Consolidated financial statements of

Ivanhoe Mines Ltd.

December 31, 2022
(Stated in U.S. dollars)

Ivanhoe Mines Ltd.

Management's responsibility for financial reporting

The accompanying annual consolidated financial statements of Ivanhoe Mines Ltd. (the "Company") have been prepared by management and are in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

Management acknowledges its responsibility for the preparation and presentation of the annual consolidated financial statements, which includes designing and implementing internal controls to provide reasonable assurance of the fair presentation of financial statements that are free from material misstatement, whether due to fraud or error, selecting and applying appropriate accounting policies, and making accounting estimates that are reasonable in the circumstances.

Any system of internal control over financial reporting, no matter how well designed, has inherent limitations. The result of the inherent limitations in all control systems means design and operation of controls cannot provide absolute assurance that all control issues and instances of fraud will be detected.

The Board of Directors approves the consolidated financial statements and ensures that management discharges its financial reporting responsibilities. The Board's review is accomplished principally through the Audit Committee, which is composed of non-executive directors. The Audit Committee meets periodically with management and the auditors to review financial reporting and control matters.

(Signed) Marna Cloete

Marna Cloete
President

(Signed) David van Heerden

David van Heerden
Chief Financial Officer

March 10, 2023

Ivanhoe Mines Ltd.

December 31, 2022

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Independent auditor's report

To the Shareholders of Ivanhoe Mines Ltd.

Our opinion

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of Ivanhoe Mines Ltd. and its subsidiaries (together, the Company) as at December 31, 2022 and 2021, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS).

What we have audited

The Company's consolidated financial statements comprise:

- the consolidated statements of financial position as at December 31, 2022 and 2021;
- the consolidated statements of comprehensive income for the years then ended;
- the consolidated statements of changes in equity for the years then ended;
- the consolidated statements of cash flows for the years then ended; and
- the notes to the consolidated financial statements, which include significant accounting policies and other explanatory information.

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Company in accordance with the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA Code) and the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada. We have fulfilled our other ethical responsibilities in accordance with these requirements.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the year ended December 31, 2022. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter	How our audit addressed the key audit matter
Valuation of the embedded derivative liability	
As disclosed in *Note 15: Convertible notes* in the consolidated financial statements, the Company concluded a private placement offering of $575 million on March 17, 2021 of 2.50% convertible senior notes maturing in 2026. Due to the election right of the holder and the conversion feature the convertible notes have an embedded derivative liability that is measured at fair value with changes in value being recorded in profit or loss, as well as the host loan that is accounted for at amortised cost. The key inputs and assumptions in determining the fair value of the embedded derivative liability at each reporting period are as follows: - Share price; - Credit spread; - Volatility; and - Borrowing costs We considered the valuation of the embedded derivative liability for the convertible bonds to be a matter of significance to our audit for the year ended December 31, 2022 due to the judgment and estimation made by management in determining the fair value of the embedded derivative liability and the magnitude of the convertible notes to the consolidated financial statements.	Our audit procedures in respect of the valuation of the embedded derivative liability included the following: - We obtained the key inputs and assumptions used in the valuation model from management; - We utilised our internal valuation specialists to independently recalculate the fair value taking into account independently obtained data such as the share price, credit spread, volatility and borrowing costs. The outcome was compared to the fair value as determined by management's expert. The fair value as calculated by management's expert is within an acceptable range when compared to the results of our internal valuation specialist; and - We have assessed the presentation and disclosure in terms of IFRS 7: Financial Instruments - Disclosure.
Recognition of deferred tax asset - Kipushi Project	
As disclosed in *Note 7: Income taxes* in the consolidated financial statements, the Company recognized the previously unrecognized deferred tax asset relating to the Kipushi Project on June 30, 2022.	Our audit procedures in respect of the recognition of the deferred tax asset relating to the Kipushi Project included the following: - We obtained management's assessment supporting the recognition

Key audit matter	How our audit addressed the key audit matter
Taking into account the factors set out below, the Company considers it probable that the Kipushi Project will have future taxable profits that will be available against which the deductible temporary differences can be utilized. The Company considered the following: - The positive findings of the independent 2022 Feasibility Study released in February 2022; - The signing of an agreement between the Company and Gécamines during December 2021 to return the Kipushi Project back to commercial production; and - The Company, together with Gécamines, approved the development budget for the Kipushi Project in line with the 2022 Feasibility Study during June 2022. We considered the recognition of the deferred tax asset relating to the Kipushi Project to be a matter of most significance to the audit for the year ended December 31, 2022 due to the following: - The significant judgment and estimation made by management in determining the whether the Kipushi Project will have future taxable profits that will be available against which the deductible temporary differences can be utilized; and - The magnitude of the deferred tax balance to the consolidated financial statements. Refer to note 2 (c) and note 7 (b) to the consolidated financial statements.	of the deferred tax asset relating to the Kipushi Project; - We obtained management's discounted cash flow model used in the impairment assessment of the Kipushi Project and that supports that it is likely that sufficient future taxable profits will be available against which the deductible temporary differences can be utilized and performed the following procedures on this model: o We made use of our corporate finance and financial modelling expertise to assess the valuation model used in management's impairment assessment. We found that the model is materially consistent with best practice; o We made use of our internal valuation expertise to evaluate the appropriateness of the forecasted average long-term commodity prices used by management in the discounted cash flow model, which we compared to a range of forecasts by independent analysts. The forecasted average long-term commodity prices fell within range; o We found that management's discounted cash flow model is based in real terms. With recognition of the deferred tax asset, our internal valuation specialists prepared a scenario to convert the cash flows from real to nominal cash flows and discounted the model at a nominal discount rate;

Key audit matter	How our audit addressed the key audit matter
	○ The deferred tax asset balance calculated by management was within an acceptable range when compared to the results of our internal valuation specialist; and - We considered the requirements of IAS 12: Income Taxes to recognise deferred tax assets relating to unused tax losses and tax credits. A deferred tax asset can be recognised for the carry forward of unused tax losses and unused tax credits to the extent that it is probable that future taxable profit will be available against which the unused tax losses and unused tax credits can be utilised. The requirements of IAS 12.34-36 have been met.

Other information

Management is responsible for the other information. The other information comprises the Management's Discussion and Analysis.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of management and those charged with governance for the consolidated financial statements

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

In preparing the consolidated 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.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated 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 Canadian generally accepted auditing standards 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 consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance 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.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Oswald Wentworth.

PricewaterhouseCoopers Inc.

PricewaterhouseCoopers Inc.
Director: OT Wentworth
Registered Auditor
Johannesburg, South Africa
March 13, 2023

The examination of controls over the maintenance and integrity of the Company's website is beyond the scope of the audit of the financial statements. Accordingly, we accept no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the website.

Ivanhoe Mines Ltd.

Consolidated statements of financial position as at December 31, 2022

(Stated in U.S. dollars)

	Notes	December 31, 2022	December 31, 2021
		$'000	$'000
ASSETS			
Non-current assets			
Investment in joint venture	4	**2,047,040**	1,641,795
Property, plant and equipment	5	**630,295**	468,272
Mineral properties	6	**264,995**	264,995
Deferred tax asset	7	**208,356**	73,162
Loans receivable	8	**92,475**	41,768
Promissory note receivable	9	**26,756**	26,717
Other receivables	13	**15,141**	–
Investments	10	**9,652**	1,799
Right-of-use asset	11	**7,540**	9,033
Other assets		**4,372**	3,925
Total non-current assets		**3,306,622**	2,531,466
Current assets			
Cash and cash equivalents	12	**597,451**	608,176
Prepaid expenses	14	**28,466**	4,948
Loans receivable	8	**19,629**	61,710
Other receivables	13	**15,742**	10,695
Consumable stores		**1,011**	995
Current tax assets		**364**	216
Total current assets		**662,663**	686,740
Total assets		**3,969,285**	3,218,206
EQUITY AND LIABILITIES			
Capital and reserves			
Share capital	21	**2,347,105**	2,316,293
Share option reserve	21	**141,541**	141,099
Foreign currency translation reserve	22	**(63,830)**	(62,508)
Accumulated profit		**509,801**	98,937
Equity attributable to owners of the Company		**2,934,617**	2,493,821
Non-controlling interests	23	**(93,486)**	(116,824)
Total equity		**2,841,131**	2,376,997
Non-current liabilities			
Convertible notes - host liability	15	**462,290**	434,381
Deferred revenue	16	**310,725**	69,562
Convertible notes - embedded derivative liability	15	**221,300**	244,200
Borrowings	17	**40,823**	38,342
Lease liability	11	**10,761**	11,241
Cash-settled share-based payment liability	18	**9,023**	8,292
Advances payable	19	**3,123**	2,908
Deferred tax liability	7	**1,775**	–
Rehabilitation provision		**1,093**	327
Total non-current liabilities		**1,060,913**	809,253
Current liabilities			
Trade and other payables	20	**61,637**	26,799
Convertible notes - host liability	15	**3,033**	3,033
Cash-settled share-based payment liability	18	**2,025**	1,395
Lease liability	11	**546**	729
Total current liabilities		**67,241**	31,956
Total liabilities		**1,128,154**	841,209
Total equity and liabilities		**3,969,285**	3,218,206

Continuing operations (Note 1)

(Signed) Peter Meredith

Peter Meredith, Director

(Signed) William Hayden

William Hayden, Director

Ivanhoe Mines Ltd.

