



ANNUAL REPORT 20 22

Jamaica Bauxite Institute



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The ochre “**J**” represents the influence of the iron mineral goethite in Jamaican bauxite. The behaviour of this mineral during Bayer processing is one of our areas of research.

The reddish “**B**” represents the influence of the iron mineral haematite in our bauxite.

The white “**I**” represents alumina - the end product in Jamaica.

The silver globe indicates aluminium and our world-wide interest in the product.

THE ORGANISATION

AS OF APRIL 1, 2021, THE BOARD COMPRISED:

Mr. Alston Douglas, O.D., J.P. (Chairman)
Mr. Angus Gordon (Deputy Chairman)
Mrs. Sharon Hay Webster
Rev. Casbert Bryan
Mrs. Juliet Rose
Miss Rayharna Wright
Mr. Yaneke Watson
Mrs. Shasha Lee
Dr. Ava Robertson (Resigned June 2021)

APPOINTED JULY 2021

Mrs. Kayon Whyne

PRINCIPAL OFFICERS:

Mr. Stevie Barnett, *General Manager*
Miss Yolanda Drakopoulos - *Senior Director, Bauxite Reserves*
Mr. Kemoy Lindsay, *Director - Bauxite Lands*
Mr. Worrell Lyew-You, *Director - Process Monitoring & Environmental Services*
Mr. Richard Hanson, *Director - Analytical Services*
Mrs. Joan Thomas Levy, *Director - Administration & Finance from January 2022*

ROLE & FUNCTION



The Jamaica Bauxite Institute was established by the Government of Jamaica in 1975 to, *inter alia*:

- (a) monitor and study the aluminium industry and provide technical advice on, and personnel for, the negotiations of various agreements;
- (b) undertake research and development activities on various problems related to the processing of Jamaican bauxite;
- (c) continually assess and ensure rationalization in the use of Jamaica's bauxite reserves and (bauxite) lands; and
- (d) monitor and make recommendations to ensure adequate pollution controls and other environmental programmes in the industry.

In addition, the Jamaica Bauxite Institute has diversified its laboratory to analyze not only bauxite, its products and by-products, but also a range of industrial and agricultural materials.

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MINISTER'S MESSAGE



The Jamaica Bauxite Institute (JBI), over the past year has indeed “maintained an unwavering commitment to effective regulatory enforcement, good scholarly and market-based research as well as the facilitation of investment in plant expansion and renewal, without degrading the environment”, as outlined in its mission.

The past year certainly had its challenges, not only as we continue to recover from the impacts of the Coronavirus on the local bauxite industry, but even as we face a new threat and learn to navigate through it all. I am pleased that the Jamaica Bauxite Institute has remained resilient in its mandate to conduct research and analysis of data and trends in the bauxite and alumina industry.

Through a number of initiatives geared towards providing industry data in the bauxite and alumina sector, including processability testing of bauxite samples from JISCO-Alpart which will give a measure of the suitability of particular bauxite for processing, the Institute remains relevant and

optimal in providing much-needed research and data services.

The Institute further continues experimental research work on the development of an economically viable process for the recovery of rare earth elements from red mud. Research capabilities were strengthened with the procurement of a new Inductively Coupled Plasma Optical Emission Spectrometer.

Under the BCDP, several rehabilitation and solar electrification projects which were implemented on behalf of Members of Parliament in bauxite constituencies have also been completed.

JBI's partnership with the Jamaica Social Investment Fund on the Rural Economic Development Programme will also see the BCDP investing over JMD\$100M to erect greenhouse and water harvesting facilities across all five bauxite-bearing parishes in the coming months. This project will directly benefit over 340 small farmers and indirectly improve the lives and livelihoods of hundreds in



these areas. Further to this, the JBI will be undertaking a solar electrification project, to install JMD\$10M worth of solar street lights in rural bauxite communities towards the improvement of community safety and security.

For the upcoming year, the Institute will pursue the upgrade and diversification of its laboratory services. This will include commercial testing of water samples and completion of ISO 17025 accreditation of selected laboratory testing methods. The accreditation process was started in 2021 and is expected to be completed, for certain test methods, this year. The JBI will have the first ISO 17025 accredited bauxite laboratory in Jamaica.

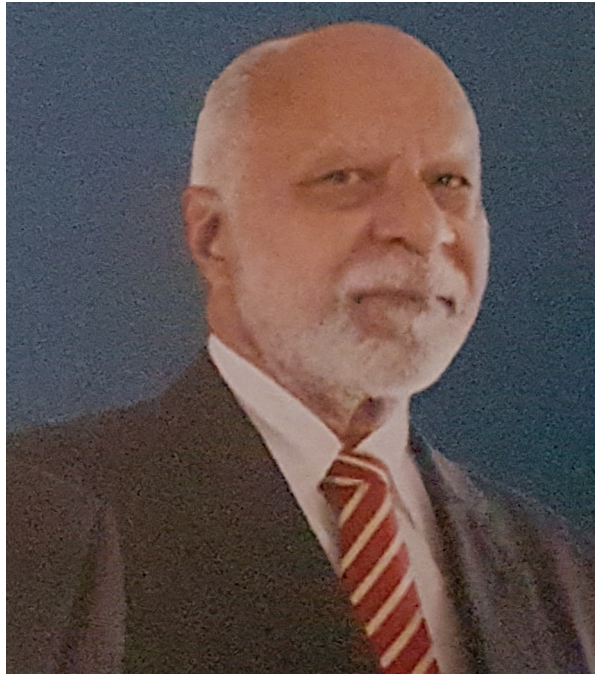
The JBI in collaboration with the bauxite and alumina industry and other partners will launch a tree planting in school's initiative. One hundred and twenty schools (120) will be chosen across the five bauxite bearing parishes (Clarendon, Manchester, St. Elizabeth, St. Ann and St. Catherine). Each school will be given 10 plants, each student will be given a plant and each teacher will be given a plant. This is a bold move by the JBI which as Minister I support.

Like many others, I've drawn strength and inspiration from the unique complement of staff and members of the Board whom I have had the pleasure to work with in my capacity as Minister of Transport and Mining. I therefore take this opportunity to commend members of staff for their commitment to ensuring that the work continued; and the Board for providing strategic oversight of the organization.

I maintain confidence in the fact that we are guided by experts who possess a wide range of experiences and comprehensive knowledge of the sector. The Jamaica Bauxite Institute continues to strive for compliance in accordance with the Corporate Governance Framework for Public Bodies, in keeping with the general thrust of the public sector.

.....
Hon. Audley Shaw. CP, MP

CHAIRMAN'S MESSAGE



The past year has been one of extraordinary challenges. Despite this, I am heartened by the Jamaica Bauxite Institute's (JBI) response of pivoting with resourcefulness and agility. As bauxite-alumina production in Jamaica continues to be regarded critically, I am proud to be part of an institution that is both collaborative and proactive in responding to the government's interest in alumina and trade. While we continue to evolve in our execution, our mandate of 1975 remains as relevant today as it was then.

I believe that the varying initiatives of the institution, particularly those being implemented under the Jamaica Bauxite Institute/Jamaica Social Investment Fund MOU, are testament of the JBI's commitment of investing in bauxite communities and improving the lives of Jamaicans with environmental sustainability at the fore. The mandate of Life After Bauxite (LAB), is one which we vigorously pursue on behalf of the government.

As we look ahead to explore the new environmental, social and economic opportunities, I say thank you to our stakeholders and partners that have been crucial to our success.

I take this opportunity to thank and congratulate the Senior Management team, Board of Directors and staff of the Institute for their unwavering commitment to duty. I am confident that our reputation of research and development will continue to distinguish the JBI.

Alston Douglas

Alston Douglas, O.D., J.P.

GENERAL MANAGER'S MESSAGE



Reviewing 2021, it is evident that the Jamaica Bauxite Institute (JBI) continued to serve its stakeholders and varying bauxite communities by *“maintaining an unwavering commitment to effective regulatory enforcement, good scholarly and market-based research as well as the facilitation of investment in plant expansion and renewal, without degrading the environment.”*

Though not unscathed by the Covid-19 pandemic and the challenges it presented for the sector, our continued dedication saw the Institute critically engaging, at the international level in market analysis, regional discussions, and plans for the future of bauxite and alumina.

The work we have been able to achieve across Bauxite Lands, Process Monitoring, Analytical Services and Bauxite Reserves has only buttressed our resolve to navigate this industry which is crucial to our country's survival.

As we look to the future of mining and the opportunities therein, the JBI will continue to place

priority on researching red mud utilization, the exploration of reserves for future mining and revenue earning opportunities with 'Life After Bauxite' in view.

We also continue to publish:

- (a) technical reports to inform our strategies
- (b) specialist articles in the JBI Journal for a wider audience
- (c) export statistics for government agencies and the media, local and international audiences.

We look forward to continued growth and stand ready to support the Government of Jamaica (GOJ) in regulating one of our Country's most crucial sectors.

A handwritten signature in blue ink, appearing to read 'Stevie Barnett', written over a dotted line.

Stevie Barnett

BOARD OF DIRECTORS' REPORT

In an effort to revitalize productivity in the bauxite and alumina industry, The Board continued to place emphasis on enhancing the core function of the Jamaica Bauxite Institute. Throughout the reporting period, the Board placed heavy emphasis on accountability and the importance of being compliant with the relevant rules and regulations that govern the Institute. In addition to the monthly reports from the General Manager, the Board periodically heard reports from each committee of the Board in an effort to maintain accountability and efficiency. By way of the General Manager's Report, the Board was given insight with respect to the Institute's finances, divisional reports, initiatives being undertaken by the Institute, among other things. Board meetings continued on a monthly basis where pertinent matters were discussed and where actions requiring an update were followed-up on.

At the beginning of the year 2021, the Board met with the then Minister of Transport and Mining, the Honourable Minister Robert Montague where he relayed a number of charges to the Board. Minister Montague asked that the Board focus on the following:

- a) The pieces of legislation that come under the purview of the JBI to be assessed to determine the areas of deficiencies with a view to having the required amendments effected.
- b) Appropriate measures are to be taken to recognize Dr. Lambert. A commemorative journal should be published in his honour.
- c) Research should be continued on the possible uses of "Red Mud" as it is believed that the true value of this material remains largely untapped.
- d) The bauxite levy payments are to be addressed in respect of United Company RUSAL and JAMALCO (once the matter of incorporation has been concluded.)
- e) The JBI needs to play its role in ensuring that the local population benefits from the bauxite industry.
- f) Addressing outstanding titles for persons who would have been relocated by the various bauxite mining companies over the years.
- g) Leveraging the plethora of research that has been done on castor oil over the years. It is time to implement the various projects and workable recommendations that have been made.

With regards to charge "b" above, the Board agreed that in addition to the publishing of the journal, there could be a scholarship named in Dr. Lambert's honour for students wishing to venture into Dr. Lambert's field of study. For the year 2021/2022, the Board remained focused on these charges. Throughout the year, the Board was reminded of these charges and took steps in furtherance of each. With respect to charge 'g', the Institute began seeking lands for the cultivation of castor bean during the reporting period.

The charges from the Minister acted as an overall guide for the Board in the performance of their duties throughout the year.

The Board discussed a number of initiatives, some of which was geared towards providing support to communities within the bauxite areas; others were geared towards improving the public profile of the Institute, while others were being discussed to generate income for the Institute. Some of these initiatives are summarized as follows:

- I. Business Development – with respect to a possible partnership between Solvay, a Belgian multinational chemical company, and JBI, a quotation was sent from JBI to Solvay with respect to the services that JBI could provide to them. Throughout the reporting period, the Board continued to await feedback.
- II. JBI/NWC Water Project – the Institute was given a mandate to collaborate with the National Water Commission (NWC) on the provision of water to areas in St. Elizabeth. Steps were taken to further this mandate.



- III. JBI LAB ISO 17025 Certification – the Institute had taken steps to earn ISO certification for the Laboratory. Training had taken place for same.
- IV. JBI Greenhouse – the Board approved the construction of a greenhouse for the Institute.
- V. Life After Bauxite – this initiative focused on life in the bauxite communities, and on bauxite lands, after these lands become are mined out. One of the many initiatives discussed was a tree planting initiative for primary and secondary schools in collaboration with the Forestry Department.
- VI. At-Risk Youth – JBI continued to make arrangements to implement the initiative to reach out to at-risk youths within the bauxite communities in an attempt to offer guidance.
- VII. JBI Cares – This focused on preparing and distributing care packages to over seven hundred and fifty (750) individuals within the bauxite councils.

The Board took a keen interest in staff retention and staff morale at the Institute. Throughout the reporting period, the Board saw a number of resignations and took swift action to curtail this issue. With respect to the improvement of staff morale, the Board encouraged the reinstatement of the JBI Staff Association. Periodic updates were sought on the steps taken to fill the vacant posts and the steps taken to boost the staff morale at the Institute. One such step included instructions to the Human Resource Department to seek approval from the Ministry of Finance to fill certain posts. The management staff members were encouraged to build relationships with the general members of staff.

Throughout the reporting period, some Board members, along with members of staff, including the then Public Relations Officer formed a committee to discuss and plan a celebration for JBI's 45th Anniversary. The Board heard periodic updates on the progress and activities planned, throughout the reporting period.

In keeping with the Institute's core function, the Board encouraged the undertaking of a number of research projects. These were carried forward from the previous reporting period. The research

undertaken by the Institute included:

- Rare Earth Element Project;
- Research on the feasibility of gallium;
- Research on the feasibility of sodium oxalate;
- Socio-economic impact of bauxite;
- Creation of bricks through the combination of high silica bauxite and cement; and
- Viability of large-scale castor production on mined out lands

The Board remained focused on the mandate of the Institute which is to act as a repository of knowledge in the bauxite industry. Additionally, on the matter of accountability, on the 6th of May, 2021, members of the Board engaged in an appraisal session of the General Manager, with him in attendance. While the report from the appraisal was tabled at a subsequent meeting, one of the recommendations coming out of the appraisal was that the organization needs to return to a state where its main focus is on research. It was observed that the organization has somewhat moved away from research and the General Manager was charged with focusing on the mandate of the Institute. It was on this basis why periodic updates on the research projects undertaken by the Institute were provided to the Board. In support of this mandate, the Institute embarked on a journey to locate research papers that were previously done on rare earth elements. The purpose of locating these was so that it would be readily available in the Institute's library.

In keeping with this mandate also, the General Manager advised the Board of plans that were being actioned to digitize research papers in the library. He noted that digitizing the library would prevent any reoccurrence of having research done without documentation. The Board supported this.

In furtherance of the responsibilities of the Institute, the Board closely monitored disbursement of funds to the Members of Parliament within the bauxite constituencies, and heard updates on the Rural Economic Development Initiative (REDI) programme which launched its second phase during the reporting period. The Board heard periodic updates from the Ministry of Transport and Mining and closely monitored developments with respect to special mining leases.



Additionally, in summary, the following activities were also undertaken during the financial year 2021/2022:

1. The Board robustly discussed and approved a revised Staff Loan Policy allowing a cap of Fifty Million Dollars (\$50,000,000.00). The overall loan amount, which was split into two categories (motor vehicle loans and miscellaneous loans), ought not to exceed the abovementioned amount.
2. With respect to the launch of the REDI 2 programme, in collaboration with the Jamaica Social Investment Fund, the Institute facilitated and assisted with the registration of the respective councils with the Department of Co-operatives and Friendly Societies. Additionally, sites were selected and JSIF conducted an internal appraisal process where they did an internal assessment of the social impact that the project will have on the participants. The year ended with REDI 2 being launched.
3. The Audited Financial Statement for the year ending March 31, 2021 was presented to the Board in July 2021. Two major statements were presented, namely the Statement of Comprehensive Income and the Statement of Financial Position. The Board perused the financials for the Institute in great detail. The External Auditor made recommendations to the Board with respect to accrued unused vacation leave and the risks of same continuing, as well as a recommendation for a fixed asset register to be implemented. These recommendations were also presented to the Audit and Risk Management Committee during the reporting period. The recommendations were accepted by the Board. The Financial Statement was unanimously accepted by the Board as well.
4. The Board attended a two-day Retreat at the Moon Palace Hotel in St. Ann on the 23rd and 24th of July 2022. The main focus of the Retreat was for strategic planning. At the Retreat there was a address by Minister Montague, a presentation of the Corporate Plan for the financial years 2021/2022 and 2022/2023, as

well as presentations from the divisional heads with regards to their respective divisions. There was also a panel discussion on the opportunities associated with the use of mined out bauxite lands. The panel discussion saw participation from representatives of Windalco, Jamalco and Noranda.

