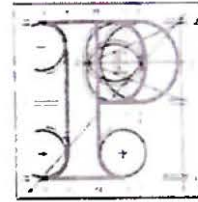


Our Case Number: ABP-318302-23

Your Reference: Emanuela Ferrari for Futureproof Clare



**An
Bord
Pleanála**

FP Logue Solicitors
c/o Eoin Brady
8-10 Coke Lane
Smithfield
Dublin 7

Date: 15 April 2024

Re: Expansion of the Bauxite Disposal Area, extension to the existing Salt Cake Disposal Cell and extension of the permitted borrow pit at Aughinish Alumina Limited
In the townlands of Aughinish East, Aughinish West, Island Mac Teige, Glenbane West, and Fawnamore at or adjacent to Aughinish Island, Askeaton, Co. Limerick

Dear Sir / Madam,

An Bord Pleanála has received your recent letter of the 2nd April 2024 in relation to the above mentioned case. The contents of your letter have been noted.

If you have any queries in relation to the matter please contact the undersigned officer of the Board at laps@pleanala.ie

Please quote the above-mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully

[Handwritten signature of Breda Ingle]

Breda Ingle
Executive Officer
Direct Line: 01-8737291

CH08

Tell (01) 858 8100
Glao Áitiúil LoCall 1800 275 175
Facs Fax (01) 872 2684
Láithreán Gréasáin Website www.pleanala.ie
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64 Sráid Maoilbhríde 64 Marlborough Street
Baile Átha Cliath 1 Dublin 1
D01 V902 D01 V902

FPLOGUE SOLICITORS

Our Reference: EJB/ 87503018
Your Reference: ABP-318302-23

2 April 2024

Brenda Ingle
Executive Officer
An Bord Pleanála
84 Marlborough Street
Dublin 1
D01 V902

By email only: sids@pleanala.ie, laps@pleanala.ie

Our client: Futureproof Clare CLG
Address of client: c/o 4 Glenview Road, Ennis, County Clare
RE: Response to applicant submission on ABP-318302-23
Development: Strategic Infrastructure Development Application for expansion of Bauxite Residue Disposal Area at Aughinish Alumina Limited, in the townlands of Aughinish East, Aughinish West, Island Mac Teige, Glenbane West and Fawnamore at or adjacent to Aughinish Island, Askeaton, Co. Limerick

A Chara,

We refer to our submission in the above matter made on 21 March 2024. These are supplemental submissions made in response to the request of the Board made in its letter of 11 March 2024. That letter enclosed the submission of TPA dated 6 July 2022 in respect of the application.

Our client reiterates the submissions made in the response of 21 March 2024. This supplemental submission addresses specific points raised in the TPA submission of 6 July 2022.

Environmental Impact Assessment and Habitats Directive:

1. The Proposed Development seeks permission to extend the BRDA by making it higher (up to 44m AOD), and this will extend the lifetime of the AAL production installation out to 2039, and thus will extend the duration of production 20 years beyond the original time horizon. The impacts of this time extension relative to the baseline prior to the establishment of and commencement of production of the AAL facility have never been assessed for the purposes of the EIA Directive.

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2. Fundamentally, AAL misidentified the project that the Board was required to assess for the purposes of the EIA Directive.
3. The impact of the AAL production installation have not been assessed as part of the proposed development submitted to the Board by AAL, nor have they been cumulatively assessed. This requires the obligation to describe and assess the effects of the project cumulatively with the effects identified and assessed in the EIA for phase I of the BRDA expansion.
4. The EIAR identified a range of projects for consideration at 6-74 to 6-93 which did not include the impact of the existing AAL production Installation, or its extension to 2039, and did not provide data to calculate the overall impact of the AAL Installation, including ancillary activities such as the related Dumping at Sea, with the technically connected BRDA and borrow pit.
5. In particular the EIAR has failed to address the acknowledged environmental impacts of the hazardous substances discharged to groundwater as a result of the 170 acres of unlined BRDA, which seepage is prohibited by Regulation 9 of the Groundwater Regulations 2010.
6. The EIAR submitted by AAL, has taken as the baseline the current state of the environment. It did not consider what the existing impact of the ongoing AAL installation was, whether that activity was having a significant effect on the environment, and accordingly whether that activity should continue to be permitted.
7. Furthermore, the EIAR is invalid as it misinterpreted the meaning of "significant" effects for the purposes of the EIA Directive contrary to Article 1 to Article 3 of the EIA Directive and Section 171 of the 2000 Act.
8. The EIAR used an approach to significance based on EPA Guidelines from 2017 (at p42) under which effects that were slight or moderate, but more than "not significant", were nonetheless treated as "not significant" and therefore did not have to be assessed. On a precautionary basis, effects which are more than "not insignificant" are sufficiently significant to require assessment, particularly in circumstances where an accumulation of insignificant effects may need to be considered to determine if they are cumulatively significant.
9. Accordingly, AAL have failed to put before the Board the relevant information necessary to comply with the requirements of the EIA Directive. The EIAR is non-compliant with the assessment of 'significance' for the purposes of the EIA Directive, as determined by the Court in *Monkstown Road Residents Association v An Bord Pleanala* [2022] IEHC 318.
10. In that regard, the table adopted used the following definitions:

