, between myself and Mr. Sweetman and I would just like to clarify that for the record, that the information

10: 46
10: 46

1 we have received so far and were considering related
2 only to depth of the soil or peat above the top of
3 the pipe.

4
5 END OF SUBMISSION BY MR. BOB ANDREWS

10: 46

6
7 CHAIRMAN: Thank you very much. I
8 know that you had a brief
9 chat with Mr. Sweetman about this after we finished
10 the meeting yesterday and he agreed that you should
11 clarify this morning what you had been referring to.

10: 47

12
13 Now is there anybody who wishes to make any
14 submission this morning? Nobody? Nothing new to
15 say.

10: 47

16
17 I should say that there are a number of people here
18 today who did make submissions yesterday. But there
19 are few new faces around and I wonder does anybody
20 want to say anything? No?

10: 47

21
22 All right. Well I think unless people have been held
23 up or delayed or whatever, I think I will adjourn
24 this meeting for perhaps 10, 15 minutes and we will
25 resume and see if there is anybody present at that
26 time who wishes to make a submission. If there is
27 not, I intend to close the meeting and ask Mr. Hanna
28 and Advantica to present their reports in due course.
29 At the moment, I think we will say 11:05. Thank you.

10: 48

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29

SHORT ADJOURNMENT

1 THE HEARING RESUMED, AS FOLLOWS, AFTER THE SHORT
2 ADJOURNMENT

3
4
5 CHAIRMAN: Now ladies and gentlemen, I 11:08
6 again ask is there anybody
7 present who would like to make a submission? No,
8 there is nobody, sorry?

9 MS. BHREATHNACH: Is there a microphone,
10 please? 11:28

11 CHAIRMAN: Yes, there is. I know that
12 you spoke
13 yesterday... (INTERJECTION)

14 MS. BHREATHNACH: Well, even if there is
15 nobody else I would like to 11:29
16 make some kind of a conclusion. I am happy to wait
17 until everybody else has spoken. I just want to say
18 that I am in no hurry whatsoever to speak and I don't
19 want to take anybody else's time. So, I just want to
20 make a closing comment, suggestion, you know. I will 11:29
21 hand back the microphone.

22 CHAIRMAN: Sorry, your name is Máire
23 Bhreathnach, and I know
24 that you spoke here yesterday for some time.

25 MS. BHREATHNACH: Yes, yes, I'm not in any 11:29
26 hurry to speak again.

27 CHAIRMAN: There is nobody else
28 offering to speak and I
29 think you should start.

1 Can I ask you to please remember that this meeting is
2 dealing with safety. Safety issues are really what
3 we are concerned with. I have noted everything that
4 you said yesterday, it is on tape and it has been
5 recorded by the stenographer. I would ask you not to 11: 30
6 repeat anything that you have dealt with, but if you
7 have something else new that you wish to contribute,
8 please do so.

9

10 CLOSING SUBMISSION BY MS. MÁIRE BHREATHNACH 11: 30

11

12

13 MS. BHREATHNACH: First of all, just to
14 clarity your point. As was
15 mentioned yesterday the terms of reference are so 11: 30
16 narrow that it tells me that we really -- and I said
17 this yesterday so I haven't begun yet now, by the
18 way, -- that we really do not know what we are doing.
19 I would say that in relation to all of our
20 institutions, our religious, our political, our 11: 30
21 economic, and our commercial and our educational
22 institutions, the by-products of those, like, are
23 legal institutions.

24

25 You know, if we knew who we were, the Constitution 11: 31
26 and our legal institutions, our judiciary, whatever,
27 would never let this happen.

28

29 I am talking about what is happening in North Mayo

1 and indeed in many, many local places all over the
2 planet. So it's local and it's global by way of a
3 problem. So I need to say that first, so it's
4 impossible to speak within your terms of reference,
5 safety at local level is safety at planetary level, 11: 31
6 safety globally is safety locally. So, you know, if
7 you confine me, or if you restrain me, if you like
8 this gathering, apart altogether from it happening
9 when it's happening, as was stated yesterday in the
10 statement from Dr. Mark Garvan on behalf of the 11: 32
11 Rossport five. It's absolutely worthless and
12 meaningless and a waste of time. So I need to say
13 that very, very honestly.

14
15 So I was going to suggest, I was going to make a 11: 32
16 number of points and I wanted to indicate
17 particularly to the Minister that if these points are
18 not considered, particularly for such major
19 decisions, then we are going to keep going down this
20 road and we and the natural world will meet 11: 32
21 catastrophe, if not perish, on the way.

22
23 So I think we need to open up this whole, what will I
24 say, issue, and if not today at another time. It is
25 too serious, you know, our children and all the 11: 32
26 children into the future are going to be paying a
27 heavy price if they live to see it.

28
29 As we speak the climate is changing. We might not

1 see it literally happening because the geological
2 time is so different to our shallow time, if you
3 like. We are in and then we're out, like the twinkle
4 of a star. So I need to say that first. So, I would
5 like to continue, right. Okay, thank you. 11: 33

6
7 So, what I am saying is that I worry about safety and
8 I know it is very, very critical for those people who
9 are immediately living here and I cannot state that
10 strongly enough. But that is so for people living 11: 34
11 locally everywhere. So, I am making these following
12 points, and I'm saying if they're not taken into
13 consideration then it would take safety at the
14 broadest level and the narrowest level, I suppose,
15 local level, then we are in deeper trouble than we 11: 34
16 are right now.

17
18 I would be asking that the Minister and that
19 companies like Shell and, indeed, any kind of human
20 work would insist on the rights of humanity and 11: 34
21 nature to coexist in a healthy, supportive, diverse,
22 and sustainable condition. That the elements of
23 human design interact with and depend upon the
24 natural world with broad and diverse implications at
25 every scale. 11: 35

26
27 Accept responsibility for the consequences of design
28 decisions upon human well-being, the viability of
29 natural systems and their right to coexist. Do not

1 burden future generations with requirements for
2 maintenance or vigilant administration of potential
3 danger due to the careless creation of products,
4 processes, or standards.

11:35

5
6 Eliminate the concept of waste. Waste for one
7 becomes food for another. That's how earth does it
8 and that's why I said yesterday that earth is our
9 great model and mentor. Human designs should be like
10 the living world. Derive their creative forces from 11:36
11 perpetual solar income. Solar energy deriving from
12 that wind energy, wave energy etcetera.

13
14 Treat nature as a model and mentor not as an
15 inconvenience to be evaded or controlled. Encourage 11:36
16 direct and open communication between all before the
17 dotted lines are signed, consents given etcetera,
18 etcetera, etcetera. So, in conclusion coming back to
19 where we are right now, again, I want to state that
20 the context for this project and, indeed, this 11:37
21 gathering is inadequate.

22
23 I suggest that our government, our guardians,
24 supposedly, I regrettably add, require Shell to stop,
25 turnaround and go in a totally new direction. Invite 11:37
26 Shell to explore and advance alternative energy
27 products that enhance human earth relationships. And
28 before Shell take up and leave here, restore this
29 place to its original state to the life community

1 here. The human community and all of the other
2 communities who dwell here. Thank you.