Consolidated statements of comprehensive income for the year ended December 31, 2022

(Stated in U.S. dollars)

	Notes	December 31, 2022	December 31, 2021
		$'000	$'000
Operating income (expenses)			
Share of profit from joint venture net of tax	4	**254,180**	105,742
Reversal of VAT write-off		**4,555**	–
Exploration and project evaluation expenditure	6	**(33,912)**	(52,171)
Share-based payments	24	**(27,216)**	(20,002)
Salaries and benefits		**(13,651)**	(16,070)
Other expenditure		**(9,025)**	(8,105)
Travel costs		**(7,529)**	(6,971)
Legal fees		**(2,252)**	(3,282)
Foreign exchange (loss) gain		**(2,031)**	65
Professional fees		**(1,776)**	(4,110)
Profit (loss) from operating activities		**161,343**	(4,904)
Finance income	26	**175,298**	102,290
Gain (loss) on fair valuation of embedded derivative liability	15	**22,900**	(93,700)
Other income	27	**2,907**	3,500
Finance costs	25	**(38,084)**	(32,891)
Loss on fair valuation of financial asset	10	**(3,627)**	(266)
Transaction costs on convertible notes offering	15	**–**	(3,651)
Profit (loss) before income taxes		**320,737**	(29,622)
Income tax recovery (expense)			
Current tax	7	**119**	(107)
Deferred tax	7	**113,250**	75,041
		113,369	74,934
Profit for the year		**434,106**	45,312
Profit (loss) attributable to:			
Owners of the Company		**410,864**	55,242
Non-controlling interests		**23,242**	(9,930)
		434,106	45,312
Other comprehensive loss			
Items that may subsequently be reclassified to profit:			
Exchange loss on translation of foreign operations, net of tax		**(1,226)**	(28,170)
Items that may subsequently be reclassified to profit:		**(1,226)**	(28,170)
Total comprehensive income for the year		**432,880**	17,142
Total comprehensive income (loss) attributable to:			
Owners of the Company		**409,542**	29,790
Non-controlling interests	23	**23,338**	(12,648)
		432,880	17,142
Basic profit per share	28	**0.34**	0.05
Diluted profit per share	28	**0.33**	0.05

Ivanhoe Mines Ltd.

Consolidated statements of changes in equity
for the year ended December 31, 2022

(Stated in U.S. dollars)

	Share capital							
	Number of shares	Amount	Share option reserve	Foreign currency translation reserve	Accumulated profit	Equity attributable to owners	Non-controlling interests	Total
		$'000	$'000	$'000	$'000	$'000	$'000	$'000
Balance at January 1, 2021	**1,205,894,118**	**2,302,197**	**131,823**	**(37,056)**	**43,695**	**2,440,659**	**(104,176)**	**2,336,483**
Net profit (loss) for the year	–	–	–	–	55,242	55,242	(9,930)	45,312
Other comprehensive loss	–	–	–	(25,452)	–	(25,452)	(2,718)	(28,170)
Total comprehensive income (loss)	–	–	–	(25,452)	55,242	29,790	(12,648)	17,142
Transactions with owners								
Share-based payments charged to operations (Note 24)	–	–	16,249	–	–	16,249	–	16,249
Restricted share units vested (Note 21(c))	1,216,071	4,025	(4,025)	–	–	–	–	–
Deferred share units settled (Note 21(d))	21,530	168	–	–	–	168	–	168
Bonus shares issued (Note 21(e))	66,336	496	–	–	–	496	–	496
Options exercised (Note 21(b))	2,467,346	9,407	(2,948)	–	–	6,459	–	6,459
Balance at December 31, 2021	**1,209,665,401**	**2,316,293**	**141,099**	**(62,508)**	**98,937**	**2,493,821**	**(116,824)**	**2,376,997**
Net profit for the year	–	–	–	–	410,864	410,864	23,242	434,106
Other comprehensive (loss) income	–	–	–	(1,322)	–	(1,322)	96	(1,226)
Total comprehensive income (loss)	–	–	–	(1,322)	410,864	409,542	23,338	432,880
Transactions with owners								
Share-based payments charged to operations (Note 24)	–	–	25,129	–	–	25,129	–	25,129
Restricted share units vested (Note 21(c))	2,738,292	18,740	(18,740)	–	–	–	–	–
Deferred share units settled (Note 21(d))	78,049	608	–	–	–	608	–	608
Options exercised (Note 21(b))	4,272,837	11,464	(5,947)	–	–	5,517	–	5,517
Balance at December 31, 2022	**1,216,754,579**	**2,347,105**	**141,541**	**(63,830)**	**509,801**	**2,934,617**	**(93,486)**	**2,841,131**

Ivanhoe Mines Ltd.

Consolidated statements of cash flows
for the year ended December 31, 2022

(Stated in U.S. dollars)

	Notes	December 31, 2022	December 31, 2021
		$'000	$'000
Cash flows from operating activities			
Profit (loss) before income taxes		**320,737**	(29,622)
Items not involving cash			
Share of profit from joint venture	4	**(254,180)**	(105,742)
Finance income	26	**(175,298)**	(102,290)
(Gain) loss on fair valuation of embedded derivative liability	15	**(22,900)**	93,700
Non-cash movement in other receivables		**(15,141)**	–
Finance costs	25	**38,084**	32,891
Share-based payments	24	**27,216**	20,002
Depreciation		**5,327**	8,696
Decrease in fair valuation of financial asset	10	**3,627**	266
Unrealized foreign exchange loss		**2,328**	261
Transfer from other assets to working capital items		**1,109**	935
Expected credit loss provision		**1,017**	–
Depreciation on right-of-use asset	11	**543**	894
Loss on disposal of property, plant and equipment		**26**	454
Other taxes		**(3)**	3
		(67,508)	(79,552)
Proceeds from streaming transaction (net of transaction costs)	16	**223,901**	69,562
Interest received	26	**14,590**	2,259
Change in working capital items	31	**6,257**	811
Interest paid		**(141)**	(96)
Income taxes paid		**(13)**	(74)
Net cash generated from (used in) operating activities		**177,086**	(7,090)
Cash flows from investing activities			
Property, plant and equipment acquired		**(158,655)**	(52,044)
Investment in listed shares	10	**(13,329)**	–
Other assets acquired		**(1,728)**	(410)
Cash paid on behalf of joint venturer	9	**(39)**	(3,198)
Proceeds from sale of property, plant and equipment		**117**	280
Loan advanced to joint venture		**–**	(152,652)
Purchase of exploration licences	6	**–**	(557)
Net cash used in investing activities		**(173,634)**	(208,581)
Cash flows from financing activities			
Settlement of coupon interest on convertible bonds	15	**(14,375)**	(8,306)
Principal portion of lease liability repaid		**(714)**	(716)
Deferred share units settled in cash		**(118)**	–
Options exercised		**5,517**	6,459
Proceeds from issuance of convertible bonds (net of transaction costs)	15	**–**	564,531
Net cash (used in) generated from financing activities		**(9,690)**	561,968
Effect of foreign exchange rate changes on cash		**(4,487)**	(946)
Net cash (outflow) inflow		**(10,725)**	345,351
Cash and cash equivalents, beginning of year		**608,176**	262,825
Cash and cash equivalents, end of year		**597,451**	608,176

1. Basis of presentation and going concern assumption

Ivanhoe Mines Ltd. is a mining, development and exploration company incorporated in Canada which, together with its subsidiaries and joint venture, is focused on the mining, development and exploration of minerals and precious metals from its property interests located primarily in Africa.

The registered and records office of the Company is located at Suite 606-999 Canada Place, Vancouver, British Columbia, Canada V6C 3E1. The Company is listed on the Toronto Stock Exchange ("TSX") under the ticker symbol IVN. The shares of the Company are also traded on the OTCQX Best Market in the United States of America under the symbol IVPAF.

These consolidated financial statements have been prepared on the historical cost basis with the exception of certain financial instruments and share-based payments which are measured at fair value. Historical cost is generally based on the fair value of the consideration given in exchange for assets. The financial statements are also prepared on a going concern basis, which contemplates the realization of assets and settlement of liabilities in the normal course of business.

The Company has an accumulated profit of $509.8 million at December 31, 2022 (December 31, 2021: $98.9 million). As at December 31, 2022, the Company's total assets exceeds its total liabilities by $2,841.1 million (December 31, 2021: $2,377.0 million) and current assets exceeds current liabilities by $595.4 million (December 31, 2021: $654.8 million).

2. Significant accounting policies

The significant accounting policies used in these consolidated financial statements have been consistently applied to all years presented, unless otherwise stated, and are as follows:

(a) Statement of compliance

The Company's consolidated financial statements have been prepared using accounting policies in compliance with International Financial Reporting Standards ("IFRS") and Interpretations of the IFRS Interpretations Committee ("IFRIC"), effective for the Company's reporting year ended December 31, 2022. The Company has not adopted any new or amended standards which are not yet effective.

(b) Basis of consolidation

The consolidated financial statements incorporate the financial statements of Ivanhoe Mines Ltd. and the entities it controls (its subsidiaries) (collectively referred to as the Company).

Control is achieved when the Company:

- has power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power to affect its returns.

The Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

2. Significant accounting policies (continued)

(b) Basis of consolidation (continued)

When the Company has less than a majority of the voting rights of an investee, it has power over the investee when the voting rights are sufficient to give it the practical ability to direct the relevant activities of the investee unilaterally. The Company considers all relevant facts and circumstances in assessing whether or not the Company's voting rights in all investees are sufficient to give it power, including:

- the size of the Company's holding of voting rights relative to the size and dispersion of holdings of the other vote holders;
- potential voting rights held by the Company, other vote holders or other parties;
- rights arising from other contractual arrangements; and
- any additional facts and circumstances that indicate that the Company has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous shareholders' meetings.

Income and expenses of subsidiaries acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the effective date of acquisition and up to the effective date of disposal, as appropriate. Total comprehensive profit and loss of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

When necessary, adjustments are made to the financial statements of subsidiaries to align their accounting policies with those used by the Company.

All intra-group transactions, balances, income and expenses are eliminated in full on consolidation.

Changes in the Company’s interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions. The Company accounts for a change in the Company’s share of comprehensive income of the joint venture in the consolidated statement of comprehensive income. The carrying amount of the Company’s interest and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiary. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity attributable to the owners of the Company. The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the fair value on initial recognition for subsequent accounting under IFRS 9, when applicable, the cost on initial recognition of an investment in an associate or joint venture.