- Impact Definitions (as defined by the EPA 2017 Guidelines, page 42)
- Imperceptible:
 - An effect capable of measurement but without noticeable consequences.
- Not significant:
 - An effect which causes noticeable changes in the character of the environment but without noticeable consequences
- Slight Effects:
 - An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
- Moderate Effects:
 - An effect that alters the character of the environment in a manner that is consistent with existing and emerging trends.

- **Significant Effects:**
 - An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
- **Very Significant:**
 - An effect which, by its character, magnitude, duration or intensity significantly alters the majority of a sensitive aspect of the environment.
- **Profound Effects:**
 - An effect which obliterates sensitive characteristics

11. Hence, unless an effect would alter a sensitive aspect of the environment, it would not be assessed.
12. On this basis a large number of impacts on landscape of medium character, magnitude, probability, duration event on landscape of medium sensitivity were considered moderate and therefore not significant. They were therefore dismissed as not needing to be assessed, even cumulatively. (pages 9-7, 9-35 to 9-46, 9-50 to 9-74.)
13. Similarly, at page 12-9, loudness of traffic had to double before it was considered significant.
14. At pages 16-15 to 16-18, Accidents, even if very likely (occurring several times a year), were considered not significant if their consequence was only "limited", meaning if they involved only a single fatality; or a limited number of people affected; a few serious injuries with hospitalisation and medical treatment required; or localised displacement of a small number of people for 6 – 24 hours; a cost up to €3m; or community functioning with inconvenience.
15. Furthermore, the EIAR confined itself to the risk of major accidents, whereas the Directive in this instance is not confined to the risk of major accidents. The EIAR referred to AAL's Environmental Liabilities Risk Assessment (ELRA) submitted to the EPA as identifying the types of accident that might occur, but failed to include that ELRA, and incorrectly stated that it was only required to consider the risk of major accidents.
16. Furthermore, the EIAR did not assess the use of resources, in particular use of water. AAL's Annual Environmental Report, submitted to the EPA under Licence P0035-07 in 2022, states that the Alumina facility uses 4,793,112 m3 of water per year, equivalent to 13,132 m3 per day. This water is taken from the River Deel which as a result is very low in summer and unable to sustain its normal functions for wildlife. This was not assessed. This is a breach of the requirement identified by the Court of Justice in C-535/18, *IL v Land Nordrhein-Westfalen* that the EIAR must include the data that are necessary in order to assess the effects of the project on water, in the light of the criteria and requirements laid down in, inter alia, Article 4(1) of the Water Framework Directive.
17. In relation to the Habitats Directive, the concept of project according to caselaw is commensurate with that under the EIA Directive.
18. The Natura Impact Statement (NIS) submitted by AAL repeats the error in relation to the misidentification of the project required to be assessed. It failed to establish the combined effects of the extended project with the original AAL project. Accordingly it does not address the entire project and thus fails to comply with the requirements of a valid NIS for the purposes of enduring compliance with Article 6 of the Habitats Directive.

