John Callaghan
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The Secretary of An Bord Pleanála,
64 Marlborough Street,
Dublin 1,
D01V902,

November 23rd,2022

Third Party Planning Appeal of the decision by Meath County Council to grant planning permission for development Planning Reference Number: 22331 Meath CoCo.

Planning Application Reference: 22331 Meath County Council
Development Address: Randalstown, Simonstown and Sillogue, Navan, Co Meath
Applicant: Boliden Tara Mines DAC,
Agent: John Callaghan, Civil Engineer, 10 The Cloisters, Oldcastle Road, Kells, Co Meath A82C9Y7
Agent's Address: John Callaghan, Civil Engineer, 10 The Cloisters, Oldcastle Road, Kells, Co Meath A82C9Y7
Appellant: Sustainability 2050, Care of John Callaghan, 10The Cloisters, Oldcastle Road, Kells, Co Meath A82C9Y7
Appellant Address: Sustainability 2050, Care of John Callaghan, 10 The Cloisters, Oldcastle Road, Kells, Co Meath A82C9Y7
Address for correspondence: John Callaghan, 10 The Cloisters, Oldcastle Road, Kells, Co Meath A82C9Y7

Development Description: *the construction of a reinforcement buttress to the extant embankment walls of the Tailings Storage Facility. The development works will consist of the construction of a rockfill and earthen reinforcement buttress to sections of the extant embankment walls of the Tailings Storage Facility. The proposed buttress, to be constructed on the downstream slope and at the crest of the Stage 1,2 and 3 starter*

embankments, will provide additional support and increase the overall stability of the extant upstream raises i.e. Stage 4 and Stage 5. The proposed development will not increase the footprint nor the overall height of the extant structure. The proposed development relates to an activity covered by the Company's Industrial Emissions Licence Ref No. P0516-04. An Environmental Report for the development will be submitted to the Planning Authority with the planning application. A Natura Impact Statement (NIS) for the development has been prepared and will be submitted to the Planning Authority with the planning application

1.0 Structure of the Appeal.

2.0 The Standing of the Appellant.

3.0 Confirming participation in the process at Application to County Council Stage.

4.0 Introduction and context of the appeal.

5.0 The History of Tailings Dams and recent developments.

6.0 Description of Characteristics of the Site.

7.0 The Grounds of Appeal

2.0 Sustainability 2050 is an Environmental NGO with standing under the Aarhus Convention. ***This appeal is submitted by John Callaghan Civil Engineer on behalf of Sustainability 2050. John Callaghan is a member of Sustainability 2050***

3.0 Copies of the letters of acknowledgement of submissions to Meath County Council by the Appellant, on the planning application from are exhibited on the following pages.

Meath County Council
Planning Department
Buvinda House
Dublin Road
Navan
Co. Meath C15 Y291
00172770

Phone: 046 909 7000 Fax: 046 909 7001

Planning Reference Number 22/331

14/04/2022

Sustainability 2050
c/o John Callaghan
10 The Cloisters
Kells
Co Meath A82 C9Y7

Re: Planning & Development Regulations 2001 to 2021
Acknowledgement of receipt of Submission or Observation on a Planning Application for a proposed development by Boliden Tara Mines DAC ,

Dear Sir/Madam

I wish to acknowledge receipt of your Submission/Observation made in writing to this office on 14/04/2022 to the proposed development described as the construction of a reinforcement buttress to the extant embankment walls of the Tailings Storage Facility. The development works will consist of the construction of a rockfill and earthen reinforcement buttress to sections of the extant embankment walls of the Tailings Storage Facility. The proposed buttress, to be constructed on the downstream slope and at the crest of the Stage 1, 2 and 3 starter embankments, will provide additional support and increase the overall stability of the extant upstream raises i.e. Stage 4 and Stage 5. The proposed development will not increase the footprint nor the overall height of the extant structure. The proposed development relates to an activity covered by the Company's Industrial Emissions Licence Ref No P0516-04. An Environmental Report for the development will be submitted to the Planning Authority with the planning application. A Natura Impact Statement (NIS) for the development has been prepared and will be submitted to the Planning Authority with the planning application.