When the Company ceases to consolidate or equity account for an investment because of a loss of control, joint control or significant influence, any retained interest in the entity is remeasured to its fair value, with the change in carrying amount recognized in profit or loss. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive income in respect of that entity are accounted for as if the Company had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in other comprehensive income are reclassified to profit or loss.

The preparation of financial statements in conformity with IFRS requires the Company’s management to make estimates and assumptions concerning the future. The resulting accounting estimates can, by definition, only approximate the actual results. Estimates are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

2. Significant accounting policies (continued)

(c) Significant accounting estimates and judgments

Significant accounting judgments are accounting policies that have been identified as being complex or involving subjective judgments or assessments.

Recoverability of assets

Property, plant and equipment, including capitalized development costs and finite-lived intangible assets are assessed at each reporting period to determine whether there is any indication that those assets have suffered an impairment loss.

In assessing whether an impairment is required, the carrying value of the asset or cash generating unit ("CGU") is compared with its recoverable amount. The recoverable amount is the higher of the CGU's fair value less costs of disposal and value in use. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent, if any, of the impairment loss.

The Company assesses whether an impairment is required on loan receivables. The loan to HPX (see Note 8(i)) (including the principal amount of the loan and accrued interest) is convertible in whole, or in part, by Ivanhoe at its sole discretion into shares of treasury common stock of HPX. Repayment of the social development loan (see Note 8(ii)) will be made by offsetting the loan against future royalties and dividends payable to Gécamines from future profits earned at Kipushi.

Given the nature of the Company's activities, information on the fair value of an asset is usually difficult to obtain unless negotiations with potential purchasers or similar transactions are taking place. Consequently, the fair value less costs of disposal for each CGU is estimated based on discounted future estimated cash flows that are expected to be generated from the continued use of the CGUs. They are estimated using market consensus-based commodity price and exchange assumptions, estimated quantities of recoverable minerals, production levels, operating costs and capital requirements, including any expansion projects, and its eventual disposal, based on the CGU development plans and latest technical reports. These cash flows are discounted using a discount rate that reflects current market assessments of the time value of money and the risks specific to the CGU.

If the recoverable amount of an asset or CGU is estimated to be less than its carrying amount, the carrying amount of the asset or CGU is impaired to its recoverable amount. An impairment loss is recognized immediately in the statement of comprehensive income.

2. Significant accounting policies (continued)

(c) Significant accounting estimates and judgments (continued)

Recoverability of assets (continued)

The Company has concluded that there is no impairment required to any of its projects. Significant judgments and assumptions are required in making estimates of determining the recoverable amount (fair value less cost of disposal). This is particularly so in the assessment of long-life assets. It should be noted that the valuations are subject to variability in key assumptions including, but not limited to, long-term commodity prices, capital expenditures, discount rates, transport costs and the cost of production and operating costs. The factors considered by the Company included the following:

- The Platreef discounted cash flow model at the end of the year portrays positive results and there are no indications of impairment. Assumptions made in determining the recoverable amount included, but were not limited to, the following:
  - Life of mine of 28 years;
  - Price forecasts of $1,050/oz Platinum, $1,400/oz Palladium, $1,560/oz Gold, $5,000/oz Rhodium, $7.30/lb Nickel, and $3.10/lb Copper
  - Real discount rate of 8%.

- The Kamoa-Kakula discounted cash flow model at the end of the year portrays very positive results and there are no indications of impairment. Assumptions made in determining the recoverable amount included, but were not limited to, the following:
  - Life of mine of 37 years;
  - Copper price of $3.10/lb;
  - Real discount rate of 8%.

- The net present value (NPV) of the Kipushi project exceeds the carrying value of its assets. Assumptions made in determining the recoverable amount included, but were not limited to, the following:
  - Life of mine of 14 years;
  - Zinc price of $1.20/lb;
  - Real discount rate of 8%.
  - Production levels; and
  - Capital and operating costs assumptions.

Where an impairment loss subsequently reverses, the carrying amount of the asset or CGU is increased to the revised estimate of its recoverable amount, and is limited to the carrying amount that would have been determined had no impairment loss been recognized for the asset or CGU in prior years. A reversal of an impairment loss is recognized immediately in the statement of comprehensive income.

2. Significant accounting policies (continued)

(c) Significant accounting estimates and judgments (continued)

Determination of functional currency

The Company has used its judgment to determine the functional currency that most faithfully represents the economic effects of the underlying transactions, events and conditions and determined that the Company's functional currency is the U.S. dollar. Factors considered in making this determination include:

- The currency that primarily influences the costs of labour, materials and other costs incurred in development of the Company's projects is the U.S. dollar.
- The vast majority of funding provided by Ivanhoe Mines Ltd. to the project companies (including the Kamoa Holding joint venture) to fund the development activities is denominated in U.S. dollar. The repayment of this funding is anticipated to also be in U.S dollar.
- The majority of the funding and cash that is used to develop the Company's projects is held in U.S dollars and only converted to other currencies if required to be utilized for a specific reason in that particular other currency.
- Sales of copper concentrate and blister copper at Kamoa-Kakula are determined in U.S. dollar and although the Company does not yet sell the output that will be produced at its other projects, the currency in which the future selling prices are to be determined is the U.S. dollar.
- Although the project companies do not yet remit any funds to the Company, it is anticipated that any such remittance in future periods, in whichever form, will be denominated in U.S dollar.

The Company's subsidiaries have a variety of functional currencies that include, but are not limited to, U.S. dollar ("USD"), South African Rand ("ZAR") and Canadian dollar ("C$").

Technical feasibility and commercial viability of projects

In determining whether an exploration and evaluation property is technically feasible and commercially viable, the Company considers the following elements:

- a technical analysis of the basic geology of the project;
- a mine plan for accessing and exploiting the ore body;
- a process flow sheet for processing the ore generated from mining;
- projections as to the capital cost of constructing the project;
- projections as to the cost of operating the project in accordance with the mine plan;
- projections as to revenues from the concentrate or other mineral product to be generated from operations in accordance with the mine plan; and
- an economic analysis of the project based on the projected capital and operating costs and production revenues.

Classification of Kamoa Holding Limited as a joint venture

- Kamoa Holding Limited is a limited liability company whose legal form confers separation between the parties to the joint arrangement and the company itself. Furthermore, there is no contractual arrangement or any other facts and circumstances that indicate that the parties to the joint arrangement have rights to the assets and obligations for the liabilities of the joint arrangement. Accordingly, Kamoa Holding Limited is classified as a joint venture of the Company. See Note 4 for details.

2. Significant accounting policies (continued)

(c) Significant accounting estimates and judgments (continued)

Determination of inputs into lease accounting

- Lease payments should be discounted using the interest rate implicit in the lease unless that rate cannot be readily determined, in which case the lessee's incremental borrowing rate is used, being the rate that the individual lessee would have to pay to borrow the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment with similar terms, security and conditions. The Company has used the risk-free interest rate adjusted for credit risk specific to the lease.
- In determining the lease term, the Company considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated). For the rented surface infrastructure (Kipushi), the lease term is the life of mine and therefore the Company reasonably assessed that the lease will not be extended beyond or terminated before the end of that period. For the office buildings the lease cannot be reasonably certain to be extended as the contract has already been extended to October 31, 2027, beyond which there is no certainty of further extension. The lease term for the office building is the length of the contract.

Provisionally priced revenue and remeasurement of contract receivables

Sales in the Kamoa Holding Limited joint venture are provisionally priced at the average market price on the date that the products are delivered to the buyers at the Kamoa-Kakula mine concentrate warehouse or the demarcated holding area at the Lualaba Copper Smelter premises. Revenue from the contract receivables is recognized for all the sales during the year at the average market price for the month in which the sales occurred. Revenue from contract receivables are remeasured with reference to the forward market price at each reporting date and the remeasurement of contract receivables is recognized as revenue in the statement of comprehensive income of the Kamoa Holding Limited joint venture.

Bill-and-hold arrangements

During the year ended December 31, 2022, the Kamoa Holding Limited joint venture had a bill-and-hold arrangement with a customer for copper concentrate sales, as described in IFRS 15. The control of the copper concentrate had passed to the customer however physical possession was retained by Kamoa-Kakula.

Revenue from the copper concentrate sales was recognized by the joint venture when control of the goods transferred to the customer through fulfilment of the contractual performance obligations, which was to deliver the concentrate to the customer. Delivery of the concentrate was on a free-carrier basis as per INCOTERMS 2020, with the point of delivery being on the floor of the Kamoa-Kakula concentrate warehouse. Upon delivery as per the contract, Kamoa-Kakula had a present right to payment for the concentrate and revenue was therefore recognized.

2. Significant accounting policies (continued)

(c) Significant accounting estimates and judgments (continued)

Valuation of embedded derivative liability

The Company used the following key inputs and estimates to determine the fair value of the embedded derivative liability at initial recognition and at the end of each year:

	March 17, 2021	December 31, 2021	December 31, 2022
Share price	C$7.00	C$10.32	CS$10.70
Credit spread	630 basis points	356 basis points	419 basis points
Volatility	42%	40%	40%
Borrowing cost	50 basis points	25 basis points	25 basis points

Deferred revenue

The advance payments received under the stream financing agreements (see Note 16) have been accounted for as contract liabilities within the scope of IFRS 15. Under the terms of the agreements, settlement of the contracts will be executed via the delivery of credits to the purchasers. The credits to be delivered are directly linked to the metal contained in concentrate produced at the Platreef mine. The contracts are therefore not financial instruments as the contracts will not be settled in cash or another financial instrument.

Performance obligations under the contracts will be satisfied through production at the Platreef mine and revenue will be recognized over the duration of the contracts. As the contracts are long term in nature and a portion of the financing was received at inception of the contracts, it has been determined that the contracts contain a significant financing component under IFRS 15.

