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Limerick City & County Council

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For Application number : 17714

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Comhairle Cathrach agus Contae Luimnigh,
Tuar an Daill,
Luimneach

Planning and Environmental Services,
Limerick City and County Council,
Dooradoyle,
Limerick

t: +353 (0) 61 556 000
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There are 4 matching results

Name	Address	Received	Acknowledged	Status	Notifications
Mr. Pat Geoghegan	Cappagh Farmers Support Group Boolaglass Askeaton Co. Limerick	29/08/2017	29/08/2017	VALID	NotRecorded94WV78
Mr. Peter Sweetman	Peter Sweetman & Associates 113 Lower Rathmines Road Dublin 6	29/08/2017	29/08/2017	VALID	Notifications
Mr. Jim Long	43 Ballinacurra Gardens Limerick	29/08/2017	29/08/2017	VALID	Notifications
Ms. Attracta Uí Bhroin	An Claíomh Glas Macro Centre 1 Green Street Dublin 7	29/08/2017	30/08/2017	VALID	Notifications

Close

Application : 17714

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Seirbhisi Pleanála agus Comhshaoil,
Comhairle Cathrach agus Contae Luimnigh,
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Planning and Environmental Services,
Limerick City and County Council,
Dooradoyle,
Limerick

EIRCODE V94 WV78

t: +353 (0) 61 496 000
f: +353 (0) 61 496 001

ACKNOWLEDGEMENT of RECEIPT of SUBMISSION or OBSERVATION on a PLANNING APPLICATION

17/714 30/08/2017

Ms. Attracta Uí Bhroin
An Claíomh Glas
Macro Centre
1 Green Street
Dublin 7

Applicant: **Aughinish Alumina Limited**

Development: **PERMISSION for a ten year permission for development on this site of c. 7 hectares located adjoining the existing Aughinish Alumina Ltd plant for the provision of a Borrow Pit with an extraction area of c. 4.5 hectares to extract c. 374.000 m³ of rock over a 10 year period. The extraction area is sought up to a maximum depth of c. 8.5 m O.D., with extraction to occur between April and September each year. The proposed development includes the demolition of a contractors shed and all ancillary site development, areas of stockpiling, landscaping and boundary treatment works above and below ground, including restoration of the extraction area. Aughinish Alumina Limited carries out an activity requiring an Industrial Pollution Prevention and Control Licence (now replaced by an Industrial Emissions Licence – Licence Register No. P0035-06). The development and operation of the proposed Borrow Pit is not a licensable activity.**

An Environmental Impact Statement (EIS) will be submitted to the Planning Authority with the application.

at Aughinish East, Aughinish West, Island Mac Teige, Glenbane West, Morgan North and Fawnamore at or adjacent to Aughinish Island Askeaton Co. Limerick

---

Dear Sir/Madam,

I wish to acknowledge receipt of your observations or submission on 29/08/2017 in connection with the above application for planning permission and would inform you that the points raised by you will be borne in mind when a decision is being made on this application.

Tuar an Daill, Luimneach
Dooradoyle, Limerick

customerservices@limerick.ie
www.limerick.ie
@LimerickCouncil
061 - 496200

Keep this document safely; you will be required to produce this acknowledgement to An Bord Pleanala if you wish to appeal the decision of the Planning Authority. It is the only form of evidence which will be accepted by An Bord Pleanala that a submission or observation has been made to the Planning Authority on the planning application.

Your payment of €20. made by SEPA transfer, is acknowledged. You will be notified of the Council's decision in due course.

Yours faithfully,

p Jennifer Smith

Heather Supple
Planning & Environmental Services

Observation for Planning Application: 17714

info@acg.ie

Tue 29 Aug 2017 4:[illegible] PM

To plandev <planning@limerick.ie>;

[illegible]

ACG Limerick C&CoCo Planning Obs pdf,

Dear Sir / Madame

Please see attached observation in respect of

Planning Application: 17714 and we enclosed details of our payment of the required fee

Yours sincerely

Attracta Uí Bhroin

An Claíomh Glas

C/O Attracta Uí Bhroin
Macro Centre
1 Green Street
Dublin 7

Email info@acg.ie

Aug 29th 2017

Planning Department,
Limerick City & County Council,
Dooradoyle,
Co. Limerick

By email:Planning@Limerick.ie

Re Observation on Planning Application: 17714

Applicant: Aughinish Alumina Limited

Development Description: a ten year permission for development on this site of c. 7 hectares located adjoining the ex with an extraction area of c. 4.5 hectares to extract c. 374.000 m³ of rock over a 10 year pe O.D., with extraction to occur between April and September each year. The proposed deve site development areas of stockpiling, landscaping and boundary treatment works above a Aughinish Alumina Limited carries out an activity requiring an Industrial Pollution Preventio Licence – Licence Register No. P0035-06). The development and operation of the propose Statement (EIS) will be submitted to the Planning Authority with the application.

Dear Sir / Madame

An Claíomh Glas, ACG, wish to make an observation on the above application.

We have made an electronic payment of funds for the required observation fee of €20.00 to your account for today. The payment details with the payment references etc. quoting the Planning Application number are included for your reference and convenience in Annex I to this application.

We look forward to receiving an acknowledgement of our observation.

Public Participation Issues:

An Claíomh Glas, an Irish eNGO welcomes the opportunity to comment on this planning application. We consider the timing of the public consultation on a scheme of this environmental significance to be far from ideal being in the heart of the holiday season,

particularly given the public interest in the matter. While we recognise the entitlement of the applicant to make the submission, we feel the timing does not speak to inspiring corporate responsibility, and would have hoped pre planning consultations which were undertaken between the applicant and the Council in respect of non-statutory discussions on the scope of an EIAR might have resulted in a different schedule for the making of the application.

Additionally we would highlight the fundamental obligation arising from the public participation provisions of Article 6 of the Aarhus Convention[1] which apply to a development of this type and which are to provide for "effective public participation", Articles 6(3) and 6(4) in particular refers. While these obligations rest on the State, the Council is the emanation of the State as the Competent Authority for the purposes of the consents of concern here, not limited to the Environmental Impact Assessment, pursuant to Directive 85/337/EC as amended. As the Court of Justice of the European Union has clarified, in case c-240/09, the Convention is an "integral part of the EU legal order", and we trust we do not need to highlight further the jurisprudence of the Irish Superior Courts, and the CJEU further in relation to the obligations to interpret in light of the Convention when either: interpreting national legislation implementing the Convention or national legislation implementing EU Directives which implement the Convention.

In this regard we wish to highlight a further issue which caused some difficulty with our consideration of the application, and thus our participation as an eNGO and member of the "public concerned" [2] . When the application was highlighted by one of our members, we reviewed the newspaper notice in the Irish Times. It indicates that an "EIS" will be submitted to the Council and that :

> "The EIS can be inspected, or purchased at a fee.....at the office of the public authority during its opening hours"

[1] "The Aarhus Convention" - THE CONVENTION ON ACCESS TO INFORMATION, PUBLIC PARTICIPATION IN DECISION-MAKING AND ACCESS TO JUSTICE IN ENVIRONMENTAL MATTERS done at Aarhus, Denmark,on 25 June 1998

[2] Article 1 of the EIA Directive defines this as follows: Article 1 (e) "public concerned" means the public affected or likely to be affected by, or having an interest in, the environmental decision-making procedures referred to in Article 2(2). For the purposes of this definition, non-governmental organisations promoting environmental protection and meeting any requirements under national law shall be deemed to have an interest;

Article 2(5) of the Aarhus Convention defines it also as follows:
"The public concerned" means the public affected or likely to be affected by, or having an interest in, the environmental decision-making; for the purposes of this definition, non-governmental organizations promoting environmental protection and meeting any requirements under national law shall be deemed to have an interest.

The site notice is similarly worded in this regard. Infact the Non-technical summary for the Environmental Impact Assessment Report, EIAR, stipulates clearly on page 2/30 that:

> "A copy of the full EIAR is available for reference/purchase at the office of the Planning Authority, Limerick City and County Council Office, Dooradoyle, Limerick"

We submit these are both very misleading, particularly in the context of those unfamiliar with planning applications, and it is moreover problematic given the extent of the public concerned who exist at some remove from the offices of the Council. The requirement for in-situ inspection is not feasible for most, and creates a material disadavantage and is discriminatory across the public concerned, and thus would be in breach of the Convention.

In inspecting the Council's online documentation, this non-tehcnical summary is the first item in the list of scanned applications. It is not immediately apparent from the way in which documents have been listed in the eplan site, or the index references that there are in fact multiple documents listed under the second entry, infact some 13 files which appear to include the full EIAR scanned in parts. We submit this is a best unfortunate, and at worst problematic, particularly in the context of the additional complexities arising for this application consequent on Ireland's failure to transpose in time the amended EIA Directive 2014/52/EU, "the 2014 EIA Directive", and the fact that under the transitionary provisions of Article 3 of that Directive, this application falls to be considered under the new provisions. As we have highlighted to the Department of Housing, Planning and Local Government in its recent and lamentably late consultation on the transposition of the new Directive – the public are disadvantaged in such applications already given the lack of effective communication there has been on the failure to transpose in time and to make clear the implications and differing requirements of the new directive versus the old version as codified in directive 2011/92/EU. This issue has been exacerbated we submit by virtue of a site notice and newspaper notice which refer to an EIS – the name given to the set of information required to be provided by the Developer pursuant to Article 5 of Directive 2011/92/EU, whereas the actual application documents refer to an Environmental Impact Assessment Report, "the EIAR", which is of course a new creature of the amended directive 2014/52/EU. We submit the public notifications are misleading and fail to satisfy the relevant legal requirements for notification. It would have been appropriate to alert the public in the context of this to the new legislative regime which includes a number of significant changes relevant to this application, such as, but not limited to: different screening requirements, differing assessment requirements under a revised Article 3, greater emphasis on major accidents throughout, requirements for joint and co-ordinated procedures for a number of assessments under the Birds and Habitats Directives – not just the appropriate assessment obligations pursuant to Article 6(3) of the Habitats Directive.

We note the obligations in the Irish Planning and Development Act 2000 as amended and associated Planning and Development Regulations, 2001 as amended in respect of access to

application materials; (**) In fairness we commend the Council for having made an electronic copy of the EIAR available. However it was arguably, "hidden in plain site" given the level of misdirections involved in the two public notifications, the statement in the Non-technical summary which is the first application document which arises on for the application on the Council's website, and the manner in which the documents are indexed on the e-plan site, which do not make the presence of this full EIA clear, and all compound the transitionary issues arising in the context of the transposition failure. We submit in the context – this leaves an decision to grant permission which the Council might choose to make open to challenge, and/or appeal to the Board, in light of how the public participatory process which is a fundamental obligation under Article 6 of the Environmental Impact Assessment Directive, where such input must be considered for any decision to be lawful and compliant.

Obligations under 2014/52/EU

Page 3/30 of the Non-Technical Summary, "NTS" of the EIAR refers to the failure to transpose Directive 2014/52/EU and states:

> " regard has been had to this Directive and circular letter PL 1/2017".

In brief, we wish to submit that it is <u>not</u> sufficient or appropriate to simply "have regard to" the new Directive. As a matter of legal obligation the Competent Authority will need to apply the new Directive where it meets the criterion for it having Direct Effect, as has been clarified by the CJEU, and given the transposition failure. Additionally, the Department's circular letter has no legal effect in this regard.

We note with concern that the non-statutory consultation on the scoping of the EIAR fails to require conformance with the new Directive, and requires conformance with 2011/92/EU and only to have regard to the new Directive.

We therefore submit the Council will need to satisfy itself as to the effect of the new Directive and the adequacy of the materials submitted in light of those requirements. It will then need to seek further information as necessary in order to rectify any deficiencies; and facilitate consultation thereon, in accordance with Article 6(3)c of the Directive prior to embarking on any Article 3 assessment or decision, as these materials will clearly be necessary to the decision.

We also note the applicants documentation is inconsistent in that it refers to EIAR and EIS – reflecting a failure to focus and present in line with the new directive (e.g. see page 17/30 of the NTS for the EIAR which refers to section "5.0 of the EIS"

We also submit the standard of input provided by the prescribed consultees does not suffice for the purposes of the new Directive, and there are serious deficiencies particularly in

respect of human health considerations necessary to support the consideration of this application.

We submit that given the significance of the changes to Article 3 in the 2014 Directive, it is clear there are deficiencies in the information submitted not limited to the impacts on human health, biodiversity, major accidents and disasters, where the revised Article 3 which stipulates that which the Competent Authority must assess provides as follows:

'Article 3

1. The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on the following factors:

(a) population and human health;

(b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;

(c) land, soil, water, air and climate;

(d) material assets, cultural heritage and the landscape;

(e) the interaction between the factors referred to in points (a) to (d).

2. The effects referred to in paragraph 1 on the factors set out therein shall include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned.';

Additionally, of course in this regard, the information required from the applicant is stipulated in Article 5 which has been substantially revised and highlights issues for the information submitted as part of this application.

Of particular note is the obligations which arise in respect of the competence of those preparing the documentation and undertaking the necessary surveys, and the deficits in the inputs provided by State Prescribed Consultees and agencies - for example in respect of public health considerations etc.

Screening Obligations under 2014/52/EU

The application refers to the mandatory threshold levels for EIA of 5 hectares and indicates it was considered appropriate that an EIAR was prepared.

In short, Art 4 sets out the requirements for screening of developments where an EIA is not mandatory. Additionally, a new requirement specifying the set of information required to be submitted by the Developer is specified in Annex IIa, and a screening determination is required in accordance with the criteria specified in the revised Annex III, and in accordance with Article 4 overall. It would seem the applicant, has elected to provide an EIAR on the expectation of a positive screening. The obligations which arise in this context both under National and EU law need to be addressed by the Council.

Other consideration:

Consideration will need to be given to the implications of any dependence or inter-relationship of the proposed development with developments not in conformance with the EIA Directive or Habitats Directive.

The implications of the judgement in c-461/13 for the consideration of impacts on objectives of the Water Framework Directive, particularly given the issues with the legislative provisions in this regard.

We submit there are serious failures in respect of Art 12 and 16 of the Habitats Directive and the requirements to provide derogation licences in advance of consent and to faciliatate consultation thereon –as clarified in c-143/15 given the "likely significant effects" considerations which arise. There are also issues with the adequacy of underlying surveys.

Consideration of waste arising needs to be addressed in the context of the EIA decision.

The conclusions in respect of Art 6(3) Habitats are clearly of issue and we submit a full AA is required.

Yours sincerely

Attracta Uí Bhroin

Vice Chair ACG

An Claíomh Glas

Annex I

Aughinish Alumina Planning App 17714 Observation fee Bank of Ireland 365 Online _ SEPA Transfer _ Confirmation.pdf - Adobe Acrobat Reader DC

File Edit View Window Help

Home Tools

8/29/2017 Bank of Ireland 365 Online | SEPA Transfer | Confirmation

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Planning and Environmental Services,
Limerick City and County Council,
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Limerick

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ACKNOWLEDGEMENT of RECEIPT of SUBMISSION or OBSERVATION on a PLANNING APPLICATION

17/714 29/08/2017

Mr. Pat Geoghegan
Cappagh Farmers Support Group
Boolaglass
Askeaton
Co. Limerick

Applicant: Aughinish Alumina Limited

Development: **PERMISSION for a ten year permission for development on this site of c. 7 hectares located adjoining the existing Aughinish Alumina Ltd plant for the provision of a Borrow Pit with an extraction area of c. 4.5 hectares to extract c. 374.000 m³ of rock over a 10 year period. The extraction area is sought up to a maximum depth of c. 8.5 m O.D., with extraction to occur between April and September each year. The proposed development includes the demolition of a contractors shed and all ancillary site development, areas of stockpiling, landscaping and boundary treatment works above and below ground, including restoration of the extraction area. Aughinish Alumina Limited carries out an activity requiring an Industrial Pollution Prevention and Control Licence (now replaced by an Industrial Emissions Licence – Licence Register No. P0035-06). The development and operation of the proposed Borrow Pit is not a licensable activity.**

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Dear Sir/Madam,

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Receipt No. 25082059 in the sum of €20 is enclosed. You will be notified of the Council's decision in due course.

Yours faithfully,

Heather Supple
Planning & Environmental Services

CAPPAGH FARMERS SUPPORT GROUP

Boolaglass
Askeaton
Co.Limerick
27-8-2017

Dear Sir or Madame

The Cappagh Farmers Support Group, wish to make an objection to planning Application **17/714** lodged by Aughinish Alumina for a ten year permission for development on the site proposed to rock blast for the purpose of a borrow pit on the following grounds

1-Dangers of Rock blasting to a depth of 8 metres and 4.5 hectare in size next to approx 40 million tonnes of hazardous/toxic waste red mud ponds.

To Rock Blast so close to the existing red mud waste ponds especially BRDA 1 & 2 containing approx 40 million tonnes of hazardous/toxic waste on the grounds that its reckless and has the potential to cause a major environmental disaster, not alone to the Shannon Estuary in every aspect imaginary should the embankments walls be breached and millions of tonnes toxic waste escapes out in to the Estuary, not to mention the closeness of Foynes Village to these Mud Ponds.

The following document shows the danger of rock blasting

See **Ref 1** attached- International Journal of Chemical, .Environmental & Biological Science (JCEBS) Volume 3 issue 1 - The Environmental Impacts of Rock Blasting and their Mitigation section 11 Re -Generation of Ground Vibrations, Noise and Fly rock attached. It states "*The energy carried by these waves crushes rock, which is the immediate vicinity of the hole, to a fine powder.*

The region in which this takes place is called shock zone. ***The radius of this zone is nearly two times the radius hole. Beyond the shock zone, the energy of the waves get attenuated to some degree which causes the radical cracking of the rock mass***" See Fig 2 where it shows the type of fractures from shock. severe that takes place from blasting.