19. Furthermore, the NIS does identify the effects identified in the EIS and assessment for Phase 1 of the BRDA expansion to ensure that they had been prevented. The NIS does not address the compensatory salt marsh or short eared owl. It does not accept the likelihood of visual and noise disturbance. It made no mention of protected plants (meadow barley and greater burnet) or their transplantation. It made no mention of the compensatory salt marsh proposed for Phase 1 of the BRDA expansion.
20. The NIS noted that the SAC is designated for protection of mudflats and sandflats not covered by seawater at low tide. The Conservation Objectives for the Lower Shannon SAC state that estuaries include the following community types: *Intertidal sand with Scolelepis squamata and Pontocrates spp. community*; *Intertidal sand to mixed sediment with polychaetes, molluscs and crustaceans community complex*; *Subtidal sand to mixed sediment with Nucula nucleus community complex*; *Subtidal sand to mixed sediment with Nephtys spp. community complex*; *Fucoid-dominated intertidal reef community complex*; *Mixed subtidal reef community complex*; *Faunal turf-dominated subtidal reef community*; *Anemone- dominated subtidal reef community*; and *Laminaria- dominated community complex*.
21. The NIS did not carry out any survey to identify the presence of these species near the Installation or to establish if they were more or less plentiful than in other areas of the SAC. There was no attempt to establish whether the Installation might be having an impact on them.
22. The NIS listed the species of birds for which the Lower Shannon SPA is designated. However, the NIS did not carry out any survey to identify the presence of these species near the AAL Installation or to establish if they were more or less plentiful than in other areas of the SAC. There was no attempt to establish whether the existing AAL Installation might be having an impact on them.
23. In the absence of any survey of the AAL Installation and its impact carried out for the purposes of the NIS, there was no evidence presented on foot of which an impact could have been identified. There was also no evidence on foot of which an impact could have been excluded beyond reasonable scientific doubt. No inference can be drawn from the absence of evidence which has not been sought.
24. The NIS repeatedly found there was "no evidence" of impact. It did so in relation to the following potential impacts:
 - Night time lighting (p137)
 - Estuaries (p145)
 - Mudflats & Sandflats not covered by seawater at low tide (p145)
 - Coastal lagoons (p146)
 - Atlantic salt meadows (p146)
 - Sea lamprey and river lamprey (p147)
 - Bottlenose Dolphin (p147-8)
 - Otter (p148)
 - Intertidal feeding waterbirds (p151)
 - Juniperus communis formations on heaths or calcareous grasslands in Barrigone SAC,

25. The NIS stated that sediment deposition can have an impact on microbenthic communities, but it confined its analysis to the presence of heavy metal pollutants and did not consider the impact sediment can have in smothering the benthic (seabed dwelling) communities on which other animals such as protected wild birds feed. It did not consider this potential impact on the wintering birds for which the SPA is designated.
26. Accordingly, there was no evidence presented in the NIS on foot of which an impact on the benthic communities in estuaries could have been excluded.
27. In relation to impact on estuaries, the NIS stated that "The latest Standard Data Form for Article 17 reporting to the EU, lists a good conservation status for this qualifying interest." This is not correct, Vol 2 p22-26 of the 2019 Article 17 report indicates that the current conservation status of estuaries is unfavourable, and attributes this in large part to sedimentation in the Shannon estuary as a result of various factors including maintenance dredging. Specific structure, future prospects, and overall assessment of conservation status are all given as "unfavourable", and the overall trend is "deteriorating".
28. The NIS also stated that mudflats and sandflats not covered by seawater at low tide are at "good" conservation status. (p145) Again this is not correct: specific structure, future prospects, and overall assessment of conservation status are all given as "unfavourable", and the overall trend is "deteriorating". (NPWS Vol 2 p41.) This is attributed in part to an "unfavourable / inadequate" overall site-based conservation assessment for the Shannon SAC. (NIS p37.)
29. Quayfield and Poulaweala Loughs which are 2.5ha in size and close to the site are designated lagoons within the SAC and are eutrophic. This is stated to be due to vegetation.
30. The NIS stated that artificial otter holts constructed as part of the mitigation requirements associated with Phase 1 of the BRDA expansion have not been occupied by otters in recent years, though otter are frequently seen passing along the coast around Aughinish Island. (NIS p148.) There is no consideration given as to why this is so, or whether it is attributable to the impacts of the BRDA or to the production part of the AAL installation, or otherwise. There is no consideration given as to whether the loss of the connection along Poulaweala creek following permission for Phase 1 of the BRDA expansion has resulted in disturbance of otter.
31. The NIS stated that salmon are at "excellent conservation status" based on the NPWS return Article 17 Standard Data Form under the Habitats Directive. In fact, that report concludes its overall assessment that their conservation status is "inadequate". (Vol 2, p398.) The impacts on migrating salmon are furthermore not assessed in relation to the significant Dumping at Sea programme which AAL have submitted to the EPA since the NIS was first submitted.
32. These errors and omissions in the NIS prevent the assessment from reaching clear precise and definitive conclusions capable of removing all reasonable scientific doubt as to the absence of effects. All they establish is that the NIS contains inaccurate statements and lacks data.