Deferred tax

Significant judgment is required in determining the deferred tax asset related to the Platreef and Kipushi Projects. This includes the probability that there will be sufficient taxable income in the future against which the deferred tax can be utilized. The Company recognized the previously unrecognized deferred tax asset relating to the Platreef Project in the year ended December 31, 2021. Due to the conclusion of the stream-financing agreements and the announcement of the exceptional results of the independent 2022 Feasibility Study, the Company considers it highly probable that the Platreef Project will have future taxable profits that will be available against which the deductible temporary differences can be utilized (see Note 7).

With the agreement of the development plan for the Kipushi Project by its shareholders and the approval of the development budget consistent with the feasibility study, the Company considers is probable that future taxable profit will be available, against which the unused tax losses and unused tax credits can be utilized. As a result, the Company recognized the previously unrecognized deferred tax asset of the Kipushi Project in June 2022 (see Note 7).

Provisions for tax claims

From time to time, the Company becomes subject to claims or assessments made by tax or other authorities in the ordinary course of its business. Such claims may be made against the Company, or its subsidiaries and affiliates, or its joint ventures. Given the complexity, scope and multi-jurisdictional nature of the Company's business, such claims may arise in several jurisdictions and may involve complex legal, tax or accounting matters.

2. Significant accounting policies (continued)

(c) Significant accounting estimates and judgments (continued)

Provisions for tax claims (continued)

Management assesses the Company's liabilities and contingencies for all tax years open to claims or assessment based upon the latest information available. The Company accrues for such claims, or makes a provision, in its financial statements, when a liability resulting from the claim is both probable and the amount can be reasonably estimated. In order to assess such likelihood management reviews claims with the benefit of internal and external legal advice where appropriate.

The joint venture is currently subject to several such claims, all of which have been determined by management, with the benefit of legal advice, to be without merit and justification and therefore not probable that a liability would arise therefrom. Where these estimated liabilities are determined as probable, management has determined that such liability would not have a material effect on the consolidated financial statements of the Company. Such determinations are based on current information and advice, which is subject to change based on changed facts or circumstances. Accordingly, management may re-assess any prior determination regarding the likelihood of a probable liability at any time.

(d) Interests in joint ventures

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The results and assets and liabilities of joint ventures are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment, or portion thereof, is classified as held for sale, in which case it is accounted for in accordance with IFRS 5. Under the equity method a joint venture is initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Company's share of the profit or loss and the other comprehensive income of the joint venture.

When the Company's share of losses of the joint venture exceeds the Company's interest in that joint venture (which includes any long-term interests that in substance form part of the Company's net investment in the joint venture), the Company discontinues recognizing its share of further losses. Additional losses are recognized only to the extent that the Company has incurred legal or constructive obligations or made payments on behalf of the joint venture.

An investment in a joint venture is accounted for using the equity method from the date on which the investee becomes a joint venture. On acquisition of the investment in a joint venture, any excess of the cost of the investment over the Company's share of the net fair value of the identifiable assets and liabilities of the investee is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Company's share of the net fair value of the identifiable assets and liabilities over the cost of the investment, after reassessment, is recognized immediately in profit or loss in the period in which the investment is acquired.

When a group entity transacts with a joint venture of the Company, profits and losses resulting from the transactions with the joint venture are recognized in the Company's consolidated financial statements only to the extent of interests in the joint venture that are not related to the Company.

2. Significant accounting policies (continued)

(e) Property, plant and equipment

All property, plant and equipment are recorded at historical cost net of accumulated depreciation and any impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items. Subsequent costs are included in the asset's carrying value or recognized as a separate asset as appropriate, only when it is probable that future economic benefits associated with the specific asset will flow to the Company and the cost can be measured reliably. All other repairs and maintenance are charged to profit or loss during the reporting period in which they are incurred.

Depreciation commences once the asset is available for use and is calculated on the straight-line method to write off the cost of each asset to its residual value over their estimated useful life. The assets' residual values, useful lives and depreciation methods are reviewed and adjusted if appropriate, at each financial year end. Any changes are accounted for prospectively as a change in accounting estimate. Depreciation is recognized so as to write off the cost or valuation of assets (other than freehold land and assets under construction) less their residual values over their useful lives, using the straight-line method.

The expected lives applicable to each category of fixed assets are as follows:

• Buildings	5 to 20 years
• Office equipment	3 to 8 years
• Motor vehicles	5 to 7 years
• Plant and equipment	3 to 7 years
• Aircraft	8 years
• Mining Infrastructure	20 to 30 years

Freehold land is not depreciated.

The Company reviews the carrying values of its property, plant and equipment whenever events or changes in circumstances indicate that their carrying values may exceed their estimated net recoverable amounts determined by reference to estimated future operating results and discounted net cash flows. An impairment loss is recognized when the carrying value of those assets is not recoverable and exceeds their fair value.

The gain or loss arising on the disposal of an item of property, plant and equipment is determined as the difference between the sale proceeds and the carrying amount of the asset and is recognized in profit and loss.

Assets in the course of construction for production, supply or administrative purposes, including development costs, are carried at cost, less any recognized impairment loss. Cost includes costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and, for qualifying assets, borrowing costs capitalized in accordance with the Company's accounting policy. Such assets are initially categorized in the assets under construction category. Management applies its judgement to determine the date on which these assets are re-classified to the appropriate categories of property, plant and equipment when completed and ready for intended use. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

2. Significant accounting policies (continued)

(f) Mineral properties and exploration expenditure

Direct historical costs related to the acquisition of mineral properties are capitalized on a property-by-property basis. The Company reviews the carrying values of its mineral properties whenever events or changes in circumstances indicate that their carrying values may exceed their estimated net recoverable amounts determined by reference to estimated future operating results and discounted net cash flows. An impairment loss is recognized when the carrying value of those assets are not recoverable and exceeds their recoverable amount.

Amortization of mineral properties will commence when commercial production starts. Mineral properties will be amortized over the expected life of mine.

Exploration costs are charged to operations in the period incurred, until such time as the Company determines that a property is technically feasible and commercially viable, whereafter those determined to be development costs are capitalized as property, plant and equipment. In making this determination the Company considers whether a proposed project is capable of being developed at a sufficient return to justify the capital and managerial resources that must be committed to the project. The determination is made on a property by property basis and generally coincides with the finalization of a preliminary economic assessment or pre-feasibility study of the property. Development costs are capitalized as property, plant and equipment and are costs incurred to obtain access and to provide facilities for extracting, treating, gathering, transporting and storing the minerals.

Development expenditures are capitalized to the extent that they are necessary to bring the property to commercial production.

On the commencement of commercial production, net capitalized costs are charged to operations on a unit-of-production basis, by property, using estimated proven and probable recoverable reserves as the depletion base. Where the Company's exploration and development activities are conducted jointly with others, these consolidated financial statements reflect only the Company's interests in such activities.

(g) Long-term loans receivable

Long-term loans receivable have been recognized on the date that the Company is contractually entitled to receive the associated cash flows. The long-term loans receivable will be derecognized when the rights to receive cash flows associated with the receivables have expired or have been transferred and the Company has transferred substantially all the risks and rewards of ownership.

At initial recognition, the long-term loans receivable have been measured at fair value, with associated transaction costs being expensed in the statement of comprehensive income and are subsequently measured at amortized cost.

(*h) Leases*

IFRS 16 requires a lessee to recognize assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. A lessee is required to recognize a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments.

A contract is, or contains, a lease if it conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Company leases various land, offices, equipment and vehicles.

2. Significant accounting policies (continued)

(*h*) *Leases (continued)*

Contracts may contain both lease and non-lease components. The Company allocates the consideration in the contract to the lease and non-lease components based on the terms contained in the applicable contract or on their relative stand-alone prices.

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants other than the security interests in the leased assets that are held by the lessor. Leased assets may not be used as security for borrowing purposes.

Right-of-use assets

Right-of-use assets are initially measured at:
- the amount of the initial measurement of lease liability;
- any lease payments made at or before the commencement date less any lease incentives received;
- any initial direct costs; and
- restoration costs.

After the lease has commenced the right-of-use asset is measured at cost less accumulated depreciation and accumulated impairment.

Right-of-use assets

Right-of-use assets are depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. If the Company is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset’s useful life.

Lease liabilities

The lease liability is initially measured at the present value of the lease payments payable over the lease term, discounted at the rate implicit in the lease if that can be readily determined. If that rate cannot be readily determined, the Company shall use their incremental borrowing rate.

The Company has used its incremental borrowing rate because the interest rate implicit in the lease cannot be readily determined.

To determine the incremental borrowing rate, the Company:
- where possible, uses recent third-party financing received by the individual lessee as a starting point, adjusted to reflect changes in financing conditions since third-party financing was received;
- uses a build-up approach that starts with a risk-free interest rate adjusted for credit risk for leases held by the Company, which does not have recent third party financing; and
- makes adjustments specific to the lease, e.g. term, country, currency and security.

The initial measurement of the lease liability includes:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable;
- variable lease payment that are based on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable by the Company under residual value guarantees;
- the exercise price of a purchase option if the Company is reasonably certain to exercise that option; and
- payments of penalties for terminating the lease, if the lease term reflects the Company exercising that option.

2. Significant accounting policies (continued)

(*h*) *Leases (continued)*

Lease liabilities (continued)

Variable lease payments that are not included in the measurement of the lease liability are recognized in profit or loss in the period in which the event or condition that triggers payment occurs, unless the costs are included in the carrying amount of another asset under another Standard.

The lease liability is subsequently remeasured to reflect changes in:
- the lease term (using a revised discount rate);
- the assessment of a purchase option (using a revised discount rate);
- the amounts expected to be payable under residual value guarantees (using an unchanged discount rate);
- future lease payments resulting from a change in an index or a rate used to determine those payments (using an unchanged discount rate); or
- lease modifications (unless they are to be treated as separate leases).