5. The highlights of the Retreat were as follows:
 - Minister Montague recommended that the Board is to visit at least two (2) bauxite communities to observe the efficiency of the Rural Economic Development Initiative (REDI) programme. He also noted the importance of auditing the councils to ensure they are operating within the established rules and regulations. Most importantly, the Board was asked to investigate if or when annual general meetings are being held and the tenure of the council chairpersons.
 - Minister Montague recommended that the Board make attempts to boost the bauxite communities' involvement in the REDI programme. As an example, he stated that instead of assisting clusters and groups within the communities, assistance should be given to individuals whose needs would be catered to on a case-by-case basis. Instead of shade houses being owned by groups, these shade houses could be owned by individuals. On the point of assisting individuals, Minister Montague implored the Board to have a discussion with the National Water Commission (NWC) to address water supply issues in these communities. Mr. Barnett advised that he was in dialogue with the Ministry of Finance and Public Service (MOFPS) to iron out the requirements for expending funds on this water project.
 - Minister Montague encouraged the Board to make the land titling issue their number one priority.
 - The Board was encouraged by Minister Montague to proceed with the



implementation of the JBI and Jamaica Castor Industry Association (JCIA) Castor Bean Project.

- Minister Montague recommended that JBI publish all the research within JBI's possession.
- JBI is to write to Minister Montague's office, per his instructions, advising of the outstanding levies owed by the bauxite companies and to seek MTM's intervention.
- JBI is to share issues relating to the JBI and National Environment and Planning Agency (NEPA) Memorandum of Understanding with MTM. The Board was advised in previous meetings of challenges being faced in terms of reinstating a MOU between the two agencies.
- Chairman Douglas recommended the provision of laptops to the Chair of each committee to facilitate smooth virtual meetings.
- The Board is to address the retirement age for females following discussions at the HR & Corporate Governance Committee.
- There is to be a meeting between JBI and NEPA to discuss the establishment of buffer

zones around alumina plants and RDA. Mr. Barnett indicated that Mr. Watson had already made steps to contact NEPA in furtherance of this objective.

6. Updates were provided to the Board periodically with respect to the Board Retreat highlights.
7. The Board closely monitored succession planning activities, especially in light of those senior members of staff whose retirement was near approaching.
8. The Board resolved that the retirement age of female employees at the Institute should be raised from sixty (60) to sixty-five (65).
9. The Board monitored and obtained periodic reports on environmental disruptions.
10. The Board actively sought updates on the filling of vacant posts.

It was reported that for the financial year, JBI made Two Hundred and Seventy-Three Million, Two Hundred and Fifty-One Thousand, One Hundred and Nine Dollars (\$273,251,109.00) and spent Two Hundred and Forty-Six Million, Nine and Thirty-Four Thousand Dollars (\$246,934,000.00) resulting in a net position of Twenty-Six Million Dollars (\$26,000,000.00).

THE BAUXITE COMMUNITY DEVELOPMENT PROGRAMME (BCDP)

The Bauxite Community Development Programme is a programme of special funding for communities impacted by bauxite and alumina operations. The programme was established in October 1996, by the Government of Jamaica which designated the Jamaica Bauxite Institute (JBI) the agency responsible for its management. The main goal of the programme is to reinvest earnings from the bauxite/alumina industry by implementing long-term sustainable projects in communities affected by bauxite operations, ultimately leading to improvements in socio-economic conditions in the affected communities and “Life after Bauxite”.

The programme is currently in its seventh (VII) phase which was launched officially in September, 2020. As at March 2022, the BCDP expended JMD 31,674,819 on projects under this phase, primarily

under in road repairs under the Member of Parliament disbursement facility. The previous phase of the BCDP (Phase VI extension) ended in January, 2020.

Since its inception in 1996, the BCDP has expended approximately \$589 million on projects in the areas of agriculture, sports, skills training, community infrastructure development and road rehabilitation in over 300 bauxite communities. The diagram below shows the total disbursements on projects under the BCDP since its inception in 1996.

As can be seen from the chart below, agricultural projects continue to account for the largest share of disbursements. Community infrastructure accounted for JMD 166.3M and road repairs JMD 138.42M. Agricultural projects are historically received from the community councils, however due to the on-going COVID-19 pandemic, the activity of the councils has been drastically reduced. However,

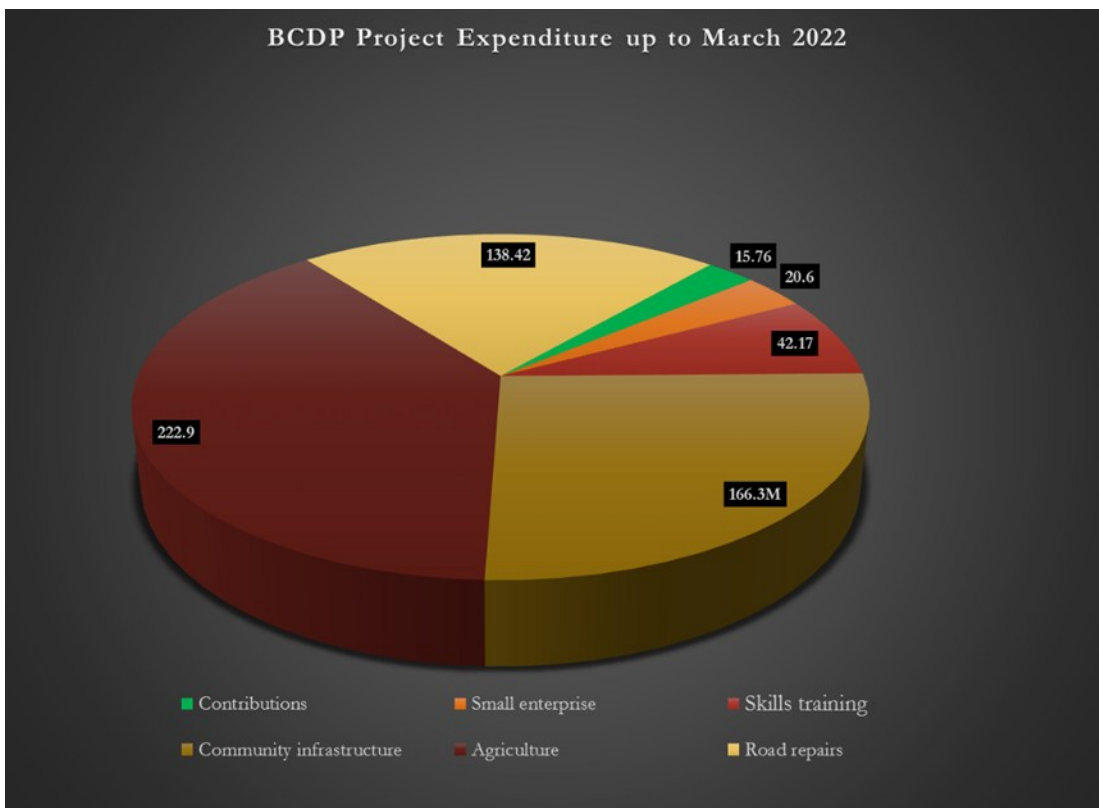


Figure 1: Expenditure by Project Type



works are underway to inject more investment in Greenhouse farming (renovation of Rural Economic Development Programme (REDI) I greenhouse clusters), as well as poultry and goat rearing. REDI II is expected to get underway shortly which will see the BCDP invest almost JMD 100M in the construction of over 300 additional greenhouses across all bauxite parishes.

Additionally, over the fiscal year, all community councils were audited and the BCDP team continues to conduct socio-economic surveys of the councils to advise on the implementation of projects. Special strategies are being put in place to facilitate increased engagement of the community councils as well as the wider community to enable them to benefit from BCDP funding. This is particularly important as the Councils continue to recover from the effects of the COVID-19 pandemic.

Partnerships

The JBI/BCDP team has partnered with several public and private entities towards the advancement of projects across all bauxite parishes. Among these is the partnership with the Social Development Commission (SDC) for a street lighting project to be funded by the BCDP in the parishes of Manchester, St. Ann and Clarendon. This project will be completed in the upcoming financial year. The municipal corporation is also a partner in this initiative and several other projects implemented over the past year. Other partnerships initiated over the year include:

- 1) Regional Health Authorities- to negotiate the renovation and rehabilitation of public health clinics and hospitals
- 2) National Land Agency- in the finalizing of lease agreements for agricultural projects as well as in support of the land titling activities being undertaken by the JBI/BCDP

- 3) Bauxite Companies- to finalize support to be given to their land titling activities
- 4) Rural Agricultural Development Agency- to train and implement poultry farmers in St. Elizabeth and Clarendon

The BCDP under its mantra “life after bauxite” also continues to provide support for the 14 active joint bauxite community councils located in areas impacted by bauxite/alumina operations in close proximity to the mines, railways, ports and refineries. With its focus on sustainability, the programme will continue to implement projects that positively impact the lives of Jamaicans residing in bauxite bearing areas by utilizing methods that are environmentally sustainable and socially responsible.

Upcoming projects

The BCDP will be implementing several projects over the upcoming year 2022/23. These projects include agricultural, infrastructure, health sector development and training. Some of the priority projects for the coming year include:

- 1) Black River Hospital Development project (Phase 1- frontage and entrance expansion)
- 2) Rehabilitation and reopening of Broadleaf Community Health Center
- 3) Rehabilitation of Alexandria Community Hospital Water catchment system
- 4) Solar street lighting project (Manchester, St. Ann and Clarendon)
- 5) Greenhouse/Water Harvesting project under the Rural Economic Development Initiative II
- 6) Land Titling support

These projects will be implemented at a cost approximately JMD 100M with the Black River project slated to begin as early as first quarter in the 2022/23 fiscal year.



HIGHLIGHTS OF ACTIVITIES

BAUXITE LANDS

The Bauxite Lands Division has overall responsibility for ensuring that bauxite lands are prudently managed and protected as part of Jamaica's overall reserves management programme. The protection of bauxite lands against sterilization is necessary to secure the reserves required for future mining and to maintain the viability of the industry. The Division is also charged with facilitating the optimum utilization of lands before, during and after mining, monitoring the use of these lands and ensuring that the legal obligations of the government and the bauxite companies in respect of land agreements are fulfilled. Over the past year, the Division worked closely with the Bauxite Reserves Division with the

production of maps and GIS information. These activities were critical in advising on multiple matters pertaining to the JBI's role in the industry.

Processing of Applications for Sub-divisions on Bauxite Lands

For the financial year March 2021 to March 2022, the Bauxite Lands Division processed Two Hundred and Seventy-Five (275) subdivision applications, of which Two Hundred and Seventy-Four (274) applications were approved. One (1) application was refused as the JBI did not agree with the proposed land use. Additionally, the turnaround time for the processing of subdivision applications has improved from 10-14 days, to 5-7 days. This marks a significant improvement in our service delivery. The Table 1 below shows the distribution of applications received and approved by parish.

Parish	Total	Approved	Refused
Saint Ann	64	64	0
Trelawny	25	25	0
Saint Elizabeth	63	63	0
Manchester	96	95	1
Clarendon	26	26	0
Saint Catherine	1	1	0
Total	275	274	1



BAUXITE RESERVES

Sterilization of bauxite reserves continues to be a major issue due to conflicts of interest with land use, be it for development or for environmental issues. This includes both sterilization of the bauxite itself, as well as loss of access to the deposits. There are now no unallocated bauxite areas left in the country, so any further losses will not be able to be made up elsewhere. No solutions have been put in place for the protection of bauxite reserves so it is expected that the situation will continue to worsen.

With the recent announcement of a change in ownership of Noranda Jamaica Bauxite Partners, discussions have been held with the Ministry of Mining and Transport, the Jamaica Bauxite Mining Ltd, Ministry of Finance, JBI personnel, and the new owners, Concord Resources Holding Ltd. They have indicated their willingness to settle outstanding payments to the Government of Jamaica (GoJ), and to work together with the JBML to improve Noranda's public image. To this end, a series of meetings have been held with all the stakeholders to establish schedules for the collection of bauxite revenues owed to the Government. The company is being renamed Discovery Bauxite Ltd, held by Atlantic Alumina Co, (ATALCO) and Jamaica Bauxite Mining Limited (JBML). The lengthy period of time taken to get a final decision from NEPA on the Environmental Permit for SML173 was of great concern for both sides of the negotiation, as Noranda now has a severe shortage of processable bauxite. Finally, it was announced in February that NEPA has granted an environmental permit but only for very small area within SML 173, and only for five years. A number of presentations were made to the Minister of Mining and Transport to seek his intervention on the matter, as this very small permitted area will severely impact Discovery Bauxite's ability to meet their refinery specifications. Discussions continue between the GoJ teams internally, as well as with the owners of Discovery Bauxite Ltd to discuss their situation with respect to future bauxite reserves and new fiscal arrangements with the GoJ so all entities will be in

agreement with the way forward. This is mainly in relation to Noranda, but any amendments to the bauxite production levy will impact the whole industry.

Land Reclamation

The acreage of mined out bauxite lands presented for certification as having been satisfactorily restored was not up to the usual quantity in 2021 due to the effects of the COVID-19 pandemic, and other economic factors affecting the industry. In addition, JISCO Alpart is closed so no mining is taking place there, and due to a fire at Jamalco last August, they also have not been mining for some time. However, the mining companies have not exceeded the duration of time allowed for certification except with permission for extension, so there were no breaches in the requirements by law.

Research Project – Brick Production

The objective of this project is to utilize unprocessable material from the bauxite industry to produce bricks for the purpose of landscaping. This project is intended to have an environmental benefit as it will reduce waste, as well as potentially generate revenue for JBI. The first site which was selected is in the Windalco Ewarton mining lease and contains bauxite which cannot be utilized for alumina due to quality specifications as the silica content is very high. Chemical and mineralogical characterization of the raw material has been completed, as well as testing for other properties such as plasticity and shrinkage. Physical tests are now underway to establish parameters such as durability and resistance to impact and crushing, and the performance of the material in the brick production process. This includes looking at the effects of various additives such as pozzolan and Portland cement on bonding ability. Repairs to the JBI brick making machine have not been completed due to unavailability of the necessary spare parts. In the interim, brick are being made using a hand mould to make life-sized bricks for testing at the MGD laboratory.



PROCESS MONITORING & SERVICES

In 2021, the global coronavirus pandemic was unabated and there was a general ennui with restrictions in operations as adapted modalities become the norm. There was a full return to office in January 2022, however, the unit has had several staff interruptions related to the pandemic and resulting in mixed productivity. The operational areas in the period were Jamalco, Windalco's Ewarton Works and Noranda Bauxite, however a significant fire at Jamalco in August curtailed operations at the refinery for the remainder of the financial year. All companies are subjected to the government's environmental monitoring and management programme, which has the objective of minimizing impacts on adjacent communities and the public at large. The other locations - Windalco's Kirkvine Works and Mines remained mothballed and is still part of court action with Rusal. JISCO Alpart remained shut down through 2021.

The Environment

Public concerns yet again remain centred on three areas: dust emissions, regulation and risk assessment. The Jamaica Bauxite Institute has undertaken regular environmental review site meetings, audits at all facilities and verification monitoring of surface and groundwater resources. The companies are generally in compliance with the air quality standards and where there are breaches, action plans are developed to address the issues.

Nevertheless, dust nuisance remains an area of primary concern, particularly in St. Elizabeth in relation to JISCO's operations, during dry and windy conditions. The surrounding communities were not happy with JISCO's management of dusting incidents, but some resolutions were achieved from interactions with the government stakeholders and community representatives.

In September of 2021, a suit in the courts was initiated against Noranda (part government owned) on constitutional grounds with respect to negative environmental impact. This backdrop has resulted in

an anomalously long permitting process which ultimately resulted in the environmental permit for the new mining area for Special Mining Licence (SML) 173. The area lies adjacent to the Cockpit Country Protected Area (CCPA) which was gazetted and now includes area that was previously owned by Kaiser and formerly in the SML 173 area.

With respect to waste management, in particular the red mud sites, the JBI continues to progress the development of the framework for status, assessments and standards. The expansion for the Effluent Holding Pond (EHP) at Ewarton works was initiated and it is anticipated that there will be better water management at the bauxite residue disposal site. With the above-mentioned fire at Jamalco, Ewarton remained the only active alumina producer for the remaining 6 months of this financial year. There is no change to the commitment to constrain the size of the operational waste disposal areas, as well as utilization of the best available technology. The invasion of Ukraine by Russia is yet to impact local operations though there has been an accelerated change in cost of living.

The JBI Environment Unit had a particularly challenging year - the expiry of all permits issued prior to 2015 became due for renewal and updating, as well as Environmental Impact Assessments for new mining areas and new permit applications had to be executed with the limited staff complement. Additionally, technical subcommittees with other government partners were reinitiated for air and water quality. At the strategic level, input has been ongoing for the global initiatives for mineral resource governance in the context of sustainable development and the forest approaches to Reduce Emissions from Deforestation and forest Degradation (REDD+) in developing countries.

In terms of progress in the closure at the bauxite residue disposal pond at Mt Rosser, the total progress of the closure works is estimated at 85% - however, works to lower the dam was significantly impacted by the ongoing pandemic. Once the site has met the government requirements, another five years of continuous monitoring will be done.



Research

The Division continued to develop the research and development programme in the areas of gallium recovery from the Bayer Process, converting sodium oxalate a hazardous waste into a useful byproduct, and background air quality in the vicinity of alumina and bauxite operations.