3

4

END OF SUBMISSION BY MS. MÁIRE BHREATHNACH

5

11:38

6

7

CHAIRMAN: Thank you, Máire. Does
8 anybody want to make a
9 submission?

10

11:38

11

12

13

14

15

16

17

18

19

Well, in that event I will close the meeting. I
would like to thank everybody who came here today and
came here yesterday, everybody who participated. I
would like to thank them for their courtesy and,
indeed, from my own particular point of view, the
welcome that we received because it was, as I
anticipated, a very relaxed day yesterday and people
were very kind and very generous.

11:39

20

21

22

23

24

25

26

27

28

29

THE HEARING WAS THEN CONCLUDED

11:39

11:39

1

1 [2] - 10:15, 24:1
10 [6] - 13:15, 13:17,
13:19, 13:23, 13:26,
27:24
100 [1] - 21:11
10:10 [1] - 4:7
11:05 [1] - 27:29
13 [2] - 1:21, 4:2
15 [4] - 3:9, 6:28, 7:3,
27:24
16 [1] - 3:11
17 [1] - 18:10
18 [1] - 3:11
19 [1] - 3:13
1995 [1] - 9:27

2

20 [2] - 6:13, 18:4
2002 [2] - 6:28, 7:3
2004 [1] - 7:11
2005 [4] - 1:21, 4:2,
8:24, 13:15
21 [1] - 7:10
26 [2] - 3:13, 3:15
27 [2] - 3:15, 3:17
28 [4] - 3:17, 3:19,
13:5, 13:29
29 [1] - 3:21

3

3 [1] - 22:26
30 [2] - 3:21, 3:23
34 [2] - 3:23, 3:25
350 [1] - 6:16

4

4 [1] - 3:7

5

5 [2] - 3:7, 3:9
500 [1] - 17:8

6

65 [1] - 6:14

9

900 [1] - 6:11

A

above-named [1] -
1:30

absolutely [1] -
31:11
Accept [1] - 32:27
access [2] - 17:15,
25:15
accidental [1] - 18:9
accordance [1] -
19:28
account [3] - 12:8,
16:22, 24:23
accurate [2] - 1:26,
8:6
acquisition [1] - 17:5
act [1] - 4:15
Act [6] - 6:24, 6:25,
7:1, 7:6, 9:27
acted [2] - 4:17, 4:18
action [1] - 1:30
activities [4] - 5:29,
8:27, 8:28, 12:3
Acton [7] - 2:17,
3:13, 5:5, 18:7, 19:1,
19:3, 26:1
add [2] - 19:25,
33:24
added [1] - 17:4
additional [2] - 7:24,
21:5
addressed [4] -
12:28, 20:13, 20:23,
23:15
addressing [1] -
20:24
adjourn [1] - 27:23
Adjournment [3] -
3:19, 28:1, 29:2
administered [1] -
7:12
administration [1] -
33:2
administrative [1] -
6:21
adopting [1] - 24:15
advance [1] - 33:26
Advantica [1] - 2:13,
5:6, 14:1, 14:28, 15:3,
16:9, 16:26, 25:15,
26:20, 26:23, 27:28
advice [1] - 16:29
Advice [1] - 10:9
advised [1] - 4:18
Advisor [1] - 4:23
Advisory [10] - 5:12,
5:26, 6:3, 8:23, 9:3,
12:4, 13:12, 13:21,
14:15, 21:3
afraid [1] - 26:27
afternoon's [1] -
26:22
agreed [1] - 27:10
allows [1] - 7:1

alternative [1] -
33:26
altogether [1] - 31:8
America [2] - 17:6,
17:13
analyses [1] - 20:4
analysis [1] - 21:3
Andrews [9] - 2:16,
3:15, 5:5, 18:2, 23:9,
26:17, 26:19, 27:5
answer [1] - 16:18
anticipated [1] -
34:17
apart [1] - 31:8
Appearances [1] -
2:4
appendices [2] -
22:10, 22:21
appoint [2] - 9:13,
10:12
appointed [4] - 5:7,
10:2, 10:5, 10:9
appointment [2] -
9:10, 9:14
appropriate [4] -
11:11, 11:13, 14:28,
21:14
approval [1] - 7:3
approvals [1] - 8:22
approved [1] - 6:28
April [2] - 6:28, 7:3
area [4] - 8:5, 18:2,
18:8, 23:9
areas [3] - 17:9,
17:20, 25:6
arising [1] - 9:21
arrangements [1] -
6:21
arrive [1] - 9:14
arriving [1] - 4:8
Arwell [7] - 2:15, 5:6,
15:1, 16:1, 16:5,
18:15, 19:3
aspect [1] - 23:7
aspects [4] - 19:8,
20:1, 20:16, 25:5
assemble [1] - 5:24
assess [1] - 23:6
assessing [2] -
20:22, 25:19
assessment [4] -
22:23, 23:25, 24:1,
24:13
assignment [1] -
17:17
Assistant [2] - 2:11,
5:1
associated [1] -
10:22
attention [3] - 7:17,
12:23, 12:27

B

August [8] - 10:10,
10:11, 13:13, 13:15,
13:17, 13:19, 13:23,
13:26
authorised [1] - 10:2
authorities [1] -
11:14
Authority [1] - 7:13
authority [1] - 9:26
available [4] - 13:1,
14:2, 20:19, 26:10
aware [1] - 7:9

background [8] -
14:23, 16:8, 16:10,
16:25, 19:11, 21:9,
21:15, 22:11
base [1] - 17:4
based [4] - 14:5,
14:16, 17:27, 18:10
bearing [1] - 11:1
becomes [1] - 33:7
bedrock [1] - 26:26
beginning [2] -
13:13, 14:19
begun [1] - 30:17
behalf [1] - 31:10
behind [1] - 5:20
bell [1] - 5:22
Bellanaboy [1] - 7:21
below [1] - 26:26
best [4] - 11:16,
11:23, 17:16, 19:29
better [1] - 4:12
between [2] - 26:28,
33:16
Bhreathnach [9] -
2:21, 3:23, 29:9,
29:14, 29:23, 29:25,
30:10, 30:13, 34:4
billion [1] - 6:11
bit [5] - 12:2, 12:14,
14:29, 22:7, 26:27
blue [1] - 22:17
Bob [17] - 2:9, 2:16,
4:22, 5:5, 5:10, 5:14,
15:5, 16:3, 18:2, 19:5,
19:23, 20:11, 23:9,
25:26, 26:17, 26:19,
27:5
Bord [1] - 7:10
box [1] - 8:8
brief [1] - 27:8
briefly [5] - 6:4, 6:20,
10:4, 13:28, 16:8
bring [1] - 17:17
bringing [1] - 7:7
brings [1] - 6:16
British [2] - 17:3,