The appropriate fee of € 20 has been paid. (not applicable to Prescribed Bodies or Councillors)

The Submission/Observation is in accordance with the appropriate provisions of the Planning & Development Regulations 2001 to 2021 and will be taken into account by the Planning Authority in its determination of the Planning Application.

You will be notified of the Planning Authority's decision in due course.

On behalf of Meath County Council

THIS IS AN IMPORTANT DOCUMENT

Keep this document safely. You will be required to produce this acknowledgment 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/Observation has been made to the Planning Authority on the Planning Application.

Planning Authority Stamp
CERTIFIED 14 APR 2022

Comhairle Chontae na Mí
Roinn Pleanáil
Teach Buvinda, Bóthar Átha Cliath
An Uaimh, Contae na Mí, C15 Y291
Fón: 046 – 9097500, Fax: 046 – 9097001
Ríomhphost: planning@meathcoco.ie
Web: www.meath.ie

Meath County Council
Planning Department
Buvinda House, Dublin Road
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Tel: 046 – 9097500, Fax: 046 – 9097001
E-mail: planning@meathcoco.ie
Web: www.meath.ie

Planning Reference Number 22/331

Date:17/10/2022

Sustainability 2050
c/o John Callaghan
10 The Closters, Oldcastle Road
Kells
Co. Meath A82 C9Y7

Re: Planning & Development Regulations 2001 to 2022
Acknowledgement of receipt of Submission or Observation on a Planning Application for a proposed development by Boliden Tara Mines DAC.

Dear Sir/Madam

I wish to acknowledge receipt of your Submission/Observation made in writing to this office on 17/10/2022 to the proposed development described as the construction of a reinforcement buttress to the extant embankment walls of the Tailings Storage Facility. The development works will consist of the construction of a rockfill and earthen reinforcement buttress to sections of the extant embankment walls of the Tailings Storage Facility. The proposed buttress, to be constructed on the downstream slope and at the crest of the Stage 1,2 and 3 starter embankments, will provide additional support and increase the overall stability of the extant upstream raises i.e. Stage 4 and Stage 5. The proposed development will not increase the footprint nor the overall height of the extant structure. The proposed development relates to an activity covered by the Company's Industrial Emissions Licence Ref No. P0516-04. An Environmental Report for the development will be submitted to the Planning Authority with the planning application. A Natura Impact Statement (NIS) for the development has been prepared and will be submitted to the Planning Authority with the planning application. Significant further information/revised plans submitted on this application.

The appropriate fee of € 20 has been paid (not applicable to Prescribed Bodies or Councillors).

The Submission/Observation is in accordance with the appropriate provisions of the Planning & Development Regulations 2001to 2022 and will be taken into account by the Planning Authority in its determination of the Planning Application.

You will be notified of the Planning Authority's decision in due course.

On behalf of Meath County Council

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Keep this document safely. You will be required to produce this acknowledgment 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/Observation has been made to the Planning Authority on the Planning Application.