The re-measurements are treated as adjustments to the right-of-use asset.

Lease payments are allocated between principal and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The finance cost is included as interest paid in the operating activities section of the consolidated statement of cash flows.

Practical expedients not relied on:

- Election by class of underlying asset, not to separate non-lease components from lease components and instead account for all components as a lease.
- Re-assessment whether a contract is, or contains, a lease at the date of initial application.
- Applying IFRS 16 to a portfolio of leases with similar characteristics if the entity reasonably expects that the effects on the financial statements would not differ materially from applying IFRS 16 to the individual leases within that portfolio.

Recognition exemptions

Payments associated with short-term leases and all leases of low-value assets are recognized on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise mainly IT equipment and office furniture.

(i) Promissory note receivable

The Company became party to a non-interest-bearing, 10-year promissory note receivable as the purchase consideration for selling 1% of its share in Kamoa Holding Limited (see Note 4).

The promissory note receivable was recognized when the Company became contractually entitled to receive the cash flows associated with it and was initially measured at fair value with associated transaction costs being expensed in the statement of comprehensive income. The promissory note receivable is subsequently measured at amortized cost.

(j) Other assets

Other assets represent prepayments for non-current assets and deposits of the Company. Other assets are cash paid for which the related asset, service or benefit is expected to be received more than 12 months from the end of the reporting period.

2. Significant accounting policies (continued)

(k) Investments

The Company holds investments in equity instruments of listed and unlisted companies (see Note 10) and measures these investments initially at cost and subsequently at fair value through profit or loss. Transaction costs that are directly attributable to the acquisition of investments carried at fair value through profit or loss are expensed in the statement of comprehensive income.

The classification depends on the Company's business model for managing the investments and the contractual terms of the cash flows. These investments are not held for trading. Purchases and subsequent sales of these equity investments are recognized on trade date, being the date on which the Company commits to purchase or sell these equity instruments.

The investments are derecognized when the rights to receive the cash flows associated with the equity instruments have expired or have been transferred and the Company has transferred substantially all the risks and rewards of ownership.

Investments in listed shares are subsequently measured at fair value through profit and loss with reference to the prevailing share prices at the end of each reporting period. Gains and losses on the equity instruments are recognized in profit or loss.

Investments in unlisted shares are subsequently measured at fair value through profit and loss.

(l) Financial instruments: Financial assets

Classification

The Company classifies its financial assets in the following measurement categories:
- those to be measured subsequently at fair value (either through other comprehensive income (OCI) or through profit or loss); and
- those to be measured at amortized cost.

For assets measured at fair value, gains and losses will be recorded in profit or loss.

Measurement

At initial recognition, the Company measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss (FVTPL), transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVTPL are expensed in profit or loss.

Subsequent measurement of debt instruments depends on the Company's business model for managing the asset and the cash flow characteristics of the asset. There are three measurement categories into which the Company classifies its financial assets:

- Amortized cost: Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. Interest income from these financial assets is included in finance income using the effective interest rate method. Any gain or loss arising on derecognition is recognized directly in profit or loss. Impairment losses, if recognized, are presented as a separate line item in the statement of profit or loss.

2. Significant accounting policies (continued)

(l) Financial instruments: Financial assets (continued)

Measurement (continued)

- Fair value through OCI (FVTOCI): Assets that are held for collection of contractual cash flows and for resale, where the assets' cash flows represent solely payments of principal and interest, are measured at FVTOCI. Movements in the carrying amount are taken through OCI, except for the recognition of impairment gains or losses, interest income and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in OCI is reclassified from equity to profit or loss. Interest income from these financial assets is included in finance income using the effective interest rate method. Impairment expenses are presented as a separate line item in the statement of profit or loss.

- FVTPL: Assets that do not meet the criteria for amortized cost or FVTOCI are measured at FVTPL. A gain or loss on a debt investment that is subsequently measured at FVTPL is recognized in profit or loss.

Impairment

The Company assesses on a forward-looking basis the expected credit losses associated with its debt instruments carried at amortized cost and FVTOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

For trade receivables, the Company applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognized from initial recognition of the receivables. Loan receivables and the promissory note receivable are assessed using the general approach.

(m) Taxation

Current tax

The tax currently payable is based on taxable income for the year. Taxable profit differs from profit as reported in the consolidated statement of comprehensive income because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Company's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable income. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. Such deferred tax assets and liabilities are not recognized if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit or loss nor the accounting profit or loss.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, and interests in joint ventures, except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

2. Significant accounting policies (continued)

(m) Taxation (continued)

Deferred tax (continued)

Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent that it is probable that there will be sufficient taxable profits against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset when there is a legally-enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Company intends to settle its current tax assets and liabilities on a net basis.

Current and deferred tax for the year

The Company recognized the previously unrecognized deferred tax asset relating to the Platreef Project in the year ended December 31, 2021. Due to the conclusion of the stream-financing agreements and the announcement of the exceptional results of the independent 2022 Feasibility Study, the Company considers it highly probable that the Platreef Project will have future taxable profits that will be available against which the deductible temporary differences can be utilized (see Note 7).

The Company recognized the previously unrecognized deferred tax asset relating to the Kipushi Project on June 30, 2022. Due to the signing of a new agreement between the Company and Gécamines to return the Kipushi Project back to commercial production and the positive findings of the independent 2022 Feasibility Study, the Company considers it probable that the Kipushi Project will have future taxable profits that will be available against which the deductible temporary differences can be utilized.

Current and deferred taxes are recognized as an expense or income in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case the tax is also recognized outside profit or loss, or where they arise from the initial accounting for a business combination. In the case of a business combination, the tax effect is taken into account in the accounting for the business combination.

(*n) Cash and cash equivalents*

Cash and cash equivalents comprise bank balances and highly liquid investments with original maturities of three months or less.

2. Significant accounting policies (continued)

(o) Prepaid expenses and deposits

Prepaid expenses is cash paid for which a service or benefit is expected to be derived in the future. The future write-off period of the incurred cost will normally be determined by the period of benefit covered by the prepayment. Prepaid expenses specific to a particular period will be expensed when the period arrives and the costs will be treated as a period cost for that period. Prepaid costs for an extended period of time are normally written off equally during the period in which the benefit will be derived.

Prepaid expenses are generally classified as current assets unless a portion of the prepayment covers a period longer than twelve months or the prepayment relates to a non-current asset to be received in the future. When payments may be accounted for as prepaid expenses but the payment will be amortized within the current period and is not considered material to the presentation of financial position, such payments may be expensed in the month the payment is made.

(p) Other receivables

Other receivables represent accounts receivable, including those receivable from the joint venture as well as indirect taxes refundable from governments. Other receivables are initially recognized at the amount of consideration that is unconditional unless they contain significant financing components, in which case they are recognized at fair value. Other receivables are subsequently measured at amortized cost less any loss allowances.

(q) Consumable stores

Consumable stores are stated at the lower of cost and net realisable value. The costs of consumable items are determined using weighted average cost of the items purchased. Costs of purchased items are determined after deducting rebates and discounts.

(r) Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting its liabilities. Equity instruments, which include share capital, are recorded at the proceeds received, net of direct issue costs.

(s) Financial instruments: Financial liabilities

Financial liabilities are classified as either (i) at fair value through profit or loss or (ii) other liabilities at amortized cost. All of the Company's financial liabilities are recognized initially at fair value and subsequently measured at amortized cost, other than derivative liabilities which are measured at fair value through profit or loss.

(t) Borrowings

Borrowings are initially recognized at fair value, net of transaction costs incurred. Borrowings are subsequently measured at amortized cost. Any difference between the proceeds (net of transaction costs) and the redemption amount is recognized in profit or loss over the period of the borrowings using the effective interest method.

Borrowings are removed from the statements of financial position when the obligation specified in the contract is discharged, cancelled or expired. The difference between the carrying amount of a financial liability that has been extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognized in profit or loss as other income or finance costs.

2. Significant accounting policies (continued)

(t) Borrowings (continued)

Borrowings are classified as current liabilities unless the Company has an unconditional right to defer settlement of the liability for at least 12 months after the reporting period.

(u) Advances payable

Advances payable represents an unsecured and interest-bearing loan payable by the Company. Advances payable have been initially recognized at fair value, net of transaction costs incurred. The Company has designated this financial liability as an other liability and subsequently measures the advances payable at amortized cost.

Interest incurred on the advances payable is recognized as finance costs in the statement of comprehensive income.

The Company has classified the advances payable as a non-current liability as the advances are only contractually repayable once the Kipushi project has generated a profit as defined in the contract. The generation of profit at Kipushi is only expected to occur more than 12 months after the reporting period.

(v) Rehabilitation provision

The Company recognizes provisions for statutory, contractual or legal obligations associated with the reclamation of mining property, plant and equipment, when those obligations result from the acquisition, construction, development or normal operation of the assets. Initially, a provision for rehabilitation is recognized at its fair value in the period in which it is incurred.

Upon initial recognition of the provision, the corresponding asset is added to the carrying amount of the related asset and the cost is amortized as an expense over the economic life of the asset using either the unit-of-production method or the straight-line method, as appropriate. Following the initial recognition of the rehabilitation provision, the carrying amount of the provision is increased for the passage of time and adjusted for changes to the amount or timing of the underlying cash flows needed to settle the obligation.

(w) Trade and other payables

Trade and other payables is comprised of accounts payable, accrued liabilities and salary-related liabilities of the Company for goods and services provided to the Company prior to the end of the reporting period which are unpaid. These amounts are unsecured and are usually settled within 30 days of recognition and are therefore classified as current liabilities.

Trade and other payables are recognized initially at their fair value and subsequently measured at amortized cost using the effective interest rate method.