C

25:16
broad [1] - 32:24
broadest [1] - 32:14
bulk [1] - 22:15
burden [1] - 33:1
business [1] - 13:5
by-products [1] -
30:22

calculations [2] -
20:3, 22:23
caliber [1] - 9:12
cannot [1] - 32:9
captured [1] - 13:18
car [1] - 5:24
careless [1] - 33:3
carried [1] - 22:24
carry [1] - 17:18
carrying [1] - 19:15
case [1] - 17:21
catastrophe [1] -
31:21
causes [1] - 24:3
centre [2] - 4:29,
18:7
certainly [1] - 25:1
certify [1] - 1:24
chair [1] - 5:26
Chair [1] - 10:9
Chairman [16] - 1:17,
4:5, 4:15, 5:17, 5:26,
12:17, 25:29, 26:3,
26:19, 26:21, 27:7,
29:5, 29:11, 29:22,
29:27, 34:7
challenges [1] - 6:17
changing [1] - 31:29
characteristics [1] -
24:7
chat [1] - 27:9
Chief [4] - 2:9, 2:11,
4:22, 5:1
children [2] - 31:25,
31:26
China [1] - 17:14
clarification [2] -
16:19, 21:8
clarify [4] - 13:10,
26:21, 26:29, 27:11
clarity [1] - 30:14
classifying [1] -
21:12
clear [1] - 20:15
clearly [1] - 16:18
climate [1] - 31:29
close [3] - 13:5,
27:27, 34:11
Closing [2] - 3:23,
30:10

closing [1] - 29:20
code [1] - 24:27
codes [3] - 11:11, 19:29, 25:28
coexist [2] - 32:21, 32:29
collaboration [1] - 25:17
colleagues [4] - 5:11, 6:1, 17:29, 25:26
collection [1] - 7:22
combined [1] - 24:9
coming [1] - 33:18
comment [2] - 22:2, 29:20
comments [4] - 13:3, 14:27, 22:3, 22:22
commercial [1] - 30:21
commissioned [1] - 19:20
common [1] - 24:29
communication [1] - 33:16
Communications [2] - 4:24, 5:3
Communications, marine [1] - 2:7
communities [1] - 34:2
community [2] - 33:29, 34:1
companies [3] - 6:8, 25:18, 32:19
company [2] - 6:27, 11:6
comparison [2] - 24:27, 25:21
complete [1] - 14:20
completeness [2] - 19:27, 20:20
compliance [1] - 11:23
comply [2] - 11:11, 11:15
composition [1] - 25:5
comprise [1] - 6:2
concept [1] - 33:6
conception [1] - 8:20
concerned [1] - 30:3
concerns [4] - 19:16, 19:21, 21:26, 25:11
conclude [1] - 11:9
Concluded [2] - 3:25, 34:27
concluded [2] - 14:5, 14:20
concluding [1] - 22:18

conclusion [2] - 29:16, 33:18
conclusions [1] - 9:19
condition [1] - 32:22
conditions [3] - 7:4, 21:22, 21:23
conducted [1] - 12:6
conducting [1] - 12:18
confine [1] - 31:7
confirm [1] - 21:20
confirming [1] - 19:27
confusion [1] - 13:11
connected [2] - 4:17, 7:21
connection [2] - 6:1, 23:27
consecutive [1] - 17:24
consent [2] - 6:26, 7:11
consenting [1] - 8:22
consents [1] - 33:17
consequences [4] - 18:9, 19:18, 25:4, 32:27
consider [3] - 11:24, 14:10, 26:11
consideration [2] - 23:6, 32:13
considered [3] - 13:24, 20:6, 31:18
considering [1] - 27:1
Constitution [1] - 30:25
constraints [1] - 22:29
constructed [2] - 7:2, 11:18
construction [4] - 10:19, 20:10, 20:25, 23:21
consultancies [1] - 17:5
consultancy [1] - 16:27
Consultant [1] - 2:16
consultant's [1] - 14:17
Consultants [1] - 5:7
consultants [1] - 9:11, 9:12, 9:19, 10:5, 10:14, 11:16, 12:15, 13:24, 14:10, 17:28, 19:6
consultation [4] - 9:16, 13:29, 14:25, 24:20

contained [2] - 14:21, 22:9
context [2] - 16:25, 33:20
Continental [1] - 6:23
continue [1] - 32:5
Continued [1] - 4:1
continuous [1] - 5:22
contract [2] - 9:14, 10:12
contribute [1] - 30:7
control [2] - 7:20, 23:20
controlled [4] - 7:19, 7:26, 7:27, 33:15
copies [1] - 12:29
correspondence [1] - 13:17
Corrib [3] - 1:10, 4:17, 19:13
corrosion [1] - 23:20
counsel [1] - 4:14
countries [1] - 17:13
country [2] - 6:13, 6:14
course [6] - 17:15, 17:27, 22:2, 24:18, 26:9, 27:28
courtesy [1] - 34:14
cover [4] - 16:8, 21:7, 23:13, 26:24
covered [1] - 19:23
covering [5] - 17:9, 20:16, 21:16, 22:28, 23:2
creation [1] - 33:3
creative [1] - 33:10
credentials [1] - 16:10
critical [2] - 19:26, 32:8
critically [1] - 11:7
crosses [1] - 25:6
cubic [1] - 6:11
current [2] - 6:13, 11:15
cutting [1] - 25:25
cycle [1] - 17:1

D

danger [1] - 33:3
data [2] - 20:1, 25:21
dealing [2] - 25:14, 30:2
dealt [1] - 30:6
December [1] - 14:19
decided [1] - 12:12
decisions [2] - 31:19, 32:28

deemed [1] - 11:15
deep [2] - 6:15, 25:7
deeper [1] - 32:15
deficiencies [2] - 11:25, 11:26
deficiency [1] - 20:11
deficit [1] - 12:2
delayed [1] - 27:23
deliver [1] - 11:17
democratic [1] - 12:2
Department [1] - 2:7, 4:24, 5:2, 5:27, 5:29, 6:23, 8:21, 8:29, 9:2, 11:6, 12:3, 12:28, 13:17
depth [4] - 26:24, 26:25, 26:26, 27:2
Derive [1] - 33:10
deriving [1] - 33:11
describe [1] - 22:14
design [1] - 9:22, 10:18, 10:23, 19:29, 20:2, 20:9, 20:18, 21:9, 23:1, 23:9, 24:28, 25:1, 25:28, 32:23, 32:27
Design [1] - 24:27
designed [1] - 23:11
designs [1] - 33:9
detail [5] - 6:20, 10:6, 20:25, 22:9, 22:14
detailed [2] - 11:27, 21:14
details [1] - 22:23
determine [1] - 14:7
developed [1] - 25:18
development [3] - 22:27, 25:25, 25:27
Development [1] - 6:27
developments [1] - 9:23
device [1] - 7:22
Dick [2] - 2:11, 6:2
different [1] - 32:2
difficult [2] - 6:9, 6:14
direct [1] - 33:16
directed [1] - 13:20
direction [1] - 33:25
directly [1] - 19:6
Director [4] - 2:15, 2:17, 5:6, 15:2
discuss [2] - 21:8, 22:27
discussing [1] - 20:11
discussion [4] - 8:4,