Planning Authority Stamp
CERTIFIED
17 OCT 2022

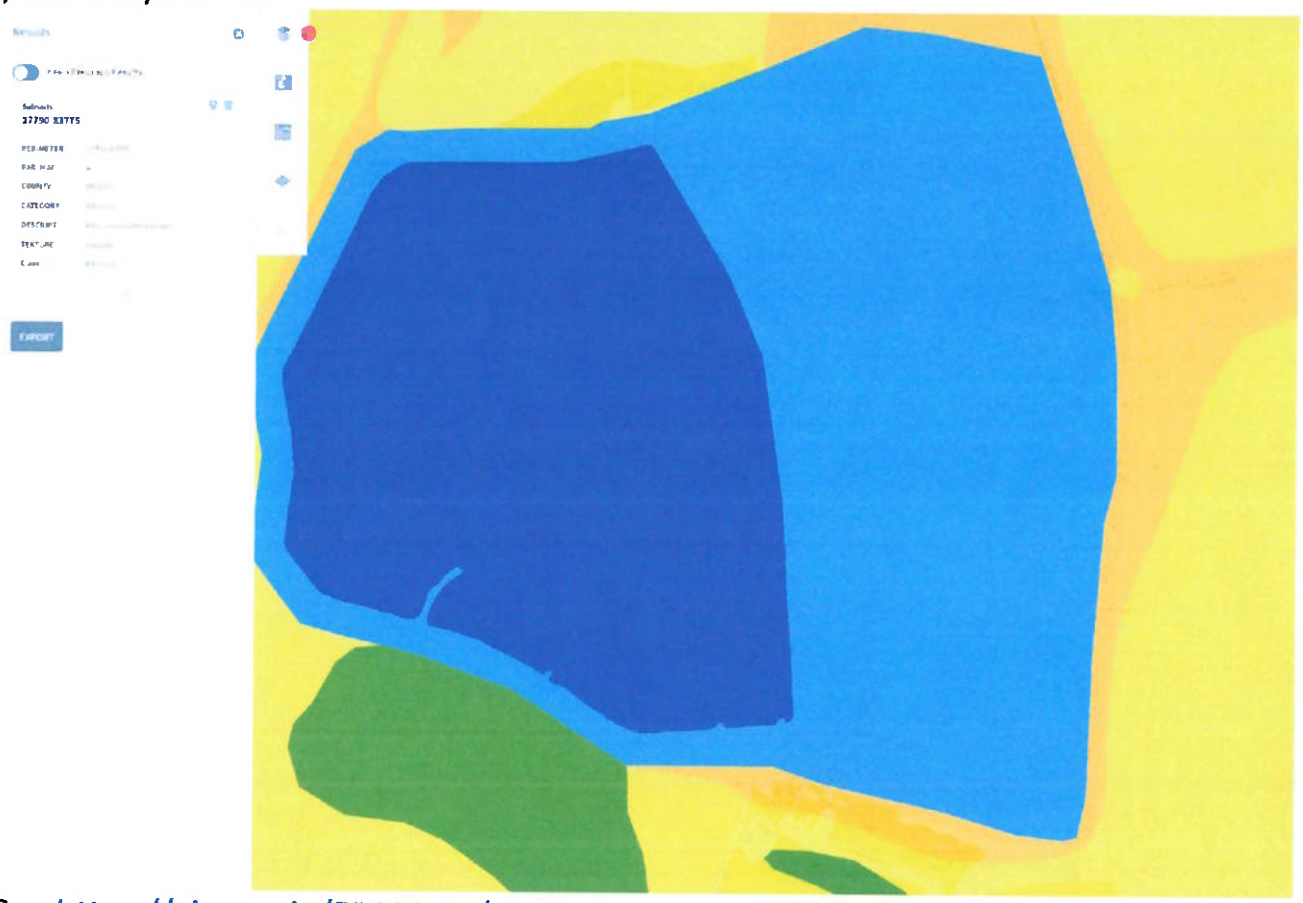
4.0 Introduction and context of the appeal.

The tailings pond located north and upstream of Navan and Drogheda must rank among the largest manmade structures on the British Isles.

Following tailings dam failures in Brazil and a catalogue of failures around the World there has been a move to recognise that many tailings dams are unsafe. A new standard has bee adopted by GLOBAL INDUSTRY STANDARD ON TAILINGS MANAGEMENT AUGUST 2020 see Appendix 9

The Applicant Organisation has had three significant dam failures at other facilities during the lifetime of the Navan Tailings Impoundment. See Appendix N0 1 Section 15.

The Tailings Dam area is underlaid by a layer of alluvium indicating the area was previously flooded



See https://gis.epa.ie/EPAMaps/
Alluvium deposits will have a significance to Geotechnical Engineers, Hydrologists, & Civil Engineers.