Mary Kate Bolger Submission

33. TPA say that there are no links between the claims made by Mary Kate Bolger and the ongoing operations at AAL. However, as Mary Kate Bolger says that the 'overall health of this population may be declining' which is perfectly acceptable to say.
34. For example, TPA say:

"For instance, a recent publication based on a long-term study of this dolphin population found that the overall adult survival rate for the Shannon population (0.94 ± 0.001 SD) is comparable to those reported from other bottlenose dolphin populations in temperate regions (Ludwig et. al 2021)".

35. This is a valid point by TPA but survival rates does not measure negative stresses on the animals or quality of life. The requirement to assess impacts on species protected within the Natura 2000 site includes all adverse impacts not just those which result in mortality.
36. Furthermore, as is clear from our client's submission on 21 March 2024, the impacts of the new Dumping at Sea regime have not been assessed in the application either for the purposes of the EIA or the Habitats Directive. Therefore, there has been no assessment of the impacts of such dredging on the population of dolphins in the SAC.

Cappagh Farmers Support Group Submission

37. As set out above, there has been an ongoing failure to assess for the purposes of the EIA and Habitats Directive the seepage of hazardous chemicals from the 170 acres of unlined BRDA into groundwater since it was made operational. We refer in this regard also to our submission made in relation to the duty on the Board to nullify the unlawful consequences of a failure to comply with the EIA Directive, see further Case C-196/16 *Comune di Corridonia*.
38. AAL attempt to deal with the issue of leachate from the BRDA by saying that bauxite residue is categorised as non-hazardous under the European Waste Code. However, as stated by Cappagh Farmers it is accepted that bauxite residue is hazardous. This is supported in the academic literature. There is no doubt that bauxite residue to hazardous in groundwater. We refer in this regard to the EPA's *Classification of Hazardous and Non-Hazardous substances in Groundwater*.
39. *Khairul et al in The composition, recycling and utilisation of Bayer red mud*¹, note that Wang et al had found a vast quantity of red mud stockpiled in a field is very hazardous and toxic. *Khairul et al* state:
- The disposal of red mud may cause serious environmental pollution, such as dried and dusty red mud creating air pollution from the surface of the disposal area (Li, 1998). Some of the soluble compounds in red mud, such as sodium carbonate, sodium hydroxide and sodium bicarbonate, can dissolve with rainwater and pollute the land and rivers. Consequently, the impacts of red mud on the environment are quite extensive.*
40. *Mayes et al in Advances in Understanding Environmental Risks of Red Mud After the Ajka Spill, Hungary* acknowledge that there has not been enough studies of the environmental impacts of red-mud leachate:
- Information on the quality of leachates from red mud is relatively scarce in the published literature but is imperative for assessing risks posed by environmental red mud releases and for long-term BRDA management.*²
41. They noted that the Ajka disaster allowed for the first full appraisal of the environmental effects of red-mud leachate on waters. They noted that in the immediate aftermath of the spill, analysis of residual leachate release from the Ajka BRDA was characterized by extreme pH (13.1) and alkalinity (up to 6600 mg L⁻¹ as Na₂CO₃), and enrichment of a range of potential

¹ Resources, Conservation & Recycling 141 (2019) 483–498

² J. Sustain. Metall. (2016) 2:332–343

elements of concern. These include many oxyanion forming elements which are soluble at high pH, such as Al, As, Cr, Mo, and V.