24:17, 24:26, 26:22
Discussion [3] - 3:7, 3:17, 3:21
diverse [2] - 32:21, 32:24
Division [1] - 5:2
documentation [5] - 10:18, 11:5, 19:26, 19:28, 20:19
documents [8] - 19:9, 21:2, 21:8, 21:11, 21:13, 21:15, 21:17, 23:13
done [1] - 11:22
door [1] - 5:20
dotted [1] - 33:17
down [1] - 31:19
Dr [9] - 2:16, 2:17, 3:13, 3:15, 5:5, 18:2, 18:7, 31:10
draft [5] - 14:1, 14:6, 14:11, 22:1, 22:3
draw [1] - 12:27
due [5] - 22:1, 22:2, 26:9, 27:28, 33:3
during [1] - 20:24
dwelt [1] - 34:2

E

early [2] - 14:2, 22:1
earth [3] - 33:7, 33:8, 33:27
East [1] - 17:14
economic [1] - 30:21
edge [1] - 25:25
educational [1] - 30:21
effect [2] - 24:8, 24:14
efficient [1] - 11:20
either [2] - 11:10, 21:12
element [1] - 9:17
elements [2] - 24:9, 32:22
Eliminate [1] - 33:6
elsewhere [1] - 20:23
emphasise [1] - 24:20
empower [1] - 9:28
Encourage [1] - 33:15
end [5] - 8:24, 11:17, 13:13, 13:29, 14:18
End [5] - 15:5, 18:15, 26:1, 27:5, 34:4
Energy [2] - 4:23, 9:27
energy [5] - 16:27,

33:11, 33:12, 33:26
Engineer [2] - 2:11, 5:1
engineering [5] - 16:27, 17:5, 17:23, 20:18, 23:13
Engineering [2] - 5:2, 23:9
Engineers [1] - 17:25
engineers [2] - 17:8, 17:28
enhance [1] - 33:27
Environmental [1] - 7:12
environmental [1] - 20:22
equipment [1] - 20:27
equivalent [1] - 7:7
essentially [3] - 22:28, 23:10, 23:13
established [2] - 8:24, 9:3
establishment [1] - 12:4
esteemed [1] - 12:17
etcetera [4] - 33:12, 33:17, 33:18
Europe [1] - 17:13
evaded [1] - 33:15
evaluating [1] - 21:1
evaluation [1] - 9:9
event [2] - 24:4, 34:11
events [1] - 14:20
eventually [1] - 7:10
everywhere [1] - 32:11
evidence [1] - 1:29
Examination [1] - 3:5
examine [1] - 11:7
example [2] - 7:28, 22:21
exceptions [1] - 8:17
Executive [2] - 2:15, 15:2
exist [3] - 11:10, 11:11, 13:12
exists [1] - 11:5
exit [1] - 5:21
exits [1] - 5:20
experience [3] - 18:5, 18:10, 25:14
experiments [1] - 25:22
expertise [8] - 9:12, 11:9, 16:28, 17:9, 17:20, 17:28, 18:3, 18:8
explain [1] - 26:5
exploration [2] - 6:7,

8:27
explore [1] - 33:26
expressed [3] - 16:21, 19:16, 24:22
extreme [1] - 5:8

F

faces [1] - 27:19
facilitated [1] - 12:16
facilities [5] - 7:19, 8:15, 10:22, 11:10, 11:14
facility [2] - 11:18, 12:9
fact [3] - 12:27, 19:5, 25:6
fail [3] - 7:25, 24:4, 24:5
fail-safe [1] - 7:25
failure [3] - 19:19, 24:3, 25:4
fairly [1] - 24:2
fall [1] - 8:11
falls [2] - 10:26, 10:27
familiar [1] - 8:5
far [1] - 27:1
fashion [1] - 12:13
fatigue [1] - 23:16
features [2] - 6:4, 7:16
feet [1] - 6:11
fell [1] - 21:18
few [1] - 27:19
Field [1] - 4:18
field [1] - 6:10
filed [1] - 6:27
final [2] - 14:12, 22:3
Finally [1] - 25:25
finished [1] - 27:9
fire [4] - 5:19, 5:21, 24:7, 24:8
first [7] - 9:8, 10:10, 16:7, 16:12, 16:25, 31:3, 32:4
First [1] - 30:13
firstly [1] - 21:1
Firstly [1] - 19:3
fit [1] - 11:19
five [1] - 31:11
floor [1] - 14:27
flowchart [1] - 24:10
focus [1] - 16:27
followed [3] - 6:7, 22:2, 22:15
following [6] - 1:25, 9:21, 20:29, 21:3, 24:13, 32:11
Following [2] - 9:19, 14:15

Follows [2] - 4:1, 29:1
food [1] - 33:7
forces [1] - 33:10
Foreshore [2] - 7:6, 9:28
form [1] - 26:9
forth [1] - 9:10
four [1] - 22:16
framework [1] - 5:28
Friday [1] - 13:5
full [2] - 25:1, 25:21
fully [1] - 16:22
function [2] - 6:23, 26:7
functions [1] - 8:26
future [2] - 31:26, 33:1

G

gained [2] - 18:4, 25:22
Gallagher [3] - 4:10, 4:14, 14:26
Gallaher [1] - 1:19
gamut [1] - 14:20
Garvan [1] - 31:10
gas [10] - 6:10, 6:12, 8:26, 16:28, 18:9, 18:11, 19:15, 24:5, 25:5, 25:20
Gas [6] - 1:10, 4:17, 7:1, 17:3, 17:25, 25:16
gathering [2] - 31:8, 33:21
generally [1] - 19:11
generations [1] - 33:1
generous [1] - 34:18
gentlemen [4] - 4:6, 4:27, 26:3, 29:5
geological [1] - 32:1
Geological [1] - 4:29
Geologist [2] - 2:10, 4:28
given [5] - 7:3, 7:8, 19:15, 23:6, 33:17
global [1] - 31:2
globally [1] - 31:6
governed [1] - 23:1
government [1] - 33:23
governs [2] - 6:26, 7:7
granted [1] - 7:10
grateful [2] - 12:16, 12:17
great [1] - 33:9
Griffiths [8] - 2:15,

3:11, 5:6, 15:1, 16:1, 16:3, 16:5, 18:15
ground [3] - 21:22, 23:19, 25:7
Group [14] - 5:12, 5:27, 6:3, 8:23, 9:3, 9:20, 10:10, 12:4, 12:5, 12:29, 13:12, 13:21, 14:15, 21:3
growth [1] - 17:4
Gsi [1] - 2:10
guardians [1] - 33:23
guidance [1] - 11:27