Tara in Ireland is Europe's largest zinc mine and also one of the largest in a global comparison. Since mining began in 1977, more than 85 million tonnes of ore have been extracted. The Applicant now seeks planning permission to augment the dam wall structure to increase its factor of safety.

Boliden acquired the mine in 2004.[1]

> *The Tara mine has been through a succession of ownerships and continuance of mining operations were often in doubt*[2]
>
> *1964 - Tara begins to drill for ore outside Navan, Co Meath.*
> *September 1975 - The minister for industry and commerce, Mr Justin Keating, grants a 25-year lease to Tara Mines to mine the lead-zinc orebody outside Navan, Co Meath. The State is given a 25 per cent shareholding and 4.5 per cent royalty on taxable profits.*
>
> *January 1978 - Commercial production begins at the mine.*
>
> *1981-82 - Seven-month strike hits the mine.*
>
> *1982 - Tara asks its shareholders for more equity capital to ensure the mine's continuing financial viability. The State agrees to extend the lease by 10 years.*
>
> *February 1986 - Finnish state-owned mining company Outokumpu buys 75 per cent of Tara's ordinary share capital and 100 per cent of the preference share capital for approximately £72.9 million from major international mining groups Noranda and Northgate, which control Tara.*
>
> *April 1989 - The State sells its shareholding and royalty entitlement to Outokumpu for $50 million, leaving the Finns as outright owners. One-third of the $50 million is to cover royalties. According to figures issued by the Department of Energy at the time the State shareholding is sold, Tara Mines has lost money in seven out of the 11 years from 1978 to 1989.*
>
> *November 1994 - Tara Mines issues protective notice to workers as 53 development miners start industrial action.*
>
> *July 1996 - Tara Mines seeks job cuts of between 120 and 150 in a move to regain competitiveness.*

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[1] https://www.boliden.com/operations/mines/boliden-tara
[2] https://www.irishtimes.com/news/tara-mines-37-years-on-the-edge-1.335144

January 1998 - Nearly 300 SIPTU members vote by two to one to reject radical changes in work practices by miners and general operatives. Management had said the mine faced a serious risk of closure if the changes were not implemented.

In late June it issues one-day protective notices to 630 workers, as it awaits a Labour Court recommendation.

The court opts for the unions' proposals to make the plant viable, but with the proviso that the company's own survival plan be accepted unconditionally by the workforce if cost-saving targets are not met within three months.

October 2000 - Miners at Tara Mines are balloted for strike action following the introduction of more contract workers at the plant.

November 2000 - Tara Mines begins notifying 600 employees that its lead-zinc plant is being put on a "care and maintenance" basis because of strike action by miners over the use of contract workers.

November 2001 - Tara closes for three months, forcing its workers into temporary redundancy.

February 1998 - After 19 months of negotiation, management and unions at Tara Mines reach agreement on a cost-efficiency programme. SIPTU says the deal secures the future of the mining operation for the next 10 years.

May-June 1999 - Talks on a cost-cutting plan to save more than 600 jobs at Tara Mines break down. Tara Mines formally agrees to defer introduction of its controversial survival plan to allow Labour Court intervention.

An Bord Pleanála's Inspector described the operations at the Mining Complex in the Inspectors Report on File PL17.247707[3] as an Appeal arose on planning application NA160408 Meath CoCo.