(x) Short-term employee obligations

Liabilities for wages and salaries, including non-monetary benefits and annual leave that are expected to be settled wholly within 12 months after the end of the period in which the employees render the related service are recognized in respect of employees' services up to the end of the reporting period and are measured at the amounts expected to be paid when the liabilities are settled. The liabilities are included in trade and other payables in the balance sheet.

2. Significant accounting policies (continued)

(y) Foreign currencies

In preparing the financial statements of each individual group entity, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences on monetary items are recognized in profit or loss in the period in which they arise except for:

- exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings; and
- exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur (therefore forming part of the net investment in the foreign operation), which are recognized initially in other comprehensive income and reclassified from equity to profit or loss on repayment of the monetary items.

For the purposes of presenting consolidated financial statements, the assets and liabilities of the Company's foreign operations are translated into currency units using exchange rates prevailing at the end of each reporting period. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuate significantly during that period, in which case the exchange rates at the dates of the transactions are used. Exchange differences arising, if any, are recognized in other comprehensive loss and accumulated in equity (attributed to non-controlling interests as appropriate).

On the disposal of a foreign operation (i.e. a disposal of the Company's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, a disposal involving loss of joint control over a jointly controlled entity that includes a foreign operation, or a disposal involving loss of significant influence over an associate that includes a foreign operation), all of the exchange differences accumulated in equity in respect of that operation attributable to the owners of the Company are reclassified to profit or loss.

In addition, in relation to a partial disposal of a subsidiary that does not result in the Company losing control over the subsidiary, the proportionate share of accumulated exchange differences are re-attributed to non-controlling interests and are not recognized in profit or loss. For all other partial disposals (i.e. partial disposals of associates or jointly controlled entities that do not result in the Company losing significant influence or joint control), the proportionate share of the accumulated exchange differences is reclassified to profit or loss.

Goodwill and fair value adjustments on identifiable assets and liabilities acquired arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the rate of exchange prevailing at the end of each reporting period. Exchange differences arising are recognized in equity.

(z) Share-based payments

Equity-settled share-based payments to employees providing services are measured at the fair value of the equity instruments at the grant date.

2. Significant accounting policies (continued)

(z) Share-based payments (continued)

The fair value of share options is estimated as of the date of the grant using a Black-Scholes option valuation model and are recorded in profit and loss over their vesting periods. Share options with graded vesting schedules are accounted for as separate grants with different vesting periods and fair values. Changes to the estimated number of awards that will eventually vest are accounted for prospectively. When the share options are ultimately exercised, the amount in the share-based payment reserve is moved to share capital.

The share-based payment expense relating to the B-BBEE transaction described in Note 24, was determined by using a Monte Carlo simulation of the underlying share, together with its dividends, to estimate the closing share price at vesting date, as well as the remaining funding balance. Cash-settled share-based payments are remeasured at each reporting period.

Restricted share units are equity-settled share-based payments and are valued using the fair value of a common share at time of grant and are recorded in profit and loss over their vesting periods.

(aa) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalization.

All other borrowing costs are recognized in profit or loss in the period in which they incurred.

(bb) Profit or loss per share

The basic profit or loss per share is computed by dividing the profit or loss attributable to the owners of the Company from continuing operations and discontinued operations by the weighted average number of common shares outstanding during the year. The diluted profit or loss per share reflects the potential dilution of common share equivalents, such as outstanding share options and restricted share units, in the weighted average number of common shares outstanding during the year, if dilutive.

(cc) Interests in joint operations

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control. The Company has one joint operation, as described in Note 29.

When a group entity undertakes its activities under joint operations, the Company as a joint operator recognizes in relation to its interest in the joint operation:

- Its assets, including its share of any assets held jointly.
- Its liabilities, including its share of any liabilities incurred jointly.
- Its revenue from the sale of its share of the output arising from the joint operation.
- Its share of the revenue from the sale of the output by the joint operation.
- Its expenses, including its share of any expenses incurred jointly.

2. Significant accounting policies (continued)

(cc) Interests in joint operations (continued)

The Company accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the IFRS applicable to the particular assets, liabilities, revenues and expenses.

When a group entity transacts with a joint operation in which a group entity is a joint operator (such as a sale or contribution of assets), the Company is considered to be conducting the transaction with the other parties to the joint operation, and gains and losses resulting from the transactions are recognized in the Company's consolidated financial statements only to the extent of other parties' interests in the joint operation.

When a group entity transacts with a joint operation in which a group entity is a joint operator (such as a purchase of assets), the Company does not recognize its share of the gains and losses until it resells those assets to a third party.

(dd) Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-makers. The Company's executive management team has been identified as the chief operating decision-makers, and are responsible for allocating resources and assessing performance of the operating segments.

(ee) Related parties

Two parties are considered to be related if one party has the ability, directly or indirectly, to control the other party or exercise significant influence over the party in making financial and operating decisions. Parties are also considered to be related if they are subject to common control or significant influence. Related parties may be individual or corporate entities.

(ff) Convertible notes

The convertible notes comprise a host loan and an embedded derivative liability. The embedded derivative liability arises from the election right of the Company to settle the notes in cash, shares or a combination thereof.

On initial recognition of the convertible notes, the embedded derivative liability was calculated first with the residual value being assigned to the host loan. The host loan is subsequently measured at amortized cost whereas the embedded derivative liability is measured at fair value with changes being recorded in profit or loss.

Transaction costs were apportioned to the host loan and the embedded derivative liability. The portion of the transaction costs attributable to the embedded derivative liability was expensed in the consolidated statements of comprehensive income whereas the transaction costs attributable to the host loan are added to the carrying amount and amortized as part of the effective interest rate.

Interest on the host loan is calculated using the effective interest rate method. The effective interest rate for the host loan is 9.39% which is the rate that is required to discount the contractual cash flows back to the carrying amount, after adjusting for the transaction costs.

2. Significant accounting policies (continued)

(ff) Convertible notes (continued)

The fair value of the embedded derivative liability is obtained from an independent third-party financial institution who uses the following key inputs and assumptions at the end of each reporting period:

- Credit spread
- Borrowing costs
- Volatility
- The prevailing price of the Company's shares

(gg) Deferred revenue

Deferred revenue of the Company represents advance sales under gold and platinum and palladium streaming agreements and is recognized as a contract liability under IFRS 15. The deferred revenue is recognized at fair value, net of transaction costs as there is reasonable assurance that the Company will comply with the conditions associated with the stream agreements. The Company will recognize a financing component relating to the difference in the timing of the deferred revenue received and the delivery of the metal credits to the Stream Purchasers.

(hh) Revenue

Revenue arises in the Company's Kamoa Holding Limited joint venture through its business of producing copper concentrate and blister copper. Revenue is recognized from the sale of these products when control is transferred to the customer through fulfilment of the contractual performance obligations, which is to deliver the products to the customers.

Delivery occurs, on a free-carrier basis as per INCOTERMS 2020, in accordance with the relevant agreement with the buyer. For copper concentrate sales, the point of delivery is the Kamoa-Kakula concentrate warehouse and for blister copper sales, the point of delivery for loading trucks is the demarcated holding area at the Lualaba Copper Smelter. Once delivery has occurred, the control associated with the products will have been transferred to the customer.

Kamoa Holding has concluded that it is the principal in its revenue contracts with customers because it controls the products before it is transferred to the customer.

Contracts with customers for the sale of copper concentrate and blister copper allow for price adjustments based on the market price at the end of the relevant quotation period. These provisional pricing adjustments result in selling prices that are based on the prevailing commodity prices on a specific future date after delivery of the products to customers.

Revenue is measured at the amount of the consideration which Kamoa Holding expects to be entitled to in exchange for those products in terms of the contract and is determined using the quoted market prices of the metals. At the end of a calendar month, all deliveries made during a month are grouped together in a provisional invoice to the customer, and are calculated based on the average quoted market prices over the month of delivery.

At the end of each calendar month, the contract receivables from the customer are remeasured using quoted market forward rates and the remeasurement is recognized as revenue in the statement of comprehensive income.

The contracts with customers require the customers to provide a rolling advance payment facility which can be drawn down every three months at the discretion of the Project. The advance payment facility is set off against the contract receivables from the customer at the end of the reporting period in the statement of financial position.

2. Significant accounting policies (continued)

(hh) Revenue (continued)

Kamoa Holding does not expect to have any contracts with customers where the period between the delivery of the products and payment by the customers exceeds 12 months. Consequently, the transaction prices are not adjusted for the time value of money.

(ii) Future accounting changes

The following new standards, amendments to standards and interpretations have been issued but are not effective during the year ended December 31, 2022. The Company has not yet adopted these new and amended standards.

- Amendment to IAS 1 – Presentation of financial statements. The amendments clarify how to classify debt and other liabilities as current or non-current. Another amendment requires companies to disclose their material accounting policy information rather than their significant accounting policies, with additional guidance added to the Standard to explain how an entity can identify material accounting policy information with examples of when accounting policy information is likely to be material. (i)

  The Company has considered the amendment and assessed that it will have no material impact on adoption.

- Amendments to IAS 12 – Income Taxes: Deferred tax related to assets and liabilities arising from a single transaction. The amendments require companies to recognize deferred tax on transactions that, on initial recognition, give rise to equal amounts of taxable and deductible temporary differences. (i)

  The Company has considered the amendment and assessed that it will have no material impact on adoption.

- Narrow scope amendments to IAS 1 – Presentation of Financial Statements, Practice statement 2 and IAS 8 – Accounting Policies, Changes in Accounting Estimates and Errors. The amendments aim to improve accounting policy disclosures and to help users of the financial statements to distinguish changes in accounting policies from changes in accounting estimates. (i)

  The Company has considered the amendment and assessed that it will have no material impact on adoption.

(i) Effective for annual periods beginning on or after January 1, 2023

3. Application of new and revised standards

The following standards became effective for annual periods beginning on or after January 1, 2022. The Company adopted these standards in the current period and they did not have a material impact on its consolidated financial statements unless specifically mentioned below.