Gallium is a metal which occurs in trace amount in bauxite ores and dissolves during the processing of bauxite, it sharing some properties with aluminium. Most gallium globally is recovered as a by-product of the alumina production process. Gallium is used in computers, photovoltaic cells, transistors, aerospace, etc. Other applications include the manufacturing of LEDs that form a part of control systems and optical communication systems, making microwave circuits, satellite TVs, mobile phones and consequently it is classified as a critical element for the future by Europe and USA.

The JBI has done the literature search and is procuring material to move into the laboratory phase. The intent is to append gallium recovery to existing plants processing bauxite to alumina in Jamaica.

Sodium oxalate on the other hand is formed from the reactions between organic matter entering the plant primarily with bauxite and the caustic soda. This waste is removed from the process and stored separately from red mud. Sodium oxalate has applications in pharmaceuticals and is used extensively in China in the processing of rare earth elements. This could be a raw material for the recovery of rare earth elements from red mud in Jamaica.

ANALYTICAL SERVICES

Research

The Analytical Services Division continued its research activities around the development of an economically viable process for the recovery of Rare

Earth Elements (REE) from Jamaican red mud. As part of this project, samples of Jamaican red mud collected from different disposal sites were sent to an ISO 17025 accredited laboratory in the United States for characterization for REE and other elements of interest. Other activities under the REE research project included preliminary experiments on the effects of high temperatures on Jamaican red mud and the design of a high temperature brick furnace for heating red mud to neutralize it prior to REE extraction.

The division also conducted research on the stabilization of Bayer liquor used as a reference material at Bayer process laboratories. This research was used to design a system where microfiltration and aging is used to reduce the fine particle content of Bayer liquor and thereby reduce the likelihood of precipitation and breakdown.

With a view to advance REE research in the division and increase revenue through diversification of the analytical capabilities of the laboratory, an inductively coupled plasma-optical emission spectrometer (ICP-OES) was acquired and commissioned for quantification of REE in red mud and other elements in various matrices such as water and soil.

Laboratory Testing

The Division provided analytical laboratory services on 1155 samples. These samples consisted of 894 samples submitted by commercial clients and 261 samples analysed per statutory obligation.

X-ray Fluorescence (XRF) analyses accounted for a large portion of all commercial work done for the period. The commercial samples also included bauxite samples for bomb digestion, water samples for pH, sodium and Total Dissolved Solids (TDS) analysis, and heavy metal analysis on water samples via ICP-OES. The statutory analyses include environmental water samples analysed for pH and sodium, and bauxite samples from Noranda



Bauxite shipments analysed for moisture content.
Details of the laboratory activities are outlined below.

Statutory

Noranda Bauxite

Moisture content analysis on 58 bauxite samples drawn from shipments from Jamaica

Environment Monitoring

pH and sodium on 175 environmental water samples

Processability testing

Pre-desilication, A/C ratio, settling, clarity and g/l solids were analysed on a bauxite sample.

Winalco round-robin

Bomb digestion (TAA and AA), total silica by XRF and Loss on Ignition (LOI) was performed on a bauxite sample.

In-house

Sample preparation for REE analysis on 7 red mud samples.

XRF analysis on 12 bauxite samples.

XRD analysis on 6 bauxite samples.

pH, Na, and Total Dissolved Solids (TDS) analysis on 1 water sample.

Commercial

Rio Tinto (water samples from Mount Rosser)

pH, Na, and TDS on 144 water samples.

pH and Na on 51 water samples.

pH and Na on 17 bi-annual water samples.

Jamalco

XRF on 115 bauxite samples and 8 alumina samples.

Loss on Ignition (LOI) analysis on 58 bauxite samples.

Bomb Digestion AA on 50 samples

Bomb Digestion TAA on 50 samples

Reactive silica analysis on 50 bauxite samples.

Liquor filtration and A/C ratio on 1 liquor sample.

Noranda Bauxite

XRF on 216 bauxite samples

Bomb Digestion on 123 bauxite samples

Alpart

Bomb digestion, reactive silica, soluble phosphate, processability, XRF, settling, ACS, clarity, compaction and g/l solids for 2 bauxite samples.

Technological Solutions

Mercury and lead analysis by ICP-OES on 9 water samples.

PICTORIAL HIGHLIGHTS

PLANT NURSERY



Vegetable/Herb Seedlings



Fruit Trees

CORPORATE GOVERNANCE REPORT

Jamaica Bauxite Institute continues to strive for compliance in accordance with the Corporate Governance Framework for Public Bodies, in keeping with the general thrust of the public sector. This report outlines initiatives and activities undertaken by the entity in furtherance of its obligations under the Framework.

The initiatives undertaken and/or implemented were:

1. Continued reliance on the internal legislative compliance and Corporate Governance schedule that was created to assist with being compliant with reporting timelines.
2. Corporate Secretary continued to strive to conduct two internal sensitization sessions annually for the Board of Directors.
3. Corporate Secretary participated in Corporate Governance Sensitization Sessions.
4. JBI's Board Charter was approved by the Board on the 30th of July 2021.
5. Board Retreat held on the 23rd and 24th of July 2021 was organized to discuss strategic planning with the Board of Directors, Management of JBI and invited guests who play a crucial role in the bauxite industry.

The following components of the Corporate Governance Framework have been implemented:

- Appointment of Company Secretary
- JBI Framework Document
- Procurement Committee
- Evaluation and Tender Committee
- Audit Committee
- Annual Report
- Audited Financial Statements
- Corporate Plan
- Quarterly Report
- Annual Returns
- Annual Asset Declaration
- Quarterly/Annual Summary of awards contract
- Record of officers with assigned vehicles

ESTABLISHED COMMITTEES

Audit Committee

Membership

The first meeting of the Committee during the reporting period was held on June 24, 2021, at this point, the Audit Committee comprising the following members:



- Ms. Juliet Rose (Chairman)
- Mr. Yaneke Watson
- Mr. Denis Miller

The Audit Committee comprised of the following members beginning March 2022 to the end of the reporting period:

- Ms. Juliet Rose (Chairperson)
- Mr. Yaneke Watson
- Mr. Denis Miller
- Mr. Shayne Kerr

The Internal Auditor, where applicable, is required to be in attendance at the meetings. The General Manager and Board Chairman attends on the invitation of the Committee Chairperson to specific meetings.

Meetings

The Committee met four (4) times during the reporting period. Meetings were held on:

- July 16, 2021
- September 29, 2021
- December 14, 2021
- March 16, 2022

Activities

The Committee relied primarily on the work of the Internal Auditor to the extent that an individual was employed to the post. For the relevant period, the Institute had a permanently employed Internal Auditor at the beginning of the reporting period, up to April 16, 2021. An Internal Auditor was temporarily employed to the Institute in the last quarter of the year 2021 to specifically provide assistance in responding to the issues identified in the Final Audit Report of the Ministry of Transport and Mining for the period April 2017 to September 2018. The following activities were undertaken:

- Audited Financial Statement
The Audited Financial Statement for the preceding financial year was presented in depth and accepted by the Audit and Risk Management Committee. Two major statements were presented, namely the Statement of Comprehensive Income and the Statement of Financial Position.
- Vacant Posts
The Committee acknowledged that there were a number of posts that needed to be filled in order to allow the Institute to operate efficiently. The Committee urged the HR Department to fill these posts, which included the Internal Auditor.
- Departmental Risks
During the periods where there was no Internal Auditor in place, the Committee sought information from the heads of each department on whether there were any risks being faced by their respective departments that they would wish to bring to the attention of the Committee. Throughout the reporting period, two departments identified risk, these departments were the Process Monitoring and Services Division and the Bauxite Lands Division. The risk identified by the former Division was with respect to a vacancy in the post of Mechanical Technician. The risk identified by the Bauxite Lands Division was with respect to the considerably high estimates received from the Municipal Corporation for project estimates.



The Committee sought to resolve these issues throughout the reporting period.

- Succession Planning for Retiring Members of Staff
The Committee discussed the retirement of the Directors of the Process Monitoring and Services Division, as well as the Bauxite Reserves Division. The Committee also sought information as to the succession planning activities taking place at the Institute.
- MTM Audit
There continued to be heavy reliance on the Final Audit Report for the period April 2017 to September 2018 from the Ministry of Transport and Mining. The report stated breaches of JBI's operations and highlighted financial issues. The report also highlighted where the entity went wrong with respect to each breach and also included management's response to all breaches. Corrective measures were taken by the Committee with the involvement of the Internal Auditor, to the extent that one was employed to the Institute.
- JBI Policies
The Committee discussed, in conjunction with the HR Department, the implementation of new policies to mitigate risks within the Institute.
- Monitoring of Projects
The Committee monitored a number of projects that were undertaken by the Institute, two of which were the Castor Bean Project and the Land Titling Initiative. These projects were monitored closely given the expenditure of funds involved, on the part of the Institute.
- External Auditor's Report
An External Auditor's Report was secured for the period which identified a number of issues, namely, accrued unused vacation leaves and the need for a fixed asset register. Throughout the reporting period, the Committee sought to address these concerns raised and actively requested updates on these matters.

Finance Committee

Membership

At the beginning of the reporting period to the third quarter, the Finance Committee comprised the following members:

Rev. Casbert Bryan (Chairman)

- Mr. Richard Stephens
- Mr. Gordon Hutchinson
- Mr. Denis Miller

The Finance Committee comprised of the following members throughout the last quarter of 2021 to the end of the reporting period:

- Rev. Casbert Bryan (Chairman)
- Mr. Denis Miller
- Mr. Gordon Hutchinson



The Committee is also supported by the Accountant, the Director of Administration and Finance and the Director of Bauxite Lands of JBI. The General Manager attends Finance Committee meetings.

Meetings

The Committee met ten (10) times during the reporting period. Meetings were held on:

- April 21, 2021
- May 21, 2021
- June 15, 2021
- July 20, 2021
- September 24, 2021
- October 27, 2021
- November 23, 2021
- January 26, 2022
- February 22, 2022
- March 22, 2022

Activities:

- Reviewed monthly Financial Statements to ensure proper accountability of JBI's funds and also to ensure that a high level of accounting standard is maintained.
- Reviewed monthly Income and Expenditure Statements for the Bauxite Community Development Programme (BCDP).
- Reviewed on a monthly basis, negative and positive variances with respect to the Institute's expenditure.
- Discussed and made the necessary adjustments to the Budgetary Forecast for the 2022/2023 Financial Year.
- Analyzed and discussed the Audited Financial Statements for financial year 2020/2021.
- Monitored closely the approval, construction, maintenance and expenditure of the JBI Greenhouse as well as closely monitored the expenditure with respect to the Castor Bean Project..
- Discussed and analyzed the expenditure with respect to the procurement of assets for the Institute, including but not limited to, a truck for BCDP, generator and laboratory equipment. Additionally the Committee approved and discussed a number of activities where expenditure is concerned, including the soundproofing of the conference room, and expenditure for the Institute's 45th Anniversary celebrations.
- Approved the acquisition of a company credit card.
- Discussed with a view to improving and approving the Staff Loan Policy with a view to modernizing the terms of the policy.
- Instructed that research be carried out on the effects of switching to solar powered electricity in the JBI Laboratory. This was requested as a cost cutting measure where electricity was concerned.



- Actively sought a withholding tax refund from the Tax Administration of Jamaica (TAJ).
- Funding from the Capital Development Fund was received.

Human Resource and Corporate Governance Committee

Membership

For the reporting period, the Human Resource and Corporate Governance Committee comprised of the following members:

- Ms. Rayharna Wright (Chairperson)
- Mrs. Sharon Hay Webster
- Rev. Casbert Bryan
- Mr. Vaughn McDonald
- Mrs. Kayon Whyne

The Committee is supported by the Legal Counsel, to the extent that there is one, Human Resource Manager and Human Resource Consultant. The General Manager attends these meetings.

Meetings

The Committee met nine (9) times during the reporting period. Meetings were held on:

- April 20, 2021
- May 19, 2021
- June 16, 2021
- July 21, 2021
- September 22, 2021
- October 20, 2021
- November 17, 2021
- February 23, 2022
- March 28, 2022

Activities:

- The Committee continued the Policy Review Process. Existing policies were revisited, and the Committee explored implementing policies that were non-existent within the Institute but were relevant to JBI's operations.
- The Committee received a report from the HR Manager on a monthly basis, where the Committee was advised on HR related matters within the Institute.
- Discussed and actioned the filling of vacant posts. Approval was received from the Ministry of Finance during the reporting period.
- Discussed activities with a view to raising JBI's public profile.
- The Institute's flow chart was reviewed and amended.
- Reviewed the governance structure for weaknesses that would threaten its compliance with established and approved GOJ policies and directives.
- Reviewed the Staff Loan Policy.



- Began discussions with respect to the organization of the Board Strategic Planning Retreat. The Committee discussed the agenda for the Retreat where it was recommended that day one of the Retreat would focus on the Institute's corporate plan, while day two would focus on the operational plan and budget for the 2021/2022 year.
- The HR Consultant was reengaged.
- Activities geared towards improving staff morale were undertaken, e.g. there was an attempt to revive the dormant Staff Association.
- A Performance Appraisal document was drafted and adopted by the Committee.
- The Committee discussed the retirement of the Directors of the Process Monitoring and Services Division, as well as the Bauxite Reserves Division. The Committee also sought information as to the succession planning activities taking place at the Institute.

Bauxite Community Development Programme Advisory Board

Membership

For the reporting period, the BCDP Advisory Board comprised of the following members:

- Mr. Angus Gordon (Chairman)
- Mrs. Sharon Hay Webster
- Ms. Juliet Rose
- Mr. Denis Miller
- Mrs. Shasha Lee
- Ms. Rayharna Wright

The Advisory Board is supported by the Director of Bauxite Lands, BCDP Project Coordinator, Project Officer, and Agricultural Research Specialist of JBI, who is expected to join all meetings. The General Manager attends these meetings.

Meetings

The Advisory Board met ten (10) times during the reporting period. Meetings were held on:

- April 27, 2021
- May 20, 2021
- June 22, 2021
- July 19, 2021
- September 23, 2021
- October 21, 2021
- January 25, 2022
- February 22, 2022
- March 29, 2022

Activities

- Perused the BCDP accounts (income and expenditure) on a monthly basis. The Nursery sales for each month were reviewed on a monthly basis.



- Continued the development of agreements between the JBI and the Cluster Managers (Operators) and with individual farmers associated with the JBI/JSIF Water Harvesting and Greenhouse Cluster Project.
- The Advisory Board oversaw and monitored the implementation of the Rural Economic Development Initiative 2 programme.
- A great deal of emphasis was placed on the Life After Bauxite Initiative where the Advisory Board discussed activities and strategies to promote continued support of communities in the bauxite areas, even after the mining of bauxite has ceased.
- Reviewed the BCDP Organizational Chart.
- Received updates, discussed the progress of, and addressed issues relating to BCDP projects. Some of these projects included the Castor Bean Project through partnership with the Jamaica Castor Industry Association, and the Adopt-a-Clinic Project where assistance would be provided to various hospitals and clinics. Another project that was monitored by the Advisory Board was the Land Titling Project, where JBI, through BCDP, sought to assist members of the bauxite communities acquire titles for the lands they legally own..
- Funding from the Capital Development Fund was received.
- Discussed, approved and monitored the disbursement of funds for Members of Parliament projects.
- A truck was purchased to transport BCDP products.

Director's Information

Table 2 and 3 below outlines the names, expertise, length of service, meeting attendance records and list of other directorships, for the JBI Board members.

TABLE 2		
NAME	EXPERTISE	LENGTH OF SERVICE
Mr. Alston Douglas-Chairman	Industrial Engineer	Chairman July 2018-Present
Mrs. Sharon Hay Webster	Social Engineer	May 2016- Present
Ms. Julliet Rose	Attorney-at-Law	February 2017-April 2022
Rev. Casbert Bryan	Theology	July 2018-Present
Ms. Rayharna Wright	TVET and Youth Development	July 2019- Present
Mr. Angus Gordon	Finance and IT	July 2018-Present
Mr. Yaneke Watson	Policy, Planning and Evaluation	December 2020 - April 2022
Mrs. Shasha Lee	Entrepreneurship	December 2020 - April 2022
Dr. Ava Robertson	Medical Doctor	December 2020 - June 2021
Mrs. Kayon Whyne	Educator	July 2021-Present



TABLE 3		
NAME	MEETING ATTENDANCE RECORD 2021-2022 TOTAL MEETINGS HELD - 11	OTHER DIRECTORSHIPS
Mr. Alston Douglas-Chairman	Meetings attended- 11	Port Authority-Director NROCC- Director ODPEM - Director
Mrs. Sharon Hay Webster	Meetings attended- 11	E Gov- Director JIS Gender Advisory Council
Ms. Juliet Rose	Meetings attended- 11	None
Rev. Casbert Bryan	Meetings attended- 10	<ul style="list-style-type: none">• RADA (Trelawney Advisory Board)- Vice Chairman• Warsup Primary and Infant school- Chairman• Wait A Bit Primary School- Vice Chairman
Ms. Rayharna Wright	Meetings attended- 8	<ul style="list-style-type: none">• Petrojam Limited• Jamaica Centre for Tourism Innovation - Director
Mr. Angus Gordon	Meetings attended- 11	SERHA- Director
Dr. Ava Robertson	Meetings attended - 1	None
Mrs. Shasha Lee	Meetings attended - 9	None
Mr. Yaneke Watson	Meetings attended - 9	<ul style="list-style-type: none">• Rural Agricultural Development Authority• Town and Country Planning Authority• Jamaica Energy Council
Mrs. Kayon Whyne	Meetings attended - 9	None

**CORPORATE SOCIAL RESPONSIBILITY
ACTIVITIES**

Although the Ministry of Finance and Planning has not finalized a Corporate Social Responsibility Framework, the Jamaica Bauxite Institute discussed plans to embark upon the following activities for the period 2021/2022:

1. A programme to assist communities to continue to strive after bauxite mining has ceased;
2. The relaunching of the Rio Tinto/Alcan Legacy Fund Scholarship;
3. Assisting with the provision of titles to landowners in the bauxite communities.
4. Providing support to hospitals in need of repairs in select bauxite communities.
5. Tree planting initiative for primary and secondary in collaboration with the Forestry Department.