42. The research indicated that for the majority of elements, the bulk of the concentration was partitioned in particulate and colloidal phases in the leachate. Only for Mo, P, and V were significant proportions partitioned in truly dissolved phases, which would be anticipated to be more bioavailable in the environment.
43. Furthermore, speciation analyses of V in Ajka leachate showed it to be present in its most toxic, pentavalent form.
44. Below is the table reproduced from the Mayes study:

Table 1 Concentrations of selected oxyanion-forming elements in Ajka leachate during sequential filtration (all values in mg L⁻¹)

Element	Total	Colloidal and dissolved (<0.45 µm filter)	Truly dissolved (<10 kDa ultrafiltered)
Al	678.7	539.6	24.7
As	3.4	2.9	0.5
Cr	0.27	0.06	0.03
Mo	5.6	5.2	4.3
P	13.8	0.6	0.2
V	5.6	5.3	3.3

45. The research noted that the concentrations of Arsenic and Vanadium exceeded the standards for aquatic life in waters.
46. It is noted that arsenic is listed by the EPA as a hazardous substance in groundwater, for the purposes of the Guidelines published by the Agency pursuant to Regulation 9(c) of the Groundwater Regulations.
47. Regulation 9(a) of the Groundwater Regulations provides:

The input of hazardous substances into groundwater is prohibited.

48. This gives effect to Ireland's transposition of the Water Framework Directive. Recital 22 of the Directive provides that the purpose of the Directive is to contribute to the progressive reduction of emissions of hazardous substances to water. Recital 27 provides that the Directive to achieve the elimination of priority hazardous substances and contribute to achieving concentrations in the marine environment near background values for naturally occurring substances.
49. Arsenic and its compounds is listed in Annex VIII of the Water Framework Directive which comprises the indicative list of the Main Pollutants for the purposes of the Directive.
50. Kanel et al, note in *Arsenic Contamination in Groundwater: Geochemical Basis of Treatment Technologies*³ that:

³ ACS Environ Au. 2023 May 17; 3(3): 135–152.

Arsenic (As) has been widely used in medicinal and industrial applications. Yet, the health risks associated with arsenic exposure have not been recognized until the 20th century. As present in various environmental matrices (i.e., water, soil, and air) and food can be attributed to both natural and anthropogenic sources. More importantly, arsenic is the most toxic naturally occurring groundwater contaminant. In fact, arsenic, particularly in its inorganic form, has been reported as a carcinogen and identified as highly problematic in drinking water. It has been estimated that at least 150 million people globally drink water with elevated levels of arsenic. Yet, according to the International Agency for Research on Cancer (IARC), arsenic is a Group 1 human carcinogen. The U.S. Environmental Protection Agency (U.S. EPA), the U.S. National Toxicology Program, and the American Conference of Industrial Hygienists have also classified arsenic in their list of cancer-causing agents. Aside from lung and skin cancer, arsenic exposure also leads to ailments of the stomach, intestine, skin, respiratory system, kidney, and central nervous system.

51. They go on to state:

To protect human health, the World Health Organization (WHO) and the U.S. EPA have set a maximum contaminant level (MCL) of 10 µg/L for inorganic arsenic in drinking water.

52. Directive 2020/2184 on the quality of water intended for human consumption (the Drinking Water Directive) which replaced Directive 98/83, and which was required to be transposed by Member States by 12 January 2023 provides for a ELV of 10 µg/L in respect of levels of arsenic in waters for human consumption.
53. Groundwater Well monitoring for the AAL installation provided by AAL to the EPA on 15 January 2024 indicates that for samples taken on 25 October 2023 had concentrations significantly in excess of 10 µg/L, with 1040 µg/L identified at POW 17, 286 µg/L at POW1, and 270 µg/L at POW 7.
54. The underlying Groundwater Body for the AAL installation is the Askeaton Groundwater body (IE_SH_G_010), which is classified as karstic indicating a risk of contamination due to the fissured nature of the rock. It is noted that the EPA have assigned separate Waterbody codes the groundwater bodies at the AAL facility. There is no scientific basis to separate out the AAL facility from the groundwater body which underlies it.
55. In the EPA's List of Abstractions of water published in July 2023, it is noted that the National Federation of Group Water Schemes and the West Limerick Group Water Scheme (Ref R00308-01) have an abstraction of drinking water from the groundwater body (Ref. R02544-01).
56. In Case C-723/21, *Stadt Frankfurt (Oder)*, the Regional Office for Mining, Geology and Raw Materials in Cottbus (Germany) approved an application submitted by Lausitz Energie Bergbau AG for the construction of an artificial lake. The lake, created by flooding a pit resulting from the extraction of lignite, would have an overflow that would flow into the River Spree. Upon creation of the lake, the water leaving the overflow will have a significantly higher sulphate concentration than the water already in the Spree. The Spree is one of the sources Frankfurter Wasser- und Abwassergesellschaft (FWA) uses to produce drinking water and the river's water already has a high concentration of sulphate, originating from closed open-cast mines. The drinking water fed into the supply lines is subject to a certain sulphate value, a requirement which has so far been only narrowly complied with by FWA. The City of Frankfurt (Oder) and FWA feared that, due to the planned inflow into the water of the Spree, that river's