H

hand [3] - 18:13, 26:14, 29:21
Hanna [9] - 2:9, 3:9, 4:22, 5:10, 5:14, 5:16, 15:5, 19:23, 27:27
happy [1] - 29:16
hard [1] - 12:29
hazard [2] - 17:10, 23:25
hazards [1] - 23:26
health [1] - 20:16
healthy [1] - 32:21
hear [4] - 5:23, 9:11, 16:20, 21:26
Heard [1] - 1:17
hearing [1] - 21:26
Hearing [5] - 1:7, 3:25, 4:1, 29:1, 34:27
heavy [1] - 31:27
held [3] - 8:1, 21:7, 27:22
helpful [1] - 34:22
hereby [1] - 1:24
high [2] - 19:14, 24:28
higher [1] - 24:29
highlighted [2] - 22:16, 22:26
historical [1] - 25:15
history [1] - 21:17
hitting [1] - 23:18
home [1] - 34:24
honestly [1] - 31:13
hope [1] - 5:22
hotel [3] - 5:24, 34:20, 34:21
housing [1] - 25:3
human [5] - 32:19, 32:23, 32:28, 33:27, 34:1
Human [1] - 33:9
humanity [1] - 32:20
hurry [2] - 29:18, 29:26

I

idea [2] - 22:7, 22:8
identification [1] - 23:26
identified [3] - 11:4, 23:27, 24:25
identify [4] - 10:17, 11:25, 20:12, 24:17
identifying [2] - 21:4, 24:3
ignite [2] - 24:6, 24:7
illustrated [1] - 24:10
immediately [1] - 32:9
impact [3] - 10:25, 20:22, 23:17
implement [1] - 11:27
implications [1] - 32:24
important [11] - 6:4, 7:11, 9:17, 12:5, 12:21, 13:7, 13:15, 14:23, 17:13, 21:15, 23:5
importantly [1] - 24:19
Importantly [1] - 25:20
impossible [1] - 31:4
inadequate [1] - 33:21
incidents [2] - 19:12, 25:23
include [4] - 20:3, 22:10, 22:21, 24:26
included [3] - 11:1, 20:15, 24:26
includes [1] - 9:16
including [2] - 17:9, 21:22
income [1] - 33:11
inconvenience [1] - 33:15
indeed [4] - 31:1, 32:19, 33:20, 34:15
independent [3] - 20:2, 20:8, 25:13
Index [1] - 3:3
indicate [1] - 31:16
indicative [1] - 8:4
industry [7] - 16:28, 16:29, 17:21, 18:5, 18:11, 19:11, 25:17
influence [1] - 25:4
information [10] - 11:7, 11:8, 12:29, 13:25, 21:5, 21:16, 25:16, 25:22, 26:23, 26:29

initial [2] - 21:1, 21:3
input [2] - 12:13, 21:26
inside [1] - 8:16
insist [1] - 32:20
inspection [2] - 9:6, 9:23
Inspector [1] - 4:24
installation [1] - 23:21
installations [1] - 9:29
Institution [1] - 17:25
institutions [4] - 30:20, 30:22, 30:23, 30:26
Insulations [1] - 4:23
integrity [2] - 18:3, 23:16
intend [1] - 27:27
intended [1] - 23:12
interact [1] - 32:23
interesting [1] - 6:6
interests [1] - 5:19
International [2] - 17:16, 17:24
international [2] - 11:16, 24:27
interview [1] - 10:12
interviewing [1] - 9:10
introduce [3] - 4:12, 5:10, 17:29
introduction [1] - 22:11
investigation [1] - 18:9
invitation [1] - 13:14
Invite [1] - 33:25
invite [3] - 9:8, 14:28, 15:1
invited [1] - 12:20
inviting [2] - 14:25, 14:26
involved [8] - 7:21, 8:14, 8:21, 16:29, 18:8, 21:25, 25:27, 34:23
involvement [2] - 17:15, 25:16
ippc [1] - 7:13
Ireland [1] - 4:29
Irish [1] - 11:14
issue [2] - 26:22, 31:24
issued [2] - 13:14, 22:2
issues [6] - 6:17, 23:7, 24:17, 24:25, 25:14, 30:2

itself [1] - 24:1

J

jargon [1] - 26:27
job [5] - 5:28, 9:13, 9:20, 11:19, 23:11
John[3] - 1:19, 4:10, 4:14
judgement [1] - 11:9
judiciary [1] - 30:26
July[2] - 8:24, 13:13

K

keep [2] - 7:26, 31:19
key [1] - 20:4
kilometres [1] - 6:15
kind [4] - 23:15, 29:16, 32:19, 34:18
knowledge [1] - 17:4
known [3] - 7:17, 7:25, 10:20
Koen[4] - 2:10, 4:28, 6:2, 8:9

L

ladies [2] - 4:5, 29:5
lady [1] - 26:6
land [2] - 7:2, 8:11
landfall [2] - 10:21, 23:4
large [2] - 6:10, 25:21
larger [1] - 19:5
last [3] - 17:24, 22:5, 25:10
layouts [1] - 16:9
leading [1] - 18:1
leave [3] - 4:22, 5:23, 33:28
left [3] - 4:13, 18:2, 26:6
legal [3] - 6:21, 30:23, 30:26
legally [1] - 10:2
legislation [3] - 6:25, 7:6, 9:26
level [5] - 31:5, 32:14, 32:15
License[1] - 9:28
license [1] - 7:13
life [2] - 17:1, 33:29
likely [1] - 24:6
Likewise[1] - 10:28
limited [1] - 8:16
Limited[1] - 15:3
lines [1] - 33:17
listen [2] - 16:21, 24:21

literally [1] - 32:1
live [1] - 31:27
living [3] - 32:9, 32:10, 33:10
loading [1] - 23:16
local [6] - 19:16, 21:22, 31:1, 31:2, 31:5, 32:15
locally [2] - 31:6, 32:11
locations [1] - 23:4
logical [1] - 24:10
look [5] - 9:4, 10:1, 23:25, 24:14
looked [1] - 12:7
looking [5] - 16:13, 19:8, 20:3, 20:5, 24:4
looks [2] - 6:24, 8:23
lost [1] - 7:28

M

main [1] - 22:9
maintenance [2] - 23:23, 33:2
major [3] - 6:25, 6:26, 31:18
manage [1] - 9:15
managed [1] - 23:28
management [1] - 17:10
Managers [1] - 17:25
manifold [1] - 7:22
manner [1] - 11:20
map [1] - 8:4
Marine [2] - 4:24, 5:3
Mark [1] - 31:10
materials [1] - 23:19
matter [1] - 4:20
Mayo [1] - 30:29
Mckeever [3] - 2:11, 5:1, 6:2
meaningless [1] - 31:12
means [2] - 10:22, 14:17
measures [3] - 20:6, 24:14, 24:15
mechanical [1] - 23:16
mechanism [1] - 10:2
meet [2] - 12:14, 31:20
meeting [10] - 4:16, 4:26, 9:17, 21:7, 26:8, 27:10, 27:24, 27:27, 30:1, 34:11
mentioned [1] - 30:15
mentor [2] - 33:9,