6. JBI continued to make arrangements to implement the initiative to reach out to at-risk youths within the bauxite communities in an attempt to offer guidance.

JBI Cares – This focused on preparing and distributing care packages to over seven hundred and fifty (750) individuals within the bauxite councils.

BOARD PERFORMANCE EVALUATION

The Jamaica Bauxite Institute did not complete a Board Performance Evaluation in the reporting year 2021/2022, neither for the Board nor the Committees. The Institute intends on implementing same for the 2022/2023 reporting period.

ALUMINIUM INDUSTRY REVIEW

THE INTERNATIONAL ECONOMY

The global economy rebounded strongly in 2021 expanding by 6.1%, after marked contraction by 3.1% in 2020 when the COVID-19 health crisis led to lockdowns and disrupted economic activity worldwide. The recovery was driven by vaccination programme rollouts gaining momentum, which facilitated the reopening of many nations and the boosting of commercial activities.

Advanced economies, aided by fiscal and monetary stimulus, grew by 5.2% in 2021, up from the 4.5% downturn in 2020. The United States saw economic activity boosted by 5.7%, the highest growth rate since 1984 and a substantial change from 2020, when it shrank by a record 3.4%. This was due to growth in all major parts of the economy, led by personal consumption expenditures. Gross Domestic Product (GDP) in the Euro Area gained by 5.3%, up from plunging 6.4% in 2020. Member states expanded by varying degrees with Germany, France and Spain increasing by 2.8%, 7.0% and 5.1% respectively. The UK grew by 7.4% in 2021, after the economy shrank by a record 9.3% in 2020 as a result of the coronavirus. Meanwhile the Japanese economy was up by 1.6%, rebounding from the 4.5% contraction in 2020.

Emerging market economies also saw improved growth, with GDP among emergent nations advancing by 6.8% in 2021 in comparison to a downturn of 2.0% in 2020. Goods exporting countries have overall fared well. Although exporters of services have struggled due to the decline in tourism. Emerging economies have Many nations that are part of emerging markets have been able to increase their exports because of the surge in global demand for commodities, which has been accompanied by a boom in commodity prices. Over the course of the past two years, the amount of goods exported from virtually every significant emerging market economy has surged by double-

digit percentages. This remains true even after accounting for currency devaluations. Oil exporting nations, like Russia, have benefited from higher energy prices, which has led to an improvement in their terms of trade. The country's economy expanded by 4.7% in 2021 after contracting by 2.7% the previous year. Brazil registered 4.6% growth in GDP, while China, through supportive fiscal and monetary stance and resilient foreign trade, expanded by 8.1 percent. This was up from 2.2% growth in 2020 and bettered the government's target of above 6% growth for the year. Meanwhile, the Indian economy accelerated by 8.9% in 2021, after plummeting 6.6% in 2020. (See Table 4 for GDP rates from selected economies).

Economic Outlook for 2022

Prior to the war, the global economy was poised for robust, albeit divergent, COVID-19 recovery. However, China's economic performance, new COVID-19 versions, the trajectory of the Russia-Ukraine conflict and sanctions against Russia, and a faster-than-anticipated Fed tightening policy all posed threats to the growth forecast landscape. Consequently, the global economy is expected to lose momentum this year. Indeed, amid the weakened global growth prospects, the IMF in its April issue of the World Economic Outlook (WEO), projects an expansion of 3.6% in the global economy for 2022, a downward revision from the 4.4% growth expectation stated in its January 2022 outlook.

Advanced economies are projected to grow by 3.3% in 2022 and then by 2.4% in 2023. US quarter-on-quarter GDP, largely weighed down by net trade, contracted by 1.5% in Q1, 2022. Consumer spending was sluggish, underpinned by the continued decline in real income. The US economy is expected to rebound in successive quarters. However, inflation, in conjunction with rising interest rates as a direct result of monetary tightening, are



TABLE 4

OVERVIEW OF GDP FOR SELECTED ECONOMIES

Economy	2020 (y-o-y % change)	2021 (y-o-y % change)	2022 (Projection %)	2023 Pro- jection %)
World Output	-3.1	6.1	3.6	3.6
Advanced Economies	-4.5	5.2	3.3	2.4
United States	-3.4	5.7	3.7	2.3
Euro Area	-6.4	5.3	2.8	2.3
Japan	-4.5	1.6	2.4	2.3
United Kingdom (UK)	-9.3	7.4	3.7	1.2
Emerging & Developing Markets	-2.0	6.8	3.8	4.4
China	2.2	8.1	4.4	5.1
India	-6.6	8.9	8.2	6.9
Russia	-2.7	4.7	-8.5	-2.3
Brazil	-3.9	4.6	0.8	1.4

Source: IMF: World Economic Outlook Update, April 2022

among the most important problems now facing the economy and posing downside risks to growth. The US economy is therefore forecasted to grow by 3.7% in 2022 and moderate to 2.3% in 2023. The GDP situation is cautiously optimistic in the Euro

Area as final estimates saw a revision of quarter-on-quarter growth expanding by 0.6% in Q1 2022 from the previous growth estimate of 0.3 percent. Net commerce and inventories were the propellers of growth while household consumption and public spending fell. The economic prospects for the Euro Area are subdued as the Russian-Ukraine conflict is expected to put additional pressure on commodity prices, resulting in supply interruptions and creating greater uncertainty for the bloc. Further, as part of its efforts to rein in record inflation, the European Central Bank (ECB) is prepared to cease its eight-years of negative interest rates, which is likely to negatively impact consumer spending and

investment. The Euro Area is therefore seen expanding by 2.8% in 2022, and then slowing to 2.3% growth in 2023.

The UK is forecast to grow by 3.7% in 2022 and then see growth of 1.2% in 2023. Inflation and a tightening of monetary policy are expected to be impediments to growth this year. Further threats include a protracted conflict between Russia and the Ukraine and the introduction of new COVID-19 variants. Additionally, government declarations of intentions to override the Northern Ireland Protocol is heightening trade tensions with the EU. Potential upsides to risks however may come in the form of increased fiscal support as the government announced a GBP 15 billion cost-of-living package. Meanwhile, it is anticipated the Japanese economy will increase by 2.4% in the year and then see growth of 2.3% in 2023.



For emerging and developing economies, the IMF projects growth of 5.4% in 2022 and 5.6% in 2023. It is anticipated that the Russian economy will enter a recession this year as a result of the consequences from the conflict with Ukraine and the attendant international sanctions. Rising inflation and a weakening labor market are expected to have a negative impact on consumer expenditure, while an outflow of foreign money will have a negative impact on investment activity. Increasing economic seclusion will weigh on growth prospects over the long term, which could see the Russian economy plummeting by 8.5% in 2022 and then contracting by 2.3% the following year. Meanwhile, Brazil is anticipated to register growth of 0.8% in 2022 and then to post growth of 1.4% in 2023. The Indian economy is expected to advance by 8.2% in 2022 and then by 6.9% in 2023. The Chinese economy is expected to decelerate sharply this year due to the government's stringent pandemic measures, the steep property downturn, and cooling export growth. However, more robust infrastructure incentives should shore up growth. Downside risks include continued COVID-19 restrictions and a worsening of the real estate crisis, while upside risks include the prospects of a U.S. tariff relaxation. The anticipated growth forecasts for China are 4.4% in 2022 and 5.1% in 2023.

GLOBAL ALUMINIUM MARKET

Aluminium demand recovered strongly in 2021 following a demand decline of 11.4% between 2019 and 2020 during the COVID-19 pandemic. In 2021, **world primary aluminium consumption** was 68.96 million tonnes, outstripping **world production** which totalled 67.40 million tonnes to create a market deficit of 1.56 million tonnes. Market analysts posit that 2021 saw a larger deficit than originally anticipated due to power outages in China, which hampered the country's production capacity, and caused delays in project ramp-ups and restarts. Nonetheless, the transportation, construction, packaging and the electrical sectors were the key sectors driving demand, together accounting for 75% of the required metal total.

World aluminium production climbed by 4.1% vis-à-vis 2020. The ramp up in production was propelled

by higher output from China — the world's largest primary aluminium producing country — which rose by 5.0% year-on-year to 38.58 million tonnes in 2021. This accounted for 57.2% of world production, in contrast to 56.7% in 2020. The uptick in Chinese production resulted from producers raising output in response to higher aluminium prices and government stimulus measures on infrastructure and construction. Meanwhile, aluminium production in the **World Excluding China** also increased, rising 2.9% year-on-year to total 28.81 million tonnes in 2021 underpinned by increased output from Asia and Central America.

Meanwhile world primary aluminium consumption grew by 9.6% year-on-year. China, the world's largest primary aluminium consuming country, saw a 6.1% rise in consumption year-on-year as a result of a rise in the use of aluminium in infrastructure and construction projects initiated with the Chinese government's stimulus package that contributed to a large jump in Chinese aluminium consumption in 2021. Consumption in the world excluding China was up 14.8% to 28.82 million tonnes in 2021 relative to the previous year. Consumption of the metal was especially strong in the United States (US) (up 7.3% year-on-year to 4.6 million tonnes), Germany (up 20% year-on-year to 2.1 million tonnes), and Japan (up 21% year-on-year to 1.7 million tonnes). The growth in consumption partially reflects increased aluminium usage in new, energy efficient car models.

2021 was a very strong year for aluminium prices. The London Metal Exchange (LME) spot price for aluminium rose by 40% year-on-year to US\$2,562/mt (in real terms) in 2021. The LME (3-Mth) price started the year at \$2005/mt and increased steadily throughout the first half of the year due to resurgent industrial production in China and a more upbeat outlook on the global demand climate fuelled optimism from the lows of the COVID-19 pandemic in 2020. Prices reached their peak for the 2021 period in October at around \$2,969/mt, before closing the year on \$2,693/mt with an average realized price of \$2,484/mt, for which the fourth quarter recorded the highest average at around \$2,770/mt. The LME aluminium 3-month price, to which the bauxite levy is indexed, averaged



US\$2,488 in 2021, up 43.8% from the US\$1,730 per tonne in 2020.

Demand for primary aluminium in 2022 is expected to be mainly driven by China, as the Chinese government continues to inject fiscal and monetary stimulus into the economy through the first half of 2022. An economic recovery in the US, United Kingdom, Eurozone, India, South Korea and Japan is likely to add more demand for primary aluminium. As a result, global primary aluminium consumption is forecast to increase by 2.1% in 2022, to 70 million tonnes. A significant driver of aluminium demand is expected to come from cars, particularly energy-efficient vehicles and electric vehicles (EV), which contain a higher proportion of aluminium components. Automakers across the world are working to replace internal combustion engines with electric battery engines, and are seeking to reduce vehicles' weight by increasing the use of aluminium, which is 10 to 40 % lighter than steel.

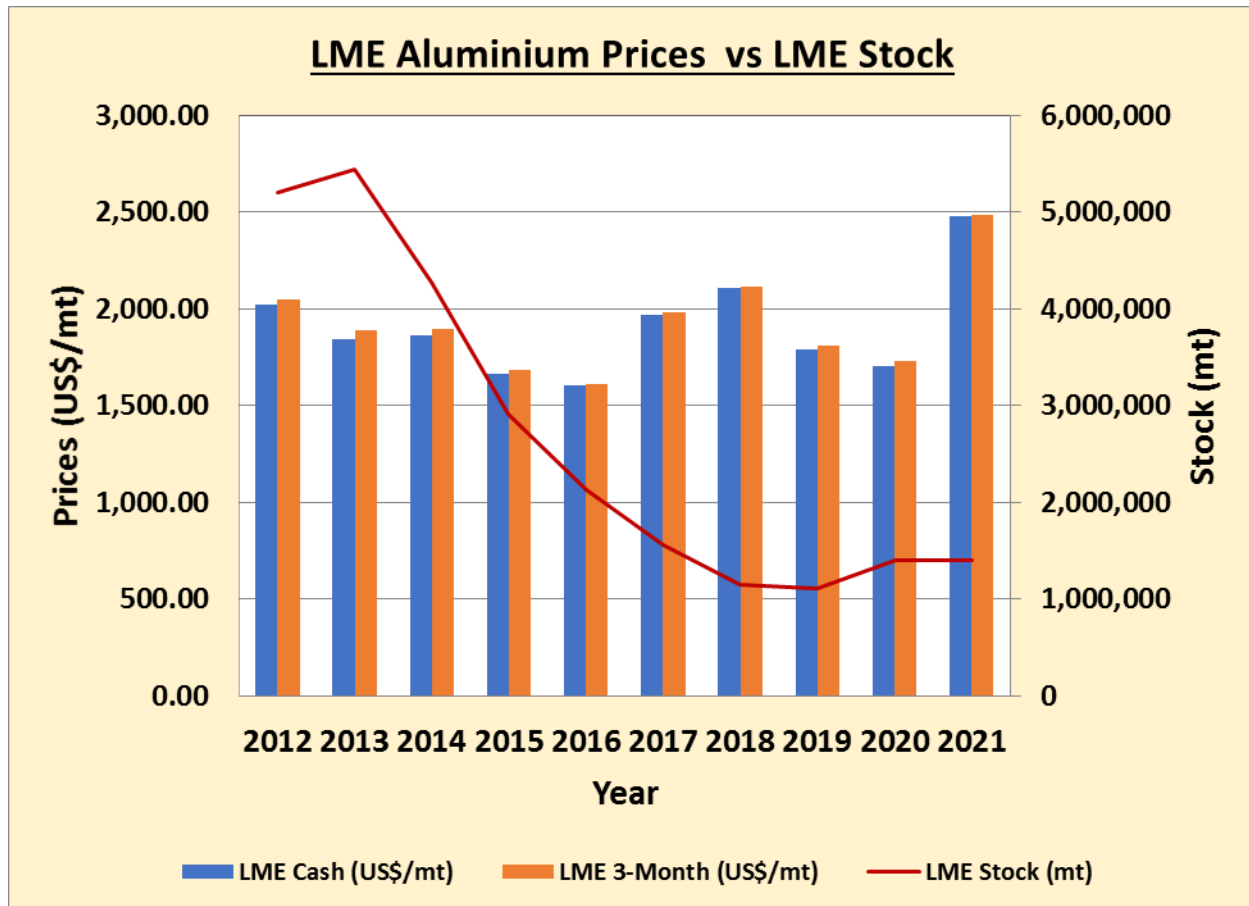
World primary aluminium output is forecast to grow by 1.8% year-on-year to 68 million tonnes in 2022. The gain is expected to be driven by higher primary aluminium prices. China's primary aluminium output is forecast to reach 39 million tonnes by 2022, up 1.0% year-on-year. Outside of China, primary aluminium production in India is forecast to increase by 2.0% year-on-year to reach 4.0 million tonnes in 2022. In Australia, Alcoa Corporation is scheduled to restart its 35,000 tonnes a year idled capacity at its Portland Aluminium smelter in Victoria in the September quarter 2022. The reactivated capacity is expected to bring Australian primary aluminium output to 1.6 million tonnes a year.

For Q1 2022, the LME 3-month aluminium price averaged \$3,255/mt. This despite rising to a 34-year high on 7 March 2022, reaching US\$3,985 per tonne. This was driven by the concerns over Russia-Ukraine tensions, the COVID-19 outbreak in China, and energy shortages in Europe. Primary aluminium remains a highly exposed commodity to supply disruptions and international trade sanctions on Russia. High energy prices have forced aluminium output cutbacks in France, Spain and the

Netherlands. At the time of writing in June, the LME 3-month price had bounced back today from a three-week low to \$2,813/mt and is expected to average around this mark for the Q2 period. In 2022, the LME aluminium spot price is forecast to rise by 21% year-on-year to average US\$3,100 per tonne (in real terms). Rising input costs and rising primary aluminium consumption in China and in the global transport (aviation and car manufacturing) industry generally are expected to be significant drivers of increased aluminium prices (see *Figure 2 for aluminium price movements*).