Also see figure 2 rock breakage process- An effect of ground vibrations on the structures. **"The ground vibrations cause the ground to vibrate in transverse, longitudinal and the vertical direction leading to its damage"**

See B- Mitigation of the Ground Vibrations stating "***It is not possible to completely prevent the generation of ground vibrations*** *never less the blasts can be designed in order to minimize their effects at the point of contention"*

Once we have now established that it is not possible to completely prevent the generation of ground vibration, which can vibrate in transverse, longitudinal and vertical direction, where blasting is taking place so close to these ponds, it cannot be allowed to proceed, in fact it never should have been accepted in the first place by LCCC at their pre planning meetings. The precautionary principal must be applied immediately.

The dangers set out above, far outweighs the reason given by Aughinish Alumina that they need rock, which will be sourced on site and used to increase the existing walls of the Mud Ponds, which will be used to store more hazardous/toxic waste that will be allowed to blow on to farms and local community in polluting them further.

This planning application is not a necessity, It does not put jobs at risk, is does not stop production. It's not a case, if we don't act now that something will happen, nothing will happen if this rock is not sourced on site. This rock can be easily sourced from the local quarries.

Aughinish cite additional traffic on main road as one reason given but we are all well aware of LCCC facilitating the granting of a lease to Cadence up in Shangolden, which will allow huge volumes of traffic, large trucks daily should it go ahead in taking waste through villages to the proposed gasification plant. Surely LCCC won't see travelling such a short distance to retrieve stone as been a problem, the quarry across the road approx 300 yards from their main entrance will suffice nicely

In the Limerick Leader on the 18th June 2017 Dr Paul Connett professor in Environmental Chemistry has also called this application reckless and the following are his comments to the Limerick Leader. See **Ref 2** for full article

Dr Paul Connett calls borrow pit plans "reckless"

A US EXPERT in environmental chemistry has called for an independent investigation into Aughinish Alumina after a visit to west Limerick.

Dr Paul Connett was in the county to speak at a Limerick Against Pollution meeting about Irish Cement, but spoke at length about the red ponds at the alumina plant, calling them "disgusting".

He described as "reckless" the proposal by the firm to create a borrow pit by 'blasting' rock adjacent to the millions of tonnes of red mud, which is a waste product from the bauxite refining process.

"Looking at this, it's only a matter of time before that waste ends up in the Shannon Estuary. There's probably leachates going in there now," said the retired professor.

"What a beautiful country. I'm looking at the most fertile valley in the whole of Europe, the Golden Vale. And then you see this savage red pond here, built right next to the estuary, just a few feet from the estuary - it's sacrilege," added Dr Connett

The professor thinks that "poisonous" chemicals in the highly alkaline red waste have the potential to wreak havoc on both human health and the environment, if a spill were to occur. He also believes that the material could already be polluting the area through the groundwater and wind.

"There are so many problems with this it's hard to know where to begin. You have emissions from the plant itself, emissions from the station that's generating power, blow off from the red ponds, and you've got leachate from the stacks, which is going into the river," he said.

"I don't know how much fishing goes on, but that," he said, pointing at the red ponds, "is the kiss of death for fish in this area," he added.

Dr Connett, who is also a prominent fluoridation critic and zero-waste advocate, studied at Cambridge and Dartmouth, before spending more than 20 years as a professor of environmental chemistry at St Lawrence University, Canton, New York.

He claims that previous EPA reports on the level of toxic chemicals "didn't even measure some of the key things", and he called for an independent investigation into both the plant and "the government officials who continue to allow it to be here".

"And now they plan to blast the rock. What a ridiculous, reckless thing to do, to set off explosives near the wall of the ponds, because you could easily break the barriers, and all the waste would go into the Shannon Estuary. That is crazy, really reckless," he said.

When asked if there is a safe way to deal with the red waste, Dr Connett suggested solidifying it, as the loose dust is "open to the elements".

In page 4 below an article in the Daily Mail -Re interview with a former management personal who worked at the Aughinish Alumina Plant and the dangers of the Mud pond on the Aughinish plant? It outlines many breaches to planning and EPA licences that occurred regularly. The picture which is only of one mud pond, where we now have two covering 450 acres in size and fully supports Dr Connett views of the dangers of rock blasting as reckless been so close to these toxic ponds.

Irish Daily Mail

WEDNESDAY, OCTOBER 13, 2010

Price €1 (30p NI)

Louis Walsh: the courts have got it all wrong on illegal downloads

SEE PAGE 14

RED SLUDGE

Vast: Scale of waste dump at Aughinish Alumina plant is clear from the air

Picture: CHRIS BARDON

OF LIMERICK

Red tide: Hungarian spill left eight dead

20 million tons of poisonous mud... from the same process that caused Hungary's environmental disaster and sited right next to the tidal Shannon... a toxic timebomb?

FULL STORY - PAGES 4-5

SLOVAKIA 1 IRELAND 1: ROBBIE PAYS PENALTY

FULL STORY - SEE SPORT

Mudpile

By Neil Michael
Chief Reporter

IRELAND is in danger of suffering a toxic sludge disaster even worse than that which is devastating areas of Hungary, it has been claimed.

Twenty million tons of the red mud are contained in Limerick's Aughinish Alumina plant, close to the Shannon river.

And the threat of a disaster there – the largest alumina refinery in Europe – is "very real", according to a safety expert who worked at the plant.

Dr Edward Horgan said last night that the proximity of the mountain of red mud to the tidal river is what should be ringing alarm bells.

He said: "It's a toxic time bomb."

With more than 450 employees, it is a major employer in the area and bosses of the plant claim it injects as much as €100million into the local economy.

Of deep concern to Dr Horgan is the fact that the amount of waste residue at the plant is "many times" that which flooded three towns in Hungary last Monday week, killing eight people so far. He worked at the site between 1987 and 1995, and last night he told the Irish Daily Mail: "The Limerick plant's red mud pile is massive compared to the amount that spilled out in Hungary.

"I estimate that it is around 50million tons. All you need here is a combination of high tides in the Shannon estuary and a bout of prolonged rainfall and you have the potential for disaster.

Aughinish Alumina bosses last night played down fears that the 250-acre mud pile could burst its walls, as happened in Hungary. They said it could withstand "a once in a 100-year event".

They also insisted that most of the red mud at the €1.2billion plant, which is owned by Russian billionaire Oleg Deripaska's aluminium processing firm Rusal, is not hazardous.

20million
tons of toxic waste in the pile, claims the company

They dispute Dr Horgan's assertion that there is at least 50million tons of waste on the site – saying that it is "nearer to 20million tons".

A spokesman said: "Our plant and all its facilities are designed to the best available technological standards, we receive regular surveillance and we run a very highly regulated site.

"We are not going to comment on what Dr Horgan has to say but the red mud is non-hazardous, as classified by the Environmental Protection Agency."

However, he then added that there was a "percentage of hazardous material" but said it was "a small percentage of the overall residue".

The Limerick plant uses a similar process as that used at the site in Hungary when disaster struck. It is called the Bayer process and it refines bauxite (aluminium ore) to produce aluminium oxide, or alumina.

The red mud is the by-product of getting aluminium out of the bauxite, which comes out of the ground containing many minerals, including some heavy metals.

The process involves soaking the ore in sodium hydroxide to separate the aluminium from the unwanted minerals, creating the toxic sludge or "red mud".

At least two tons of bauxite – 3.5million tons of which is shipped in from Brazil and west Africa each year – is needed to produce just one ton of alumina.

The red mud is highly alkaline.

After the residue is treated, it is laid out across the red mud pile via a series of pipes and pumps. The idea is that it dries but each newly laid layer is then compacted under fresher layers.

These layers can, as reporter Philip Boucher Hayes pointed out on RTE radio's Drive Time yesterday, dry under hot sunny conditions. And, in the 1990s, this caused a problem because in high winds, toxic dust clouds were formed.

brigade out to hose down sections of the red mud pile but the plant has since installed a sophisticated sprinkler system.

He said last night: "Although dust clouds have not been a problem at the plant for a while, I have heard about an incident in the past year."

As well as water spray to cut down on dust, the plant also lays out cheap hay which then rots and forms as a sort of protective mesh over the red mud.

The company claims its method of treating waste in Limerick is superior to the Hungary plant.

In Hungary they use a "wet pond" facility to treat the by-product, different from the "dry-stacking" method in Limerick. A spokesman said: "The major advantage of the Aughinish 'dry stacking' system is that the deposited residue is not hazardous waste.

"It compacts and solidifies and can be walked on and driven on by reinstated with vegetation and returned to its natural state with relative ease. This methodology and the process model and software that we use for 'mud farming' has been developed through research and development at Rusal Aughinish and is being patented as it is Best Available Technology."

Dust from this residue has, however, been blamed by local farmers as the cause for problems with their cattle as well as their health.

And there have been a number of incidents over the years. A spray of more than 5,000 litres of lime, bauxite and caustic soda slurry erupted into the air in March 2005 after a pressure failure at the plant, sending workers fleeing indoors.

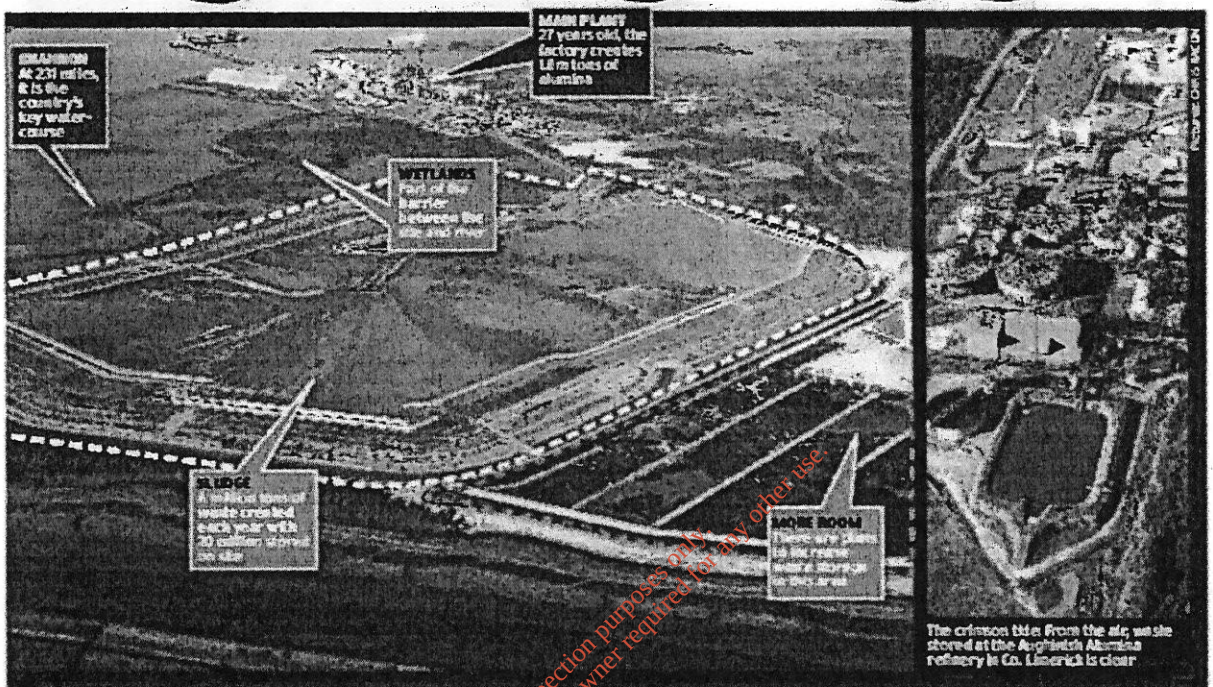
The previous year, tons of caustic soda overflowed from a storage tank for more than three hours before anybody noticed.

The EPA was first informed by a member of the public – and not the

Pictures from the air reveal the scale of the red mudpile by the Shannon, where a million tons of waste are added each year and more storage space is still needed...

Catastrophe: Fireman at work on toxic clean-up in Hungary

is getting bigger



The crimson tide from the silo we site stored at the Aughinish Alumina refinery in Co. Limerick is clear

'MUD FARMING' - HOW PLANT BOSSES SAY THEY CAN DEAL WITH TONS OF RED SLUDGE

LAST night the plant's owners, RUSAL, issued the following statement:

"We would like to express our shock and sadness for the tragic loss of life and the injuries suffered by people following the major accident at the Hungarian Ajkai plant owned by MAL Rt., the Hungarian Aluminum Production and Trade Company.

"The RUSAL-owned Aughinish plant in Limerick does not have a bauxite residue lake or pond. That type of older process is conventionally referred to as "wet ponding".

"This method would not be given planning permission or licensed by the Environmental Protection Agency (EPA) in Ireland.

"Instead RUSAL Aughinish uses the "dry stacking" system of bauxite residue disposal.

"This dry stacking method utilises modern technology to dewater the bauxite residue within the process plant. The residue is washed, vacuum filtered and then transferred to the dry stacking bauxite residue disposal area (BRDA) as a thick paste.

Waste: Bauxite residue being processed

In the BRDA itself, further drying takes place using thin layer deposition and a mobile plant technology termed "mud farming".

"There, we use equipment known as an Amphirol, which has been developed specifically for modern bauxite residue disposal areas, to further dewater the residue.

"This equipment ensures that the maximum quantity of the remaining free water is removed from the residue.

"This fluid along with rain water run-off is then recycled to the alumina plant.

"The major advantage of the Aughinish "dry stacking" system is that the deposited residue is not hazardous waste.

"It compacts and solidifies and can be walked on and driven on today.

"It also means the area can be reinstated with vegetation and returned to its natural state with relative ease.

"This methodology and the process model and software that we use for "mud farming" has been developed through research and development at RUSAL Aughinish and is being patented as it is best available technology.

The EU Commission produced a Best Reference Document in 2005 to act as a guideline for the design and operation of current and future residue disposal facilities.

"The EU technical experts visited the RUSAL Aughinish bauxite residue disposal area during the development of the BRef. The BRef states that the key feature of the Aughinish design - dry disposal rather than wet lake - makes it an example of best available technology.

"The BRef document issued by the EU Commission references the Aughinish BRDA engineering design and operation more than 18 times as examples of best available technology.

"The RUSAL Aughinish BRDA is subject to planning permission from Limerick County Council and also IPCC licensing and inspection from the Environmental Protection Agency."

2002 a boiler malfunctioned - sending plumes of thick black smoke into the air. That same year, an EPA survey discovered emissions at the plant were - in some cases - more than seven times permitted levels.

A power failure caused a caustic vapour cloud to be formed over the plant in May 2007 but an incident in May the previous year is its worst so far. Then - when the company was owned by a different firm - more than 300,000 litres of a highly toxic alkaline solution leaked from the plant.

Much of it went straight into the Shannon, killing every plant and fish life as it did. But yet again, a member of the public reported the spillage to the EPA while the company at first insisted the incident was minor one and just 50,000 litres had leaked.

The higher figure only emerged after an EPA investigation and led to the plant owners being fined.

Last night, a spokesman for the plant said: "We do not accept that the plant is responsible for any health problems experienced by the farmers or their cattle. The EPA came out with a report which dismissed the claims and we support the report's findings."

Originally designed to produce 800,000 tons of alumina each year when it opened in 1982, the plant is now operating at more than double the capacity.

Its owner Oleg Vladimirovich Deripaska is estimated to be worth about $10.7billion, down somewhat on estimations for his wealth in 2008.

Then he was ranked the 9th richest person in the world, according to the Forbes rich list, with an estimated $28billion fortune.

Nuclear physics graduate Deripaska, who is married to former Russian President Boris Yeltsin's grand daughter, is rumoured to have links to the Russian mafia.

These alleged links - formally denied - are believed to have been the reason why the U.S. temporarily suspended his access visa. No slouch when it comes to charity, a foundation he has set up hands out between $60million and $100million a year to around 400 mostly educational institutes in Russia.

While hardly a household name here, the 42-year-old father-of-two - who is also involved in aircraft and automobile manufacturing - is better known in the UK.

50,000
Litres of toxic liquid leaked at the plant in 2001

In 2008, Peter Mandelson spent time on Deripaska's Queen K private yacht while he was serving as EU Trade Commissioner.

At the time, he was involved in discussions dealing with the reduction of EU aluminium tariffs.

Dr Horgan said last night: "There is little danger of a disaster such the Hungarian one in the short and medium terms. The immediate dangers lie in health hazards to employees and local residents from much smaller scale leaks of dust and toxic materials into the air and ground water, and the danger in the longer term when the plant closes down.

"Apart from closure for economic reasons, the plant will eventually be forced to close due to lack of space to store the red mud waste.

"At Aughinish Island the plant is already experiencing waste storage difficulties and they are getting around this by piling the waste mound ever higher, using containing walls of stone.

"This requires careful monitoring and regular maintenance which will continue as long as the plant remains in operation. The inevitable eventual closure of the plant could be a 'disaster waiting to happen' several years after closure.

"It would be perceptained most likely in winter-time by an exceptionally prolonged period of heavy rain, of the type described as the worst in living memory.

"The rains of 1947 are still part of local folklore, and their like are probably due again."

He added: "Unlike the Hungarian disaster, when the Aughinish mud pile starts to move, there will be no stopping it.

"There will probably be a build-up of water internally and externally and the mountain will simply burst northwards into the estuary possibly during a very high or spring tide.

"It won't just go westwards toward the sea at Ballybunion, destroying all in its path on both sides of the estuary.

"Some of it will also be washed towards Limerick City, and towards nearby Shannon airport and up the River Fergus estuary, as the tides come in twice a day."

neil.michael@dailymail.ie

2-The failure to request a financial bond to be put in place by Aughinish Alumina

All the above shows that a financial bond was not requested to be put in place to cover for an environmental disaster should the rock blasting breach the walls or damage the foundation of the existing Mud ponds and where the hazardous/toxic waste will enter the estuary in massive volumes destroying all before it. The existing financial bond of only 14 million is not to cover such a disaster.

In this application, there is no risk assessment or the worst case scenario as to the potential damage that may be caused to the Estuary and Foynes in particular should these walls be breached. The cost would run into millions in a cleanup operation or to contain a massive spill.