33:14
methodologies [1] - 25:26
methods [1] - 25:19
metres [1] - 6:16
Michael [1] - 5:5
Mick [1] - 2:17
microphone [2] - 29:9, 29:21
Middle [1] - 17:14
might [2] - 24:4, 31:29
Mike [5] - 16:12, 18:7, 18:11, 19:1, 26:1
Minister [12] - 4:15, 4:19, 4:27, 5:7, 8:25, 9:21, 14:13, 14:16, 26:10, 31:17, 32:18
Minister's [1] - 12:23
Minster [1] - 9:4
minute [1] - 22:18
minutes [1] - 27:24
Miscellaneous [1] - 9:27
mitigation [1] - 25:8
model [2] - 33:9, 33:14
models [2] - 20:1, 25:3
moment [1] - 27:29
monitored [1] - 7:20
monitoring [3] - 8:28, 9:5, 9:23
month [1] - 10:11
morning [6] - 4:5, 16:4, 16:7, 26:15, 27:11, 27:14
Most [2] - 16:12, 17:22
most [2] - 4:10, 16:11
move [2] - 8:26, 16:11
movement [2] - 23:19, 25:7
Máire [6] - 2:21, 3:23, 29:22, 30:10, 34:4, 34:7

N

name [4] - 4:10, 4:14, 16:4, 29:22
named [1] - 1:30
narrow [1] - 30:16
narrowest [1] - 32:14
Natural[3] - 2:7, 4:25, 5:3
natural [3] - 31:20, 32:24, 32:29

nature [3] - 13:9, 32:21, 33:14
necessary [3] - 5:23, 6:22, 13:25
need [6] - 8:6, 13:10, 31:3, 31:12, 31:23, 32:4
neutral [1] - 4:16
never [1] - 30:27
new [6] - 9:22, 25:26, 27:14, 27:19, 30:7, 33:25
Nobody[1] - 27:14
nobody [3] - 29:8, 29:15, 29:27
normal [1] - 10:13
North [3] - 17:6, 17:13, 30:29
noted [1] - 30:3
Nothing [1] - 27:14
November [3] - 14:2, 14:19, 22:1
number [10] - 6:7, 6:8, 6:16, 6:17, 7:4, 7:23, 8:25, 19:7, 27:17, 31:16

O

observations [4] - 13:19, 14:5, 14:11, 14:17
obtained [1] - 19:27
obviously [3] - 21:25, 22:18, 24:17
occurred [1] - 19:13
October[5] - 1:21, 4:2, 7:10, 13:5, 13:29
offering [2] - 25:13, 29:28
Officer[1] - 2:9
officers [1] - 10:2
offshore [4] - 6:15, 7:22, 8:15, 20:26
oil [2] - 8:26, 18:11
one [6] - 7:11, 7:24, 17:16, 22:26, 26:22, 33:6
ongoing [2] - 9:5, 9:15
Onshore[2] - 1:12, 19:14
onshore [9] - 7:7, 7:18, 7:20, 7:23, 10:21, 10:29, 20:17, 20:26, 24:29
open [6] - 7:27, 10:8, 13:9, 14:24, 31:23, 33:16
operate [2] - 17:12, 19:14

operating [1] - 11:12
operation [7] - 10:19, 10:23, 10:25, 10:29, 11:2, 20:10, 23:22
operations [1] - 23:22
opinion [1] - 20:9
opportunity [5] - 4:8, 12:13, 12:14, 13:2, 21:27
option [1] - 23:3
options [1] - 25:8
oral [3] - 12:13, 12:20, 21:25
Oral [1] - 1:7
order [3] - 5:19, 11:24, 16:9
original [1] - 33:29
originated [1] - 11:13
origins [1] - 17:3
outline [3] - 4:25, 10:4, 16:8
outlined [1] - 21:17
outset [1] - 12:1
outside [4] - 10:27, 11:2, 21:18, 25:2
outstanding [1] - 7:12
overall [1] - 22:27
own [3] - 20:1, 20:2, 34:15

P

Page [1] - 3:5
park [1] - 5:24
part [2] - 13:8, 19:5
Part [1] - 24:1
participated [1] - 34:13
particular [5] - 5:28, 18:2, 18:8, 19:18, 34:15
Particularly [1] - 17:12
particularly [5] - 16:28, 19:17, 21:16, 31:17, 31:18
party [1] - 4:17
past [1] - 8:11
paying [1] - 31:26
peat [3] - 25:7, 26:25, 27:2
pending [1] - 7:14
people [12] - 4:12, 5:18, 13:7, 13:16, 22:7, 25:12, 25:13, 27:17, 27:22, 32:8, 32:10, 34:17

people's [1] - 21:26
performing [1] - 4:27
perhaps [4] - 4:10, 4:12, 26:13, 27:24
Perhaps [1] - 5:10
period [3] - 10:8, 14:6, 14:18
perish [1] - 31:21
permission [1] - 7:9
perpetual [1] - 33:11
person [1] - 4:19
petroleum [1] - 8:26
Petroleum [1] - 6:25
picked [1] - 24:18
piece [2] - 6:25, 7:11
pipe [5] - 10:20, 23:19, 26:26, 27:3
Pipeline [2] - 1:10, 19:14
pipeline [30] - 6:22, 7:7, 7:23, 8:10, 10:23, 10:25, 10:29, 19:11, 19:18, 19:19, 20:2, 20:10, 20:17, 20:23, 20:26, 21:21, 22:29, 23:1, 23:11, 23:14, 23:16, 23:17, 23:18, 23:22, 23:27, 24:4, 24:28, 25:3, 25:6, 25:12
pipelines [4] - 7:2, 18:3, 25:1, 25:20
place [2] - 9:22, 33:29
places [1] - 31:1
plan [1] - 22:27
Plan [1] - 6:26
planet [1] - 31:2
planetary [1] - 31:5
planned [2] - 11:15, 19:14
planning [2] - 7:9, 8:19
Pleanala [1] - 7:10
point [5] - 11:2, 12:26, 13:10, 30:14, 34:15
pointer [1] - 8:7
points [5] - 16:21, 21:7, 31:16, 31:17, 32:12
policing [1] - 9:2
political [1] - 30:20
position [1] - 7:27
possibility [1] - 23:18
possible [2] - 19:18, 25:4
posterity [1] - 12:24
potential [1] - 33:2
power [1] - 6:12