THE GLOBAL MARKET FOR ALUMINA

In 2021, both the world alumina production and consumption levels experienced an increase with respect to the levels recorded previously in 2020. **Global alumina production** rose by 4.4% year-on-year to 139 million tonnes in 2021, versus 127 million tonnes recorded at the end of 2020. This increase was driven by higher output in China and Brazil. Production in China — the world's largest alumina producer — rose 5.9% year-on-year to 77 million tonnes in 2021, as Chinese refiners raised output to accommodate higher aluminium production. Looking at **world production excluding China**, output in India and Brazil rose by 7.5% and 5.5% to 7.0 and 11 million tonnes, respectively. In Brazil, Norsk Hydro's Alunorte refinery (annual capacity of 6.4 million tonnes) ramped up production in 2021, following the completion of maintenance work at its Paragominas bauxite mine in October 2020. Alumina production in Australia — the world's second largest alumina producer — fell by 2.3% in 2021, to 20.4 million tonnes, due to lower production at Rio Tinto's Yarwun refinery. Meanwhile, world alumina consumption increased by 1.4% year-on-year in 2021 to 131 million tonnes, driven by higher global aluminium production, which was up by 1.4% year-on-year in 2021. This equates to a world alumina surplus in 2021 of rough 8 million tonnes. China remained the world's largest alumina consuming country, accounting for 57% of global alumina consumption. In 2021, a 3.8% rise in Chinese primary aluminium production led to a 3.8% rise in alumina consumption, to 75 million tonnes.

Figure 2: LME Aluminium Prices vs LME Stock


Source: JBI, Economics Division

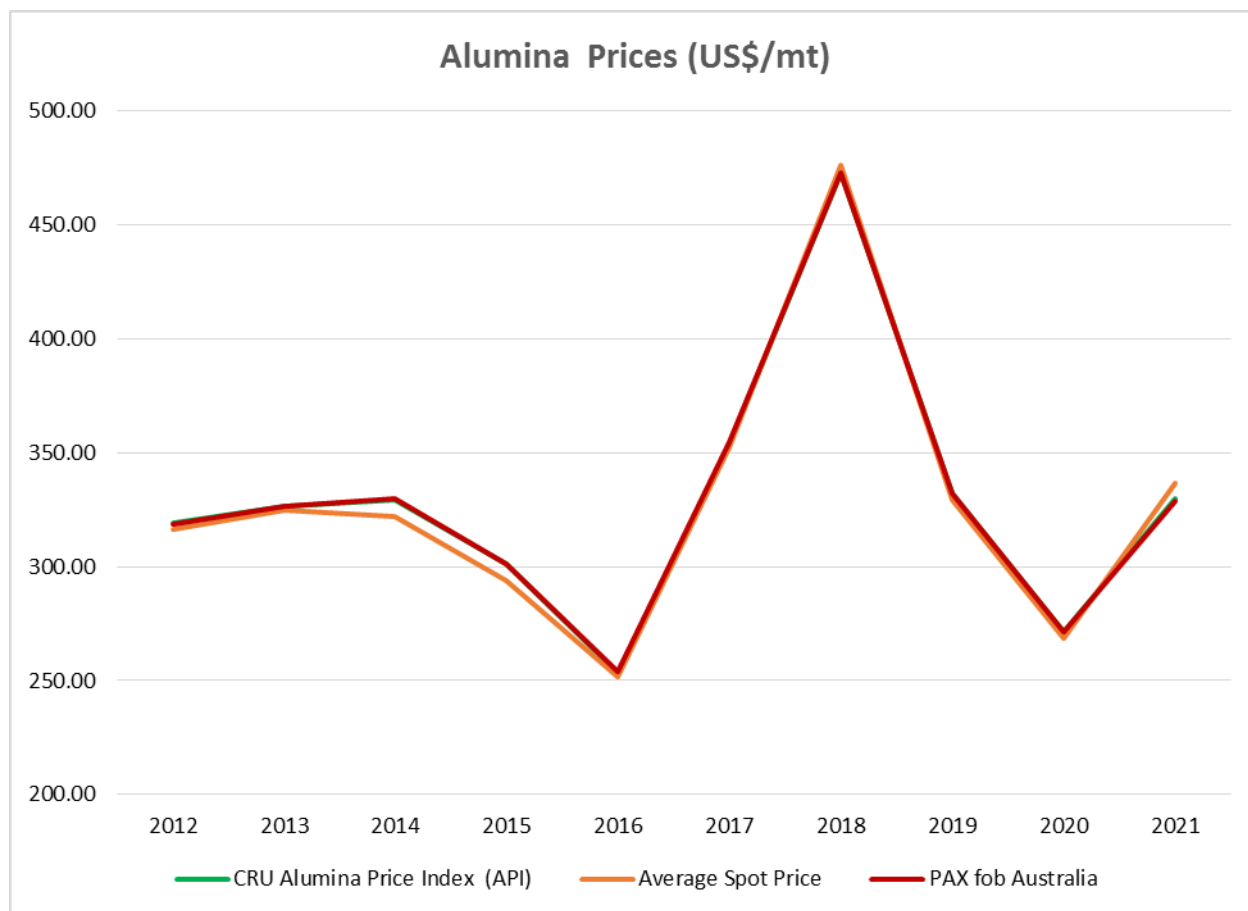
Outside of China, alumina consumption in India and Russia rose by 10% and 1.9% to reach 7.7 and 7.7 million tonnes in 2021, respectively.

Alumina prices broke the benchmark US\$300/mt barrier at the start of 2021 (see Figure 3 for alumina price trends). In line with the rise in primary aluminium price, the free on board (FOB) Australian alumina price grew by 17% year-on-year to US\$340 a tonne (in real terms) in 2021. The growth was driven by higher alumina demand, as world aluminium output rose by 4.1% in 2021. The CRU's Alumina Price Index (API) averaged US\$329.75 per tonne for the year 2021, up 21.5% from the US\$271.33 per tonne registered in 2020. The alumina price was equivalent to 13.3% when expressed as a share of the LME aluminium 3-

month price and compares with 15.7% in 2020. The aluminium price rally is deemed to potentially influence alumina prices by incentivizing output from alumina producers. The FOB Australian alumina price is forecast to increase by 15% year-on-year to average US\$390 a tonne (in real terms) in 2022, driven by increased primary aluminium production in China. Ukraine, Australia and Ireland are Russia's three largest suppliers of alumina, together accounting for 78% of Russia's total alumina imports. The international sanctions against Russia's invasion of Ukraine are likely to have a significant impact on Russia's alumina supply and primary aluminium production. Russia consumes 7.7 million tonnes of alumina a year, of which 39% are from domestic production and 61% from imported overseas.



Figure 3: Alumina Price Trends



Source: JBI, Economics Division

THE BAUXITE MARKET

Pertaining to the global bauxite market, world consumption increased by 4.0% y-o-y to 353 million tonnes in 2021, propelled by increased global alumina production (up 4.4% in 2021). China remained the world’s largest bauxite consuming country, accounting for 53% of global bauxite consumption. Meanwhile world bauxite production decreased by 1.0% in 2021 to 365 million tonnes. This was due to political instability in Guinea that inadvertently pushed up the cost of bauxite, the material used to produce alumina and aluminium. Production in Guinea — the world’s second largest bauxite producer — fell by 5.9% to 83 million tonnes in 2021. Elsewhere, output in Australia — the world’s largest bauxite producing country — decreased by 0.6% year-on-year to 103 million tonnes in 2021.

World bauxite output is forecast to grow by 4.5% year-on-year to 381 million tonnes in 2022. The gains are expected to be driven by newly added capacity in Guinea, where output is rising rapidly. Guinea’s Compagnie des Bauxites de Guinée mine, which expanded from 13 to 18 million tonnes a year in 2019, is due to expand further to 28 million tonnes by 2022. Emirates Global Aluminium is also ramping up output at its 12 million tonnes a year bauxite mine in Guinea.

INVESTOR COMPANY PERFORMANCE

As illustrated in Table 5, UC Rusal registered US\$3,225 million in net income, which represented an increase from 2020 when net gain of US\$759 million was recorded. The company’s revenue for



TABLE 5						
INVESTOR COMPANIES REVENUES AND NET INCOME/LOSS (US\$m)						
	REVENUE			NET INCOME/LOSS		
	2020	2021	% Chg	2020	2021	% Chg
UC Rusal	8,566.0	11,994.0	40.0	759.0	3,225.0	324.9
*Noble Group Holdings Limited	2,042.0	2,623.0	28.5	(376.0)	(72.2)	-80.8

* Financial results for Noble Group Holdings Limited are for the nine months ended 30 September 2020 and 2021.

Source: JBI, Economics Division

the year ended 31 December 2021 rose by 40.0% to US\$11,994 million in comparison with US\$8,566 million for 2020. Rusal's aluminium production during 2021 accounted for approximately 5.6% of world output, while its alumina production represented roughly 6.3% of global output. The company's worldwide aluminium operations consist of eleven aluminium smelters, nine alumina refineries and seven bauxite mines.

Meanwhile, during the nine-month period ending September 30, 2021, Noble Group Holdings Limited reported revenues to the tune of approximately US\$2,623 million. Notwithstanding, the company registered a loss in net income of US\$72.2 million over the same timeframe. The remaining investors in the local industry are Concord Resources and Jiuquan Iron & Steel Company Limited (JISCO). JISCO are the owners of the Alpart refinery, whose operations currently remain suspended. Concord, which has been a minority partner in New Day Aluminium Holdings since 2018, has purchased the controlling shareholding in the DADA Holdings Group from the other stockholders in July 2021. Concord's assets include the Noranda Alumina refinery and NICHE Chemical non-metallurgical alumina business in Gramercy, Louisiana, as well as

its Noranda Bauxite mine operations in St. Ann, Jamaica, owned jointly with the Jamaican government.

ENERGY PRICES

Energy prices rebounded in 2021 from their pandemic induced slump due to continual production restraints from OPEC and its allies, as well as strong demand from expanding economic activity, which was boosted as vaccine roll outs progressed. The Organization of the Petroleum Exporting Countries (OPEC) Reference Basket averaged US\$69.7/bbl in 2021, representing a 68.7% increase from 2020. Meanwhile, Brent and WTI-Cushing crude benchmarks rose year over year by 69.3% and 73.3% to average US\$70.7/bbl and US\$68.0/bbl, respectively.

Energy prices have been largely volatile in 2022 driven primarily by the sustained armed conflict between Russia and the Ukraine after the former invaded the latter in late February of this year. The geopolitical tension is fueling bullish market sentiment due to concerns about oil supply disruptions. The Energy Information Administration (EIA) in its June 2022 Short Term Energy Outlook expects Brent prices to average US\$108/bbl in Q2



and US\$102/bbl in the second half of 2022. In 2023, an average price of US\$93/bbl is anticipated. It is postulated that the outlook for June is subject to high degrees of uncertainty due to several events, including Russia's full-scale invasion of Ukraine. However, during the time frame of the forecast, the energy markets could be affected by a variety of possible macroeconomic events. These include factors driving energy supply uncertainty such as the impact of sanctions on Russia's oil output, the production decisions of OPEC+, and the rate of increase in drilling by U.S. oil and natural gas companies.

THE LOCAL BAUXITE/ALUMINA SECTOR

The downturn in the local sector observed in the previous year persisted in 2021. This was in part attributed to the continued suspension of operations at the Alpart refinery. However, the fire that extensively damaged the Jamalco refinery's powerhouse in the latter half of August 2021 and that led to the cessation of operations at the plant for the remainder of the year, exacerbated the situation. For 2021, the local industry refined roughly 1.16 million tonnes of alumina, which equates to approximately 31% capacity utilisation rate and a decline in output of 28.5% relative to 2020. In addition, crude bauxite production stood at just over 2.61 million dry metric tonnes (DMT), down 12.9% from the previous year. Total Bauxite Production (the bauxite equivalent of the alumina refined plus the crude bauxite produced) was roughly 5.96 million DMT, down 21.0% from the approximate 7.54 million DMT generated last year. Meanwhile, crude bauxite exports decreased by 14.9% to slightly more than 2.60 million tonnes while alumina shipments fell 26.6% to about 1.21 million tonnes in comparison to 2020.

Despite higher alumina prices, Jamaica's gross export value in 2021 decreased by approximately 10.8% to about US\$470.73 million from near

US\$527.60 million the previous year. This largely resulted from decreased alumina exports and lower bauxite prices. Earnings retained in the country by way of net foreign exchange inflows moderated from roughly US\$278 million in 2020 to around US\$266 million in 2021, which equated to a decrease of 4.3 percent. The decline reflected reductions in local cost inflows and royalties by 3.7% and 40.0%, respectively. The Retention Rate or the value retained in Jamaica moved from 52.8% in 2020 to 56.6% in 2021 (See Table 6 for details).

PROSPECTS FOR THE SECTOR

The near to medium term prospects for the sector remain subdued as it faces new challenges from developments in the global macro environment as well as locally. These include rising input commodity prices, logistical challenges and restricted markets due to the ongoing Russian invasion of Ukraine. In addition, the situation has given rise to a high level of uncertainty and fear regarding the short and long term impacts that the sanctions placed on Russia, Russian companies and Oligarchs, may have on UC Rusal operations, including Windalco. In regards to the Jamalco refinery, it is anticipated that a return to pre-fire production levels will be achieved by September of this year.

The escalating prices of input raw materials energy and caustic soda does not augur well for domestic bauxite and alumina production costs. Nonetheless, higher bauxite, alumina and aluminium prices may offset some of the negatives of these production expenses. Against this background, as well as the situation with Jamalco and uncertainty surrounding the reopening of the Alpart refinery, alumina production is envisaged to decline to 1.019 million tonnes (down 14.0%), crude bauxite to rise to 3.178 million DMT (up 21.5%) and total bauxite production to increase slightly to about 6.09 million DMT (up 1.2%).

TABLE 6			
JAMAICA PRODUCTION, EXPORT & EARNINGS			
BAUXITE/ALUMINA	2021	2020	% CHANGE
Total Bauxite Produced ('000 mt)	5,962.3	7,546.1	-21.0
Total Bauxite disposed of ('000 mt)	6,100.2	7,701.7	-20.8
Crude Bauxite Production ('000 mt)	2,614.7	3,001.7	-12.9
Crude Bauxite Export ('000 mt)	2,603.9	3,061.5	-14.9
Alumina Production ('000 mt)	1,158.5	1,620.9	-28.5
Alumina Export ('000 mt)	1,214.1	1,654.1	-26.6
Capital Exp. (\$'000)	23,590.9	26,168.2	-9.8
Bx Levy (US\$'000)	0.0	0.0	-
**Bauxite Levy Legacy Payment	0.0	0.0	-
Minimal Profit Sharing Payment @US\$1.50/mt (US\$'000)	0.0	0.0	0.0
Balance of Profit Sharing Payment @17 $\frac{1}{3}$ % (US\$'000)	0.0	0.0	-
Total Profit Sharing Payment (US\$'000)	0.0	0.0	0.0
Income Tax (US\$'000)	0.0	0.0	-
Local Costs Inflows (\$'000)	263,427.5	273,522.0	-3.7
Royalties (US\$'000)	2,897.9	4,829.8	-40.0
TOTAL Inflows (\$'000)	266,325.3	278,351.8	-4.3
Export Value (\$'000)	470,728.9	527,598.4	-10.8
Retention Rate (%)	56.6%	52.8%	

Source: JBI, Economics Division

SENIOR EXECUTIVE COMPENSATION

Names of Senior Executives	Position of Senior Executive	Salary	Gratuity or Performance Incentive	Travelling Allowance or Value of Assignment of Motor Vehicle	Pension or Other Retirement Benefits	Other Allowances	Non-Cash Benefits	Total
		(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
Stevie Barnett	GENERAL MANAGER	7,329,082.06	3,663,524.12	73,572.50		122,000.04		11,588,178.72
Yolanda Drakapoulos	SNR. DIRECTOR BAUXITE RESERVE	6,576,821.16		1,697,148.00	307,245.96	122,121.92	251,853.50	8,955,190.54
Joan Thomas-Levy	DIRECTOR, ADMIN & FINANCE	1,173,798.24		24,287.00		30,500.01		1,628,585.25
Richard Hanson	DIRECTOR, A. S.	4,065,349.82		1,697,148.00	410,600.33	122,170.67	311,793.48	6,607,062.30
Worrell Lyew You	DIRECTOR P. M. S.	4,809,709.65		1,697,148.00	485,780.67	122,000.04	336,542.88	7,451,181.24
Kemoy Lindsay	DIRECTOR B/LANDS	4,122,608.26		1,697,148.00	316,291.25	122,000.04	175,292.21	6,433,339.76
Notes	42,663,537.81							
	<ol style="list-style-type: none"> 1. The General Manager is eligible to receive 25% of his annual basic salary as gratuity in lieu of pension benefits 2. Other Allowances comprised of Meal subsidy given to all staff and retro subsistence 3. Non-cash Allowances include Group Life & Health Insurance coverage 4. The Snr. Director of Bauxite Reserve salary includes leave pay 							