- Amendment to IFRS 3 – Business combinations. The amendment updates a reference in IFRS 3 to the Conceptual Framework for Financial Reporting without changing the accounting requirements for business combinations.

- Amendment to IFRS 9 – Financial instruments. The amendment clarifies which fees an entity includes when it applies the "10 per cent" test in assessing whether to derecognize a financial liability.

- Amendment to IAS 16 – Property, plant and equipment. The amendments prohibit an entity from 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 a manner intended by management. Instead an entity recognizes the proceeds from selling such items, and the cost of producing these items, in profit or loss.

- Amendment to IAS 37 – Provisions, Contingent Liabilities and Contingent Assets. The amendments specify which costs should be included in an entity's assessment of whether a contract will be loss-making.

- Amendment to IFRS 9, IAS 39 and IFRS 7 – Financial Instruments. These amendments provide certain reliefs in connection with interest rate benchmark reform (IBOR). The reliefs relate to hedge accounting and have the effect that IBOR should not generally cause hedge accounting to terminate. However, any hedge ineffectiveness should continue to be recorded in the income statement.

  The Phase 2 amendments are relevant to the Company as the Company has exposure to the variable US dollar London Interbank Overnight Rate (LIBOR) through various financial instruments.

  When the contractual terms of the Company's borrowings are amended as a direct consequence of the interest rate benchmark reform and the new basis for determining the contractual cash flows is economically equivalent to the basis immediately preceding the change, the Company changes the basis for determining the contractual cash flows prospectively by revising the effective interest rate. If additional changes are made, which are not directly related to the reform, the applicable requirements of IFRS 9 are applied to the other amendments.

  The Company is still assessing its approach to implementing the transition. As at December 31, 2022, only the interest rate on the loan from Citi bank has been modified (see Note 17). Negotiations with counterparties on appropriate changes and resetting of rates are expected to continue in the following months. Management expects that the transition will be concluded on an economically equivalent basis.

  The following table details the financial instruments as at December 31, 2022, which reference the US LIBOR and which have not yet transitioned to an alternative interest rate benchmark:

	December 31, 2022	December 31, 2021
	$'000	$'000
Financial assets at amortized cost		
Loan advanced to the joint venture	**1,536,601**	1,385,535
Loans receivable - Social development loan	**43,684**	41,776
Financial liabilities at amortized cost		
Borrowings	**36,937**	38,342
Advances payable	**3,123**	2,908

4. Investment in joint venture

Kamoa Holding Limited ("Kamoa Holding"), a joint venture between the Company and Zijin Mining Group Co., Ltd. ("Zijin"), holds a direct 80% interest in the Kamoa-Kakula Copper Complex ("Kamoa-Kakula"). The Company holds an effective 39.6% interest in the project through its 49.5% shareholding in Kamoa Holding. Zijin holds 49.5% of Kamoa Holding while the remaining 1% share interest is held by privately-owned Crystal River Global Limited ("Crystal River") (see Note 9).

The costs associated with mine development at Kamoa-Kakula's Kansoko and Kakula sites were capitalized as property, plant and equipment in Kamoa Copper SA (a subsidiary of Kamoa Holding).

Kamoa-Kakula was deemed to have reached commercial production on July 1, 2021, after achieving a milling rate in excess of 80% of design capacity and recoveries in excess of 70% for a continuous period of seven days. 333,497 tonnes of copper in concentrate was produced during the year ended December 31, 2022 (December 31, 2021: 105,884).

Kamoa-Kakula is among the world's lowest greenhouse gas emitters per unit of copper metal produced. The Kamoa-Kakula Copper Complex is powered by clean, renewable, hydro-generated electricity.

On March 21, 2014, a financing agreement was entered into between Ivanhoe Mines Energy DRC SARL (a subsidiary of Kamoa Holding) and La Société Nationale d'Électricité SARL ("SNEL"), relating to the first-stage upgrade of two existing hydroelectric power plants in the DRC to feed up to 113 MW into the national power supply grid and for the supply of electricity to the Kamoa-Kakula Project. All six new turbines at the Mwadingusha hydropower plant were synchronized to the national electrical grid in August 2021, with each generating unit producing approximately 13 megawatts (MW) of power, for a combined output of approximately 78 MW. In August 2021, Ivanhoe Mines Energy DRC SARL ("Ivanhoe Mines Energy") signed an extension of the existing financing agreement with SNEL to upgrade turbine 5 at the Inga II hydropower complex. Turbine 5 is expected to produce 178 MW of renewable hydropower, providing the Kamoa-Kakula Copper Complex and the planned, associated smelter with sustainable electricity for future expansions.

Under the agreements, Ivanhoe Mines Energy agreed to provide a loan relating to the power upgrade. The total loan advanced as at December 31, 2022 amounts to $252.5 million (December 31, 2021: $197.1 million) comprising of a principal amount of $219.3 million (December 31, 2021: $176.3 million) and interest of $33.2 million (December 31, 2021: $20.8 million) and is included in the net assets of the joint venture under the heading "Long-term loan receivable". The loan is capped at a maximum commitment of $250 million which, after deducting the loan advanced as at December 31, 2022 of $219.3 million (December 31, 2021: $176.3 million), results in a remaining commitment of $30.7 million. The Company's proportionate share (49.5%) of the remaining maximum commitment amounts to $15.2 million.

The term for repayment of the principal amount, accrued interest and future costs is estimated to be 25 years, beginning after the expiry of a two-year grace period from the signing date of the agreement. The actual repayment period will ultimately depend on the amount actually financed and on the amounts deducted from electricity bills based on a fixed percentage of 40% of the actual bill as per the loan repayment terms. Interest is earned at a rate of USD 6-month LIBOR plus 3%. The Kamoa-Kakula Project has a priority electricity right by which SNEL commits to make available as per an agreed power requirements schedule, sufficient energy from its grid to meet the energy needs of the project.

4. Investment in joint venture (continued)

Company's share of comprehensive income from joint venture

The following table summarizes the Company's share of Kamoa Holding's total comprehensive income for the years ended December 31, 2022 and December 31, 2021.

	December 31, 2022	December 31, 2021
	$'000	$'000
Revenue from contract receivables	**2,357,335**	813,902
Remeasurement of contract receivables	**(209,664)**	17,218
Revenue	**2,147,671**	831,120
Cost of sales	**(775,424)**	(229,516)
Gross profit	**1,372,247**	601,604
General and administrative costs	**(86,043)**	(46,626)
Amortization of mineral property	**(12,134)**	–
Profit from operations	**1,274,070**	554,978
Finance costs	**(295,303)**	(150,637)
Finance income and other	**13,192**	3,044
Profit before taxes	**991,959**	407,385
Current tax expense	**(46,055)**	(8,289)
Deferred tax expense	**(291,838)**	(126,026)
Profit after taxes	**654,066**	273,070
Non-controlling interest of Kamoa Holding (i)	**(140,572)**	(59,449)
Total comprehensive income for the year	**513,494**	213,621
Company's share of profit from joint venture (49.5%)	**254,180**	105,742

(i) The DRC government holds a direct 20% interest in Kamoa-Kakula. A 5%, non-dilutable interest in the project was transferred to the DRC government on September 11, 2012 for no consideration, pursuant to the 2002 DRC mining code. Following the signing of an agreement in November 2016, an additional 15% interest in the project was transferred to the DRC government.

4. Investment in joint venture (continued)

Net assets of the joint venture

The assets and liabilities of the joint venture were as follows:

	December 31, 2022		December 31, 2021	
	100%	**49.5%**	100%	49.5%
	$'000	**$'000**	$'000	$'000
Assets				
Property, plant and equipment	**2,733,176**	**1,352,922**	2,000,818	990,405
Mineral property	**789,888**	**390,995**	802,021	397,000
Cash and cash equivalents	**365,633**	**180,988**	22,031	10,905
Indirect taxes receivable	**279,385**	**138,296**	152,099	75,289
Consumable stores	**257,434**	**127,430**	94,459	46,757
Long-term loan receivable	**252,523**	**124,999**	197,122	97,575
Non-current inventory	**246,424**	**121,980**	190,154	94,126
Other receivables	**212,221**	**105,049**	124,506	61,630
Trade receivables	**63,196**	**31,282**	198,513	98,264
Current inventory	**27,011**	**13,370**	20,978	10,384
Right-of-use asset	**11,549**	**5,717**	21,161	10,475
Prepaid expenses	**9,216**	**4,562**	2,822	1,397
Non-current deposits	**2,272**	**1,125**	1,689	836
Deferred tax asset	**710**	**351**	17,904	8,862
Liabilities				
Shareholder loans	**(3,103,381)**	**(1,536,174)**	(2,798,282)	(1,385,149)
Trade and other payables	**(309,710)**	**(153,306)**	(219,475)	(108,640)
Deferred tax liability	**(273,841)**	**(135,551)**	–	–
Equipment finance facility	**(102,890)**	**(50,931)**	(72,296)	(35,787)
Rehabilitation provision	**(45,231)**	**(22,389)**	(35,742)	(17,692)
Provisional payment facility	**(38,866)**	**(19,239)**	(5,117)	(2,532)
Other provisions	**(26,675)**	**(13,204)**	(15,681)	(7,762)
Income taxes payable	**(14,600)**	**(7,227)**	(8,265)	(4,091)
Lease liability	**(13,243)**	**(6,555)**	(23,287)	(11,527)
Non-controlling interest	**(291,012)**	**(144,051)**	(150,436)	(74,465)
Net assets of the joint venture	**1,031,189**	**510,439**	517,696	256,260

Investment in joint venture

	December 31, 2022	December 31, 2021
	$'000	$'000
Company's share of net assets of the joint venture	**510,439**	256,260
Loan advanced to the joint venture	**1,536,601**	1,385,535
	2,047,040	1,641,795

The Company earns interest at USD 12-month LIBOR plus 7% on the loan advanced to the joint venture (see Note 26). If there is residual cash flow in Kamoa Holding, such cash shall be required to be utilized for the repayment of the then outstanding loan amount of each lender, on a pro-rata basis. No repayment is required in the absence of residual cash flow.

