

To:

The Church of England Pensions Board

and

**Council on Ethics
Swedish National Pension Funds**

By email only to: emily.richards@churchofengland.org

Date: 19 August 2019

Dear Sirs

Re: Urgent request for information concerning tailings dam management

Thank you for your letter dated 24 July 2019 relating to an industry wide request for mining businesses to disclose their tailings dam management following the recent tragic loss of life earlier this year from tailings dam failures. Caledonia Mining Corporation Plc and its subsidiaries (together referred to herein as the “**Company**”) is fully supportive of your initiative.

Please find attached at Appendix A to this letter the Company’s response to your request for information. As requested, I hereby certify that the information presented is true to the best of my knowledge, based on the Company’s governance, technical and review systems.

Your letter also recommended that the Company’s response includes plans to communicate directly with communities that may be affected by the Company’s tailings footprint. The Company’s only tailings facility, a survey of which is included at Appendix B to this letter, is operated by its 49% owned subsidiary Blanket Mine (1983) (Private) Limited (which owns and operates the Blanket Mine in Gwanda, Zimbabwe). It is situated on a commercial farm where human dwelling is very sparse. The nearest habitation is approximately 4.5km from the facility, being the homestead of the farm owner, and the facility is situated in an area not prone to landslide or flooding; therefore, it is not considered that there are any communities that would be affected by any failure of the tailings facility and, therefore, no communities which require communication.

If you have any questions about the information disclosed or if you have any further requests for information please contact Adam Chester, General Counsel, Company Secretary and Head of Risk and Compliance, Caledonia Mining Corporation Plc, 3rd Floor, Weighbridge House, Weighbridge, St Helier, Jersey JE2 3NF (Tel +44 1534 679800; Email: achester@caledoniamining.com)

As requested, a copy of this letter will be placed on our website at www.caledoniamining.com.

Yours sincerely



Steve Curtis
CEO

Appendix A

<p>Overview question:</p> <p>Please:</p>	<p>Response</p>
<p>a) Provide an overview of your tailings management system, and how you manage risk</p>	<p>An updated comprehensive survey is carried out every October on the entire tailings dam facility, including the dam basins, position of drains, penstock outlets and piezometers.</p> <p>Appropriate monitoring data sheets and report templates are implemented for the collection, documentation and report of the various monitoring aspects pertaining to the tailings dam.</p> <p>A minimum vertical freeboard of 2m for Dam A and B must be maintained at all times.</p> <p>Piezometers are checked once per month by carrying out Upset Tests to confirm that they are fully operational.</p> <p>Drains are rodded and flushed annually to confirm that they are fully operational and not blocked.</p> <p>A comprehensive slope stability assessment is conducted with each audit.</p> <p>The tailings facility is audited every year by a contractor (Fraser Alexander Tailings (Pty) Ltd) (the “contractor”). There is also a requirement for an audit to be done by an independent auditor once every third year.</p> <p>Tonnages are recorded monthly by the contractor (to facilitate the determination of the rate of rise (“RoR”). However, at a production rate of 1,000 tpd the RoR is 0.54 m per year based on the final design area of 28 ha, which is well below the legal maximum of 2 m per year.</p>
<p>b) Confirm whether your approach to tailings management has changed or will change in light of the recent tailings disasters at Brumadinho, Mariana, Mt Polley and others. Have you, for example, reviewed all tailings storage facilities with upstream dam construction, and taken steps necessary to protect local communities and the environment e.g. buttressing, evacuation?</p>	<p>It is not considered necessary to change the Company’s approach to its tailings management although recommendations from independent surveyors (if any) will be implemented if necessary.</p>

Item	Notes	Response
1. "Tailings Facility" Name/identifier	Please identify every tailings storage facility and identify if there are multiple dams (saddle or secondary dams) within that facility. Please provide details of these within question 20	<p>The Blanket Mine tailings operation, known as the Blanket Mine Tailings Dam, is a gold tailings operation, comprising two dams/compartments adjacent to one another. These dams, namely A and B, were combined in 2015 to make one dam.</p> <p>All tailings effluent is decanted via Dam A penstock. Dam A and Dam B are operated as a paddock ("day wall") operation.</p> <p>Decanting of the two dams occurs through separate penstocks, with Dam A having an elevated penstock installed in 2005/2006.</p> <p>Dam A is the initial tailings dam with Dam B having been constructed subsequently and adjacent to Dam A. Dam A is in the order of 3 m lower in elevation to Dam B (height difference is an estimate as no current updated survey information is available). The tailings dams are operated by Fraser Alexander Tailings (Pty) Ltd.</p>
2. Location	Please provide Long/Lat coordinates	See Appendix B - Location Y +9339.68, X +2305515.28.
3. Ownership	Please specify: Owned and Operated, Subsidiary, JV, NOJV, as of March 2019	Owned.
4. Status	Please specify: Active, Inactive/Care and Maintenance, Closed etc.	Active.
5. Date of initial operation	(date)	Dam A was constructed in 1994 and Dam B in 1998.
6. Is the Dam currently operated or closed as per	Yes/No. If 'No', more information can be provided in the answer to Q20	Yes.