Nothing is contained in this EIS as to what chemicals are within the embankment walls in the Red Mud and the Salt Cake should an environmental disaster happen and how they could be dealt with.

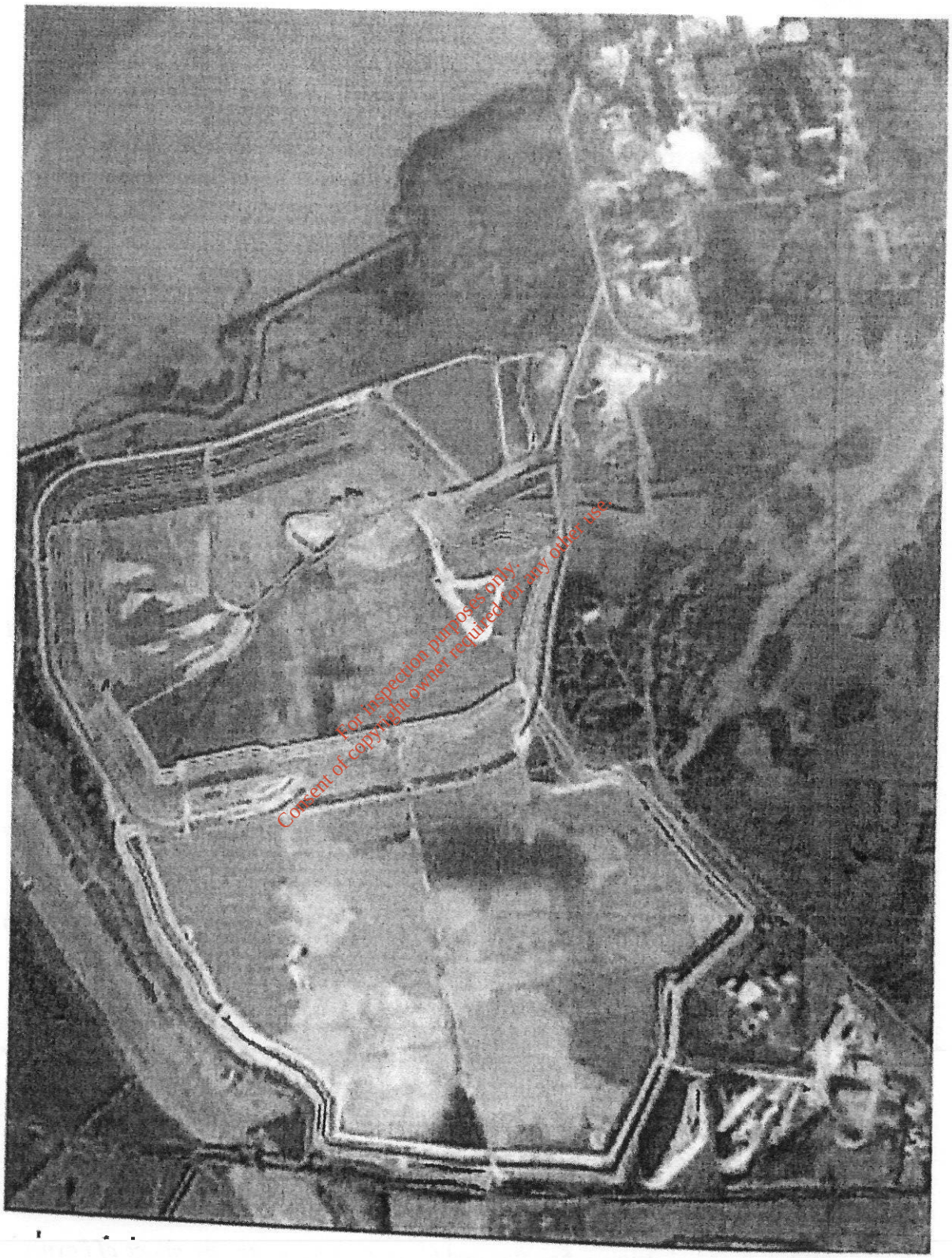
3- The failure to carry out a proper public consultation

The Cappagh Farmers Support Group, the only local group that has been raising awareness on environmental issue in the area since 2001, was completely ignored in the process. The public have been contacting our group and in the last week or two many from Foynes village especially raising concern to their safety if these embankments break. There is anger out there that they have been ignored by Aughinish and that a public consultation should have been held in the village in where they could see for themselves what dangers are possible from this blasting and we fully agree with them.

Cappagh farmers Support Group having now viewed the consultation letter issued on the 6th April 2017 in **figure 2** shown in page 8 sent out by Aughinish Alumina has raised the question again was this done in an open and honest way by Aughinish Alumina in relation to this consultation process. The red circled area, where this borrow pit is been blasted, in no way what so ever shows the true extent of its location to the existing mud ponds their size and the quantity that they hold are to this proposed blasting. It served its purpose well, as it seems only one person replied back not taking much head to it and its dangers. The picture below shows why.

Figure 2: Lands Identified for the Proposed Borrow Pit Extraction Area

If the real story was been told, it would be a much different, as having now viewed the planning application by Tom Philips & Associates on behalf of Aughinish, it now shows clearly in page 9 red section marked for borrow pit blasting in **figure 2.2** and its locations to the Mud ponds. It shows the potential environmental damages that now lie ahead if these walls are breached. This is clearly a flawed consultation process, first in relation to persons/groups who were not consulted and secondly misleading information been given out to those that were consulted privately.



Was it a case, does the consultation process on the quite/ stays below the radar from those who should have been consulted and once the consultation date closes, our friends in the planning Dept will look after us again? Sure, forget about the public or the environment they never mattered.

Our group have been refused details of the two pre planning meetings that took place between Aughinish/ representatives and Limerick City & County Council planning prior to this application as it's important to see if LCCC and Aughinish agreed on the above process in how it was to be conducted and what other short comings we will see as this process unfolds.

4- Limerick County Council ignores Foynes community Council and others in 2005

Both Aughinish and Limerick County Council have a track record in ignoring Foynes and what one would consider an extremely detailed and worrying objection from Foynes community Council in 2005 to stop the second Mud BRDA 2 pond being constructed, storing millions of tonnes of red hazardous/toxic waste next to their village. Such an objection laid down a major concern both for Aughinish and Limerick County Council in how Aughinish was impacting on their village. They state "***We live in close proximity to what can only be described as a mountain of red waste, a product of an intervention with nature through a hazardous and caustic process we are a concerned community***"

Now, when planning is lodged to rock blast next to this mountain of red waste which could put at risk a village who from their objection in 2005 have already put up with enough from Aughinish deserves fully a public consultation on this issue in Foynes as part of the EIS

We have enclosed their full objection in **Ref 3** attached and have taken again sections like the following from it.

- *We are now faced with a proposal to extend the waste ground for the material we have already watched this waste grow for over 20 years"*
- *"We have lived as an extremely patient community for many years, even allowing Aughinish Alumina to hide behind the 5.2 million EPA report into animal deaths and human health difficulties in Askeaton".*
- *"When the wind changes direction and blows from the north, the village of Foynes get covered with red dust".*

- *"Cars exposed to the red dust on a regular basis loose the lustre in their paintwork over a matter of months"*
- *"Our health –Aughinish Alumina and its waste have been linked on many occasions to various incidents of environmental and health concerns"*

- *"Can we be assured that the rate of cancer in the surrounding area is no higher than the normal average"*

- *Tourism-"The bauxite residue Area is an eye sore and detrimental to the area's appeal as a potential destination for visitors and tourism".*

- *The existing BRDA is a disgrace. No member of our community could have envisaged that the red mud would ever been packed so high"*

- *"It is insulting to use the words positive in this question, what potential positive effects could there be in our community and our surroundings from living in close proximity to hundreds of tonnes of hazardous waste material, which we experience landing on our village and being inhaled by our families on a regular basis"*

- *"For too long Aughinish Alumina have been playing the employment card. It is time to act responsibly by looking at their workers"*

- *"They are concerned at making a profit and nothing else"*

- *"Living in close proximity to hundreds of thousands of tonnes of hazardous waste material, which we experience landing on our village and been inhaled by our families on a regular basis"*

- *Our quality of life Aughinish Alumina and its waste sticks out in our minds each time you see the red tinge on the grass, or see the actual bauxite residue area itself"*

- *Our quality of life is compromised and over the years we have been continuously anticipating that the growing mountain would reach its highest point and be covered over"*

- *We do not want our families or future generations to live with this as their legacy"*

- ***"We need to be able to rely on the openness and honesty of Aughinish Alumina if we are to continue to what has been a patient relationship on our behalf to date".***

Seeing Google Map below, shows just how close Foynes village at bottom right hand corner is to these Mud ponds. The white area to the middle just above the Aughinish plant shows how close the local Quarry is to secure stone from.

5- Recent events in Donegal where a once in 100 weather event occurred caused devastation.

We have seen the serious rain falls in Donegal last week and the devastation it caused was frightening, if that situation happened in the Estuary, on the Aughinish Alumina Island, then we could be facing an environmental disaster with these ponds as we speak. Aughinish has admitted that they are only prepared for once in a 100 extreme weather event above.
It was in 1947 that history has shown the worse rainfall in living history for this area from the article above and that leaves some 30 years short of the 100 for another.
This Rock Blasting proposal not alone could remove major sections of the embankment leading to an environmental disaster immediately but it also could fracture sections of this embankment, weaken the walls so much that if you get another Donegal incident in the meantime after this blasting or within the 30 years expected time, then we have no chance of stopping this environmental disaster. This company should be made to double strengthen these embankment walls not weaken them with blasting in order to save our estuary.

6- Concerns in regard to original Mud Pond BRDA1 planning condition 38

On the 30th September 1974 planning reference number 8580 permission was granted by the then Minister James Tully to Alcan to carry out construction to build an Alumina Plant at Aughinish Island Askeaton. **Condition 38** enclosed stipulated "*that the Red Mud pond shall be constructed and maintained in a sound structural condition and it shall be effectively sealed to prevent leakage of its contents. The embankments are to be of adequate strength to resist mud pressure and storm condition in the estuary*".

38. The red mud pond shall be constructed and maintained in a sound structural condition and it shall be effectively sealed to prevent leakage of its contents. The embankments are to be of adequate strength to resist mud pressure and storm conditions in the estuary.	38. To ensure that the red mud pond shall be adequately constructed and sealed.

We believe from the original planning that the first stage of construction was approx 170 Acres in size which is part of now a 250 Acre mud pond BRDA 1, storing millions of tonnes of hazardous/toxic waste. It states clearly, that the embankments are to be of adequate strength to resist mud pressure and storm conditions in the

estuary. Nowhere does it say these banks are to be constructed to resist rock blasting which is now only a metre or so from it, only storm conditions and mud pressure were requested.

Has tests been carried out on these banks as part of this EIS to see if they would sustain this type of blasting happening 5-6 times in the year for 10 years.

Locally, it is said that major work was carried out by Aughinish Alumina in repairing the North west/western side of the Mud pond embankment facing the Shannon and Foynes side in at least two sections to try and stop the red mud flowing out, as it may have been weakened or damaged. The said repairs are believed to have been carried out by Murphy International contractors and may have lasted for a few weeks.

No report is in the EIS that we can see on these repairs or map showing where this work was carried out. Are other areas of the embankments also under pressure or weakened that we are unaware off. Putting additional stone on the embankment walls may cause problems leading to structural problems not to mind blasting so close to them. If a problem with any section to the embankment facing Foynes alone or the Estuary has been unearthed then this application must be refused immediately as more could be appearing without the Council knowledge.

Condition 38 also stipulated that the first stage of the Mud Pond BRDA 1 of approx 170 Acres must be effectively sealed to prevent leakage. Years later, it was revealed that this section was never lined which breached condition 38. No investigation took place within LCC as to how planning was granted without this lining in place, which saved Alcan huge amount of money and allowed Hazardous/toxic waste to seep into the Estuary since 1983 causing a huge environmental cost. No prosecution has taken place by LCC or LCCC against Aughinish on the water pollution Act to this day.

34 years on Limerick City & County Council have embarked on another cost saving exercise for Aughinish, which again will not alone put at risk our estuary but has the potential to wipe it out for decades for those who use it and who live in it not to mention putting Foynes village at risk. If LCC planning dept in 1982/3 could not see 170 acres of black membrane lining missing in a hole of that size, then we have no evidence, if they even inspected the construction of the embankment walls or foundations of mud pond BRDA 1 in an independent and professional manner which is now questionable, if repair work has been carried out in sections of this embankment in Mud Pond 1 as to what state it is really in.

7- Aughinish Defends their process

Our group have heard on numerous occasions Aughinish Alumina defending its process, which they say is different to the process that caused the environmental

disaster in Hungary. We fully take on board that the process used by Aughinish is a dry process compared to Hungary which is a wet process. What Aughinish would want us all to believe, if a section of their embankment was breached and removed that because its dry process the red mud would just sit there and not move?

When hazardous/toxic waste is pumped out to these ponds in liquid forms and allowed to dry, it's been wet on a continuous basis in trying to keep it from blowing in the air, which Aughinish/LCCC, EPA know is failing and this red toxic dust is blowing not alone on to farms, properties locally but over many counties in Ireland. Having shown above, no lining of approx 170 acres, we have seen no reports published as to how much water is seeping back in underneath this unlined section making it wet throughout. We have seen no borehole documents in relation to drilling into the Red Mud in this EIS to see what exactly is in there and to the wetness contents of same.

These mud ponds are the talk of the sky's as people fly into Shannon they are astounded as to how all this toxic waste is dumped so close to the Shannon. They also speak of the red they see underneath the water in a clear day, which would be coming from the unlined 170 acres. The flow that has developed since 1983 of this toxic waste out of the pond may also be allowing high volumes of water coming back in eroding the red mud inside the ponds and to what levels?

The other worrying factor in blasting to a depth of 8 metres, it will affect the water tables no matter what Aughinish says to the contrary. If the blasting removes a section of these walls or foundations the water will flow in immediately, even underneath in huge volumes forcing pressure on the red mud to push towards the walls forcing them out with the red toxic mud flowing out in to the Estuary making it similar to the Hungary. Such a depth can have serious consequences to the water tables that will impact further afield to residents water systems.

8- Potential dangers to the Gas pipe line that this blasting would have in an indirect way

Our group would also have serious concerns to the gas pipe line main feed into Aughinish, which is situated just 50 metres from the Mud pond BRDA 1. Again concerns must be raised as to what was exactly shown to them, Aughinish version or Tom Philips & Associates which they signed off on. The blasting may not have a direct impact on this pipe line, but indirectly should the walls be breached or damaged containing huge amount of stone, coupled with large volumes of red mud been released then this would have a serious knock on impact on the pipe line and been 50 metres away would not be sufficient to withstand the force of stone and red mud and water leading to a major disaster. We feel this has not been assessed properly on health and safety grounds and to the Plant itself.

9- Impact this blasting will have on protected SACs involving habitats, birds, ecosystems etc

Clearly the amount of rock blasting that is mentioned in the application over a 10 year period been carried over 5 month period between March/September with blasting 6/7 times within that period will hugely impact negatively on habitats. birds nesting, ecosystems etc and is totally unacceptable to allow this application to go ahead as shown below under 7.4.7 & under key species of Designated areas.

The operational emissions of dust, PM 22 and PM 25 not to mention fly rock and others shown in Ref 1 that will impact only associated with this rock blasting alone, not to mention Red Mud been disturbed with Dust blowing from BRDA and if walls are breached then the unthinkable will happen that one of the most protected SACs in Europe will be destroyed for decades to come.

We see conflicting information in this application and this EIS, on one hand we see no key habitats been effected and quite the opposite on another.

Under 3.3 it states "*The site is not located within the boundaries of the Natura 2000 sites in question, **does not include in any key habitats** or species relating to the conservation objectives of the designated sites and will not require any resources from the sites, therefore there will be no direct loss of key habitats or species relating to the conservation objectives of the designated sites as a result of the proposed development and as such direct impacts of the Natura 2000 sites is not of concern*"

Under 7.4.7 Do nothing impact it states "*with regard to do nothing scenario, it is assumed that the proposed borrow pit area would essentially **remain in its current state with the continued persistence of the existing habitats (eg Dry meadow and grassy verge (GS2) and Scrub (WS1)*** habit would increase in extent over time and that Dry meadow and grassy verges (GS2) would decrease as this habit progresses to Scrub (WS1) Flora and Fauna species that are currently associated with the habitats of the proposed site and adjacent area will also continue to persist.

Under key species of Designed Sites "*Activities associated with the proposed borrow pit development have the potential to **disturb and/or displace key faunal species of the designated site** The River Shannon & River Fergus Estuaries SPA and Lower River Shannon SAC (Otter only) through increased disturbance such as. noise and /or visual cues*"

10 – The Track record between Aughinish Alumina & formally Limerick County Council from the early eighties to this day regarding planning applications/granting such applications does not inspire confidence in dealing with such a serious planning application as this as shown below

- In facilitating two pre planning meetings with Aughinish/ representatives and to allow this application to proceed on the basis set out above is totally unacceptable in rock blasting so close to approx 40 million tonnes of hazardous/toxic waste ponds and questions must now be asked, if this is another private done deal between both parties?

  Since the plant commenced operations in 1983 Aughinish have been allowed by Limerick County Council as it was known then to breach most of their original planning conditions. We have enclosed original planning permission and highlighted those listed below for your attention **Ref 4.**

- **Condition 1**- Aughinish had breached production/capacity by approx 600,000 in breached of this planning condition for approx 12/15 years without any action been taken by LCC. See letter from Mr Damien Clancy MD of Aughinish on 25th March 2004 on the matter after LCC finally raised it with AAL. **Ref 5**
  Retention was applied for on the 28th June 2005.**Ref 5 A**

- **Condition 5** -Adequate Hay and Straw coverage and water spraying of the entire mud stack shall be carried out to ensure suppression of windblown dust from the entire mud stack area. This scheme shall be such to satisfy the Planning Authority that adequate measures are in place to prevent Air Pollution.
  Aughinish stopping the Hay and Straw later because it was too expensive thus leaving the red dust blow from the Mud pond on to lands and the wider community another breach and no action taken. See Daily mail article where the former managerial Aughinish employee had to take out water tanks to try and keep the dust down as it was blowing from the pond.