DIRECTORS' COMPENSATION

Name of Director	Role of Director	Fees (\$)	Travelling Allowance or Value of Assignment of Motor Vehicle (\$)	Honoraria (\$)	All Other Compensations and Non-Cash Benefits (\$)	Total (\$)
Alston Douglas	AUDIT COMMITTEE MEMBER & BOARD OF DIRECTORS CHAIR	206,200.00	-	-	-	206,200.00
Angus Gordon	BCDP ADVISORY COMMITTEE CHAIR & AUDIT COMMITTEE & BOARD MEMBER	207,800.00	-	-	-	207,800.00
Sharon Hay-Webster	HR & CORPORATE GOVERNANCE, BCDP ADVISORY COMMITTEE & BOARD MEMBER	205,600.00	-	-	-	205,600.00
Gordon Hutchinson	FINANCE COMMITTEE & BOARD MEMBER	100,100.00	-	-	-	100,100.00
Denis Miller	BCDP ADVISORY, FINANCE, AUDIT COMMITTEE & BOARD MEMBER	200,500.00	-	-	-	200,500.00
Casbert Bryan	HR & CORPORATE GOVERNANCE COMMITTEE & BOARD MEMBER & FINANCE COMMITTEE CHAIR	231,000.00	-	-	-	231,000.00
Juliet Rose	BCDP ADVISORY COMMITTEE & BOARD MEMBER & AUDIT COMMITTEE CHAIR	189,300.00	-	-	-	189,300.00
Kayon Whyne	HR & CORPORATE GOVERNANCE COMMITTEE & BOARD MEMBER	126,400.00	-	-	-	126,400.00
Rayharna Wright	BCDP ADVISORY COMMITTEE & BOARD MEMBER & HR & CORPORATE GOVERNANCE COMMITTEE CHAIR	194,100.00	-	-	-	194,100.00
Yaneke Watson	AUDIT COMMITTEE & BOARD MEMBER	115,700.00	-	-	-	115,700.00
Shasha Lee	BCDP ADVISORY COMMITTEE & BOARD MEMBER	131,600.00	-	-	-	131,600.00
Richard Stephens	FINANCE COMMITTEE MEMBER	31,800.00	-	-	-	31,800.00
Vaughn McDonald	HR & CORPORATE GOVERNANCE COMMITTEE MEMBER	31,800.00	-	-	-	31,800.00
						1,971,900.00

FINANCIAL STATEMENTS

JAMAICA BAUXITE INSTITUTE LIMITED

FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

JAMAICA BAUXITE INSTITUTE LIMITED

FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

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Lee Clarke Chang

Chartered Accountants

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INDEPENDENT AUDITORS' REPORT

To The Members of
JAMAICA BAUXITE INSTITUTE LIMITED

Report on the Financial Statements

Opinion

We have audited the financial statements of Jamaica Bauxite Institute Limited set out on pages 4 to 37, which comprise the statements of financial position as at March 31, 2022, the statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the Company as at March 31, 2022 and of its financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) and the Jamaican Companies Act.

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Company in accordance with the International Ethics Standards Board for Accountants Code of Ethics for Professional Accountants (IESBA Code) and we have fulfilled our other ethical responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Management's responsibility for the Financial Statements

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with IFRS and the Jamaican Companies Act, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

The Board of Directors is responsible for overseeing the company's financial reporting process.

INDEPENDENT AUDITORS' REPORT

To The Members

JAMAICA BAUXITE INSTITUTE LIMITED

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that presents a true and fair view.

INDEPENDENT AUDITORS' REPORT

The Members

JAMAICA BAUXITE INSTITUTE LIMITED

We communicate with the Board of Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on additional matters as required by the Jamaican Companies Act

We have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purposes of our audit. In our opinion, proper accounting records have been maintained, so far as appears from our examination of those records, and the financial statements, which are in agreement therewith, give the information required by the Jamaican Companies Act, in the manner required.



Chartered Accountants
July 29, 2022

JAMAICA BAUXITE INSTITUTE LIMITED**STATEMENT OF COMPREHENSIVE INCOME****YEAR ENDED MARCH 31, 2022**

	Note	2022 \$'000	2021 \$'000
REVENUE	5	265,183	250,014
Other income	6	10,472	2,856
Finance income		<u>9,235</u>	<u>7,641</u>
		284,890	260,511
Administrative expenses	7	<u>(247,848)</u>	<u>(252,059)</u>
Net surplus		37,042	8,452
Other Comprehensive income (loss)			
Other comprehensive income (loss) not to be reclassified to income in subsequent periods:			
Remeasurement gain on retirement benefit asset	11(f)	5,429	6,339
Remeasurement gain on retirement benefit obligation	17(e)	<u>6,233</u>	<u>20,733</u>
Total other comprehensive income		<u>11,662</u>	<u>27,072</u>
Total Comprehensive Income		<u>48,704</u>	<u>35,524</u>


JAMAICA BAUXITE INSTITUTE LIMITED

STATEMENT OF FINANCIAL POSITION

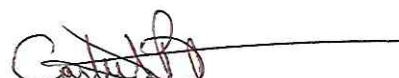
AT MARCH 31, 2022

	Note	2022 \$'000	2021 \$'000
ASSETS			
Non-current asset			
Property, plant and equipment	10	64,940	46,211
Retirement benefit asset	11	114,953	101,308
Long-term receivables	12	-	109
		<u>179,893</u>	<u>147,628</u>
Current assets			
Trade and other receivables	13	18,329	33,928
Current portion of long-term receivables	12	497	674
Taxation recoverable		12,013	12,006
Bauxite Community Redevelopment Funded Projects	14	250,843	198,668
Cash and cash equivalents	14	215,025	210,016
		<u>496,707</u>	<u>455,292</u>
Total assets		<u>676,600</u>	<u>602,920</u>
EQUITY AND LIABILITIES			
Equity			
Share capital	15	1	1
Capital grant		124	124
Accumulated surplus		313,646	264,942
		<u>313,771</u>	<u>265,067</u>
Non-current liabilities			
Retirement benefit obligation	16	85,999	83,501
Deferred income		2,726	2,733
Project funds	17	3,196	2,748
		<u>91,921</u>	<u>88,982</u>
Current liabilities			
Trade and other payables	18	20,065	50,203
Bauxite Community Redevelopment Projects		250,843	198,668
		<u>270,908</u>	<u>248,871</u>
Total equity and liabilities		<u>676,600</u>	<u>602,920</u>

The financial statements on pages 4 to 35 were approved for issue by the Board of Directors on July 29, 2022 and signed on its behalf by:



 Director



 Director

JAMAICA BAUXITE INSTITUTE LIMITED**STATEMENT OF CHANGES IN EQUITY****AT MARCH 31, 2022**

	Share Capital \$'000	Capital Grants \$'000	Accumulated Surplus \$'000	Total \$'000
Balance as at April 1, 2020	1	124	229,418	229,543
Surplus for the year	-	-	8,452	8,452
Other comprehensive gain	-	-	27,072	27,072
Total comprehensive income	-	-	35,524	35,524
Balance as at April 1, 2021	1	124	264,942	265,067
Surplus for the year	-	-	37,042	37,042
Other comprehensive gain	-	-	11,662	11,662
Total comprehensive income	-	-	48,704	48,704
Balance as at March 31, 2022	1	124	313,646	313,771

JAMAICA BAUXITE INSTITUTE LIMITED**STATEMENT OF CASH FLOWS****YEAR ENDED MARCH 31, 2022**

	Note	2022 \$'000	2021 \$'000
CASH FLOWS FROM OPERATING ACTIVITIES:			
Surplus		37,042	8,452
Adjustments for:			
Retirement benefit adjustment	11	515	20,541
Depreciation	10	15,167	16,721
Interest income		(8,602)	(6,836)
Exchange gain		(618)	(805)
		<u>43,504</u>	<u>38,073</u>
Changes in operating assets and liabilities			
Trade and other receivables		15,599	(24,803)
Taxation recoverable		(7)	(2,246)
Trade and other payables		(30,138)	32,781
		<u>(14,546)</u>	<u>5,732</u>
Net cash provided by operating activities		<u>28,958</u>	<u>43,805</u>
CASH FLOWS FROM INVESTING ACTIVITIES			
Purchase of fixed assets	10	(34,063)	(8,021)
Loss from stolen fixed assets		167	
Long-term receivables		286	(612)
Interest received		8,602	6,836
Project funds		52,616	182,477
		<u>27,608</u>	<u>180,680</u>
Net cash provided by investing activities		<u>27,608</u>	<u>180,680</u>
INCREASE IN NET CASH AND CASH EQUIVALENTS			
Effect of foreign exchange rate on cash and cash-equivalents		56,566	224,485
Effect of change in retained earnings and cash equivalent at the beginning of the year		668	805
		<u>408,634</u>	<u>183,344</u>
Cash and cash equivalent at the end of the year	14	<u>465,868</u>	<u>408,634</u>

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS YEAR ENDED 31 MARCH 2022

1. STATUS AND PRINCIPAL ACTIVITY:

The Company was incorporated under the Companies Act of Jamaica in October 1975. Its principal activities are to advise the Government of Jamaica on matters pertaining to the Bauxite/Alumina Industry, local and international, and to undertake research and disseminate information related to the industry. The registered office is located at The Hope Gardens Commercial Complex, Kingston 6.

2. SIGNIFICANT ACCOUNTING POLICIES:

The principal accounting policies applied to the preparation of these financial statements are set out below. These policies have been applied to all the years presented, unless otherwise stated.

Basis of preparation

These financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) and have been prepared under the historical cost convention as modified by the revaluation of available-for-sale investment securities.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the company's accounting policies. Although these estimates are based on management's best knowledge of current events and actions, actual results could differ from those estimates.

2.1 ***Standards, interpretations and amendments to existing standards effective during the year***

The Company applied for the first-time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2020. These new standards and amendments applied for the first time in 2020. The nature and the impact of each new standard or amendment is described below.

- **Amendments to IFRS 3: Definition of a Business**

The amendment to IFRS 3 Business Combinations clarifies that to be considered a business, an integrated set of activities and assets must include, at a minimum, an input and a substantive process that, together, significantly contribute to the ability to create output. Furthermore, it clarifies that a business can exist without including all of the inputs and processes needed to create outputs. These amendments had no impact on the financial statements of the Company, but may impact future periods should the Company enter into any business combinations.

- **Amendments to IFRS 7, IFRS 9 and IAS 39 Interest Rate Benchmark Reform**

The amendments to IFRS 9 and IAS 39 Financial Instruments: Recognition and Measurement provide a number of reliefs, which apply to all hedging relationships that are directly affected by interest rate benchmark reform. A hedging relationship is affected if the reform gives rise to uncertainty about the timing and/or amount of benchmark-based cash flows of the hedged item or the hedging instrument. These amendments have no impact on the financial statements of the Company as it does not have any interest rate hedge relationships.

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS YEAR ENDED 31 MARCH 2022

2. SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

Basis of preparation (Cont'd)

2.1 *Standards, interpretations and amendments to existing standards effective during the year (Cont'd)*

- **Amendments to IAS 1 and IAS 8 Definition of Material**

The amendments provide a new definition of material that states, "information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity." The amendments clarify that materiality will depend on the nature or magnitude of information, either individually or in combination with other information, in the context of the financial statements. A misstatement of information is material if it could reasonably be expected to influence decisions made by the primary users. These amendments had no impact on the financial statements of, nor is there expected to be any future impact to the Company.

- **Conceptual Framework for Financial Reporting**

The Conceptual Framework is not a standard, and none of the concepts contained therein override the concepts or requirements in any standard. The purpose of the Conceptual Framework is to assist the IASB in developing standards, to help preparers develop consistent accounting policies where there is no applicable standard in place and to assist all parties to understand and interpret the standards. This will affect those entities which developed their accounting policies based on the Conceptual Framework. The revised Conceptual Framework includes some new concepts, updated definitions and recognition criteria for assets and liabilities and clarifies some important concepts. These amendments had no impact on the financial statements of the Company.

2.2 *Standards, interpretations and amendments to existing standards that are not yet effective and have not been early adopted by the Company*

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Company's financial statements are disclosed below. The Company intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

- **Amendments to IFRS 10 and IAS 28: Sale or Contribution of Assets between an Investor and its Associate or Joint Venture**

The amendments address the conflict between IFRS 10 and IAS 28 in dealing with the loss of control of a subsidiary that is sold or contributed to an associate or joint venture. The amendments clarify that the gain or loss resulting from the sale or contribution of assets that constitute a business, as defined in IFRS 3, between an investor and its associate or joint venture, is recognized in full. Any gain or loss resulting from the sale or contribution of assets that do not constitute a business, however, is recognized only to the extent of unrelated investors' interests in the associate or joint venture. The IASB has deferred the effective date of these amendments indefinitely, but an entity that early adopts the amendments must apply them prospectively. The Company will apply these amendments when they become effective but they are not expected to have an impact on the Company's financial statements.

2. SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

Basis of preparation (Cont'd)

2.2 *Standards, interpretations and amendments to existing standards that are not yet effective and have not been early adopted by the Company (Cont'd)*

• **Amendments to IFRS 16 Covid-19 Related Rent Concessions**

On 28 May 2020, the IASB issued Covid-19-Related Rent Concessions - amendment to IFRS 16 Leases. The amendments provide relief to lessees from applying IFRS 16 guidance on lease modification accounting for rent concessions arising as a direct consequence of the Covid-19 pandemic. As a practical expedient, a lessee may elect not to assess whether a Covid-19 related rent concession from a lessor is a lease modification. A lessee that makes this election accounts for any change in lease payments resulting from the Covid-19 related rent concession the same way it would account for the change under IFRS 16, if the change were not a lease modification. The amendment applies to annual reporting periods beginning on or after June 1, 2020. Earlier application is permitted. This amendment is not expected to impact on the financial statements of the Company.

• **Amendments to IAS 1: Classification of Liabilities as Current or Non-current**

In January 2020, the IASB issued amendments to paragraphs 69 to 76 of IAS 1 to specify the requirements for classifying liabilities as current or non-current.

The amendments clarify:

- What is meant by a right to defer settlement
- That a right to defer must exist at the end of the reporting period
- That classification is unaffected by the likelihood that an entity will exercise its referral right
- That only if an embedded derivative in a convertible liability is itself an equity instrument would the terms of a liability not impact its classification

The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and must be applied retrospectively. The Company is currently assessing the impact the amendments will have on current practice and whether existing loan agreements may require renegotiation.

• **Reference to the Conceptual Framework – Amendments to IFRS 3**

In May 2020, the IASB issued Amendments to IFRS 3 Business Combinations – Reference to the Conceptual Framework. The amendments are intended to replace a reference to the Framework for the Preparation and Presentation of Financial Statements, issued in 1989, with a reference to the Conceptual Framework for Financial Reporting issued in March 2018 without significantly changing its requirements.

The Board also added an exception to the recognition principle of IFRS 3 to avoid the issue of potential 'day 2' gains or losses arising for liabilities and contingent liabilities that would be within the scope of IAS 37 or IFRIC 21 Levies, if incurred separately.

2. SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

Basis of preparation (Cont'd)

2.2 *Standards, interpretations and amendments to existing standards that are not yet effective and have not been early adopted by the Company (Cont'd)*

- **Reference to the Conceptual Framework – Amendments to IFRS 3 (Cont'd)**

At the same time, the Board decided to clarify existing guidance in IFRS 3 for contingent assets that would not be affected by replacing the reference to the Framework for the Preparation and Presentation of Financial Statements.

The amendments are effective for annual reporting periods beginning on or after January 1, 2022 and apply prospectively. The Company has not yet assessed the impact of these amendments on the Company's financial statements.

- **Property, Plant and Equipment: Proceeds before Intended Use - Amendments to IAS 16**

In May 2020, the IASB issued Property, Plant and Equipment — Proceeds before Intended Use, which prohibits entities deducting from the cost of an item of property, plant and equipment, any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognizes the proceeds from selling such items, and the costs of producing those items, in profit or loss.

The amendment is effective for annual reporting periods beginning on or after January 1, 2022 and must be applied retrospectively to items of property, plant and equipment made available for use on or after the beginning of the earliest period presented when the entity first applies the amendment.

The amendments are not expected to have a material impact on the Company.

- **Onerous Contracts – Costs of Fulfilling a Contract – Amendments to IAS 37**

In May 2020, the IASB issued amendments to IAS 37 to specify which costs an entity needs to include when assessing whether a contract is onerous or loss-making. The amendments apply a “directly related cost approach”. The costs that relate directly to a contract to provide goods or services include both incremental costs and an allocation of costs directly related to contract activities. General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract.

The amendments are effective for annual reporting periods beginning on or after January 1, 2022. The Company will apply these amendments to contracts for which it has not yet fulfilled all its obligations at the beginning of the annual reporting period in which it first applies the amendments.