practicaule [1] - 20:5
practice [5] - 11:12, 11:16, 11:23, 17:16, 19:29
predecessors [1] - 6:28
prepare [2] - 14:1, 14:12
present [6] - 12:22, 26:6, 26:8, 27:25, 27:28, 29:7
presentation [2] - 18:12, 22:5
press [1] - 13:14
pressure [5] - 7:26, 7:27, 19:15, 24:28, 25:1
previous [1] - 12:3
price [1] - 31:27
primarily [3] - 8:14, 8:25, 9:4
primary [1] - 16:20
Principal [1] - 2:10
principle [1] - 7:3
printed [1] - 26:9
prize [1] - 6:9
problem [2] - 26:27, 31:3
procedures [2] - 11:12, 23:23
proceedings [2] - 12:18, 26:14
process [19] - 6:26, 8:22, 9:9, 9:16, 10:8, 12:10, 13:9, 13:18, 13:29, 20:29, 21:9, 21:27, 22:15, 23:26, 24:1, 24:2, 24:10, 24:13, 24:20
processed [1] - 21:12
processes [2] - 10:14, 33:4
produced [1] - 24:8
products [3] - 30:22, 33:3, 33:27
professional [4] - 11:8, 12:22, 20:9, 25:13
Project [1] - 7:18
project [12] - 6:1, 6:5, 6:6, 7:16, 8:19, 9:15, 17:1, 21:9, 21:16, 22:11, 22:27, 33:20
promotion [2] - 8:27, 9:1
prone [1] - 25:7
proper [2] - 5:19, 11:24
properly [1] - 11:18

propose [2] - 16:14, 16:15
proposed [5] - 11:20, 20:9, 20:17, 22:6, 23:4
propriety [1] - 11:6
Protection [1] - 7:13
protection [1] - 23:17
provide [3] - 11:27, 12:8, 21:15
provided [1] - 12:15
Provisions [1] - 9:27
proximity [1] - 25:3
Public [1] - 2:19
public [3] - 12:13, 14:24, 20:18
publish [1] - 14:2
published [2] - 13:8, 14:13
purpose [1] - 11:19
purposes [3] - 8:6, 8:9, 8:14
put [3] - 9:22, 23:22, 26:14

Q

questions [1] - 16:19
quickly [1] - 24:6
quietly [1] - 5:24
quite [3] - 10:8, 10:13, 14:7

R

raised [1] - 24:19
range [1] - 25:2
rare [1] - 19:12
rates [1] - 6:13
read [1] - 16:9
real [1] - 25:11
really [7] - 19:23, 19:25, 22:5, 25:10, 30:2, 30:16, 30:18
reason [4] - 4:25, 7:28, 16:20, 22:28
reasonably [1] - 20:5
reasons [1] - 22:12
received [9] - 13:4, 13:23, 14:10, 21:4, 21:11, 22:22, 26:24, 27:1, 34:16
recently [1] - 17:22
recognise [3] - 12:21, 19:13, 25:11
recognised [4] - 8:29, 12:1, 17:20, 17:23
recognition [1] - 17:27

recommendations [6] - 9:20, 11:26, 11:28, 16:23, 20:12, 22:19
recommending [1] - 14:4
record [4] - 19:12, 26:7, 26:21, 26:29
recorded [1] - 30:5
recording [1] - 12:22
recordings [1] - 1:28
reduction [2] - 20:6, 24:14
reference [2] - 30:15, 31:4
referred [1] - 26:23
referring [3] - 25:28, 26:24, 27:11
reflecting [1] - 22:3
regarding [1] - 11:26
regime [2] - 9:6, 9:23
regrettably [1] - 33:24
regulations [1] - 11:12
related [1] - 27:1
relates [3] - 10:18, 10:23, 10:28
relation [2] - 4:19, 30:19
relationships [1] - 33:27
relaxed [1] - 34:17
release [2] - 13:15, 18:10
relevant [4] - 10:18, 11:4, 24:3, 25:27
religious [1] - 30:20
rely [1] - 22:16
remember [1] - 30:1
remit [2] - 10:26, 10:27
repeat [1] - 30:6
report [15] - 14:1, 14:6, 14:11, 14:12, 14:16, 16:15, 16:23, 20:8, 22:1, 22:3, 22:6, 22:9, 22:10, 22:16, 23:10
reports [1] - 27:28
representation [1] - 26:11
requesting [1] - 21:4
require [3] - 7:17, 7:26, 33:24
requirements [1] - 33:1
residents [1] - 19:17
Resources [3] - 2:7, 4:25, 5:3
response [1] - 19:20

responsibility [1] - 32:27
rest [1] - 18:12
restore [1] - 33:28
restrain [1] - 31:7
resubmit [1] - 13:25
resume [1] - 27:25
Resumed[1] - 29:1
review [7] - 12:10, 19:26, 21:1, 21:14, 21:18, 23:5, 24:18
Review[18] - 1:12, 8:7, 8:10, 8:15, 9:5, 9:15, 9:21, 12:6, 13:18, 14:21, 16:14, 18:1, 19:7, 19:19, 19:24, 22:12, 22:14, 25:29
reviewing [3] - 20:19, 20:25, 23:12
Richard[3] - 5:1, 13:1, 34:22
rights [1] - 32:20
rigorous [2] - 9:9, 10:7
rise [1] - 19:15
risk [13] - 17:10, 20:3, 20:5, 20:18, 20:24, 22:23, 23:25, 24:1, 24:13, 24:14, 24:15, 25:8, 25:19
road [1] - 31:20
role [2] - 4:26, 10:4
room [1] - 5:20
RosSPORT[2] - 8:11, 31:11
route [5] - 8:3, 21:21, 23:2, 23:5, 25:6
run [1] - 22:6

S

safe [3] - 7:25, 11:20, 34:24
safety [19] - 5:19, 8:23, 9:4, 11:2, 16:13, 19:12, 19:17, 20:16, 20:18, 23:6, 25:5, 25:12, 30:2, 31:5, 31:6, 32:7, 32:13
Safety[18] - 1:12, 8:6, 8:9, 8:15, 9:5, 9:15, 12:6, 13:18, 14:21, 16:14, 18:1, 19:7, 19:19, 19:24, 22:12, 22:14, 25:29, 30:2
scale [2] - 25:22, 32:25
scientists [1] - 17:8
scope [4] - 11:3,

16:13, 19:23, 21:18
sea [6] - 6:24, 7:18, 7:19, 10:28, 20:27, 23:3
Section [2] - 1:12, 22:26
section [8] - 8:10, 8:12, 9:2, 10:19, 10:21, 22:5, 23:25, 24:17
sections [2] - 22:9, 22:16
see [7] - 12:14, 14:3, 14:4, 27:25, 31:27, 32:1
select [1] - 10:11
selection [4] - 21:9, 23:2, 23:3, 24:26
send [1] - 13:3
senior [1] - 4:14
Senior [1] - 4:28
sense [1] - 4:16
sent [1] - 13:8
separate [1] - 8:27
separately [1] - 14:16
September [1] - 10:15
serious [2] - 19:16, 31:25
session [1] - 16:7
set [1] - 21:1
setting [1] - 12:16
seven [1] - 22:9
severed [1] - 7:29
shallow [1] - 32:2
Shelf [1] - 6:23
Shell [7] - 6:27, 21:5, 21:7, 32:19, 33:24, 33:26, 33:28
shores [1] - 6:11
short [2] - 10:13, 14:7
Short[2] - 28:1, 29:1
showed [1] - 10:20
shut [1] - 7:29
side [1] - 5:21
signal [1] - 5:22
signed [1] - 33:17
significant [1] - 6:5
similar [1] - 19:7
site [3] - 8:12, 9:29, 21:20
Sitting [2] - 18:1, 18:7
six [1] - 19:6
skills [1] - 17:23
slide [2] - 16:12, 25:10
snap [1] - 7:29
soil [2] - 26:25, 27:2