See Attached 2 Pages under Ref 9 17/Dec/1993

Planning Reg. 1133/93

- **Condition 7** where Aughinish were to ensure that emissions to the atmosphere from the plant will not cause pollution and that the amentia's of the area are not affected thereby

  See Foynes Community Council objection 2005 of the pollution been caused to their community and the amentias of the area since 1983 and how our group and others are on public record as to the pollution been caused by Aughinish Alumina for decades.

- **Condition 8 and 14** where Aughinish were to ensure that emission of SO2 from the plant shall not exceed specified concentrations and thereby cause injurious pollution in the area.

  Aughinish were only allowed to emit 1.95 tonnes of Sulphur dioxide in their planning permission; instead they produced 2.6 tonnes during the mid nineties.

  See Letter **Ref 6** to County Secretary by former Councillor Mr David Naughton on the 8-1-1996. Stating "*Dear Secretary, I would like to know what the council view is on the interim report by the EPA dated Sep 95 that Aughinish have exceeded their SO2 emissions from 1989 to 1994, at their plant at Aughinish Island*" Mr Naughton received no information on the matter back and no investigation ever took place into this serious breach in planning.

  Section taken from 1995 EPA interim report that Mr Naughton was referring to in **Ref 6 B**. Again no action was taken by Limerick County council This planning breach for S02 coincided exactly when farmers started having animal health problems in 1989 peaking in 1992/4 and was found to be double the WHO level on human health for SO2 that our communities were exposed to that can cause respiratory problems etc as shown in the Irish Independent article enclosed **6 C**

- **Condition 16, 17-23,** where Aughinish was to provide for satisfactory monitoring of dust concentrations in order to prevent atmospheric pollution from dust charge and to ensure that the amenity and ecology of the area are not adversely affected. Again see Foynes Community Council objection and articles from the Limerick Leader have covered red dust blowing over the year. Again no action taken again by LCC for this continuing breach.

  Even an article enclosed heading "**Where the water turns red**" and Aughinish is mentioned as a possible source for polluting this man's lands in Mayo which caused infertility in his animals similar to those farmers in Askeaton animal problems when this red substance came on to his farm **Ref 7**

- **Condition 24** Aughinish was to supply weekly figures of sulphur content of fuel oil deliveries and consumption to the planning authorities. This was to insure that the sulphur contents were within acceptable limits. This was not done by Aughinish. The sulphur contents were at 3.5% - over 4% that we know about in certain loads of oil delivered during 1991-1994 at the height of our animal problems. Aughinish failed to ensure the contents of fuel oil was within acceptable limits.

- **Conditions 25-35** where Aughinish was to prevent pollution of natural waters and injury to existing species of fauna, flora and marine life. In 2006, 500,000 litres of caustic went into the Shannon and the continuous leaking of caustic from the Plant have been allowed to continue for decades into the Shannon damaging the natural water, fauna and marine life.

- **Condition 38, 43,** was breached because Aughinish Alumina failed to ensure that the red mud pond was not adequately constructed and sealed. Which we have dealt with in item 6.

- **Condition 44** where Aughinish Alumina was to provide for the eventual reinstatement of the area for agriculture or other beneficial use. See Foynes Community objection addressing this issue, which of course has not been done as Aughinish continue to keep filling and raising BRDA 1, putting the embankments under continuous pressure and the hazardous/toxic chemicals will not allow it to be put back to agriculture use.

- **Condition 45-48** has been breached because Aughinish Alumina has failed to minimize the possibility of damage through spillage of oil, caustic or acid as the plant. This has been addressed in Condition 25.

- **Condition 49 (b)** is breached because Aughinish Alumina has failed to minimize water pollution.

- **Condition 58** where Aughinish Alumina was to prevent pollution of the natural waters and to ensure that existing species of fauna and flora shall be protected. Aughinish plant is built on an Aquifer so the plant leaks caustic and heavy metals since 1983 destroying fauna and flora before it. This is also dealt with under Condition 25.

On the 15th May 2006, which we have dealt with in Condition 1 planning, was granted by Limerick County Council for **05/1836** enclosed **Ref 8** in facilitating Aughinish on the retention which was in breach for 12/15 years on the production. It also granted permission to Aughinish to construct a second Mud pond of 200 acres to store hundreds of thousands of red hazardous/toxic waste that Cappagh Farmers, Foynes Community Council and others objected to because of its dangers and more toxic dust would blow from it, but again LCC ignored everyone.

In 2014, this article appeared in the Limerick Leader, the red hazardous/toxic red dust had as predicated by objectors in 2005 would blow and here in 2014 local residents were covered with it. No one to this day has informed them of what they were exposed to. Also no enforcement action was taken by LCC

against Aughinish. Red Dust has been seen blowing from mud pond BRDA 2 by locals.

Aughinish properties 'coated in red dust'

Colm Ward
7 Mar 2014

Residents living close to the Rusal plant in Aughinish have voiced concerns over an incident in which some properties were coated in red dust during the severe storm of February 12.
Residents living close to the Rusal plant in Aughinish have voiced concerns over an incident in which some properties were coated in red dust during the severe storm of February 12.
The company subsequently carried out a clean-up operation in the area and offered to power hose any properties that were affected.

However, some residents are worried that the red dust may have contained dangerous materials. They are also concerned that something similar may occur again.

One resident told the Leader that his house was completely coated in the red dust, which is left over after alumina is extracted from bauxite rock during the manufacturing process.

"I couldn't even see out my front window. The whole place ran red - trees, the road, everything was coated in dust," he said.

Another local resident claimed that the dust came from a newly opened storage pond on the Rusal site. A number of years ago, Rusal was granted permission to expand the pond area and to raise the height of the dry-stacked red mud.

Pointing out that the mud is still 40 feet below the land surface in this new pond, the resident said he was concerned that similar incidents could recur as more red dust is added and the height of the pond rises.

"They said this was a once-off, but once-off is too much," he said.

He added that he has taken a number of samples of the red dust from his property and plans to have it independently tested.

The company has moved to reassure local residents that the dust is "not harmful". A spokesperson confirmed that Storm Darwin caused some dust to be blown onto a number of neighbouring properties. He described that storms as "an unprecedented weather event which the plant has not experienced in its 30 years of operation".

"Winds were hurricane force with wind speeds of 160 kph recorded at the Rusal Aughinish Jetty. The westerly winds exceeded 110 kph for approximately two hours at Rusal Aughinish and Met Eireann has reported that Storm Darwin was one of the most violent in Irish history ranking it among the top five worst storms to hit Ireland since records began in 1860," the spokesman said.

"During this period, the extremely high winds carried some wet dust from our new BRDA [Bauxite Residue Disposal Area] facility in the general vicinity of the main entrance into Aughinish. We began to clean the entrance to the plant immediately after the storm to bring it back to its usual cleanliness.

"Inspections by our people in the locality found that some airborne wet dust was also carried onto the properties of a small number of our near neighbours. It is important to state that this dust is not harmful. However, we do appreciate the concern and annoyance of those neighbours affected."

The day after the storm, company representatives visited 11 houses in the area to check whether they had been affected by the dust.

"In line with our good neighbour policy, we offered to have all windows cleaned as well as the offer of power hosing any area where dust may have been present, to five of our near neighbours. Three of the five have taken up this offer and the work has since been completed," he spokesman continued.

"The Environmental Protection Agency has, as a matter of course, been informed of the issues arising and the remedial actions.

"We have revised and updated our Storm Procedures to ensure that this unprecedented event will not be repeated."

To sum all the above up in item 10. Limerick County Council and Now Limerick City & County Council seem to be unable to even open an enforcement file against Aughinish Alumina, not to mind instruct their Solicitors to issue any form of Court proceedings against Aughinish Alumina since 1983 for these planning breaches. Clearly the public need to be very worried again in relation to this latest planning application.

We request that this planning application 17/714 is refused in its entirety

Yours Faithfully

Pat Geoghegan
(Spokesperson)

Limerick City & Co Co.
Dooradoyle
Limerick.

Limerick Against Pollution
C/o 4 Ard Thonáin
Sli na Manach
Nungret.
Co. Limerick.

29/8/17.

Re; Planning Ref 17/714.

Dear Sir/Madam,

Limerick Against Pollution wish to support Cappagh Farmers support group in their objection to Aughinish Alumina proposals as per application no 17/714, and ask for the permission to be refused, regarding rock blasting near the toxic waste ponds. We also fully agree with Professor Paul Connett's professional opinion & concerns regarding the dangers it poses.

yours on behalf of Limerick Against Pollution

Claire Keating LAP.

REF 1

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Environmental Impacts of Rock Blasting and Their Mitigation

Dhekne P. Y.

Abstract---Blasting is the most accepted and practiced technique for the breakage of rock. During blasting, the energy transformation takes place in the explosive. Rock breakage during blasting process is accompanied by the generation of ground vibrations, noise, dust, fumes and flyrock. The environmental impacts of ground vibrations, noise and flyrock pose a great challenge to the safety of the nearby structures and the people. This paper deals with a case study of a Limestone quarry wherein mitigation of environmental impacts of ground vibration, noise and flyrock was carried out. To lessen the environmental impacts, initially three blasts with the prevailing practice were monitored. It was noticed that these blasts resulted into an unacceptable level of ground vibration, noise and fly rock. The results indicated that there was a necessity to modify the blast design. The modification was done by changing the delay interval and ground vibrations, noise and flyrock were once again monitored with the modified design and the levels were found to be drastically low. It can therefore be concluded that an appropriate blast design can help in reducing the environmental impacts of blasting.

Key words--- Fly Rock, Ground Vibrations, Noise, Rock blasting

I. Introduction

ROCK blasting is a day-to-day operation in an opencast mine. During rock blasting, a chemical reaction takes place which converts the chemical energy of the explosive into the shock energy and gas energy. It is established that nearly 20 % of the energy goes to the breakage of the rock whereas the remaining manifests itself in the form of waste energy. The waste energy appears in the form of seismic energy, noise heat and light. Rock blasting is further accompanied by the generation of the dust and the fumes and flyrock. In India, the opencast mines are being operated in the vicinity of cities, villages and dwellings. This calls for the mitigation of the environmental impacts of the rock blasting.

A review of the environmental impacts of rock blasting in opencast mines indicates that the fumes and the dust do not pose a significant danger to the people who are in the vicinity of the mine. The fumes generated during the course of blasting get instantly diluted whereas the dust suppression measures ensure that the airborne dust due to blasting is within the permissible limits.

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The effect of ground vibrations and noise on the human beings is well documented but they sometimes also cause damage to the property. The flyrock not only pose a major danger to the properties but at the same time can lead to the fatalities also. Fig. 1 depicts the areas of concern during blasting.

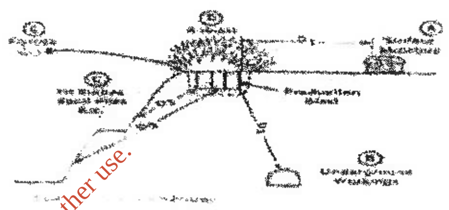

Fig. 1 Areas of concern when blasting

This paper discusses a case study of identification of mitigative measures in respect of ground vibrations, noise and flyrock. The study refers to a Limestone quarry which is being operated within a short distance of dwellings and public road.

II. Generation of Ground Vibrations, Noise and Flyrock

When an explosive charge detonates, intense dynamic waves are set around the blast hole, due to sudden acceleration of the rock mass. The energy liberated by the explosive is transmitted to the rock mass as strain energy. The transmission of the energy takes place in the form of the waves. The energy carried by these waves crushes the rock, which is the immediate vicinity of the hole, to a fine powder. The region in which this takes place is called shock zone. The radius of this zone is nearly two times the radius of the hole. Beyond the shock zone, the energy of the waves gets attenuated to some degree which causes the radial cracking of the rock mass. The gas generated as a result of detonation enters into these cracks and displaces the rock further apart causing its fragmentation. The region in which this phenomenon takes place is called transition zone. The radius of this zone is twenty to fifty times the radius of the hole. As a result of further attenuation taking place in the transition zone, the waves although cause generation of the cracks to a lesser extent but they are not in a position to cause the permanent deformation in the rock mass located outside the transition zone. If these attenuated waves are not reflected from a free face, then they may cause vibrations in the rock. However if a free face is available, the waves get reflected from a free face cause further breakage in

the rock mass under the influence of the dynamic tensile stress. Fig. 2 is a pictorial representation of the various zones described above and explains the phenomenon of reflection of waves.

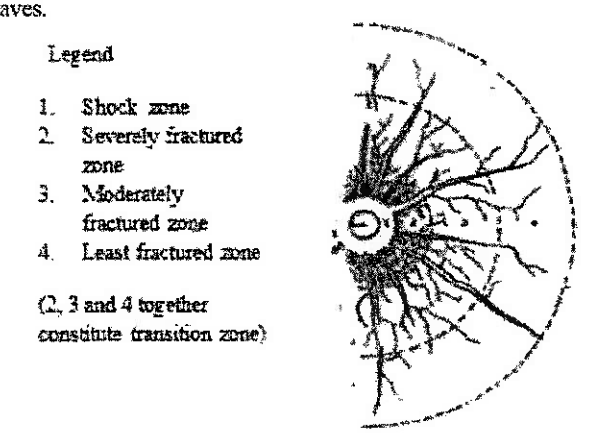

Fig. 2 Rock breakage process

A. *Effect of Ground Vibrations on the Structures*

The ground vibrations cause the ground to vibrate in transverse, longitudinal and the vertical direction leading to its damage. Fig. 3 shows the vibration of the structures on account of ground vibrations.

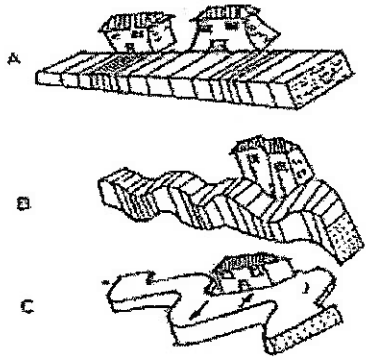

Fig. 3 Structural response to ground vibrations

Although the differences in the accelerations, amplitudes, particle velocities and the frequencies in three directions result into the damage to the structures but the peak particle velocity and the frequency are normally taken into consideration for evaluating the structural response. The damage criteria due to ground vibrations are therefore often specified with the peak particle velocity and the associated dominant frequencies. Table I gives the permissible levels of the ground vibrations under different conditions as specified by DGMS, India

TABLE I
PERMISSIBLE PEAK PARTICLE VELOCITY AT THE FOUNDATION LEVELS OF THE STRUCTURES IN MINING AREAS

Type of Structure	Dominant Excitation Frequency, Hz		
	< 8	8-25	>25
Buildings/Structures not belonging to the owner			
Domestic houses/Structures	5	10	15
Industrial buildings (Framed/concrete structures	10	20	25
Objects of historical importance and sensitive structures	2	5	10
Buildings/Structures belonging to the owner			
Domestic houses/Structures	10	15	25
Industrial buildings (Framed/concrete structures	15	25	50

(After Directorate General of Mines Safety, Govt. of India, Circular No.7 of 1997)

It is observed from the table that as the dominant excitation frequency increases, the permissible peak particle velocity also increases. The frequencies below 8 Hz are the most serious for potential damage from structure cracking. They produce large ground displacements and high level of strain. They also couple very efficiently into structures on account of resonance. The ground vibration levels beyond those specified in the approved standards may lead to the damage to the structures. Plate 1 shows the cracks generated in the walls of a building due to ground vibrations.

B. *Mitigation of the Ground Vibrations*

It is not possible to completely prevent the generation of ground vibrations nevertheless the blasts can be designed in order to minimize their effects at the point of contention. Table II presents an overview of the effect of the different blast parameters on the control of ground vibrations.

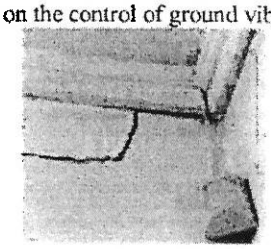

Plate 1: Cracks in a structure due to blast induced ground vibrations (Source: Google Images)

TABLE II
AN OVERVIEW OF THE EFFECT OF THE DIFFERENT BLAST PARAMETERS ON THE CONTROL OF GROUND VIBRATIONS

Variables within the control of a blaster	Effect on ground vibrations		
	Significant	Moderately Significant	Insignificant
Charge/delay, kg	×		
Delay interval, ms	×		
Spacing and burden, m		×	
Stemming (type and amount), m			×
Charge length and diameter, m			×
Angle of borehole,°			×
Direction of initiation		×	
Total charge, kg			
Bare versus open detonating cord			×

It is therefore obvious that the ground vibrations can be controlled either by controlling the charge per delay or by controlling delay interval, if spacing and burden are within acceptable ranges.

C. Air Over Pressure (Noise)

Air overpressure is a transient impulse that travels through the atmosphere. Much of the air overpressure produced by blasting has a frequency below the audible limit of 20 Hz. Air overpressure, both audible and inaudible, can cause a structure to vibrate in much the same way as ground vibrations It is a frequent cause of the complaints as a person senses air overpressure more than vibrations. The causes of generation are the energy released from unconfined explosives such as uncovered detonating cord trunk lines or mud caps used for secondary blasting, the release of explosive energy from inadequately confined borehole charges (inadequate stemming, inadequate burden, or mud seams) and the movement of the burden and the ground surface.

The causes of the noise are summarized in Table III.

TABLE III
CAUSES OF THE NOISE LEVELS

1. Too small a burden	4. Detonating cord trunk lines	Inaccurate drilling
2. Adverse geology	5. Improper delay configurations, inaccurate detonators	8. Incorrect explosive selection
3. Insufficient stemming length	6. Overbreak from previous shot	Excessive powder factors

A perusal of the causes indicates that the control of the noise is well within the scope of the blasters. The control techniques of noise are summarized in Table IV.