sulphate concentration would exceed the limit and they will have to stop producing drinking water at that point or fundamentally overhaul production. The City of Frankfurt (Oder) and FWA therefore brought an action against the planning approval decision.

57. Advocate General Medina delivered her Opinion on 2 March 2023. She determined as follows:

Article 7(3) of Directive 2000/60 includes a ban on deterioration in water quality in so far as authorising an individual project which is liable to lead to such deterioration prevents a Member State from complying with the duty to reduce the level of purification treatment required in the production of drinking water. Necessary protection measures include a binding duty on Member States to evaluate, ex ante, individual projects which are liable to have an adverse impact on the quality of identified water bodies used for the production of drinking water – irrespective of what kind of water is present in such bodies. That duty is applicable irrespective of whether that water body is inside or outside safeguard zones within the meaning of the second sentence of Article 7(3) of Directive 2000/60.

The deterioration in water quality under Article 7(3) of Directive 2000/60 arises where a project is liable to exceed the established parameters under Directive 98/83. However, in a case involving a pollutant indicated in Part C of Annex I to Directive 98/83, such exceedance does not establish deterioration solely based on the established level of a pollutant such as sulphate. In such a case, in order to establish deterioration in water quality under Article 7(3) of Directive 2000/60, there should be a risk for human health and consequently, in order to avoid such a risk, there should be a need to adjust the purification process.

Article 7(3) of Directive 2000/60 must be interpreted as meaning that the competent authority is required to verify, during the planning approval procedure – and so before the actual approval decision is taken – whether the project at issue is liable to have an adverse impact on the fulfilment of the obligations laid down in that article. Article 7(3) precludes such verification from taking place only after that approval has been given.

58. No information has been provided by AAL as to the determinants of concern for drinking waters being provided from the Askeaton groundwater body as a result of activities at AAL. Yet, clearly there are determinants of concern for these abstraction points. No information has been provided as to whether those determinants of concern are present at the abstraction sources, despite their presence above levels permitted under the Drinking Water Directive at the AAL installation.

59. Accordingly, having regard to the judgment in Case C-535/18 *IL v Land Nordrhein-Westfalen*, we submit that by analogy with Art 4 of the Water Framework Directive, that there is a requirement to identify the data necessary to assess the impact of the project on drinking water sources potentially impacted by the project. We submit that the data provided by a developer such as AAL must show whether the project is likely to result in the deterioration of a body of drinking water.

Environmental Trust Ireland Submission

60. With regard to TPA response to Environmental Trust Ireland, TPA claim that because the mud contains less liquid, the chance of a disaster akin to the alumina plant in Hungary in 2010 could not occur. However, AAL's red mud ponds on the Shannon Estuary are open and it is possible that increased rainfall has already or could change the constitution of the red mud in

the BRDA. Furthermore, the *close proximity* of the Estuary to the red mud ponds means that even if the red mud ponds of AAL are more viscous than the 'wet ponds' of Akja, and there is seepage, then as soon as the red mud meets the river (It doesn't need to be very liquid as the density of flow is likely to be high due to the volume of red mud contained in the ponds) it will soon begin to lose viscosity quickly in the water from the estuary). In this regard, we refer to our submission of 21 March 2024 in relation to the requirement on the Board in relation to assessment of IPCC climate change science under the 2015 Act.