The Tara Mines are located 2 kilometres west of the town of Navan on lands to the immediate west of the old Navan/Kingscourt Railway Line and to the south of the former N3 National Primary Route which runs northwards and runs along the northern boundary of the site towards Kells. The mining activity

[3] https://www.pleanala.ie/anbordpleanala/media/abp/cases/reports/247/r247707.pdf?r=686359628208 page 5

comprises of the drilling and blasting and removal of ore within the underground mines. The extracted ore is then broken up and delivered to one of the five underground primary crushers where it is reduced to gravel/cobble size before being moved above ground for further processing. The ore is then fed into an autogenous grinder which grinds the ore into a fine powder. Water is added to form an aqueous slurry which is fed into aerated flotation cells chemicals are then added to separate the lead and subsequently the zinc from the ore. Within the flotation cells galena (lead sulphide) and sphalerite (zinc sulphide) are separated. This chemical process allows for the separation of desirable minerals (namely lead and zinc) from the ore. Undesirable minerals such as pyrite as also extracted as a result of the chemical treatment. The residual tailings then enter a cyclone where a centrifugal force separates the coarser material from the finer slimes fraction. The course fraction is returned underground and mixed with portent cement (which assists in the chemical and physical stabilisation) of the residual ore and is returned underground to the mined out area. The typical concentration of metals and other elements contained in the tailings slurry being discharged to the TSF are set out in the Table 3 below: The remaining slime fines are pumped to the Tailings Storage Facility (TSF) approximately 4-5 kilometres north at Randalstown. The existing site at Randalstown where the tailings are stored receives on average c.1.1 million tonnes of aqueous slime per year. Some of the water which rises as a supernatant at the tailings facility is treated and recycled for use in the mining operations. The TSF at Randalstown covers an area of approximately 171 hectares. It is located to the immediate west of the old Navan/Kingscourt Railway. The area in which the existing TSF is located is relatively rural in nature. There are no dwellings in the immediate vicinity of the TSF. The existing tailings facility is surrounded on all sides by levies or earth filled embankment walls extending up to 22 metres in height. Internal access roads run along the tops of the perimeter embankments. An elevated levy also runs in a north/south direction through the centre of the facility. The overall storage facility is approximately 1.35 kilometres north to south and approximately 1.5 kilometres east to west.

Table 3

Parameter (mg/kg)	Mean Concentration µg/l
pH	8.3 (pH units)
Total Cyanide (CN)	1
Zinc (Zn)	2430
Lead (Pb)	1929
Arsenic (As)	619
Iron (Fe)	19614
Copper (Cu)	87
Mercury (Hg)	1
Cobalt (Co)	15
Calcium (Ca)	203571
Magnesium (Mg)	17150
Sulphate (SO4)	8517
Sulphide (SO2)	18100
Silver (Ag)	0.5
Aluminium (Al)	1717
Boron (B)	10
Barium (Ba)	53.3
Beryllium (Be)	< 0.5
Bismuth (Bi)	3.2
Cadmium (Cd)	4.2
Chromium (Cr)	27.0
Gallium (Ga)	<10
Potassium (K)	2400
Lanthanum (La)	<10
Manganese (Mn)	1194
Molybdenum (Mo)	1
Nickel (Ni)	52.6
Phosphorous (P)	514
Antimony (Sb)	76.6
Scandium (Sc)	1.6
Strintium (Sr)	561
Thorium (Th)	<20
Thallium (Tl)	20
Titanium (Ti)	16.7
Uranium (U)	<10
Vandium (V)	3.8
Tungsten (W)	<10

5.0 The History of Tailings Dams and recent developments

Refer to Appendix No 7, Appendix No 8, Appendix No 9, Appendix No 2, Appendix No 3, Appendix No 4, Appendix No 5 Appendix No 6.

The Eurocodes were introduced over a decade ago as the basis for design in the EU

Eurocode 7 deals with Geotechnical Design and Ground Investigation (Appendix No 6)

The Global Mining Industry has had to respond to dam failures with improved Safety Standards. Appendix No 9

Appendix No 7 details many Tailings Dam Failures since 1960

The EU has responded with new Best Available Techniques for Mining with Commission Implementing Decision (EU) 2020/248 of February requiring mandatory independent monitoring and oversite of mines by Competent Authorities. Refer to Appendix No 4.