TABLE IV
CONTROL TECHNIQUES OF NOISE

Variables within the control of a blaster	Effect on ground vibrations		
	Significant	Moderately Significant	Insignificant
Charge/delay, kg	×		
Delay interval, ms	×		
Spacing and burden, m	×		
Stemming amount, m	×		
Stemming type		×	
Charge length and diameter, m			×
Angle of borehole, °			×
Direction of initiation	×		
Total charge, kg			×
Bare versus open detonating cord	×		

Control measures for noise can be planned accordingly.

D. Flyrock

Excessive flyrock is rock that is projected beyond the normal blast-affected area. It is generated when there is too much explosive energy for the amount of burden, when stemming in insufficient, or when the explosive energy is rapidly vented through a plane of weakness. The flyrock may take place from the bench face or bench top (Fig. 4). Excessive flyrock is responsible for 40-60% of the accidents due to blasting in opencast mines. Table V presents the causes of the flyrock.

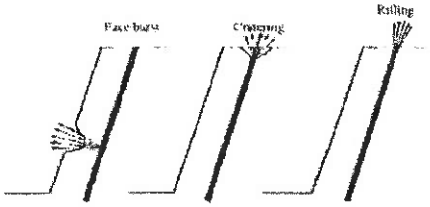

Fig. 3. Mechanisms of blast induced flyrock in opencast mines

Fig. 4 Mechanism of blast-induced flyrocks in opencast mines

TABLE V
CAUSES OF THE FLYROCK

Geology and Rock conditions	Blast design
Mud seams, natural joint or bedding planes, fractures, or cavities	a. Improper blast design b. Insufficient explosive confinement or the rapid venting of the explosive gases Blast design errors such as too high a powder factor c. An inadequate burden d. Too short a stemming region e. Ineffective stemming material f. Improper delays between rows g. The wrong blasthole delay sequence

The control techniques of flyrock are summarized in Table VI

TABLE VI
CONTROL OF FLYROCK

Bench face flyrock	Bench top flyrock
a. Burdens must be sufficient to contain the explosive energy. b. This means that effective or instantaneous burdens are at least 25 times the blast hole diameters. c. Explosive weights should be monitored to avoid overloading into void spaces. d. Fissures, mud seams and weaknesses should be stemmed through rather than loaded with explosive. Additional burden may be needed if the face is broken up or irregular. e. The explosive column may have to be shortened to avoid the lightly-burdened collar region. f. In general, burden to diameter ratio of 14.2 or more should limit flyrock to a manageable initial velocity of 100 ft/sec and range of 300 ft	a. Optimum blast design parameters should be selected as the top flyrock results due to excessive explosive and/or not enough relief and ineffective stemming and/or cratering and too less burden. b. Sufficient delay time must be provided to allow relief of later-firing rows of blast holes. c. This means that delay timing should be at least 2 ms/ft of burden to avoid both flyrock and back break. Far worse than delays which are too short are delays which are out of sequence. d. A stemming length of about 0.7 times the burden and coarse angular material which will interlock and hold against explosive gas pressure. e No condition should be provided to allow misfires as the misfires are serious flyrock generators. f. Adopting Nonel initiation system (Bottom hole initiation) g. Applying muffling arrangements like sand bags, conveyor belts and wire-meshes

III. CASE STUDY

As discussed above, the ground vibrations, noise and the flyrock constitute the important environmental impacts of blasting. A study was recently conducted in Limestone quarry

'X' to reduce the impacts of these.

The geotechnical properties of the deposit are given below.

a. Uniaxial Compressive Strength,
b. M Pa:40-45
c. Density,
d. g/cc: 2.40-2.52
e. Young's Modulus, G Pa: 44-49
f. Porosity, %: 5-7
g. Joint Spacing (Vertical), m: 2-3
h. Joint Spacing (Horizontal), m: Around 1.0 m

The deposits are having three sets of nearly vertical joints in addition to horizontal bedding planes. The quarry is a captive mine of a Cement Plant. The quarry produces the cement grade Limestone which is fed to the Plant. The quarry has the limestone deposits which belong to the sediments of Chhattisgarh basin, which are horizontal, thick bedded and classified as stromatolitic Limestone of Raipur Group. Patches of argillaceous Limestone and shale are other associated rocks. The overburden consists of hard Laterite and clay with an average thickness of 6.0 m. underlying this, the Limestone is structurally disturbed by the vertical and horizontal fissures and joints. This results into difficulties in drilling and poor fragmentation.

The deposit is being worked in two pits. There are four benches in the pit. The average height of the benches is 8.0 m. At present; the mining is being done in 1st, 2nd and 3rd bench. Conventional drilling and blasting method is used for the excavation. The blasted muck is removed by using L & T Poclain hydraulic shovel 4.0 m^3 and TELCON make 60 te dumpers. Rock breaker is used for breaking the oversize boulders.

At mentioned above, the excavation is carried out by conventional drilling and 'blasting method. The holes are drilled by pneumatically operated drills. The blast-holes have a diameter of 115 and 152 mm. Since the blocks are criss-crossed by fissures, drill holes are normally drilled on a staggered pattern. The boulders, which cannot be handled by the excavator, are further fragmented by secondary blasting. The average spacing and burden is nearly 5.0 m and 3.0 m for 115 mm holes and 7.0 and 4.0 m for 152 mm holes. Site mixed emulsion explosives is used for blasting. Charged holes are primed by Cast booster. Initiation system used is Shock tube. The firing sequence is such that there is hole to hole initiation. The typical blasting pattern is shown in Fig. 5.

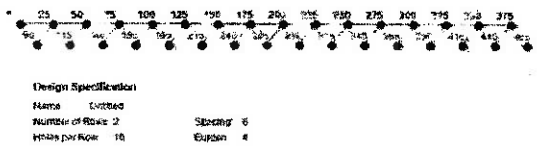

Fig. 5 Blasting Pattern

A. Investigations

The mine has a public road within 250 m of the blasting. The road has a sizable traffic density and was required to be closed down at the time of blasting. The mine site is surrounded by a lot of shrubs and the cattle belonging to the villagers graze thereon. There are few temporary structures within 300 m of blast site and they do not belong to the owner of the mine. It is therefore evident that the ground vibrations and noise were of paramount importance to the residents of dwellings. The flyrock was of significance towards the safety of passers-by on the road, residents and cattle.

The objective of the study was to design a blast to limit the ground vibrations and noise within the statutory limits prescribed by Indian regulations and the fly rock was to be totally eliminated.

In order to achieve the objective of the study, four blasts using the normal practice were monitored. The details of the blast are presented in TableVII. The ground vibrations and the noise were measured using the Instantel make Seismograph and the flyrock was visually observed and its distance from the blast site was measured. The results of the blast are presented in Table VIII. It is evident that the ground vibrations were very much on higher side and the maximum distance of flyrock was also high. This could lead to grievances from the residents of dwellings due to vibrations and noise and chances of fatalities on account of the flyrock.

TABLE VII
DETAILS OF THE MONITORED BLASTS

Parameters	Unit	Value
No. of blasts	No.	3
Holes	No.	25-32
No. of Rows	No.	2
Spacing	m	6-7
Burden	m	3.5-4.5
Diameter	mm	152
Height	m	8.5-9
Hole to hole delay	ms	25
Row to row delay	ms	65
Charge per delay	kg	125-130
Cast booster	g	250
Stemming	m	3.5
Type of the explosive		Site Mixed Emulsion

TABLE VIII
RESULTS OF THE MONITORED BLASTS

Results	Blast No.1	Blast No.2	Blast No.3
Peak particle velocity, mm/s*	37	42	40
Noise, dB*	145	143	140
Flyrock, m	200	274	300

(* measured at a distance of 300 m from the blast site)

To obviate the imminent dangers from them, the blast design was modified. A perusal of the drilling and charging pattern showed that the normal drilling, charging and firing practice that was being adopted in the mine was in line with the same that was being followed in the neighbouring mines which were not facing these problems. It was therefore thought that the firing sequence of the holes could possibly the cause of ground vibrations. Working on this premise, the firing pattern was changed without varying the drilling and charging patterns. The initial and modified firing patterns are shown in Fig. 5. It is evident from the Fig.s that the delay interval between has been increased substantially from 65 ms

to 90 ms between the successive holes. The ground vibrations, noise and flyrocks were once again monitored.

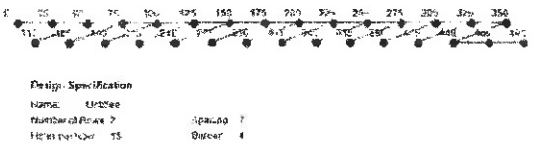

Fig. 5 Modified Blast Design

The results of the modified blast practice are presented in Table IX. It was found that by changing the pattern of firing there had been drastic reduction the ground vibrations, noise and the flyrock.

TABLE IX
RESULTS ON MODIFIED BLAST DESIGN

Results	Blast No.1	Blast No.2	Blast No.3	Blast No.4
Peak particle velocity, mm/s*	13	16	8	6
Noise, dB*	125	120	115	125
Flyrock, m	10	16	8	22

(* measured at a distance of 300 m from the blast site)

IV. Discussion

Scatter in delay timings of delay detonators is a common feature in many of them and may amount to + 15 ms. In the earlier practice, since the drilling, charging and connection pattern were in line with the established practice so the scatter was the only reason for the high levels of ground vibration, noise and the flyrock. As a result of scatter, more than one holes would detonate at one time which would in turn, increase the charge per delay. This led to increased levels of ground vibrations and noise. Further, the scatter would cause the burden of the front row to move ahead inadequately leading the broken rockmass of the second row to be thrown in the air leading to the flyrock. The increase in the delay led to wiping out the possible effect of scatter causing a reduction in the ground vibration, noise and the flyrock.

V. Conclusion

The rock blasting leads to a number of impacts on the environment. Opencast mining near the residential areas has become inevitable and therefore environmental impacts are required to be mitigated. Ground vibrations, noise and fly rock are the important environmental impacts as they may damage the properties and fly rock may cause fatalities. The case study discussed in this paper indicates that these effects can be minimized. A proper blast design ensures effective utilization of the energy of the explosives and is therefore the answer to the problem of mitigation of the environmental impacts.

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REF 2

A US EXPERT in environmental chemistry has called for an independent investigation into Aughinish Alumina after a visit to west Limerick.

Dr Paul Connett was in the county to speak at a Limerick Against Pollution meeting about Irish Cement, but spoke at length about the red ponds at the alumina plant, calling them "disgusting".

He described as "reckless" the proposal by the firm to create a borrow pit by 'blasting' rock adjacent to the millions of tonnes of red mud, which is a waste product from the bauxite refining process.

"Looking at this, it's only a matter of time before that waste ends up in the Shannon Estuary. There's probably leachates going in there now," said the retired professor.

"What a beautiful country. I'm looking at the most fertile valley in the whole of Europe, the Golden Vale. And then you see this savage red pond here, built right next to the estuary, just a few feet from the estuary - it's sacrilege," added Dr Connett.

The professor thinks that "poisonous" chemicals in the highly alkaline red waste have the potential to wreak havoc on both human health and the environment, if a spill were to occur. He also believes that the material could already be polluting the area through the groundwater and wind.

"There are so many problems with this it's hard to know where to begin. You have emissions from the plant itself, emissions from the station that's generating power, blow off from the red ponds, and you've got leachate from the stacks, which is going into the river," he said.

"I don't know how much fishing goes on, but that," he said, pointing at the red ponds, "is the kiss of death for fish in this area," he added.

Dr Connett, who is also a prominent fluoridation critic and zero-waste advocate, studied at Cambridge and Dartmouth, before spending more than 20 years as a professor of environmental chemistry at St Lawrence University, Canton, New York.

He claims that previous EPA reports on the level of toxic chemicals "didn't even measure some of the key things", and he called for an independent investigation into both the plant and "the government officials who continue to allow it to be here".

"And now they plan to blast the rock. What a ridiculous, reckless thing to do, to set off explosives near the wall of the ponds, because you could easily break the barriers, and all the waste would go into the Shannon Estuary. That is crazy, really reckless," he said.

When asked if there is a safe way to deal with the red waste, Dr Connett suggested solidifying it, as the loose dust is "open to the elements".

Plans to blast rock on the Aughinish site are being put forward due to the dwindling stockpile of rock needed for the plant's operations, all of which is due to be consumed before the end of 2017.

An environmental impact statement is now being prepared, and Limerick City and County Council confirmed that a pre-planning meeting has taken place.

If planning is successful, the borrow pit will operate over a 10 year period, with blasting occurring six to seven times per year between March and September.

A spokesperson for the EPA said that the agency had "not been made aware of" the consultation for an Environmental Impact Statement "as yet".

"Aughinish Alumina operate under Industrial Emission Licence (P0035-06) issued by the EPA. If changes are being made to activities at the licenced site - which could have an impact on the environment - then AAL will be required to notify the EPA of these. If these activities are not provided for in the licence then a licence review application may need to be made. The EPA has not received any such application to date.

"The licence application assessment process is open to full public participation."

An Aughinish spokesperson said: "Aughinish Alumina operates in compliance with Industrial Emissions Licence (IEL P0035-06). Any work on the Bauxite Residue Disposal Area (BRDA) or its environs is carried out according to our permitted activities. For clarification purposes, Aughinish operates a dry stacking system on the BRDA for disposal of the bauxite residue from the Bayer process."

REF 3

CONSULTATION QUESTIONNAIRE

FOR THE

PROPOSED EXTENSION OF

BAUXITE RESIDUE DISPOSAL AREA (BRDA) AT AUGHINISH ALUMINA LTD.

Office Coding:	Date Received:	Time:

1) Name: (Optional) 2) Address: (Optional)	THE COMMUNITY COUNCIL FOYNES AND DISTRICT COMM. COUNCIL FOYNES, Co. LIMERICK.
3) Organisation: (if relevant)	

4) What are your concerns and experiences regarding the existing Bauxite Residue Disposal Area (BRDA)?

We live in close proximity to what can only be described as a 'mountain' of red waste, a product of an intervention with nature through a hazardous and caustic process. It is a waste product that has been shrouded in controversy for decades in relation to both its content and its effect on the environment, and which is produced by a company that constantly challenges changes to EPA regulations.

We are a concerned community.

We are now faced with a proposal to extend the waste ground for this material. We have already watched this waste grow for over 20 years, and while watching them build another 'mountain' through the extension of this dump, we are expected to wait another 20 years before the current pile is covered.

According to their licence, Aughinish Alumina is permitted to pump toxic chemicals into the atmosphere and into the Shannon. Among these are sulphur dioxide, nitrous oxides and particulate matter. They have also been allowed to stockpile this bauxite residue and leave it exposed to the elements for decades.

Their openness and honesty with respect to environmental issues does not instil confidence.

We have lived as an extremely patient community for many years, even allowing Aughinish Alumina to hide behind the €5.2 million Environmental Protection Agency report into animal deaths and human health difficulties in Askeaton. While the report found the problems were not directly linked to industrial pollution, it is impossible to stand by that report when you see the effect of the 'red mud' on the surrounding landscape.

PL 31

When the wind changes direction and blows from the north, the village of Foynes gets covered in red dust. Cars exposed to the red dust on a regular basis lose the lustre in their paintwork over a matter of months. Workers are required to wear goggles to protect themselves from the dust once they enter the Aughinish plant. How can this have no effect?

In January of this year the Limerick Leader quoted Aughinish Alumina as having declared their reluctance to introduce an airborne dust-monitoring programme. It would prove too costly.

Aughinish Alumina also stated that the imposition of a mandatory annual environmental meeting was excessive. Surely the monitoring of the environment should be of utmost importance, and any company with dedication to environmental responsibility should be open to reviewing environmental impact on a regular annual basis?

Aughinish Alumina was also caught up in controversy in 2002, when it failed notify the EPA of an incident with the potential for environmental contamination of surface water or ground water as soon as practicable after the occurrence of such an incident.

Their overall approach to environmental issues does not inspire confidence.

We have concerns for our community.

Broadly our concerns are covered under the following areas, but this is not an exhaustive list, merely our high level grounds against this expansion:

Our health – Aughinish Alumina and it's waste have been linked on many occasions to various incidents of environmental and health concerns. Anecdotal evidence to highlights a higher incidence of cancer in the surrounding area. Putting aside the results of the EPA study into the incidents of animal deaths on Askeaton farms, we must have categorical assurance that there is no evidence of link between higher cancer rates and the bauxite residue.
Breathing in particulate filled air is a potential source of serious respiratory problems, particularly if our families are exposed to the material over a long period of time. The rise of the current mound of bauxite residue over the last few years has been staggering, and unexpected. It coincides with greater evidence of airborne red dust in the Foynes area when we have a northerly wind. We are concerned that we may not see the harm that this dust is causing immediately, but we have no evidence to say that it will not have harmful side effects over time.
Can we be assured that the rate of respiratory illness in the surrounding area is no higher than the national average?
Can we be assured that the rate of cancer in the surrounding area is no higher than the national average?

A strong smell is evident in the surrounding area of Aughinish Alumina. What is the cause of this smell?
In general smells are particulate, what chemicals are being carried in the air? What is the source of the smell? Is it the bauxite residue?
Is there any potential for this to be harmful to our health and the health of our families, either now or in the future?

We need independent safeguards that there will be monitoring of the current residue disposal area, regardless of sanction to build another one.

Our Quality of Life – Aughinish Alumina and its waste sticks out in our minds. Each time you see the red tinge on the grass, or see the actual bauxite residue area itself, you are struck by suspicion and the fear it is causing damage on a number of different levels within the environment and community. The red mud compromises our perception of living in a natural and clean environment. While we can choose to ignore it and rely on the prevailing wind to bring the dust to the north and northwest, away from Foynes, a change in wind direction brings us back to the reality of living beside this hazard. Our quality of life is compromised, and over the years we have been continuously anticipating that the growing mountain of waste would reach it's highest point and be covered over. It continues to grow, and you an extension to the dump is proposed. We do not want our families or future generations to live with this as their legacy.