61. Again in that regard *Khairul et al*, noted:

One of the most well-known and well-documented disasters related to red mud occurred in Hungary on 4th October 2010 when the Ajka refinery's dam wall collapsed, resulting in the surrounding area being flooded by red mud. The approximate amount of the red mud released was one-million cubic meters (Boily, 2012). This incident was liable for the contamination of 40 square-kilometres of land. Nine people were killed in the tragedy and 122 people were seriously injured. The nearest river, the Marcal river, was observed to have had a significant loss of living creatures due to the red mud contamination and this pollution rapidly reached the Danube river as well (Gura, 2010; Kogel, 2006).

62. It is therefore not hard to see why Akja is relevant to AAL's operations, and the possibility for the mobilisation of the harmful chemicals comprising the BRDA in the event of an inundation of the BRDA, as was highlighted in our submission of 21 March 2024, particularly given the increased anticipated impacts of sea level rise and storm surges as a result of climate change.

63. In relation to climate change, TPA states that it relies on Section 17 of the EIAR to the effect that climate change " ... has the *potential* to alter weather patterns ... [emphasis added]." This is an irresponsible and epic misstatement of the science of climate change. Climate change will, in fact, alter weather patterns, including in Ireland and the Shannon Estuary. The IPCC's 'AR6 Synthesis Report: Climate Change 2023' report states that:

*"Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020. Global greenhouse gas emissions have continued to increase, with unequal historical and ongoing contributions arising from unsustainable energy use, land use and land-use change, lifestyles and patterns of consumption and production across regions, between and within countries, and among individuals ... Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred. Human-caused climate change is already affecting many weather and climate extremes in every region across the globe. This has led to widespread adverse impacts and related losses and damages to nature and people ..."*⁴

64. As we outlined in our submission of 21 March 2024, the Board on account of the latest Climate Action Plan and the 2015 Act are obliged to carry out its functions in light of the implications of IPCC reporting. On account of the same, and having regard to the fact that the historical likelihood of tailings dams failures upon which AAL have based their assertions of risk of BRDA berm failure (primarily contained in the *Golder* risk assessment report and the *Engineering Design* report), we emphatically reject the assertion by TPA that the risk associated with a containment breach or bauxite residue release was or is "either highly improbable or very unlikely."

⁴AR6 Synthesis Report: Climate Change 2023. See <https://www.ipcc.ch/report/sixth-assessment-report-cycle/>

65. In relation to the point made by ETI in relation to radioactive substances in the BRDA, we submit that the 2020 Socotec Laboratories tests of the Bauxite residue were limited to testing of Thorium and Uranium isotopes in order to assess radioactivity. However, this testing fails to consider the radium which we know is present in bauxite residue because it is Technologically Enhanced Naturally Occurring Radioactive Material and contains Radium 226 and Thorium 232.
66. Furthermore, TPA classifies the 2020 results as non hazardous based on their results being comparable or slightly lower in Thorium and Uranium to the 2008 assessment results. However, the results are simply being compared to guidelines on radioactivity in 2008. Therefore, the 2020 results may not be accurate or a proper representation of safe levels of radioactive materials.
67. TPA reject the ETI submission in relation to allegations of 'project splitting'. However, as set out above and in our submission of 21 March 2024, there has been no assessment undertaken for the purposes of the EIA Directive of the primary refining operations at AAL, and its ancillary activities including the Dumping at Sea permit application currently being considered by the EPA and the abstraction of water from the River Deel and from the Askeaton groundwater body. In that regard, we concur with ETI in that the current application represents 'project splitting' in the sense of a mis-identification of the 'project' required to be assessed for the purposes of Article 4 of the EIA Directive.
68. TPA reject the ETI submission in relation to impacts on water, where they stated "*Leachate and run off from the hazardous salt cake and bauxite residue disposal area into the estuary and the groundwater has not been properly considered in any aspect of the planning documentation.*" While this is not necessarily the case, as the issue was addressed, the central issue for our client is that the leachate from the operations at AAL historically, as well as future leachate which will be permitted by this application has never been assessed for compliance with Article 4 of the Water Framework Directive.
69. As outlined above the groundwater body underlying AAL has been significantly impacted by the operations at AAL. It is noted that both the Askeaton North Fens and Askeaton South Fens surface water bodies are Groundwater Dependent Terrestrial Ecosystems (GWDTE's) as classified by the EPA, indicating a significant groundwater influence on the surface water bodies. The EPA in the latest 3rd Cycle Draft Shannon Estuary South Catchment Report (HA 24) classify the groundwater under the AAL site as "At Risk". On page 24 of same the EPA state:
- Industry has been identified as a significant pressure in one river waterbody (Mague_040) and one groundwater body (Industrial Facility (Industrial Facility (P0035-04))). These point source discharges, causing nutrient and organic issues, arise from industrial discharges (Table 6).*
70. AAL's operations are identified by the EPA as having the following impact "*Chemical & Diminution of quality of associated surface waters for chemical reasons*".
71. The status of the groundwater body is classified by the EPA as 'Poor'.
72. Furthermore, the impact of the abstraction of very significant volumes of water for the AAL operations has not been assessed for its hydromorphological impacts on the River Deel and the quantitative status of the Askeaton groundwater body.
73. We reiterate therefore that no data has been provided in the application to satisfy the requirements of Article 4 of the Water Framework Directive. Notwithstanding the same, it is