The EU has also addressed the issue of revising periodically costs associated with mine rehabilitation after closure. See Appendix No 5

6.0 Description of Characteristics of the Site.

Unfortunately, there is little documentation submitted by the applicant to describe the range of parameters that would inform proper AA & EIA Assessment of the Project.

I say this as a person who has studied Geotechnics, Fluid Mechanics, Hydrology, and who has passed the Engineering Council Examinations which satisfy the education

requirements in such disciplines for election as Chartered Engineer. I have also studied Geotechnics at Postgraduate level.

The following factors should be considered in particular by the board

- Only extension 6 of the facility has a 2mm thick liner to prevent migration of fluid through the floor and dam walls of the structure.
- Percolation through the floor of the ponds is occurring and is admitted on the EPA site that deals with licencing.
- The application documents do not describe the range of chemicals added to the process and if residuals remain in the tailings pond.
- There is no information on the lead or zinc content of the tailings. Carbonic acid from the atmosphere (rising CO2 levels) displaces sulphur from lead ore.
- There is no know safe lead concentration that is safe to humans.
- Lead can take along time to accumulate in humans.
- There are no details with the application of any cross sectional or longitudinal studies on the population within the Boyne Catchment on lead levels in people.
- The Boards Inspector was mystified as to where water was to be stored at the site when the Boyne was flowing at below the 50th percentile of flow.

7.0 The Grounds of Appeal

7.1 The Impounded area vastly exceeds 30 hectares and the proposed tailing pond's(lake) dam walls are to be checked for both drained and undrained conditions.

A number of aspects of the development engage the requirement for mandatory EIA set out in Schedule 5 of the Planning And Development Regulations.

- Schedule 5 Part 1 Section 15. *Dams and other installations designed for the holding back or permanent storage of water, where a new or additional amount of water held back or stored exceeds 10 million cubic metres.* (200 hectares at 22 metres high has a volume of 44,000,000M^3. The tailings are a mixture of soil and water. *)*

  Schedule 5 Part 1 Section 19. Quarries and open-cast mining where the surface of the site exceeds 25 hectares.
- Schedule 5 Part 2 Section 2 (b) *Extraction of stone, gravel, sand or clay, where the area of extraction would be greater than 5 hectares.*
- Schedule 5 Part 2 Section 2 (c) *All extraction of minerals within the meaning of the Minerals Development Acts, 1940 to 1999.*

- *Schedule 5 Part 2 Section 10 (dd) All private roads which would exceed 2000 metres in length. (Europe's largest lead zinc mine has an extensive internal road network.) Road is defined by the Roads Act.*
- *Schedule 5 Part 2 Section 10 (g) Dams and other installations not included in Part 1 of this Schedule which are designed to hold*

water or store it on a long-term basis, where the new or extended area of water impounded would be 30 hectares or more. It should be borne in mind that the tailings materials are suspended inwater and transported to the tailings facility in a pipeline hydraulically and are spread hydraulically.

- *Schedule 5 Part 2 Section 10 (l) Groundwater abstraction and artificial groundwater recharge schemes not included in Part 1 of this Schedule where the average annual volume of water abstracted or recharged would exceed 2 million cubic metres.*

The EPA Site provides evidence of a pattern of increasing water abstraction at the mine to keep it workable.

7.2 The nature of the project which is aimed at securing the stability of the impounded sludge adjacent to a town of 30,000 inhabitants would surely engage the necessity for sub threshold EIA. Please refer to

Guidelines for Planning Authorities and
An Bord Pleanála on carrying out
Environmental Impact Assessment
August 2018

https://www.opr.ie/wp-content/uploads/2019/08/2018-Environmental-Impact-Assessment-1.pdf

Having regard to the Criteria that engage Subthreshold EIA it is submitted that it would be irrational for the Board not to conclude a Sub Threshold EIA is not Required.