Property Values - Residents and landowners in the surrounding areas are very concerned about the impact of the waste site on the value of their property. In the event that it continues to grow, we foresee a proportionate drop in house values. The bauxite residue mounds could effect the decision of potential new residents to move to the area.

Tourism - The Bauxite Residue Area is an eye sore, and detrimental to the area's appeal as a potential destination for visitors and tourists. The Foynes area is the gateway to the southwest, and the coastline of the Shannon estuary is quite beautiful. That is of course with the exception of the 'red mud', visible from a number of points around the locality.
The Aughinish website confidently proclaims how they are saviours of the environment and the island. They state that 'Aughinish had always been known as a great place for wild fowling and in the pre-environmentally aware days was a Mecca for shooting parties that had, to a great extent, "shot it out".'
To imply that Aughinish and its wildlife are better off buried underneath hundreds of thousands of tonnes of bauxite residue is frustrating to say the least. Indeed the great detail that they have on their website of the woodlands, meadowlands and wetlands do not seem to be accompanied by the real life photographs of the residue disposal areas, and seem a little hypocritical.

5) What changes would you propose to improve the existing Bauxite Residue Disposal Area?

The existing BRDA is a disgrace. No member of our community could have envisaged that the 'red mud' would ever have been packed so high. The higher it goes, the more it is exposed to the elements, and subsequently the greater the spread of the dust on the wind.
It is unacceptable to propose that this 'mountain' will remain uncovered for the medium to long term, particularly with substantial monitoring and checking programmes in place.

It was stated that the mound would be covered in 20 years time. Why not cover it now?

It was stated that earth would be brought in to cover the mound and grass would be grown on it. An actual demonstration that grass will grow on it would at its very least be reassuring.
Show us this can be done?

At a minimum a short-term airborne dust-monitoring programme should be initiated, before the extension is considered. The results should be made a matter of public record and a public meeting be held to discuss them.
Show us we are not breathing poison?

We need to be able to rely on the openness and honesty of Aughinish Alumina if we are to continue to what has been a patient relationship on our behalf to date. We ask for an environmental review group to be established, with representation from Aughinish Alumina, the local community and independent experts in the field. The review group should meet annually and working together establish policy and practice that can protect us all.

6) Please list your concerns regarding the proposed extension of the Bauxite Residue Disposal Area (BRDA) (1 being your greatest concern, 2 your next greatest, etc.):

1. We are concerned for our health and the health of our families.
2. We are concerned for our quality of life.
3. We are concerned for the effect Bauxite Residue will have on our environment.

4. We are concerned about how the knock on effects of the Bauxite Residue will affect our status as a village that is attractive to new residents, visitors and tourists.

5. We are concerned for the effect the potential increase in industrial pollution from one company can make this an unattractive location for other industry and future jobs.

7) Please detail the effects (positive or negative) you feel the extension of the Bauxite Residue Disposal Area may have on you and your surroundings.

It is insulting to even use the word 'positive' in this question. What potential positive effects could there be on our community and our surroundings from living in close proximity to hundreds of thousands of tonnes of hazardous waste material, which we experience landing on our village and being inhaled by our families on a regular basis.

The negative effects we would anticipate have been stated in section one.

We anticipate the extension of the bauxite residue disposal area would have the following impact on the effects already cited:

- It would increase their intensity
- It would increase their longevity

8) What information or questions do you wish to be addressed in the Environmental Impact Statement?

Is there any potential for this to be harmful to our health and the health of our families, either now or in the future?
Why not cover the existing site now?
Can grass grow on this material?
Can anything grow on this material?
Can Aughinish Alumina adapt a policy of honest and open communication about the environment?
Can it be moved? Is there a safer place for it?
What are the long-term plans for the plant and the waste it produces?
What is the cause of the smell in the area surrounding Aughinish Alumina?
What chemicals are being carried by the dust?
Can we be shown that we are not breathing poison?
Has anything of this scale been done before?

9) Any other comments:

There is nothing positive in the proposal to extend the bauxite residue dump.

For too long Aughinish Alumina have been playing the employment card. It is time to act responsibly by looking at the health of their workers, that of our community and the environment, and alter their perspective. Aughinish Alumina spends too much time arguing against EPA restrictions for anyone to believe that they are overly concerned with the environment, and consequently the people who live in that environment are disillusioned.

They are concerned with making a profit and nothing else.

On the other hand, this is our home.

It is inconceivable that a company would have such blatant disregard for a local community, to suggest that they would cover the red mud in 20 years, by which time they will have probably expended their use of the factory in any case. You are asking us to not only live with the current monstrosity, in fear of unknown effects, but to allow a second one to further damage our community.

If they want to be sanctioned, let them respond with real action to cover the red mud, prove it will be capable of supporting any form of plant life.

In summation we ask, how could anyone be happy to live in close proximity to hundreds of thousands of tonnes of a waste product resultant of a hazardous chemical process? How could anyone approve the extension of that dump?

Michael A Cleary,
Knockpatrick,
Foynes,
Co. Limerick

REF 4

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACT 1963

Contae Luimnigh

Planning Register Reference Number: 8580

APPEAL by Patrick G. McMahon of Newcastle West on behalf of local farmers and other appeals against the decision made on the 10th day of April 1974 by the Council of the County of Limerick deciding to grant subject to conditions a permission to Alcan Ireland Limited of Gardner House, Ballabridge, Dublin, for development consisting of a complete plant for the processing of bauxite to alumina including ship berthing piers, bulk storages, handling services and all ancillary equipment and buildings necessary for an integrated plant at Aughinish Island, County Limerick, in accordance with plans and particulars lodged with the said Council:

DECISION: Pursuant to subsections (5) and (9) of section 26 of the Local Government (Planning and Development) Act, 1963, and after consideration of the report of the person who conducted an oral hearing of the said appeals, it is hereby decided to grant permission for the said development in accordance with the said plans and particulars, subject to the conditions specified in column 1 of the Schedule hereto, the reasons for the imposition of the said conditions being as set out in column 2 of the said Schedule and the said permission is hereby granted subject to the said conditions.

SCHEDULE

Column 1 - Conditions	Column 2 - Reasons for Conditions
1. This permission relates only to the construction of a plant for the extraction of approximately 800,000 metric tons per annum (Stage 1) of alumina from bauxite ore by a chemical leaching process together with ancillary works as set out in the planning application.	1. To identify clearly the extent of the development to which this permission relates.
2. Further plans fully detailed and dimensioned together with elevations including external colour treatment of each particular building, structure, storage tank, and ancillary plant shall be submitted to and agreed with the planning authority at least two months before construction of the particular development is commenced. In the event of dispute the said detailed plans shall be as determined by the Minister for Local Government.	2. To ensure that development is carried out in accordance with the said plans.
3. Before development is commenced, the developer shall pay or arrange payment to the Limerick County Council of the cost of providing an agreed roadway to Aughinish Island.	3. It is considered reasonable that the developer should pay to Limerick County Council the cost of providing road access which will facilitate the development.
4. The developer shall landscape the site, details of the proposed landscaping scheme shall be submitted and agreed with the planning authority. The proposed scheme will cover the whole island, the screening of the development, the seeding of the outside face of the red mud pond embankments and the seeding and planting of the [illegible] generally with suitable [illegible]	4. To secure adequate landscaping of the development site in the interests of visual amenity and to ensure a suitable colour scheme for the buildings.

SCHEDULE (Continued)

Column 1 - Conditions	Column 2 - Reasons for Conditions
The developer shall be responsible the cost of making good to the isfaction of the planning authority damage to the public roads between National Secondary Road and the site ing from construction work	5. It is considered that the developers should defray the cost to Limerick County Council of repairing any public roads which may be damaged by construction activities.
6. Before the development is commenced developer ll furnish to the planning authority ond in approved form and in an approved nt for:	6 (a) and (b). To ensure that in the event of the permanent ceasing of plant operation, reinstatement of the site will be effected and the amenity of the area preserved.
(a) The taking down and removal of all , equipment and installations in the of the Plant having, in the opinion e planning authority, permanently d to function as an Alumina ction Plant.	
(b) The reinstatement of the site to ultural or such other use as may be d with the planning authority.	
In the event of disagreement the form and nt of such bond shall be as determined e Minister for Local Government.	
Any atmospheric pollutants not ifically dealt with in conditions under and which might be emitted in future processing shall be so trolled as not to be injurious to the environment.	7. To ensure that emissions to the atmosphere from the plant will not cause injurious pollution and that the amenities of the area are not affected thereby.
(a) The concentrations of SO_2 in any place outside the Alcan , and attributable to emissions the Alcan site shall not exceed following levels sampled in the llowing time periods for more than % of the time:	8. To ensure that emission of SO_2 from the plant shall not exceed specified concentrations and thereby cause injurious pollution in the area.

Concentration p.p.m.	$\mu g/m^3$	Sampling Period
1.0	2,600	30 minutes
0.1	260	8 hours
[illegible]	130	24 hours

The yearly average SO_2 concentration l not exceed 50 $\mu g/m^3$ at any location ide the Alcan site due to Alcan's emission.

The minimum height of the main boiler stack and the calciner stack shall [illegible]

9 to 15. To ensure that gaseous and particulate emission to the

Flue gas volume, temperature and excess oxygen concentration in the main boiler and calciner stacks shall be monitored and recorded continuously. The excess oxygen level shall be maintained at as low a level as possible.

Flue gas efflux velocity shall be not less than 50 ft/sec when installed plant is in full production at a rate of 800,000 tons of alumina per annum.

Smoke emissions shall comply with the provisions of the Local Government (Sanitary Services) Act, 1962 Control of Atmospheric Pollution Regulations, 1970.

Sulphur dioxide emission from the calciner stack at minimum height shall not exceed 10 metric tons/day or 0.5 metric tons/hour.

15. Dust concentrations in the calciner stack shall not exceed 230 mg/ m^3.

16. Appropriate sampling points, sampling platforms and access to these platforms shall be provided for the measurement of dust concentrations in the calciner stacks.
The developer shall make regular measurement of dust concentrations.

16. To provide for satisfactory monitoring of dust concentrations in order to prevent atmospheric pollution and to ensure that the amenity and ecology of the area are not adversely affected.

17. In the handling of bauxite at the marine terminal the receiving hopper shall be covered and provided with an adequate air curtain to eliminate dust nuisance.

18. The bauxite receiving hopper at the marine terminal shall discharge to a totally enclosed conveyor.

19. In the transport of bauxite and alumina to and from the plant and within the plant suitable central or local dedusting facilities shall be provided to eliminate dust nuisance at all transfer points.

20. All bauxite and alumina conveyors shall be enclosed.

21. All dedusting facilities shall meet a standard of 230 mg/ m^3 maximum allowable dust concentration in exit air.

22. The working storage of bauxite shall be enclosed. Reserve storage of bauxite shall be covered or chemically treated if necessary to prevent dusting.

23. The loading of alumina at the marine terminal shall be provided with dust suppression equipment meeting the 230 mg/ m^3 ... standard for the exit air.

17. to 23. To prevent atmospheric pollution from dust discharge.

Column 1 - Conditions	Column 2 - Reasons for Conditions
24. Records of fuel oil deliveries and consumption and the sulphur content of both shall be made available on a weekly basis to the planning authority.	24. To ensure that the sulphur content of the fuel oil shall be within acceptable limits.
25. No deleterious matter shall be discharged to the estuary except as detailed hereunder.	25 to 35. To prevent pollution of natural waters and injury to existing species of fauna, flora, and marine life.
26. All process waste water and all contaminated storm water, as defined hereunder but excepting acidic waste water, boiler blowdown, cooling water blowdown, water treatment plant rinses and barometric condenser condensate shall be directed to the red mud pond. Process waste water includes: (a) boiler blowdown; (b) cooling water blowdown; (c) water treatment plant rinses; (d) red mud washings; (e) barometric condenser condensate; (f) contaminated cooling water (e g from glands, seals and bearings); (g) storm water from within bunded storage i.e. areas containing oil, caustic and acids (h) storm water from process area; (i) all drains from within process buildings; (j) laboratory wastes; (k) acidic wastes and other wastes arising from chemical cleaning of equipment.	
27. Acidic waste water, boiler blowdown, cooling water blowdown, water treatment plant rinses and barometric condenser condensate may be directed to the decant pond or the red mud pond.	
28. Uncontaminated waste water as defined hereunder may be discharged directly to the estuary: Uncontaminated waste water includes: (a) storm water from bauxite and alumina storage areas; (b) storm water from roofs to raised or sealed ground level drains; (c) storm water from areas not devoted to storage of oil, caustic or acid: or to process equipment; (d) non sanitary effluent from service and administration buildings and areas.	
29. Surplus waste water from the red mud	

...e contents of the decant pond may ...harged to the estuary providing ...llowing conditions prevail:

(i) Chromium concentration in ...decant pond does not exceed 1ppm,

(ii) Nickel concentration in decant pond does not exceed 0.5ppm,

(iii) The sum of the copper zinc and lead concentration does not exceed 0.3ppm,

(iv) Oil concentration in decant pond does not exceed 5ppm,

(v) Suspended solids in decant pond does not exceed 50ppm,

(vi) pH in decant pond is greater than 6.

(vii) Cadmium concentration does not exceed 0.1ppm.

(viii) Arsenic concentration does not exceed 0.1ppm.

...he total quantity of the following materials ...arged to the estuary from the decant ...shall not exceed:

(i)	Chromium	5 lbs/day
(ii)	Cadmium	0.5 lbs/day
(iii)	Nickel	3 lbs/day
(iv)	Arsenic	0.5 lbs/day
(v)	Copper-Zinc-Lead	2 lbs/day
(vi)	Oil	25 lbs/day
(vii)	Mercury	0.5 lbs in any 1 day or 90 lbs in any one year.

...ste water discharged from the decant ...shall be mixed with the return cooling ...prior to discharge in the estuary.

... pH of the mixed discharge of cooling ...te water shall not exceed 8.5.

...discharge from the decant pond shall ...sed at least once a week, for ... Arsenic, Cadmium, Nickel, Copper, ...c, Mercury, suspended solids and ...e 1st year of operation. The ...t frequency of analysis shall be ...h the planning authority.

...nd pH shall be monitored and ...ntinuously on the discharge ...ter from the decant pond.

...he mixed cooling water and ...stream shall be monitored and ...tinuously.

Contd/...

Column 1 – Conditions	Column 2 – Reasons for Conditions
(h) The final discharge of mixed cooling and waste water shall be into the estuary in the vicinity of the marine terminal through a diffuser system capable of giving a 10 : 1 initial dilution of the discharge. The design of the diffuser system shall be agreed with the planning authority. The discharge shall not produce a visible fume at any point. The temperature of the Shannon water at any point or depth not less than 5 metres from the diffuser shall not be more than 20°C.	
31. Estuary water shall be used in the primary cooler to cool the circulating plant and process cooling water. Cooling water volume, inlet temperature, and return temperature shall be monitored and recorded continuously and shall comply with the following: (a) cooling water volume 15 million galls/day maximum, (b) cooling water temperature increase 21°C maximum. (c) cooling water return temperature 38°C maximum.	
32. A map shall be provided indicating clearly the areas from which storm water disposal is to be drained to the red mud pond and the areas from which uncontaminated storm water may be drained to the River Shannon to defined outlets agreed with the planning authority.	
33. Storm water outlet culverts and drains shall be provided with suitable inspection manholes for investigation by the planning authority.	
34. Sanitary effluent from all sources shall be collected and treated in a suitable biological treatment plant to meet a standard of 20ppm BOD, 30ppm suspended solids, and shall be discharged through an outlet located at least 10 feet below low water level. The design and proposed location of the treated sewage effluent discharge shall be submitted to and agreed with the planning authority, or in default of agreement shall be as determined by the Minister for Local Government.	
35. The B.O.D. and suspended solids of the treated sewage effluent shall be measured at least once a week.	

Column 1 - Conditions	Column 2 - Reasons for Conditions
...ere required by any condition in order to undertake monitoring, ...ing, measurements or analyses, ...veloper shall submit the results ...e to the planning authority without	36. To ensure that all conditions of this permission for the protection of the environment are complied with.
...ll caustic soda supplied to the ... shall not exceed maximum 1ppm ...ry content.	37. To ensure that all caustic used will have minimal mercury content.
The red mud pond shall be constructed ...aintained in a sound structural ...tion and it shall be effectively ...d to prevent leakage of its ...nts. The embankments are to be ...dequate strength to resist mud ...sure and storm conditions in the ...ry.	38. To ensure that the red mud pond shall be adequately constructed and sealed.
The mud pond shall be adequately ...ected and access to it shall be ...ricted to authorised personnel.	39. To prevent accidents.
Storm water run-off from the outer ...s of the pond embankment shall be ...lected in suitable drainage ditches ...rder that the run-off can be monitored ...m time to time for pH and soda content.	40.to 42. To prevent pollution of the natural waters and injury to the existing species of fauna and flora.
Supernatant water on the mud pond may ...y be returned to the process or ...charged to the decant pond.	
(a) The decant pond shall have capacity for three times the maximum daily volume of waste water that can be discharged from the red mud pond, and (b) The mean daily flow from the decant pond over any year, shall not exceed 1.5 million gallons.	
...Results of on-going localised site ...vestigation and design data for red ...d pond holding area and embankments ...all be submitted to the planning authority. ...ese submissions shall include precis of ...ll relevant reports from the developer's ...oil Mechanics Consultants.	43. To ensure that the red mud pond shall be properly constructed.
4. The developer shall make arrangements ...atisfactory to the planning authority ...or the reclamation of the red mud pond ...hen its use shall have ceased.	44 To provide for the eventual reinstatement of the area for agricultural or other beneficial use.
45. All oil, caustic and acid storage tanks shall be suitably bunded to contain spillages or leaks.	45 to 48. To minimise the possibility of damage through spillage of oil, caustic or acid.
46. The main oil and caustic pipelines ...	

:n valves to prevent emptying the
:nts of a tank in the event of a
line break. The oil and caustic
lines on land shall be installed in
able trenches.