solar [1] - 33:11
Solar [1] - 33:11
Solution[2] - 2:16, 2:17
sophisticated [1] - 25:19
sorry [1] - 29:8
Sorry[1] - 29:22
sort [3] - 21:22, 24:2, 25:10
source [1] - 10:17
sourced [1] - 11:4
sources [1] - 20:4
Speakers [1] - 2:19
special [1] - 7:17
specialists [1] - 19:8
specific [2] - 19:8, 19:9
specifically [2] - 8:24, 17:23
spending [1] - 16:13
spoken [1] - 29:17
spring [1] - 8:1
staff [1] - 34:21
stage [1] - 8:20
standard [1] - 6:11
standards [5] - 11:11, 11:24, 24:28, 25:28, 33:4
star [1] - 32:4
start [3] - 5:17, 26:14, 29:29
started [1] - 10:14
state [3] - 32:9, 33:19, 33:29
statement [1] - 31:10
statements [1] - 14:26
statutory [1] - 9:26
stenoographer [2] - 26:6, 30:5
stenographers [2] - 12:22, 34:24
stop [1] - 33:24
strongly [1] - 32:10
structural [1] - 18:3
structure [2] - 22:6, 22:8
structured [1] - 24:2
structures [1] - 18:4
structuring [1] - 16:15
study [2] - 10:26, 10:27
studying [1] - 18:8
Sub [1] - 7:18
sub [3] - 7:19, 20:27, 23:3
Sub-sea [1] - 7:18
sub-sea [3] - 7:19, 20:27, 23:3

subject [1] - 8:3
subjected [1] - 21:13
Submission [15] - 3:9, 3:11, 3:13, 3:15, 3:23, 5:14, 15:5, 16:1, 18:15, 19:1, 26:1, 26:17, 27:5, 30:10, 34:4
submission [6] - 26:12, 26:13, 27:14, 27:26, 29:7, 34:9
submissions [9] - 12:9, 12:20, 12:26, 12:28, 13:3, 13:8, 13:14, 21:28, 27:18
submitted [1] - 13:26
subsequently [1] - 12:12
suggest [2] - 31:15, 33:23
suggestion [1] - 29:20
suitability [2] - 19:28, 20:20
summarise [1] - 25:10
summary [1] - 22:21
Summary[1] - 7:16
supervision [2] - 6:22, 8:28
supplied [1] - 21:2
supportive [1] - 32:21
suppose [1] - 32:14
supposedly [1] - 33:24
surroundings [1] - 24:9
Survey[1] - 4:29
sustainable [1] - 32:22
Sweetman [2] - 26:28, 27:9
systems [1] - 32:29

T

tape [1] - 30:4
task [1] - 9:8
tasked [1] - 5:27
team [1] - 19:5
technical [5] - 6:17, 7:16, 21:13, 21:14, 22:22
Technical[13] - 2:9, 4:23, 5:11, 5:26, 6:3, 8:22, 9:3, 10:9, 12:4, 13:12, 13:20, 14:15, 21:2
tender [3] - 9:9, 10:8, 10:11

tenders [1] - 9:8
terminal [8] - 7:19, 7:20, 8:11, 8:16, 10:21, 10:24, 20:26, 23:4
terms [3] - 20:17, 30:15, 31:4
terrain [2] - 6:9, 6:14
test [1] - 6:8
testing [1] - 23:21
thereabouts [2] - 6:12, 14:8
Therefore[1] - 13:19
therefore [1] - 13:25
they've [1] - 11:13
threats [1] - 23:14
throughout [2] - 17:1, 17:21
Thursday[1] - 1:21
Tie[1] - 7:18
tie [1] - 23:3
tie-back [1] - 23:3
today [10] - 6:18, 8:8, 12:12, 13:4, 13:28, 14:24, 16:18, 27:18, 31:24, 34:12
took [2] - 10:8, 10:10
tools [1] - 25:19
top [2] - 26:25, 27:2
totally [1] - 33:25
towards [1] - 14:18
transcribe [1] - 26:8
transcript [1] - 1:27
transparent [1] - 13:9
travelling [1] - 4:7
Treat[1] - 33:14
trouble [1] - 32:15
true [1] - 1:26
turnaround [1] - 33:25
twinkle [1] - 32:3
two [5] - 14:7, 17:24, 17:29, 21:25, 22:10
two-day [1] - 21:25

U

Uk [1] - 17:6
umbilical [1] - 7:28
uncertainty [1] - 20:4
under [2] - 6:24, 9:2
Under [1] - 7:1
undertake [1] - 20:2
undertaken [1] - 21:20
undertaking [5] - 5:29, 19:20, 19:24, 19:25, 20:29
unless [1] - 27:22

untreated [2] -
19:15, 25:5
up [6] - 12:17, 24:18,
26:14, 27:23, 31:23,
33:28
Upstream [1] - 1:12
upstream [1] - 10:21

worry [1] - 32:7
worthless [1] - 31:11
written [7] - 12:9,
12:20, 12:26, 12:27,
13:3, 13:7, 21:27

Y

V

validated [1] - 25:20
validation [1] - 25:2
valve [2] - 7:24, 7:29
valves [2] - 7:24,
7:25
various [1] - 17:9
Verbruggen [3] -
2:10, 4:28, 6:2
verify [1] - 20:1
viability [1] - 32:28
view [2] - 11:2, 34:15
views [4] - 12:6,
14:25, 16:21, 24:21
vigilant [1] - 33:2
visit [2] - 9:28, 21:20

years [5] - 6:13,
17:22, 17:24, 18:4,
18:10
yesterday [17] - 4:11,
5:18, 8:4, 13:11,
16:18, 26:5, 26:22,
27:10, 27:18, 29:24,
30:4, 30:15, 30:17,
31:9, 33:8, 34:13,
34:17
Yesterday[1] - 8:7
yesterday...(
interjection [1] - 29:13
young [1] - 26:6
yourself [1] - 5:11

W

wait [1] - 29:16
waited [1] - 4:6
waste [2] - 31:12,
33:6
Waste[1] - 33:6
water [1] - 6:15
wave [1] - 33:12
website [1] - 14:3
Wednesday[1] - 4:1
week [1] - 10:10
weeks [1] - 14:8
welcome [1] - 34:16
welded [1] - 23:20
well-being [1] -
32:28
wells [2] - 6:8, 7:21
whatsoever [1] -
29:18
whole [1] - 31:23
wide [1] - 17:15
widely [1] - 17:20
wind [1] - 33:12
wish [1] - 30:7
wishes [3] - 26:13,
27:13, 27:26
Witness[1] - 3:5
wonder [1] - 27:19
woods [1] - 8:12
word [1] - 12:8
workers [1] - 20:24
world [5] - 17:12,
25:18, 31:20, 32:24,
33:10