2. **SIGNIFICANT ACCOUNTING POLICIES (CONT'D)**

Basis of preparation (Cont'd)

2.2 ***Standards, interpretations and amendments to existing standards that are not yet effective and have not been early adopted by the Company (Cont'd)***

• **Annual Improvements 2018-2020 Cycle (issued May 2020)**

As part of its 2018-2020 annual improvements to IFRS standards process, the IASB issued an amendment to:

- **IFRS 1 *First-time Adoption of International Financial Reporting Standards*.**
The amendment permits a subsidiary that elects to apply paragraph D16(a) of IFRS 1 to measure cumulative translation differences using the amounts reported by the parent, based on the parent's date of transition to IFRS. This amendment is also applied to an associate or joint venture that elects to apply paragraph D16(a) of IFRS 1. The amendment is effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted. The amendments are not applicable to the financial statements of the Company.

- **IFRS 9 *Financial Instruments – Fees in the '10 per cent' test for derecognition of financial liabilities***

The amendment clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. An entity applies the amendment to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment.

The amendment is effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted. The Company will apply the amendments to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment. The amendments are not expected to have a material impact on the Company.

Summary of accounting policies

The principal accounting policies applied in the presentation of these financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

a) Foreign currency translation

(i) Functional and presentational currency

Item included in the financial statements are measured using the currency of the primary economic environment in which the entity operates (the functional currency) the financial statements are presented in the Jamaican dollars, which is the functional and presentation currency.

2. **SIGNIFICANT ACCOUNTING POLICIES (CONT'D)**

Summary of accounting policies (Cont'd)

a) **Foreign currency translation (cont'd)**

(ii) **Transaction and balances**

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of transactions. Foreign exchange gains and losses resulting from the settlement of such transaction and from the translation at the year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the statement of changes in net assets available for benefits. At the year-end date, monetary assets and liabilities denominated in foreign currency are translated using the closing mid-point rate of exchange. Unrealised foreign exchange differences on unsettled foreign currency monetary assets and liabilities are acknowledged in the statement of changes in net assets available for benefits.

b) **Investment securities**

Investment securities are measured at fair value by reference to quoted market prices when available. If quoted market prices are not available, then fair values are estimated on the basis of pricing models or other recognized valuation techniques.

c) **Revenue recognition**

Revenue comprises consultancy and research fees earned from projects. Revenue is recognized when consideration is received or receivable for the services in the ordinary course of business.

Interest income is recorded on the accrual basis. Where collection of interest income is considered doubtful, interest income is thereafter recognized based on the rate of interest that is used to discount the future cash flows for the purpose of measuring the recoverable amount.

Gains and losses arising from trading in foreign currencies are recognized when realized and are shown net in the statement of comprehensive income.

Sale of goods

Revenue is recognised at a point in time in the amount of the price expected to be received by the Company for publications supplied, as contractual performance obligations are fulfilled, and control of goods passes to the customer. Revenue is decreased by any discounts granted to customers.

Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition.

When calculating the effective interest rate the estimates future cash flows consider all contractual terms of the financial instrument, but not ECL.

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

2. SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

Summary of accounting policies (Cont'd)

d) Receivables

Receivables are carried at cost which approximates the fair value of those assets.

e) Expenses

All expenses are recognized in the statement of changes in net assets available for benefits on the accrual basis. Accrued expenses are recognized initially at fair value and subsequently stated at amortised cost using the effective interest method.

f) Financial investments

(i) Classification

The company classifies its investment in debt and equity securities. These financial assets are classified as available-for-sale investment securities. The company's policy is for the managers to evaluate the information about these financial assets on a fair value basis together with other related information.

(ii) Recognition/derecognition

Regular purchases and sales of investments are recognized on the trade date, the date on which the company commits to purchase or sell the investment. Investments are derecognized when the rights to receive cash flows from the investments have expired and the company has transferred substantially risks and rewards of ownership.

(iii) Measurement

Financial investments are initially recognized at fair value. Transaction costs are expensed in the statement of changes in net assets available for benefits. Subsequent to initial recognition, all financial investments are measured at fair value based on quoted bid prices or amounts derived from cash flow invested. Unrealised gains and losses are recognized in the statement of changes in net assets available for benefits.

(iv) Fair value estimation

The fair value of the financial instruments traded in active markets (such as equity securities) is based on quoted market prices at the year-end date. The quoted market prices used for financial assets held by the company is current bid price.

g) Cash and cash equivalents

Cash and cash equivalents include cash in hand, demand deposits, other short-term highly liquid investments with original maturities of three months or less.

2. SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

Summary of accounting policies (Cont'd)

h) Use of estimates and judgments

The preparation of financial statements in accordance with International Financial Reporting Standards requires the Board of Directors to make estimates and assumptions that effect the amounts reported in the financial statements and accompanying notes. These estimates are based on historical experience and the Board of Directors' best knowledge of current events and actions and are reviewed on an ongoing basis. Actual results could differ from those estimates.

i) Employee benefits

(i) Pension obligations

The company participates in a multi-employer defined benefit pension plan which is open to all permanent employees and administered by Sagicor Life Jamaica Limited. The plan is generally determined by periodic actuarial valuations.

A defined benefit plan is one that is not a defined contribution plan. Typically defined benefit plans define an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and compensation. The assets or liability recognized in the statement of financial position in respect of defined benefit pension plans is the difference between the present value of the defined benefit obligation at the reporting date and the fair value of plan assets, together with adjustments for unrecognized actuarial gains or losses and past service costs.

The defined benefit obligation is calculated annually by independent actuaries using the projected credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash flows using interest rates of high-quality Government of Jamaica bonds that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating to the terms of the related pension liability.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions and amendments to the pension plan are charged or credited to other comprehensive income over the employees, expected average remaining working lives. The adjustment experience is divided into three categories being net actuarial gain/(loss) on retirement obligations and net change in unrecognized asset. The cumulative net effect of all experience adjustment is reported in the actuarial reserve account under equity.

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

2. SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

Summary of accounting policies (Cont'd)

i) Employee benefits

(ii) Termination obligations

Termination benefits are payable when employment is terminated by the company before the normal retirement date or whenever an employee accepts voluntary redundancy in exchange for these benefits. The company recognizes termination benefits when it is demonstrably committed to either terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal; or providing termination benefits as a result of an offer made to encourage voluntary redundancy. Benefits falling due more than 12 months after the reporting date are discounted to present value.

(iii) Other retirement benefit obligations

The company also provides medical benefits to qualifying employees upon retirement. The entitlement to these benefits is usually conditional on the employee remaining in service up to retirement age and completion of a minimum service period. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. These obligations are valued annually by independent qualified actuaries.

j) Property, plant and equipment

- (i) Items of property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses. The directors however, are in the process of revaluing the building to show its true value which was materially understated.
- (ii) Depreciation is calculated on the straight-line basis at annual rates to write down the assets to their estimated residual values over their expected useful lives which are as follows:

Freehold building	40 years
Research library stock and Furniture, fixtures and equipment	5 – 10 years
Motor vehicles	5 years

Gains and losses on disposal of property, plant and equipment are determined by reference to their carrying amount and are taken into account in determining operating results.

k) Impairment of non-current assets

Property, plant and equipment and other non-current assets are reviewed for impairment losses whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the greater of the asset's net selling price and the value in use. For the purpose of assessing impairment, assets are grouped at the lowest level for which there are separately identifiable cash flows.

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

2. SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

Summary of accounting policies (Cont'd)

l) Income taxes

Taxation expense in the statement of comprehensive income comprises current and deferred tax charges. The company's income is exempt under Section 12(b) of the Income Tax Act.

Current tax charges are based on taxable surplus for the year, which differ from the surplus before tax reported because it excludes items that are taxable or deductible on other years, and items that are never taxable or deductible. The company's liability for current tax is calculated at tax rates that have been enacted at the year end date.

Deferred tax is the tax expected to be paid or recovered on differences between the carrying amounts of assets and liabilities and the corresponding tax bases. Deferred income tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. Currently enacted tax rates are used in the determination of deferred income tax.

Deferred tax assets are recognized to the extent that it is probable that future taxable surplus will be available against which the temporary differences can be utilized.

Deferred tax is charged or credited in the statement of comprehensive income, except where it relates to items charged or credited to equity, in which case, deferred tax is also dealt with in the accumulated fund.

m) Share capital

Shares are classified as equity when there is no obligation to transfer cash or other assets. Incremental costs directly attributable to the issue of equity instruments are shown in equity as a deduction from proceeds, net of tax.

n) Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the company.

2. SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

Summary of accounting policies (Cont'd)

n) Fair Value Measurement (cont'd)

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The company uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 – Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 – Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 – Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For purpose of fair value disclosures, the company has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

3. FINANCIAL RISK MANAGEMENT

The company's activities expose it to a variety of financial risks: market risk (including currency risk, fair value interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk. The company's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the company's financial performance.

The Ministry of Finance are ultimately responsible for the establishment and oversight of the company's risk management framework. The Managers provide guidelines for overall risk management and areas, such as foreign exchange risk, interest rate risk and credit risk, and investment of excess liquidity. The Managers manage and monitor risks, as follows:

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

3. FINANCIAL RISK MANAGEMENT (CONT'D)

Market risk

The company takes on exposure to market risks, which is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risks mainly arise from changes in foreign currency exchange rates, interest rates and market price.

The market risk of the company's investment portfolio is reviewed regularly using quantitative and qualitative risk measures and analyses.

(i) Currency risk

Currency risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

The company is exposed to currency risk due to fluctuation in the exchange rates on balances that are denominated in currencies other than the Jamaican Dollar.

Management ensures that the net exposure is kept to an acceptable level by monitoring all currency positions and ensuring adherence to predetermined limits.

The carrying amounts of the company's foreign currency denominated monetary assets at the reporting date are as follows:

	2022		2021	
	US\$	J\$ Equivalent	US\$	J\$ Equivalent
Assets	81,319	12,197,883	71,716	10,486,356

There was no foreign currency related liabilities at the reporting date.

Foreign currency sensitivity

The following table indicates the currency to which they have significant exposure on its monetary assets. The change in currency rate below represents the Finance Director's assessment of the possible change in foreign exchange rates. The sensitivity analysis represents outstanding foreign currency denominated bank balances and adjusts their translation at the year-end for a revaluation of 2% and devaluation of 8% (2021: 6%) in foreign currency rates.

	2022		2021	
	Change in Currency %	Effect on Surplus \$	Change in Currency %	Effect on Surplus \$
United States dollar				
Revaluation	2	(243,958)	2	(207,727)
Devaluation	8	975,831	6	629,181

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

3. FINANCIAL RISK MANAGEMENT (CONT'D)

Market risk (Cont'd)

(ii) Interest rate risk

Interest rate risk is the risk that the future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

Floating rate instruments exposes the company to cash flow interest risk whereas fixed interest rate instruments expose the company to fair value interest risk.

The company's exposure to interest rate risk is affected by its holding in bank deposits and short-term investments. In respect of liabilities, the company does not enter into transactions involving interest costs and is therefore not affected by interest rate risk on liabilities.

The following tables indicate the level of interest rate exposure of the company for Jamaican dollar and United States Dollar denominated securities:

	2022	2021
	\$'000	\$'000
J\$ denominated securities	425,488	384,951
US\$ denominated securities	12,198	10,486
	<u>437,686</u>	<u>395,437</u>

The following table indicates the sensitivity to a reasonable possible change in interest rates, with all other variables held constant, on the income statement.

The sensitivity of net surplus is the effect of the assumed changes in interest rates on surplus for the year based on the floating rate non-trading financial assets and financial liabilities. The correlation of variables will have a significant effect in determining the ultimate impact on market risk, but to demonstrate the impact due to changes in variables, variables had to be on an individual basis.

	Effect on surplus	
	2022	2021
	\$'000	\$'000
Change in interest rate on J\$ securities		
-1%	(4,255)	(3,850)
+1%	4,255	3,850

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

3. FINANCIAL RISK MANAGEMENT (CONT'D)

Market risk (Cont'd)

(ii) Interest rate risk (continued)

	Effect on surplus	
	2022	2021
	\$'000	\$'000
Change in interest rate on US\$ securities		
-1% (2021: -1%)	(122)	(105)
+1% (2021: +1%)	122	105

(iii) Price risk

Price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market price, other than those arising from currency or interest rate risk, whether those changes are caused by factors specific to the instrument or affecting all similar instruments in the market. The company is exposed to price risk arising from its holdings in unit trust investments. The level of price risk exposure is as indicated below:

(iv) Credit risk

Credit risk is the risk that a party to a financial transaction will fail to discharge an obligation and cause the other party to incur a financial loss.

Investments are allowed principally in secure liquid instruments and with counterparties that the Managers believe do not offer any significant credit risk. Based on their assessment, the Managers do not expect any counterparties to fail to meet their obligations. The managers manage credit risk by having an investment policy which includes written authority levels and prior approval by the Ministry of Finance of any investment transaction.

The company also faces credit risk on its receivables in that a credit customer may fail to pay the company amounts due from them.

The company assesses the individual characteristics of its customers to determine who will be offered credit and who will have to transact business on a cash only basis.

Cash and bank transactions are limited to high credit quality financial institutions.

The company's maximum exposure to credit risk equals the carrying value for the items on the statement of financial position that are subject to credit risk amounting to \$217 million (2021: \$186 million) as summarised at 3(v) below.

JAMAICA BAUXITE INSTITUTE LIMITED**NOTES TO THE FINANCIAL STATEMENTS****YEAR ENDED MARCH 31, 2022****3. FINANCIAL RISK MANAGEMENT (CONT'D)****Market risk (Cont'd)****(iv) Credit risk**

Trade receivables that are less than three months past due are not considered impaired. As of 31 March 2022, trade receivables of \$ Nil (2021: \$ Nil) were past due but not impaired. These relate to a number of independent customers for whom there is no recent history of default. The ageing analysis of these receivables was as follows:

	2022 \$'000	2021 \$'000
More than 3 months but not more than 6 months	<u>-</u>	<u>-</u>

As of 31 March 2022, no trade receivables (2021: Nil) were impaired.

(v) Liquidity risk

Liquidity risk, also referred to as funding risk, is the risk that the company will encounter difficulty in raising funds to meet commitments associated with financial instruments. Liquidity risk may result from an inability to sell a financial asset quickly at, or close to, its fair value. Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, and the availability of funding through an adequate amount of committed facilities. Due to the nature of the company, which accumulates and invests funds to pay liabilities which crystallise principally in the short term and in a measured predictable manner, the Managers believe liquidity risk for the company is negligible.

The maturity of all financial instruments is shown in the following tables:

	2022 \$'000	2021 \$'000
Financial assets maturing in one year of less on demand		
Cash and cash equivalents	465,868	408,684
Trade and other receivables	10,218	2,400
Loans receivables – current portion	<u>497</u>	<u>674</u>
	476,583	411,758
In more than one year		
Long-term receivables	<u>-</u>	<u>109</u>
	<u>476,583</u>	<u>411,867</u>
Financial liabilities maturing in		
One year or less or on demand		
Trade and other payables	<u>259,581</u>	<u>225,871</u>
	<u>259,581</u>	<u>225,871</u>
Excess of financial assets over financial liabilities	<u>217,002</u>	<u>185,996</u>

4. FAIR VALUE OF FINANCIAL ASSETS AND FINANCIAL LIABILITIES

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. A market price, where an active market (such as a recognised stock exchange) exists, is the best evidence of the fair value of a financial instrument. Where market prices are not available for the financial assets and liabilities of the company, fair values in the financial statements have been presented using various estimation techniques based on market conditions existing at the end of the reporting period. Generally, judgement is necessarily required in interpreting market data to develop estimates of fair value. Accordingly, the estimates presented in these financial statements are not necessarily indicative of the amounts that the company would realise in a current market exchange.

IFRS 9 accounting policies applicable after 1 January 2018

Trade Receivables

Trade receivables are recognised initially at the amount of consideration that is unconditional unless they contain significant financing components, in which case they are recognised at fair value. The Company holds the trade receivables with the objective to collect the contractual cash flows. These cash flows are solely payments of principal and interest (SPPI). Subsequent to initial recognition at fair value, the Company measures trade receivables at amortised cost using the effective interest method.

Other Financial Assets at Amortised Cost

The Company classifies its other financial assets at amortised cost as these assets are held only within a business model the objective of which is to collect the contractual cash flows and the contractual terms give rise to cash flows that are solely payments of principal and interest. Other financial assets at amortised cost include cash and bank balances, other receivables and long term receivables.

Impairment

The Company recognises a loss allowance for expected credit losses on trade receivables and other financial assets that are measured at amortised cost applying the expected credit loss model. The amount of expected credit losses is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument. Cash and cash equivalents are also subject to the impairment requirements of IFRS 9.

The Company always recognises lifetime ECL for trade receivables applying the IFRS 9 simplified approach. The expected credit losses on these financial assets are estimated based on the Company's historical credit loss experience, adjusted for factors that are specific to the debtors as well as the expected changes in factors or conditions affecting the debt at the reporting date, including time value of money where appropriate.

For all other financial instruments, the Company recognises lifetime ECL when there has been a significant increase in credit risk since initial recognition. However, if the credit risk on the financial instrument has not increased significantly since initial recognition, the Company measures the loss allowance for that financial instrument at an amount equal to 12-month ECL.