The plans for the discharge of oil and
tic from ships shall be submitted to
planning authority and shall be in
rdance with the latest published
mmendations of accepted international
horities charged with responsibilities
this area (e.g. International Oil
ker and Terminal Safety Guide published
Oil Companies International Marine Forum).

The developer shall provide boats, booms, collectors
dispersant plus personnel trained in
ir use to the requirements of the
hority having responsibility
controlling any oil spill at or
the terminal.

) There shall be named a responsible
rson appointed by the developer to
pervise all oil and caustic
ading operations. The developer
ll inform the planning authority of
person and of all replacements.

The developers shall be responsible
he removal of all floating
caused by them or their agents
uary waters.

veloper shall undertake or
aken within two months of the
n order a base line survey of
ment in the vicinity of the
te. Details shall be settled
onsultation with the planning
t shall include a hydrological
vision for establishing current
levels, current water quality
haracterising the important
mmunities flora animal
nd noise levels in the area.

time in the future the
repeated when so required by
thority.

per shall prior to
tion establish continuous
dioxide monitors in the
as to be decided by
thority. The developer
ro deposited dust at
nd determine the
luming and bauxite.

49 (a) For supervision purposes.

49 (b) To minimise water pollution.

50. To establish existing conditions in the environment.

51. To establish existing SO_2 level and dust levels.

Column 1 – Conditions	Column 2 – Reasons for Conditions
52. The developer shall monitor water quality continuously at two suitable points to be agreed with planning authority, upstream and downstream of the marine terminal. The parameters to be monitored shall be pH, temperature, and the metals referred to in Condition 50.	52 To ensure that waste water conditions are complied with.
53. The developer shall monitor noise levels at sites to be agreed with the planning authority both during construction and after operations have commenced. The equipment, locations and methods to be used shall be agreed with the planning authority.	53 and 54. In the interests of the environment.
54. The results of the surveys laid down by Conditions 51 to 53 inclusive shall be jointly reviewed by the developer and the planning authority, after not more than 2 years subsequent to plant startup and a decision made whether to continue, decrease, or increase the scope of the surveys.	
55. **existing** Noise levels measured at any/inhabited house due to the Alumina extraction plant shall not exceed 35 dBA during the hours 2200 to 0800 and shall not exceed 45 dBA during the hours 0800 to 2200.	55 To protect the environment.
56 **existing** Noise levels, measured at any/inhabited house during the carrying out of the development shall not exceed 55dBA for more than 10% of the time during the hours 0800 to 2200, or 35 dBA for more than 10% of the time during the hours 2200 to 0800.	56. To protect the environment.
57. Full details of the extraction arrangements for the cooling water system shall be submitted for agreement with the planning authority. These details will include location, depth, provision of suitable screen on intake, pipe sizes, pumping arrangement, flow measuring devices and any other details required by the planning authority.	57. To ensure that no injury is caused to the fauna and flora of the river Shannon.
58. The draw-off and monitoring arrangements of supernatant liquid from the decant pond shall be agreed with the planning authority.	58. To prevent pollution of the natural water and to ensure that existing species of fauna and flora shall be protected.

SCHEDULE (continued)

Column 1 - Conditions	Column 2 - Reasons for Conditions
59. Subsidiary raw materials used in the process such as lime, foundry flour, filter cloth, and hydrochloric acid shall be stored in a manner acceptable to the planning authority.	59. To ensure proper storage of these subsidiary raw materials.
60. Detailed plans of the marine terminal and jetty approach shall be submitted to and agreed with the planning authority or in default of agreement shall be as determined by the Minister for Local Government.	60. To ensure that the marine terminal and approach jetty shall be planned and constructed in a suitable manner.
61. General lighting in the plant area shall be agreed with the planning authority and be such that minimal glare will be directed towards the navigation channel.	61. To avoid interference with navigation in the river.

GIVEN under the Official Seal of the Minister for Local Government this 30th day of September 1974.

James Tully.

Minister for Local Government

REF 5

" 5A

Aughinish Alumina

Aughinish Alumina Limited
Askeaton
Co. Limerick
Ireland

Telephone: 061-604000

Facsimile:-
- Administration/Plant Office 061-604001
- Accounts 061-604031
- Purchasing 061-604023

Website: www.aughinish.com

25th March 2004

Your Ref: *04/262*

Limerick County Council
Planning Section
County Hall
Dooradoyle
Co Limerick

Dear Sir/Madam

The proposed sheds are required to meet our obligations under the terms of our licence from the EPA and their use as such will not lead to any further increase in the existing production capacity.

The Company will be submitting a planning application as soon as possible to address and regularise the issue of production/capacity.

Yours sincerely

D A Clancy

Damien A Clancy
Managing Director

RPS McHugh
PLANNING & ENVIRONMENT

Limerick County Council
Planning and Development Section
County Hall
Dooradoyle Road
Co. Limerick

28th June, 2005

Dear Sir/Madam

RE: **AUGHINISH ALUMINA LTD. INTENDS TO APPLY FOR PERMISSION FOR DEVELOPMENT WHICH WILL CONSIST OF A BAUXITE RESIDUE DISPOSAL AREA (CIRCA. 80 HECTARES IN AREA TO 32 METRES IN HEIGHT ABOVE MEAN SEA LEVEL) ON ADJOINING LANDS TO THE SOUTH OF THE EXISTING BAUXITE RESIDUE DISPOSAL AREA; ANCILLARY MUD DISTRIBUTION PIPES AND WATER SPRINKLER PIPES; 1 NO. 2.5 METRE HIGH ELECTRICAL PACKAGE SUBSTATION; 4 NO. 6 METRE HIGH STREET LIGHTS; 6 NO. 2 METRE HIGH WALKWAY LIGHTS; 1 NO. OPERATING PLATFORM; PERIMETER ROADWAY, SITE PERIMETER FENCE, EXTRACTION OF TOPSOIL & SUBSOIL FROM BORROW AREA AND SITE DEVELOPMENT WORKS; INCREASE IN THE HEIGHT OF THE EXISTING AND PERMITTED BAUXITE RESIDUE DISPOSAL AREA (CIRCA.104 HECTARES IN AREA TO 32 METRES IN HEIGHT ABOVE MEAN SEA LEVEL); RELOCATION OF EXISTING SALT CAKE DISPOSAL AREA TO LOCATION (1 HECTARE IN AREA) WITHIN THE EXISTING BAUXITE RESIDUE DISPOSAL AREA; REALIGNMENT OF 310 METRES OF EXISTING FLOOD TIDAL DEFENSE BERM ADJACENT TO THE ROBERTSTOWN RIVER; AN INCREASE IN HEIGHT OF EXISTING STORM WATER POND (CIRCA 6.5 HA IN AREA TO CIRCA 6.0 METRES IN HEIGHT ABOVE MEAN SEA LEVEL); AN INCREASE IN HEIGHT OF THE EXISTING LIQUID WASTE POND (CIRCA 1.3 HECTARES IN AREA TO CIRCA 6.0 METRES IN HEIGHT ABOVE MEAN SEA LEVEL) AND LANDSCAPING TREATMENTS OVER A PERIOD TO 2027; AND PERMISSION FOR THE RETENTION OF DEVELOPMENT WHICH CONSISTS OF THE EXISTING ALUMINA PRODUCTION CAPACITY OF 1.60 MILLION METRIC TONNES PER ANNUM WITH ASSOCIATED EMISSIONS WITHIN PERMITTED INTEGRATED POLLUTION CONTROL LICENCE LIMITS; AND PERMISSION FOR DEVELOPMENT WHICH WILL CONSIST OF AN INCREASE IN EXISTING ALUMINA PRODUCTION CAPACITY TO 1.95 MILLION METRIC TONNES PER ANNUM WITH ASSOCIATED EMISSIONS TO REMAIN WITHIN PERMITTED INTEGRATED POLLUTION CONTROL LICENCE LIMITS ALL ON A SITE OF CIRCA 338.37 HECTARES IN THE TOWNLANDS OF AUGHINISH EAST, AUGHINISH WEST, ISLAND MACTEIGE AND GLENBANE WEST AT OR ADJACENT TO AUGHINISH ISLAND, ASKEATON, CO. LIMERICK.**

REF	6
"	6A
"	6B
"	6C

From
COUNCILLOR DAVID NAUGHTON
Address:
BALLYSTEEN,
ASKEATON,
CO. LIMERICK.
Telephone : 061 - 392206.

8 - 1 - 96

To

Dear County Secretary,

I would like to know what the Council's view is, on the interim Report by the EPA dated Sep 95 on Aughinish [illegible] their SO2 emissions from 1989 to 1994, at their plant at Aughinish Island [illegible]

Yours faithfully,

C.3 Page. 10.

From :
COUNCILLOR DAVID NAUGHTON
Address :
BALLYSTEEN,
ASKEATON,
CO. LIMERICK.
Telephone : 061 - 392206.

Date :

To :

Aughinish Planning Permission Emissions.
SO2 Emissions 25 tons per day.
Breach of these from July 89 to July 93.

Increased in 93 to 34 tons per day.
[illegible] of 93 almost all of 94.

Calciner Stack 10 tons per day.
March 90 on and off to July 93. In Breaching these.

Increased — 93 to 12.5 tons per day,
July 93 to Jan 95.

EPA Investigation of Animal Health
Problem Askeaton,
Interim Report Sep 95.

A continuous iR monitor has been installed (May '95) on boiler C to monitor SO_x and NO_x.
Continuous monitors will be installed on boilers A and B during 1995 when they are out of service.
Olfactometric measurements were carried out in Aug/Sept '93.
Ambient monitoring of Smoke and SO_2 at five locations (Forbairt)
Ambient monitoring of dust deposition at 7 - 8 locations (Forbairt)

Monitoring by the EPA
Emission monitored by flue gas analyser for SO_x, NO_x and O_2 (21-22/03/95)
Emission sampled for organics from Boiler A (10/05/95)
Emission sampled for organics/inorganics Boiler B (07/07/95)

Details
Suppliers certificates of quality for heavy fuel oil shipments to Aughinish Alumina between February 1988 and July 1995 give sulphur contents in the range shown on Figure C.2.3, with an average of approximately three percent. These shipments averaged about 25,000 tonnes. Aughinish Alumina carried out a trial on one boiler during June and July '91 using Orimulsion (sulphur content 2.6 percent) as a boiler fuel. The historical trend in monthly SO_2 emissions from fuel oil combustion are shown on Figure C.2.4. The general increase reflects the approximate doubling of fuel oil use between 1985 and 1995 which corresponds to a similar increase in alumina production at the plant in that period.

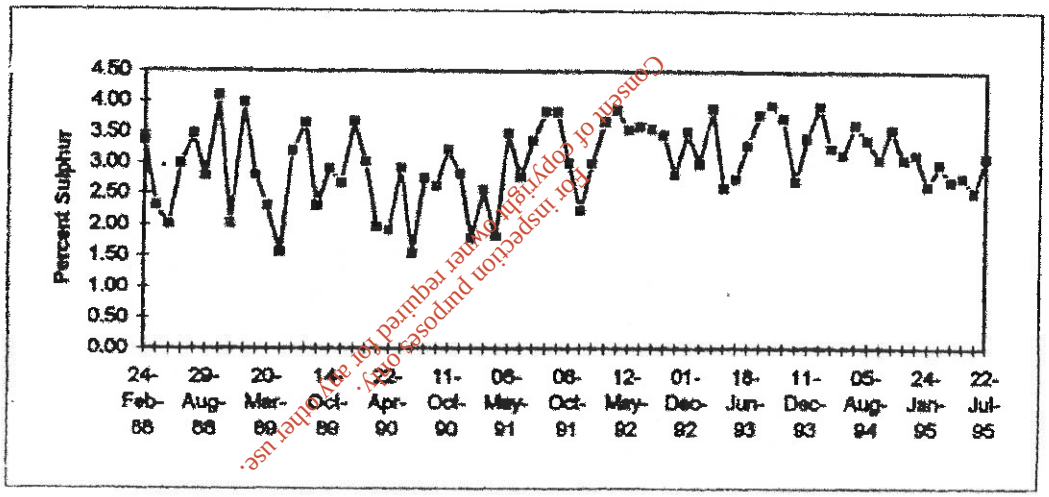


Figure C.2.3. Sulphur Content of Fuel Oil Shipments to Aughinish Alumina.

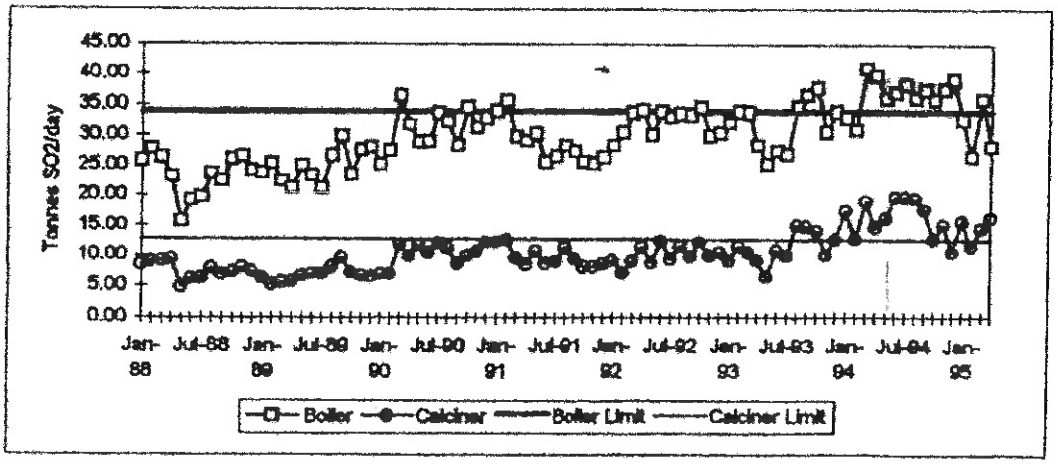


Figure C.2.4. Monthly SO_2 Emissions from Aughinish Alumina January 1988 - April 1995.

Anger over revelations firm broke law on gas emissions

Michael Brennan

A FACTORY broke planning laws by releasing massive quantities of sulphur dioxide gas into the atmosphere in the mid-90s, it emerged yesterday.

The Aughinish Alumina plant on Aughinish Island, Limerick, which is the largest of its kind in Europe, began increasing production of alumina in 1983.

In a confidential Environmental Protection Agency (EPA) email, inspector Kieran O'Brien warned colleagues that this had led the company to exceed its permitted rate of sulphur dioxide (SO2) emissions.

The company, which opened its 1,000-acre site in 1985, was only allowed to emit 1.95 tonnes of sulphur dioxide per hour under its updated 1989 planning permission.

Sulphur dioxide can irritate the body's breathing system and aggravate conditions such as asthma and chronic bronchitis. When it combines with water, it forms sulphuric acid, the main component of acid rain.

Local Coppagh Farmers Support Group said it was concerned by the revelations.

"If Aughinish were breaking their planning permission, why was no action taken by the council?" asked spokesman Pat Geoghan.

Limerick County Council was unable to state if it took any enforcement action against Aughinish Alumina for its breach of planning permission.

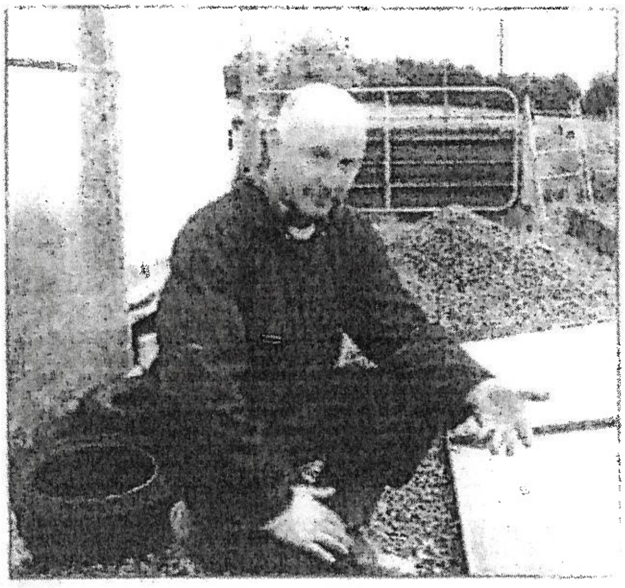
The EPA's Mr O'Brien added that factory was now emitting an average of one tonne of sulphur dioxide per hour compared to 1.6 tonnes in the mid-90s.

He added that the emissions would drop further in the future because the company's forthcoming combined heat and power plant, required under its IPC licence, would diminish the use of heavy fuel oil.

Aughinish Alumina was unavailable for comment.

REF 7

Where the water turns red



Potentially dangerous heavy metals are falling on a Co. Mayo farm. But the Environmental Protection Agency doesn't have the resources to find the cause.

Four years ago Jimmy Kelly noticed that the water outside his organic vegetable tunnel had turned red. The rainwater which collects on the several sheets of Perspex that lie outside the tunnel appeared to have developed what looked like a red algae bloom.

It wasn't just the rainwater outside his tunnel that was affected. Other containers around his house filled with this mysterious substance. He cleared the foul gunge away only to find it return a few months later, as it has been doing ever since.

"It seems to come in the rain that follows a period of dry weather," says Jimmy. "It looks to me like some form of algae but I've no idea what it is."

Last year he asked an inspector from the regional office of the Environmental Protection Agency in Castlebar to take a look. The inspector took away samples.

He returned a few weeks later for more. "The inspector didn't tell me what the results were," says Jimmy. "But he told me that when they analysed the samples it set [illegible] Dublin.

Since then Jimmy has learnt that the red gunge doesn't only fall on his farm. "A close neighbour has it and it's on a farm about 15 miles way," he says. "And I've talked to people who have seen it in rain barrels in Donegal and Tyrone."

"It's definitely not algae," says Dr. Michael Flanagan of the Castlebar EPA Inspectorate. "The samples show there are high levels of metals in the water. The level of aluminium is very high at 8.9%; normally it should be a fraction of that. The amount of lead is even more alarming. It should only be there in trace quantities but in the sample it was 3.4%. It's the lead I'd be most worried about."