CRITERIA FOR DETERMINING WHETHER A DEVELOPMENT WOULD OR WOULD NOT BE LIKELY TO HAVE SIGNIFICANT EFFECTS ON THE ENVIRONMENT

1. Characteristics of Proposed Development

The characteristics of proposed development, in particular:

- *the size of the proposed development,*
- *the cumulation with other proposed development,*
- *the use of natural resources,*
- *the production of waste,*
- *pollution and nuisances,*
- *the risk of accidents, having regard to substances or technologies used.*

2. Location of Proposed Development

The environmental sensitivity of geographical areas likely to be affected

by proposed development, having regard in particular to:

- *the existing land use,*

• *the relative abundance, quality and regenerative capacity of natural resources in the area,*

• *the absorption capacity of the natural environment, paying particular attention to the following areas:*

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Appendix

(a) wetlands,

(b) coastal zones,

(c) mountain and forest areas,

(d) nature reserves and parks,

(e) areas classified or protected under legislation, including special protection areas designated pursuant to Directives 79/409/EEC and 92/43/EEC,

(f) areas in which the environmental quality standards laid down in legislation of the EU have already been exceeded,

(g) densely populated areas,

(h) landscapes of historical, cultural or arc h a e o l o g i c a l significance.

3. Characteristics of Potential Impacts

The potential significant effects of proposed development in relation to

criteria set out under paragraphs 1 and 2 above and having particular

regard to:

- *the extent of the impact (geographical area and size of the affected population),*
- *the transfrontier nature of the impact,*
- *the magnitude and complexity of the impact,*

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- *the probability of the impact,*
- *the duration, frequency and reversibility of the impact.*

7.3 The Cumulative impact of all the separate mining operations must engage the requirement for Cumulative EIA. This includes the proposed new Air Shafts which will spew dust from lead ore into the North Meath area. The dust will come in contact with carbonic acid from CO2 mixing with rain clouds or water vapour.

7.4 Appendix No 6 contain Eurocode No 7 and a paper circulated by the Institution of Civil Engineers on the application of Cone Penetration Tests to Tailings facilities to determine Geotechnical parameters. Euro code at length sets out the necessity, nature, scope, and types of Ground Investigation Techniques required to understand the range of soil parameters and conditions that allow the characteristic strength of a soil to be estimated. The board are asked to note the definition of Characteristic Strength per the Eurocde. It is very difficult to see how AA Screening could be sensibly carried out without extensive Ground Investigations per

Eurocode No 7. I am not saying they were not carried out but that they were not set before the public to comment on.

7.5 Flooding. The Project assessed the probability of flooding using a AEP of 0.1% which related to a 1 in 1000 year flood event. A person who lived 90 years would have a 1 in 11.11 chance of experiencing a AEP of 0.1%.

The Global Industry Standard (Appendix 9) envisaged a 1 in 10,000 year flood event as the design basis for mining infrastructure.

Our 90 year old would stand a chance of 1 in 111.1 of seeing such a flood in a lifetime, which is not an insignificant risk for some thing that would probably kill you. Extreme flood events could saturate the tailings dam wall and induce sliding failure particularly if a layer of Alluvium is present which it is.

The ESB adopted a 1 in 10,000 flood design standard for the Ardnachrusha earth. dams after a slippage in 2009.

The ESB is the owner of 16 major dams and 14 other dams on 5 river systems and a pumped storage plant in Ireland. The dams were constructed between 1929 and 1973 to the highest standards of the day. However, there have been significant developments in dam safety and reservoir engineering since the dams were constructed. Therefore, in the mid 1980s, ESB commissioned flood control and dam safety studies to check the dams for compliance with modern standards and practices. These studies identified areas where

improvements or upgrading works were required in order to bring the ESB's dams into compliance with modern standards and practices.