clear having regard to the decision of the Court of Justice in Case C-461/13 *Bund für Umwelt und Naturschutz Deutschland*, that the Board cannot grant planning permission for the continued operations of AAL which is what is presented in the application before it, without satisfaction of the requirements of Article 4 of the Directive. In particular, we submit that in light of the fact that the groundwater body is currently in the lowest category status "poor" possibly assigned by the EPA, that the further release of contaminants to groundwater cannot be permitted without the application of an exemption under Article 4(7) of the Directive. AAL have not supplied the information necessary, nor requested the exercise of an exemption under Article 4(7) of the Directive.

74. It follows in the circumstances that having regard to *Bund für Umwelt und Naturschutz Deutschland*, the Board is prohibited from granting permission on this application.

Futureproof Clare Submission

As our client stated in its submission of 21 March 2024 we submit that the assumptions underlying the Golder risk assessment report and the Engineering Design report are fundamentally flawed as they are based on historical data on tailings dams failures, and fail to account for the identified impacts of climate change on foot of IPCC science.

Futureproof Clare do not deny as TPA state that there was "*detailed analysis in the EIAR*". It is that our client submits that that analysis in the EIAR proceeds on fundamentally incorrect premise, namely that past events will be an appropriate guide to future events. That analysis obviously favours AAL who wish to continue with their operations and not have to cease or alter them in light of what is known about climate change.

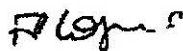
We submit that the Board now in light of the amendment to the 2015 Act has an obligation to review the AAL data in light of the IPCC science.

For the avoidance of doubt, Futureproof Clare reject the statement of TPC in response to its original submission.

Conclusion

75. Our client reiterates that the application should be refused by the Board for all of the aforementioned reasons and those outlined in our client's submission of 21 March 2024.

Yours faithfully



FP LOGUE

From: Eoin Brady [REDACTED]
Sent: Tuesday, April 2, 2024 5:05 PM
To: LAPS <laps@pleanala.ie>; SIDS <sids@pleanala.ie>
Subject: Response to applicant submission on ABP-318302-23

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A Chara,

Please see attached submission as requested on behalf of our client Futureproof Clare.

Please acknowledge receipt thereof.

Regards,

Eoin

Eoin Brady | Partner
FP Logue LLP
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From: Eoin Brady [REDACTED]
Sent: Wednesday 10 April 2024 15:59
To: Breda Ingle
Subject: RE: ABP-318302-23

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Hi Breda,

To confirm that I am acting as agent for Futureproof Clare. You can direct correspondence to me at 8-10 Coke Lane, Smithfield, Dublin 7.

Regards,

Eoin

Eoin Brady | Partner
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From: Breda Ingle <breda.ingle@pleanala.ie>
Sent: Wednesday, April 10, 2024 3:27 PM
To: Eoin Brady [REDACTED]
Subject: ABP-318302-23

FAO: Eoin Brady,
FP Logue Solicitors.

A Chara,

I refer to the above case.

Can you confirm if you are the Agent acting for Futureproof Clare.

Can you confirm if future correspondence is to be addressed to FP Logue Solicitors, 8-10 Coke Lane, Smithfield, Dublin 7 or is correspondence to be addressed to Emanuela Ferrari for Futureproof Clare, 4 Glenview Road, Ennis, Co. Clare. V96 H9T0?

Kind regards,

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Ext. 7291

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