Lifetime ECL represents the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

4. FAIR VALUE OF FINANCIAL ASSETS AND FINANCIAL LIABILITIES (CONT'D)

IFRS 9 accounting policies applicable after 1 January 2018 (cont'd)

Impairment (cont'd)

For financial assets, the expected credit loss is estimated as the difference between all contractual cash flows that are due to the Company in accordance with the contract and all the cash flows that the Company expects to receive, discounted at the original effective interest rate.

Write-off

Financial assets are written off when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery. Subsequent recovery.

The following methods and assumptions have been used in determining the fair values of financial assets and financial liabilities:

5. REVENUE

	2022	2021
	\$'000	\$'000
Revenue comprise the following:		
Government subvention	255,695	244,217
JBI Greenhouse	767	-
Water sampling project	5,888	5,165
Analyses	2,833	632
	<u>265,183</u>	<u>250,014</u>

6. OTHER INCOME

	2022	2021
	\$'000	\$'000
Other income comprise the following:		
Management fees	3,147	1,204
Rent	1,266	1,206
Other	6,059	446
	<u>10,472</u>	<u>2,856</u>

JAMAICA BAUXITE INSTITUTE LIMITED**NOTES TO THE FINANCIAL STATEMENTS****YEAR ENDED MARCH 31, 2022**

7. EXPENSE BY NATURE

	2022	2021
	\$'000	\$'000
Auditor's remuneration	1,715	770
Depreciation	15,167	16,721
Insurance	1,064	1,519
Legal and professional fees	6,851	4,335
Motor vehicle	2,798	1,851
Security	4,772	2,372
Hireage of services	2,782	3,160
Other	4,780	5,204
Laboratory supplies and spares	4,344	1,327
Administrative office supplies	2,424	3,073
Subscriptions	3,429	1,922
Environment Project & Bauxite Strategy	1,767	1,223
Repairs and maintenance	6,954	11,628
Staff costs (note 8)	176,247	185,449
Utilities	12,754	11,505
	<hr/>	<hr/>
	247,848	252,059

8. STAFF COSTS

	2022	2021
	\$'000	\$'000
Salaries, wages and related expenses	134,090	137,958
Payroll taxes – employer's portion	10,732	9,068
Pension cost (Note 11)	8,640	3,324
Health insurance and other benefits	12,627	20,106
Travelling and subsistence	675	244
Staff training	445	2,631
Separation, welfare and leave cost	9,038	12,118
	<hr/>	<hr/>
	176,247	185,449

9. INCOME TAX

The company's income is exempt from income tax under Section 12(b) of the Income Tax Act.

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

10. PROPERTY, PLANT AND EQUIPMENT

	Buildings \$'000	Laboratory, Surveying and Drawing \$'000	Furniture, Fixtures and Office Equipment \$'000	Motor Vehicles \$'000	Computers \$'000	Total \$'000
At Cost -						
April 1, 2020	3,844	72,062	30,507	35,315	26,867	168,595
Additions	3,599	-	2,807	-	1,615	8,021
Adjustment	-	11,184	(11,184)	-	-	-
March 31, 2021	7,443	83,246	22,130	35,315	28,482	176,616
Additions	24	24,691	978	4,712	3,658	34,063
Adjustment	-	-	-	(9,999)	-	(9,999)
March 31, 2022	7,467	107,937	23,108	30,028	32,140	200,680
Depreciation -						
March 31, 2020	607	65,328	6,522	25,934	15,293	113,684
Adjustment	-	(2,871)	2,865	-	6	-
Charge for the year	112	8,286	1,442	3,390	3,491	16,721
March 31, 2021	719	70,743	10,829	29,324	18,790	130,405
Adjustment	-	-	-	(9,832)	-	(9,832)
Charge for the Year	182	5,987	1,693	3,456	3,849	15,167
March 31, 2022	901	76,730	12,522	22,946	22,639	135,740
Net Book Value –						
March 31, 2022	6,566	31,207	10,616	7,080	9,501	64,940
March 31, 2021	6,724	12,503	11,301	5,991	9,692	46,211

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

11. RETIREMENT BENEFITS PENSION SCHEME

The Company participates in a multi-employer defined benefit pension plan which is open to all permanent employees and administered by Sagicor Life Jamaica Limited.

Pension plan benefits

The plan is funded by employees' contributions at 5% of pensionable salary with the option to contribute an additional 5% and employer contribution as recommended by the independent actuaries. Pension at normal retirement age is based on 2% of the final 3-year average salary per year of pensionable service, plus any declared bonus pensions.

(a) The principal actuarial assumptions used in valuing retirement benefits were as follows:

	2022	2021
	%	%
Discount rate	8.0	8.5
Long term rate of inflation	5.0	5.5
Future salary increases	5.0	5.5
Future pension increases	1.5	1.5
Administrative fees (% of salary)	1.0	1.0
Minimum funding rate	0.25	0.25

Demographic assumptions include expected retirement age and mortality. Males are expected to retire at age 65 and females at age 60, which are the normal retirement age for the pension scheme. Assumptions regarding future mortality are based on American 1994 Group Annuity Mortality (GAM94) Table, with a five year mortality improvement. No demographic assumptions are made for members existing before retirement.

The weighted average duration of the defined benefit obligation as at March 31, 2022 is 26 years (2021: 26 years).

The company expects to make a contribution of \$ 8.846 million to the plan during the next financial year. Total contributions inclusive of employee contributions is expected to be \$14.798 million.

(b) The defined benefit asset recognized in the statement of financial position was determined as follows:

	2022	2021
	\$'000	\$'000
Fair value of plan assets	752,894	736,689
Present value of funded obligation	<u>(530,653)</u>	<u>(492,852)</u>
	222,241	243,837
Unrecognised asset due to asset ceiling	<u>(107,288)</u>	<u>(142,529)</u>
	<u>114,953</u>	<u>101,308</u>

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

11. RETIREMENT BENEFITS PENSION SCHEME (CONTINUED)

(c) The movement in the net retirement benefit asset in the year are as follow:

	2022	2021
	\$'000	\$'000
Balance at the beginning of the year	101,308	90,537
Remeasurement recognized in other comprehensive income	84	(3,324)
Amounts charge to income	5,429	6,339
Employer's contributions	8,132	7,756
	<u>114,953</u>	<u>101,308</u>
Balance at the end of the year	<u>114,953</u>	<u>101,308</u>

(d) The movement in the asset ceiling is as follows:

	2022	2021
	\$'000	\$'000
Effect of assets ceiling, beginning of the year	142,529	116,724
Interest on asset	12,115	7,587
Effect of remeasurement	(47,356)	18,218
	<u>107,288</u>	<u>142,529</u>
Effect of asset ceiling, end of year	<u>107,288</u>	<u>142,529</u>

(e) The amounts recognized in surplus for the year in respect of the plan are as follows:

	2022	2021
	\$'000	\$'000
Current service cost	9,094	9,626
Net interest cost:		
Interest cost on the defined benefit obligation	39,816	32,387
Interest income on the plan assets	(61,109)	(46,276)
Interest on effect of the asset ceiling	12,115	7,587
	<u>(9,178)</u>	<u>(6,302)</u>
Net expense recognized in staff costs (Note 8)	<u>(84)</u>	<u>3,324</u>

The change for the year has been included in administrative expense in the statement of comprehensive income.

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

11. RETIREMENT BENEFITS PENSION SCHEME (CONTINUED)

(f) Amounts recognized in other comprehensive income in respect of the plan are as follows:

	2022	2021
	\$'000	\$'000
Actuarial changes arising from changes in financial assumptions	(14,003)	56,009
Experience adjustments	(27,924)	(31,452)
Change in effect of asset ceiling	47,356	(18,218)
	<u>5,429</u>	<u>6,339</u>
Net loss recognized in other comprehensive income	<u>5,429</u>	<u>6,339</u>

(g) The remeasurement gain (loss) in other comprehensive income is further analysed as follows:

	Financial Assumptions	Experience Adjustments	Net
	\$'000	\$'000	\$'000
<u>2022</u>			
Fair value of plan assets	2,534	(11,174)	(8,640)
Defined benefit obligation	(16,537)	(16,750)	(33,287)
	<u>(14,003)</u>	<u>(27,924)</u>	<u>(41,927)</u>
<u>2021</u>			
Fair value of plan assets	22,235	11,129	11,106
Defined benefit obligation	78,244	(42,581)	35,663
	<u>100,479</u>	<u>(31,452)</u>	<u>46,769</u>

(h) The movement in the fair value of the plan assets during the year is as follows:

	2022	2021
	\$'000	\$'000
Fair value of plan assets at beginning of year	736,689	722,047
Interest income	61,109	46,276
Employer's contributions	8,132	7,756
Member's contributions	5,471	5,284
Annuities purchased	45,648	15,736
Benefits paid	(95,515)	(49,304)
Remeasurement gain on assets for other comprehensive income (Note 11(g))	(8,640)	(11,106)
	<u>752,894</u>	<u>736,689</u>
Fair value of plan assets at end of year	<u>752,894</u>	<u>736,689</u>

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

11. RETIREMENT BENEFITS PENSION SCHEME (CONTINUED)

- (i) The movement in the present value of the defined benefit obligation during the year is as follows:

	2022	2021
	\$'000	\$'000
Defined benefit obligation at beginning of year	492,852	514,786
Service cost	9,094	9,626
Interest cost	39,816	32,387
Member's contributions	5,471	5,284
Annuities purchased	45,648	15,736
Benefits paid	(95,515)	(49,304)
Remeasurement gain on assets for other comprehensive income (Note 11(g))	33,287	(35,663)
	<u>530,653</u>	<u>492,852</u>
Defined benefit obligation at end of year	<u>530,653</u>	<u>492,852</u>

- (j) At the end of the reporting period the plan assets are invested in unitized segregated funds of the Sagicor Pooled Pension Investment Fund.

	Percentage Distribution		Fair value of Plan Asset	
	2022	2021	2022	2021
	%	%	\$'000	\$'000
Equities fund	22	23	167,415	167,680
Mortgage and real estate fund	13	12	95,994	87,881
Fixed income	1	5	9,152	36,701
Foreign currency fund	13	16	99,137	114,590
Money Market fund	10	10	72,175	74,648
International Equity fund	6	6	47,057	45,901
CPI index fund	5	4	36,225	30,162
Value of purchased Annuities (net of adjustment)	30	24	225,739	179,126
	<u>100</u>	<u>100</u>	<u>752,894</u>	<u>736,689</u>

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

11. RETIREMENT BENEFITS PENSION SCHEME (CONTINUED)

(k) Sensitivity analysis

		Discount rate	
		1% Decrease	1% Increase
		\$'000	\$'000
	Impact on the present values of Defined benefit obligation – increase/ (decrease)		
2022		<u>54,766</u>	<u>(45,087)</u>
2021		<u>50,365</u>	<u>(41,642)</u>
		Salary growth	
		1% Decrease	1% Increase
		\$'000	\$'000
	Impact on the present values of Defined benefit obligation – increase/ (decrease)		
2022		<u>(9,294)</u>	<u>10,755</u>
2021		<u>(8,777)</u>	<u>(9,960)</u>
		Future pension increase	
		1% Decrease	1% Increase
		\$'000	\$'000
	Impact on the present values of Defined benefit obligation – increase/ (decrease)		
2022		<u>(45,881)</u>	<u>53,159</u>
2021		<u>(42,124)</u>	<u>48,782</u>
		Life expectancy	
		1 year	1 year
		\$'000	\$'000
	Impact on the present values of Defined benefit obligation – increase/ (decrease)		
2022		<u>(8,735)</u>	<u>8,547</u>
2021		<u>(7,691)</u>	<u>7,506</u>

JAMAICA BAUXITE INSTITUTE LIMITED**NOTES TO THE FINANCIAL STATEMENTS****YEAR ENDED MARCH 31, 2022****12. LONG-TERM RECEIVABLES**

	2022	2021
	\$'000	\$'000
Staff loans	497	783
Less: Current portion	(-)	(674)
	<u>497</u>	<u>109</u>

Staff loans represents amounts advanced for the purchase of motor vehicles and miscellaneous. Interest rates on loans are set at 3% per annum. Loans were repayable over one (1) to five (5) years and are secured by guarantees. Repayments made by staff are credited to a savings account to form the basis for future loans.

13. TRADE AND OTHER RECEIVABLES

	2022	2021
	\$'000	\$'000
Receivable	9,683	1,880
Deposits	2,229	27,594
Prepayments	4,826	3,934
Other	1,591	520
	<u>18,329</u>	<u>33,928</u>

14. CASH AND CASH EQUIVALENTS

	2022	2021
	\$'000	\$'000
Bank accounts	24,204	9,265
Savings account	15,796	13,617
Repurchase agreements	174,804	186,307
	<u>214,804</u>	<u>209,189</u>
Interest accrued	221	827
	<u>215,025</u>	<u>210,016</u>
Bauxite Community Redevelopment Projects	250,843	198,668
	<u>465,868</u>	<u>408,684</u>

Bank accounts include a foreign currency account in the amount of \$12,197,883 (US\$81,319) 2021: \$10,486,356 (US\$71,717).

15. Share capital

	2022	2021
	\$'000	\$'000
Authorised, issued and fully paid share capital 200 ordinary shares at April 1 and March 31	<u>1</u>	<u>1</u>

The issued shares have no par value and carried on the books at a value of \$200.

JAMAICA BAUXITE INSTITUTE LIMITED**NOTES TO THE FINANCIAL STATEMENTS****YEAR ENDED MARCH 31, 2022****16. MEDICAL BENEFITS SCHEME**

In addition to pension benefits, the company offers retirees medical benefits. Funds are not built up to cover the obligations under the medical benefit plan. The method of accounting and frequency of valuations are similar to those used for the pension plan. The valuation of the defined benefit obligation was also carried out by the same actuary as for the pension plan on the same valuation basis.

(a) The principal actuarial assumptions used in valuing Medical benefits are:

	2022	2021
	\$'000	\$'000
Discount rate	8.0	8.5
Medical claims	8.0	8.5
Inflation	5.0	5.5

The weighted average duration of the obligation is 27 years (2021: 27 years).

(b) The liability recognized in the statement of financial position was determined as follows:

	2022	2021
	\$'000	\$'000
Present value of funded obligation	<u>85,999</u>	<u>83,501</u>

(c) The movement in the present value of the defined benefit obligation during the year is as follows:

	2022	2021
	\$'000	\$'000
At the beginning of the year	83,501	96,861
Service cost	3,903	3,599
Interest cost	7,007	6,218
Remeasurement recognized in other comprehensive income	(6,233)	(20,733)
Benefits paid	<u>(2,180)</u>	<u>(2,444)</u>
	<u>85,999</u>	<u>83,501</u>

(d) The amounts recognized in surplus for the year in respect of the plan are as follows:

	2022	2021
	\$'000	\$'000
Current service cost	3,903	3,599
Interest cost	<u>7,007</u>	<u>6,218</u>
	<u>10,910</u>	<u>9,817</u>

The charge for the year is included in administrative expense in the profit or loss in the statement of comprehensive income.

JAMAICA BAUXITE INSTITUTE LIMITED

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2022

16. MEDICAL BENEFITS SCHEME (CONTINUED)

(e) The remeasurement gain (loss) in other comprehensive income is analyzed as follows:

	2022	2021
	\$'000	\$'000
Actuarial change arising from financial assumptions	(7,548)	25,105
Experience adjustments	13,781	(4,372)
	<u>6,233</u>	<u>20,733</u>

(f) Sensitivity analysis

	Discount rate	
	1% Decrease	1% Increase
	\$'000	\$'000
Impact on the present values of Defined benefit obligation – increase/ (decrease)		
2022	<u>(12,759)</u>	<u>16,633</u>
2021	<u>(12,294)</u>	<u>15,929</u>
	Medical inflation	
	1% Decrease	1% Increase
	\$'000	\$'000
Impact on the present values of Defined benefit obligation – increase/ (decrease)		
2022	<u>(12,765)</u>	<u>16,342</u>
2021	<u>(12,305)</u>	<u>15,657</u>

17. PROJECT FUNDS

This represents amounts held for Midland Enterprise and JWL Arawak Project.

JAMAICA BAUXITE INSTITUTE LIMITED**NOTES TO THE FINANCIAL STATEMENTS****YEAR ENDED MARCH 31, 2022**

18. TRADE AND OTHER PAYABLES

	2022	2021
	\$'000	\$'000
Accruals	2,846	38,062
Vacation leave accrual	11,329	10,571
Withholding taxes	15	178
Pension and health	1,270	1,377
Statutory contributions	3,221	(37)
Other payables	1,384	52
	<u>20,065</u>	<u>50,203</u>

19. RELATED PARTY TRANSACTIONS

	2022	2021
	\$'000	\$'000
(a) Transactions with related parties		
Board of Directors' fees	1,972	2,194
General Manager's emoluments	10,993	7,289
	<u>12,965</u>	<u>9,483</u>
(b) Key management compensation		
Short-term employee benefit		
Management remuneration	20,748	39,633
Other allowances	8,327	10,396
	<u>29,075</u>	<u>50,029</u>
Pension & health	2,595	1,113
	<u>31,670</u>	<u>51,142</u>