These improvements and upgrading works have been undertaken and ESB is confident that its dam safety standards comply with current international practice. This is confirmed by independent evaluation by an External Dam Safety Committee of international experts, which carries out regular inspections of the dams and embankments. The purpose of this document is to address the preliminary flood risk assessment requirements of the following in relation to ESB's dams and embankments: • EU Directive 2007/60/EC on the Assessment and Management of Flood Risks • S.I. No. 122 of 2010 – European Communities (Assessment and Management of Flood Risks) Regulations

These legislative documents require that previous floods that have occurred are described and that potential sources of future floods are

assessed. Therefore, this preliminary flood risk assessment for ESB's dams and embankments will be undertaken under the following broad

headings:

- Past Floods
- Potential Future Floods

Potential Causes of Flooding at ESB's Dams and Embankments

EU Directive 2007/60/EC on the Assessment and Management of Flood Risks requires that preliminary flood risk assessments assess potential causes of flooding.

https://s3-eu-west-1.amazonaws.com/docs.floodinfo.opw/floodinfo_docs/PFRA/PFRA_ESB_Dams_and_Embankments.pdf

If the people of Limerick can have the comfort of a 1 in 10,000 year flood design why not the people of Navan?

It would be wise to consider a major 48 hour rainfall event with high winds that would cause water to be washed over the side of th e earthen dam. Water Speeds over 5 M/sec would induce surface erosion.

7.6 The Appropriate Assessment has not adequately considered th e level of the salmon population in th e River Boyne. The applicant

Consultants claim population levels are at 78% of the conservation limit.

Table 7 Rivers advised to be open for catch & release-only fishing based on meeting ≥50% CL management threshold or meeting management electro-fishing minimum threshold ≥15 salmon fry/ 5 min catchment-wide average).

District	River	CL	Deficit	Prop. CL achieved	Electro-fishing mean salmon fry/5 Min.
Dundalk	Fane	1173	-122	0.90	
Dundalk	Glyde	1852	-784	0.58	
Dundalk	ISW Dee	945	-517	0.45	15.4
Drogheda	Boyne	10242	-7776	0.24	15.9
Dublin	Lower Liffey Inc Rye	1705	-1594	0.07	15.6
Wexford	ISW Slaney	915	-720	0.22	15.0
Waterford	Barrow & Pollmounty	11738	-1079	0.14	16.9
Waterford	Nore	10420	-3346	0.68	15.8

https://www.fisheriesireland.ie/sites/default/files/2022-01/the-status-of-irish-salmon-stocks-in-2021-with-catch-advice-for-2022.pdf

In fact the 2022 Report of the Technical Expert Group on Salmon to theNorth-South Standing Scientific Committee for Inland Fisheries

The Status of Irish Salmon Stocks in 2021

with Catch Advice for 2022

sets the Boyne Salmon Stocks at just 24% of the conservation limit.

Kelly V An Bord Pleanála [2014] IEHC 400 sets out the criteria for scientific approach to AA Assessment under th e Habitats Directive. ***Connelly V An Bord*** sets out the basis for the level of reasoning in a decision. O'Keefe since 1993 has acknowledged the expertise of the Board in assessing Technical Matters. However if the Board were to rely on Reports of some experts rather confirm matters with their own reason first hand they might not cling to the authority confirmed by O'Keefe.

7.7 The project drawings rely on typical design condemned in Sweetman No 2 Sweetman V An Bord Pleanála. The Board are Referred to from ***Balscadden Road SAA Residents Association Limited -v- An Bord Pleanala [2020] IEHC 586*** and the Imperative Requirements of the Planning and Development Regulations in relation to project drawings . The Boliden Sectional Drawings do not indicate the bedrock, subsoil, where the deposited material starts,

- The cross sections are at scale of 1 to 250
- the Planning Regulations require max section scale of 1 to 200
- the drawings do not show the overall height of the sections of the Dam walls

not the grade and specification of the fill in terms intelligible to a Civil Engineer. See Drawing Enclosed.

7.8 The applicant has not demonstrated compliance with Commission Implementing Decision (EU) 2020/248 Refer to Appendix no 4

7.9 There is no evidence the Planning Authority inspected the Site Notices as required under Section 34 of the Planning Act