currently approved design?		
7. Raising method	Note: Upstream, Centerline, Modified Centreline, Downstream, Landform, Other.	Upstream.
8. Current Maximum Height	Note: Please disclose in metres	31 metres above ground level.
9. Current Tailings Storage Impoundment Volume	Note: (m3 as of March 2019)	4,535,432m3.
10. Planned Tailings Storage Impoundment Volume in 5 years' time	(m3 as planned for January 2024)	Approximately 5,375,663m3.
11. Most recent Independent Expert Review	(date) For this question we take 'Independent' to mean a suitably qualified individual or team, external to the Operation, that does not direct the design or construction work for that facility.	January 2016.
12. Do you have full and complete relevant engineering records including design, construction, operation, maintenance, and/or closure?	(Yes or No) We take the word "relevant" here to mean that you have all necessary documents to make an informed and substantiated decision on the safety of the dam, be it an old facility, or an acquisition, or legacy site. More information can be provided in your answer to Q20	Yes, for Dam B and relevant documents are available on the construction and operation of the facility that includes a closure plan. However, Dam A was commissioned without engineering designs. The contractor took over the management of Dam A in 1998 and in 2015 Dam A and Dam B were combined to operate as one dam.
13. What is your hazard categorisation of this facility, based on the consequence of failure?		Using the contractor's technical operating risk assessment system (TORAS), the dam is rated at 25. the TORAS risk score summary is based on a dam operation assessment including stability, seepage, water stored on the dam, pool location on dam, piezometer checks, drains, freeboard, pulp densities etc. A score below 35 is in order, a score above 35 and below 45 indicates

		<p>concerns and refer to trends. A score of 46 to 59 indicates non-compliance and a score of 60 or above is critical.</p> <p>In the event of failure, which is considered unlikely, and based on the zone of influence the dam would contaminate an area stretching 3 to 4 kilometres downstream. The hazard classification of the consequence would be high.</p>
14. What guideline do you follow for the classification system?		TORAS, as mentioned above.
15. Has this facility, at any point in its history, failed to be confirmed or certified as stable, or experienced notable stability concerns, as identified by an independent engineer (even if later certified as stable by the same or a different firm).	<p>(Yes or No) We note that this will depend on factors including local legislation that are not necessarily tied to best practice. As such, and because remedial action may have been taken, a "Yes" answer may not indicate heightened risk.</p> <p>Stability concerns might include toe seepage, dam movement, overtopping, spillway failure, piping etc. If yes, have appropriately designed and reviewed mitigation actions been implemented?</p> <p>We also note that this question does not bear upon the appropriateness of the criteria, but rather the stewardship levels of the facility or the dam. Additional comments/information may be supplied in your answer to Q20.</p>	No.
16. Do you have internal/in house engineering specialist oversight of this facility? Or do	Note: Answers may be "Both".	External - the contractor, which operates a number of facilities in Africa and abroad, were contracted by Blanket Mine to run the facility and holds regular monthly meetings with Blanket

you have external engineering support for this purpose?		Mine. Each year the contractor provides an audit report on the facility and every three years an independent audit is done on the facility.
17. Has a formal analysis of the downstream impact on communities, ecosystems and critical infrastructure in the event of catastrophic failure been undertaken and to reflect final conditions? If so, when did this assessment take place?	Note: Please answer 'yes' or 'no', and if 'yes', provide a date.	No.
18. Is there a) a closure plan in place for this dam, and b) does it include long term monitoring?	Please answer both parts of this question (e.g. Yes and Yes)	Yes and Yes.
19. Have you, or do you plan to assess your tailings facilities against the impact of more regular extreme weather events as a result of climate change, e.g. over the next two years?	(Yes or No)	Yes.
20. Any other relevant information and supporting documentation. Please state if you have omitted any other exposure to tailings facilities through any joint ventures you may have.	Note: this may include links to annual report disclosures, further information in the public domain, guidelines or reports etc.	Please see technical report (Item 19(b)) for further information on tailings dam: https://www.caledoniamining.com/wp-content/uploads/2019/02/P17-051a_Blanet_NI43-101_2018_Final_Signed.pdf

Appendix B
Blanket Tailings Dam