The EPA considered several sources that might be causing the contamination, including the Aughinish Alumina factory at Askeaton, Co. Limerick. Samples were taken by them from the lagoons of waste water outside the Limerick plant and compared [illegible] Jimmy Kelly's [illegible] in the Aughinish samples to specifically link them with the samples from the Kelly farm. "We'd need to find something specific in both samples to link them together," says Dr. Flanagan. "But it seems a long distance for it to travel."

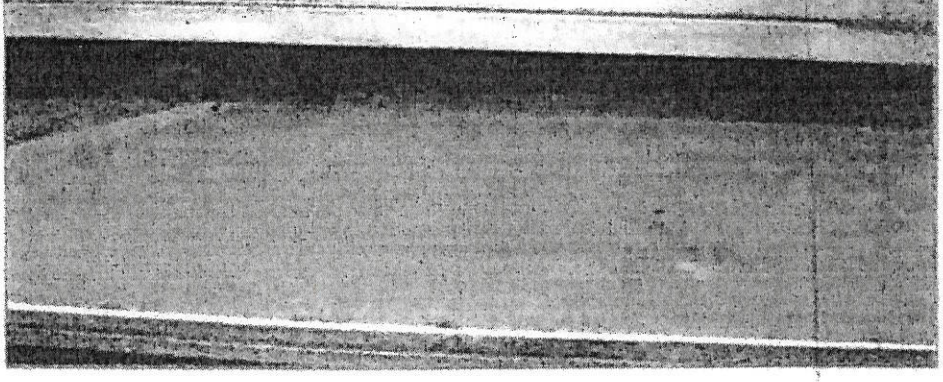
Dr. Flanagan admits that he doesn't know where these heavy metals are coming from and he doesn't have the resources to find out. He says it could be dust from a local quarry or dust from a mine [illegible] [illegible] in the Sahara. "We just don't know," he says. "I'd love to know what it is but it would cost millions to find out exactly. We just don't have those kinds of resources".

None of Jimmy's four suckler cows produced a calf this year. And last year's results weren't much better. "We were on one calf a year for the three previous years but this year none of them went into calf." Jimmy worries that it might be no coincidence that these fertility problems began at the same time that he first noticed the red water outside his tunnel.

There were no samples taken from Jimmy's grazing land. But if his fields are receiving the same levels of heavy metals as are appearing in his garden and around his house then he is right to conclude that it would have an effect his livestock.

"If these levels of metals were being scattered over all his land, it would have serious implications for his livestock," says Dr Flanagan. "If I was an organic farmer with these results I'd be very worried."

Jimmy Kelly is very worried indeed. He'd like to know where the heavy metals that are raining down on his farm are coming from. And he'd like it stopped.



REF 8

LIMERICK COUNTY COUNCIL
PLANNING AND DEVELOPMENT ACTS 2000-2004
NOTIFICATION OF DECISION TO GRANT

Aughinish Alumina Ltd.
C/o Sean Garland
Aughinish Island
Askeaton
Co. Limerick

Planning Register Number: 05/1836
Valid Application Received: 28/06/2005
Further Information Received Date: 27/03/2006

In pursuance of the powers conferred upon them by the above-mentioned Act, Limerick County Council has by Order dated 1st May, 2006 decided for the reason set out in the First Schedule hereto, to GRANT PERMISSION for development of land in accordance with the documents submitted namely:-**construction of a Bauxite residue disposal area (circa 80 hectares in area to 32m in height above mean sea level) on adjoining lands to south of existing Bauxite Residue Disposal Area; ancillary mud distribution pipes and water sprinkler pipes, 2.5m high electrical package substation; 4 no. 6m high street lights; 6 no. 2m high walkway lights; operating platform; perimeter roadway, site perimeter fence, extraction of topsoil & subsoil from borrow area & site development works; increase in height of existing and permitted Bauxite Residue Disposal Area (circa 104 hectares in area to 32m in height above mean sea level); relocation of existing salt cake disposal area to location (1 hectare in area) within existing Bauxite Residue Disposal Area ; relignment of 310m of existing flood tidal defence berm adjacent to the Robertstown River; an increase in height of existing storm water pond (circa 6.5 ha in area to 6.0 metres in height above mean sea level); increase in height of existing liquid waste pond (circa 1.3 hectares in area to circa 6.0 metres in height above mean sea level) and landscaping treatments over a period to 2027; RETENTION of existing Alumina production capacity of 1.60million metric tonnes per annum with associated emissions within permitted Integrated Pollution Control Licence limits ; PERMISSION for increase in existing Alumina production capacity to 1.95 million metric tonnes per annum with associated emissions to remain within permitted Integrated Pollution Control Licence limits, all on a site of circa 338 hectares in the townlands of Aughinish West & East, Island Mac Teige and Glenbane West at or adjacent to Aughinish Island. This application requires an IPC licence and an EIS has been submitted as part of the application at Aughinish East Aughinish West Island Mac Teige** subject to the 19 conditions and the reasons for the imposition of the said conditions as set out in the Second Schedule.

Signed on behalf of said Council _____
for COUNTY SECRETARY

Date: 1st **May, 2006**

If there is no appeal to An Bord Pleanála a grant of permission shall be issued as soon as may be but not earlier than 3 working days after the expiration of the period for making of an appeal (see footnote).

THIS NOTICE IS NOT A GRANT OF PERMISSION AND WORK SHOULD NOT COMMENCE UNTIL PLANNING PERMISSION IS GRANTED.

REF 9

...Government (Planning & Development) Acts, 1963 to 1993

NOTIFICATION OF A GRANT OF A PERMISSION

COUNCIL OF THE COUNTY OF LIMERICK

Aughinish Alumina Ltd.,
As...

...for a permission for development of land, namely:-
...bauxite residue storage area at Aughinish Island, Askeaton.

...been granted for the development described above, subject to the following

...relates to the extended mud stack as shown in E.I.S. with maximum ...of 28 metres.

...addition to the observation wells proposed in paragraph 2.8 of the E.I.S. and additional pair of boreholes shall be provided just north of Island MacTeigue, ...shall be submitted to and agreed with the Planning Authority within ... of the grant of permission.

...final effluent discharge concentrations to the Estuary shall be in accordance ...the terms of its current planning permission ref. 15,737. In addition Fluoride ...Aluminium concentration levels and total volumes shall be agreed with the Planning ...hority before development commences.

...water levels in the perimeter ditch and stormpond shall not exceed 60% of full ...rage capacity. The pumping capacity shall be increased to 250 m³/hr. in ...ordance with submission in paragraph 9.5.2. of the E.I.S.

(5) ...equate hay/straw coverage and water spraying of the entire mud stack shall be ...rried out to ensure suppression of wind blown dust from the entire mud stack area. ...detailed scheme of coverage and spraying shall be devised and submitted to the ...anning Authority within 6 months of the grant of this permission. This scheme ...all be such as to satisfy the Planning Authority that adequate measures are in ...ce to prevent air pollution. This scheme shall include at minimum the following:-

30% to 50% of the stack shall at all times be covered with hay/straw.

A water main shall be laid along the east ridge, i.e. eastern boundary of the extended mud stack, and fitted with a sprinkler system.

N/B

/........

A water bowsing system as described in the E.I.S. shall be provided for the remainder of the mud stack area.

Rockfill dykes supporting the mud stack shall be screened from views by the establishment of a scheme of intermittent planting/landscaping of the face of dykes. This scheme shall be carr ied out in phase with construction of the dykes. Within 6 months of the commencement of development, the developer shall carry out trials to determine the best method of establishing such a scheme.

A detailed planting scheme for the East Ridge shall be submitted to the Planning Authority and agreed within 3 months of the commencement of development. This planting scheme shall be such as to ensure a long lasting screen of adequate density to be provided along the eastern boundary of the mud stack.

When development commences, a trial archaeological excavation shall take place on the site in accordance with proposals outlined in paragraph 13.6 of the E.I.S. Full details of same shall be submitted to the Planning Authority.

When deposits of red mud finally cease, the stack shall be grassed so as to provide total coverage. During the "life" of the mud stack trials shall be conducted to determine a suitable grass which will establish itself permanently on the stack.

The developer shall monitor all observation wells in accordance with the schedule outlined in paragraph 8.8 of the E.I.S.

Discharges from the surface water drainage system surrounding the stack shall be monitored and submitted to the Planning Authority on a monthly basis. Full details of the manner and locations of such sampling shall be submitted to and agreed with the Planning Authority.

In addition to the existing dust monitoring regime two further dust monitoring stations shall be established adjacent to Poulaweala Creek. Details shall be submitted to and agreed with the Planning Authority.

Regular inspections of the mud surface shall be carried out to determine requirements for hay covering/water spraying by the developer. These inspections shall be carried out daily during periods of high risk weather conditions. Records of such inspections shall be kept and made available to the Planning Authority on request.

The developer shall keep records of all trials carried out for the establishment of a planting/landscaping scheme for the rockfill dykes and for the greening of the surface of the mud stack. These records shall be made available to the Planning Authority on request.

The Planning Authority shall from time to time be afforded the opportunity to inspect, examine and check or to have inspected, examined and checked all apparatus and equipment used or required to carry out the monitoring and recording operations required by parts (a), (b), (c), (d) and (e) of this condition.

Signed on behalf of the said Council: FL.

for COUNTY SECRETARY.

Date: 14th December 1993.

Note that the provisions of the Local Government (Planning & Development) Act, 1992, the duration of this planning permission is a period of five years from the date

COMHAIRLE
CATHRACH & CONTAE
Luimnigh
Limerick
CITY & COUNTY
COUNCIL

Seirbhisi Pleanála agus Comhshaoil,
Comhairle Cathrach agus Contae Luimnigh,
Tuar an Daill,
Luimneach

Planning and Environmental Services,
Limerick City and County Council,
Dooradoyle,
Limerick

EIRCODE V94 WV78

t: +353 (0) 61 496 000
f: +353 (0) 61 496 001

ACKNOWLEDGEMENT of RECEIPT of SUBMISSION or OBSERVATION on a PLANNING APPLICATION

17/714 29/08/2017

Mr. Jim Long
43 Ballinacurra Gardens
Limerick

Applicant: Aughinish Alumina Limited

Development: **PERMISSION for a ten year permission for development on this site of c. 7 hectares located adjoining the existing Aughinish Alumina Ltd plant for the provision of a Borrow Pit with an extraction area of c. 4.5 hectares to extract c. 374.000 m³ of rock over a 10 year period. The extraction area is sought up to a maximum depth of c. 8.5 m O.D., with extraction to occur between April and September each year. The proposed development includes the demolition of a contractors shed and all ancillary site development, areas of stockpiling, landscaping and boundary treatment works above and below ground, including restoration of the extraction area. Aughinish Alumina Limited carries out an activity requiring an Industrial Pollution Prevention and Control Licence (now replaced by an Industrial Emissions Licence – Licence Register No. P0035-06). The development and operation of the proposed Borrow Pit is not a licensable activity.**

An Environmental Impact Statement (EIS) will be submitted to the Planning Authority with the application.

at Aughinish East, Aughinish West, Island Mac Teige, Glenbane West, Morgan North and Fawnamore at or adjacent to Aughinish Island Askeaton Co. Limerick

---

Dear Sir/Madam,

I wish to acknowledge receipt of your observations or submission on 29/08/2017 in connection with the above application for planning permission and would inform you that the points raised by you will be borne in mind when a decision is being made on this application.

Keep this document safely; you will be required to produce this acknowledgement to An Bord Pleanala if you wish to appeal the decision of the Planning Authority. It is the only form of

evidence which will be accepted by An Bord Pleanala that a submission or observation has been made to the Planning Authority on the planning application.

Receipt No. 25082066 in the sum of €20 is enclosed. You will be notified of the Council's decision in due course.

Yours faithfully,

Heather Supple
Planning & Environmental Services

PLANNING DEPARTMENT
LIMERICK CITY - COUNTY COUNCIL
DOORADOYLE
CO LIMERICK

29/8/2017

PLANNING APPLICATION 17/714

ADELAIDE ALCHEMIA
ASHTON
CO LIMERICK

I WISH TO OBJECT TO THIS PLANNING APPLICATION TO ROCK BLAST AT THIS LOCATION

THIS WILL IMPACT ON FLORA, WILD LIFE WATER-TABLE, UNDERGROUND WATER-RIVERS AND WILL ADVERSELY AFFECT THE SURROUNDING AREAS.

THIS COMPANY DOES NOT ACT IN THE INTEREST OF OUR ENVIRONMENT WITH THIS APPLICATION

Jim Lowe

JIM LOWE
43 BALLINACURRA CARDISS
LIMERICK

COMHAIRLE
CATHRACH & CONTAE
Luimnigh
Limerick
CITY & COUNTY
COUNCIL

Seirbhisi Pleanála agus Comhshaoil,
Comhairle Cathrach agus Contae Luimnigh,
Tuar an Daill,
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Planning and Environmental Services,
Limerick City and County Council,
Dooradoyle,
Limerick

EIRCODE V94 WV78

t: +353 (0) 61 496 000
f: +353 (0) 61 496 001

ACKNOWLEDGEMENT of RECEIPT of SUBMISSION or OBSERVATION on a PLANNING APPLICATION

17/714 29/08/2017

Mr. Peter Sweetman
Peter Sweetman & Associates
113 Lower Rathmines Road
Dublin 6

Applicant: Aughinish Alumina Limited

Development: **PERMISSION for a ten year permission for development on this site of c. 7 hectares located adjoining the existing Aughinish Alumina Ltd plant for the provision of a Borrow Pit with an extraction area of c. 4.5 hectares to extract c. 374.000 m³ of rock over a 10 year period. The extraction area is sought up to a maximum depth of c. 8.5 m O.D., with extraction to occur between April and September each year. The proposed development includes the demolition of a contractors shed and all ancillary site development, areas of stockpiling, landscaping and boundary treatment works above and below ground, including restoration of the extraction area. Aughinish Alumina Limited carries out an activity requiring an Industrial Pollution Prevention and Control Licence (now replaced by an Industrial Emissions Licence – Licence Register No. P0035-06). The development and operation of the proposed Borrow Pit is not a licensable activity.**

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at Aughinish East, Aughinish West, Island Mac Teige, Glenbane West, Morgan North and Fawnamore at or adjacent to Aughinish Island Askeaton Co. Limerick

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Tuar an Daill, Luimneach
Dooradoyle, Limerick

✉ customerservices@limerick.ie
www.limerick.ie
@LimerickCouncil
061 - 496200

evidence which will be accepted by An Bord Pleanala that a submission or observation has been made to the Planning Authority on the planning application.

Receipt No. 25082062 in the sum of €20 is enclosed. You will be notified of the Council's decision in due course.

Yours faithfully,

Heather Supple
Planning & Environmental Services

PETER SWEETMAN & ASSOCIATES
113 LOWER RATHMINES ROAD
DUBLIN 6
sweetmanplanning@gmail.com

Director of Services Planning
Limerick County Council,
County Hall,
Dooradoyle,
County Limerick.

2017-08-27

Submission Re;

Limerick County Council	17714
Development Description:	a ten year permission for development on this site of c. 7 hectares located adjoining the existing Aughinish Alumina Ltd plant for the provision of a Borrow Pit with an extraction area of c. 4.5 hectares to extract c. 374.000 m³ of rock over a 10 year period. The extraction area is sought up to a maximum depth of c. 8.5 m O.D., with extraction to occur between April and September each year. The proposed development includes the demolition of a contractors shed and all ancillary site development, areas of stockpiling, landscaping and boundary treatment works above and below ground, including restoration of the extraction area. Aughinish Alumina Limited carries out an activity requiring an Industrial Pollution Prevention and Control Licence (now replaced by an Industrial Emissions Licence – Licence Register No. P0035-06). The development and operation of the proposed Borrow Pit is not a licensable activity. An Environmental Impact Statement (EIS) will be submitted to the Planning Authority with the application.
Development Address:	Aughinish East, Aughinish West, Island Mac Teige, Glenbane West, Morgan North and Fawnamore at or adjacent to Aughinish Island, Askeaton, Co. Limerick
Applicant name:	Aughinish Alumina Limited

Dear Sir/Madam

1. The description of the development is flawed, it is as states in the Directive ar Annex II

> *2. EXTRACTIVE INDUSTRY*
> *(a) Quarries, open-cast mining and peat extraction (projects not included in Annex I);*

2. The Environmental Impact Assessment Report states at 2.2

The southern part of the application site comprises a former Borrow Pit area which was previously associated with the construction of the original plant.

There is no evidence that this quarry was assessed under 261 or 261A,

The Planning application states at *5.0*

APPROPRIATE ASSESSMENT SCREENING
"As a result of a Stage 1 Screening appraisal carried out it is considered that the proposed development will have no adverse impact on the Natura 2000 sites and as such it is objectively concluded that there is no potential for significant effects on the Natura 2000 sites in question."

The Environmental Impact Assessment Report states at;

7.5 Mitigation Measures
Any potential impacts will be minimised by implementing the following mitigation and enhancement measures, such that residual impacts will be negligible in magnitude.

This is the wrong test the correct test is as per Finlay Geoghegan J. in Kelly -v- An Bord Pleanála 2013/802 JR which States;

26. There is a dispute between the parties as to the precise obligations imposed on the Board in relation to the stage 1 screening by s.1777U but its resolution is not strictly necessary in these proceedings. There is agreement on the nature and purpose of the screening process which is well explained by Advocate General Sharpston in Case C-258/11 Sweetman at paras 47-49:

> *"47. It follows that the possibility of there being a significant effect on the site will generate the need for an appropriate assessment for the purposes of Article 6(3). The requirement at this stage that the plan or project be likely to have a significant effect is thus a trigger for the obligation to carry out an appropriate assessment. There is no need to establish such an effect; it is, as Ireland observes, merely necessary to determine that there may be such an effect.*

Yours faithfully

Peter Sweetman