5. Property, plant and equipment

	Land	Buildings	Office equipment	Motor vehicles	Plant and equipment	Mining infrastructure	Aircraft	Assets under construction	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
December 31, 2022									
Cost									
Beginning of the year	1,837	15,106	7,636	4,919	45,010	10,195	2,515	420,112	507,330
Additions	–	293	1,379	468	9,609	–	293	162,805	174,847
Borrowing costs capitalized	–	–	–	–	–	–	–	28,823	28,823
Disposals	(43)	(6)	(427)	(108)	(29)	–	–	–	(613)
Transfers	–	743	17	–	1,482	137,960	–	(147,579)	(7,377)
Foreign exchange translation	(109)	(1,302)	(436)	(49)	(851)	(4,903)	(161)	(13,749)	(21,560)
End of the year	**1,685**	**14,834**	**8,169**	**5,230**	**55,221**	**143,252**	**2,647**	**450,412**	**681,450**
Accumulated depreciation and impairment									
Beginning of the year	–	2,517	4,986	2,697	27,287	1,306	265	–	39,058
Depreciation	–	549	902	605	8,405	2,710	204	–	13,375
Disposals	–	–	(381)	(84)	(4)	–	–	–	(469)
Foreign exchange translation	–	(183)	(291)	(22)	(114)	(175)	(24)	–	(809)
End of the year	**–**	**2,883**	**5,216**	**3,196**	**35,574**	**3,841**	**445**	**–**	**51,155**
Carrying value									
Beginning of the year	1,837	12,589	2,650	2,222	17,723	8,889	2,250	420,112	468,272
End of the year	**1,685**	**11,951**	**2,953**	**2,034**	**19,647**	**139,411**	**2,202**	**450,412**	**630,295**

Assets under construction includes development costs capitalized as property, plant and equipment which are costs incurred to obtain access and to provide facilities for extracting, treating, gathering, transporting and storing the minerals. Costs incurred at the Platreef Project are deemed necessary to bring the Project to commercial production and are therefore capitalized. Until December 31, 2019, costs incurred at the Kipushi Project were also deemed necessary to bring the project to commercial production and were therefore capitalized. Between Q1 2020 and Q2 2022, the Kipushi Project was on reduced activities and incurred limited costs of a capital nature. All costs during this period were expensed as “Exploration and project evaluation expenditure” on the consolidated statements of comprehensive income (see Note 6). All costs incurred at the Kipushi Project from July 1, 2022 have been capitalized to property, plant and equipment.

5. Property, plant and equipment (continued)

Borrowing costs are capitalized to the extent that they are attributable to the construction of qualifying assets and include the finance costs and low-interest loan accretion on the loan payable to ITC Platinum Development Limited, notional financing charge on the deferred revenue and a portion of the interest incurred on the convertible notes (see Note 25).

Assets pledged as security
Buildings with a carrying amount of $8.4 million (December 31, 2021: $9.5 million) have been pledged to secure borrowings of the Company (see Note 17 (ii)). The buildings have been pledged as security for bank loans under a mortgage. The Company is not allowed to pledge these assets as security for other borrowings or to sell them to another entity.

	Land	Buildings	Office equipment	Motor vehicles	Plant and equipment	Mining infrastructure	Aircraft	Assets under construction	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
December 31, 2021									
Cost									
Beginning of the year	2,116	15,214	7,505	3,476	43,738	11,091	2,696	395,823	481,659
Additions	–	91	928	1,586	2,146	–	40	47,924	52,715
Borrowing costs capitalized	–	–	–	–	–	–	–	2,162	2,162
Disposals	(117)	(1)	(310)	(77)	(724)	–	–	–	(1,229)
Foreign exchange translation	(162)	(198)	(487)	(66)	(150)	(896)	(221)	(25,797)	(27,977)
End of the year	**1,837**	**15,106**	**7,636**	**4,919**	**45,010**	**10,195**	**2,515**	**420,112**	**507,330**
Accumulated depreciation and impairment									
Beginning of the year	–	2,054	4,906	2,322	20,533	1,053	95	–	30,963
Depreciation	–	535	692	465	7,101	365	192	–	9,350
Disposals	–	–	(195)	(57)	(243)	–	–	–	(495)
Foreign exchange translation	–	(72)	(417)	(33)	(104)	(112)	(22)	–	(760)
End of the year	**–**	**2,517**	**4,986**	**2,697**	**27,287**	**1,306**	**265**	**–**	**39,058**
Carrying value									
Beginning of the year	2,116	13,160	2,599	1,154	23,205	10,038	2,601	395,823	450,696
End of the year	**1,837**	**12,589**	**2,650**	**2,222**	**17,723**	**8,889**	**2,250**	**420,112**	**468,272**

6. Mineral properties and exploration and project evaluation expenditure

Mineral properties

The following table summarizes the carrying values of the Company's mineral property interests as described below:

	December 31, 2022	December 31, 2021
	$'000	$'000
Platreef property, South Africa (a)	**6,940**	6,940
Kipushi Properties, Democratic Republic of Congo (b)	**252,337**	252,337
Other properties (c)	**5,718**	5,718
	264,995	264,995

Costs directly related to the acquisition of mineral properties are capitalized as mineral properties on a property-by-property basis, whereas development costs are capitalized as property, plant and equipment and are costs incurred to obtain access and to provide facilities for extracting, treating, gathering, transporting and storing the minerals. Development costs are capitalized to the extent that they are necessary to bring the property to commercial production.

(a) Platreef property

Construction of the planned Platreef mine is underway on the Company's discovery of palladium, platinum, rhodium, nickel, copper and gold on the Northern Limb of South Africa's Bushveld Igneous Complex approximately 8 km from Mokopane and 280 km northeast of Johannesburg, South Africa.

In November 2014, the mining right for the development and operation of the Company's Platreef mining project was executed. The mining right authorizes the Company to mine and process platinum-group metals, nickel, copper, gold, silver, cobalt, iron, vanadium and chrome at its Platreef discovery. The mining right was issued for an initial period of 30 years and may be renewed for further periods, each of which may not exceed 30 years at a time, in accordance with the terms of section 24 of the Mineral and Petroleum Resources Development Act of South Africa.

In February 2022, the Company announced the positive findings of an independent Platreef 2022 Feasibility Study for the tier one Platreef palladium, platinum, rhodium, nickel, copper and gold project in South Africa. The 2022 Feasibility Study provides the blueprint for the ongoing development of Platreef and builds on the results of the preliminary economic assessment for a phased-development plan scenario to expedite production, announced in November 2020.

A Japanese consortium of ITOCHU Corporation, Japan Oil, Gas and Metals National Corporation; and Japan Gas Corporation holds an effective 10% interest in the Platreef Project. The Company transferred an additional 26% of Platreef to a broad-based black economic empowerment (B-BBEE) special purpose vehicle in compliance with South African ownership requirements.

(b) Kipushi properties

The Kipushi Project is a past-producing, high-grade underground copper-zinc-germanium-silver-lead mine in the Central African Copperbelt, in Haut-Katanga Province, Democratic Republic of Congo ("DRC"). The Kipushi Project lies adjacent to the town of Kipushi and the border with Zambia, and about 30 km southwest of the provincial capital of Lubumbashi. Ivanhoe Mines and La Générale des Carrières et des Mines SARL ("Gécamines") own 68% and 32% of the Kipushi Project respectively, through their holdings in Kipushi Corporation SA ("Kipushi"), the mining rights holder.

6. Mineral properties and exploration and project evaluation expenditure (continued)

Mineral properties (continued)

(b) Kipushi properties (continued)

Ivanhoe Mines' interest in Kipushi was acquired in November 2011 and comprises mining rights for zinc, copper and cobalt as well as the underground workings and related infrastructure, inclusive of a series of vertical mine shafts.

On February 14, 2022 the Company announced that it had signed a new agreement with its partner Gécamines to return the Kipushi Project to commercial production. The new agreement sets out the commercial terms that will form the basis of a new joint-venture agreement for the operation of the Kipushi Project.

Also on February 14, 2022, the Company announced the positive findings of an independent feasibility study for the planned resumption of commercial production at Kipushi. The Kipushi 2022 Feasibility Study builds on the results of the prefeasibility study ("PFS") published by the Company in January 2018. The redevelopment of the Kipushi Project is based on a two-year construction timeline, which utilizes the significant existing surface and underground infrastructure to allow for lower capital costs.

(c) Other properties

The Company's DRC exploration group is targeting Kamoa-Kakula style copper mineralization through a regional drilling program on its 100% owned Western Foreland exploration licences, located to the north, south and west of the Kamoa-Kakula Project.

(d) Kamoa-Kakula properties

The Company is a joint venturer in Kamoa-Kakula which is located within the Central African Copperbelt in Lualaba Province, DRC. Kamoa-Kakula lies approximately 25 km west of the town of Kolwezi, and about 270 km west of Lubumbashi (see Note 4).

Exploration and project evaluation expenditure

Exploration and project evaluation expenditure are expensed in the period incurred, until such time as the Company determines that a property is technically feasible and commercially viable, whereafter costs associated with development are capitalized as property, plant and equipment in the assets under construction category (see Note 5).

6. Mineral properties and exploration and project evaluation expenditure (continued)

Exploration and project evaluation expenditure (continued)

The following table summarizes the exploration and project expenditure for the years ended December 31, 2022 and December 31, 2021:

	December 31, 2022	December 31, 2021
	$'000	$'000
Exploration and project expenditure		
Office and administration expenditure	**(8,242)**	(10,426)
Salaries and benefits	**(6,558)**	(11,970)
Depreciation	**(4,378)**	(7,738)
Drilling	**(4,136)**	(4,986)
Labour hire consultants	**(2,706)**	(1,937)
Studies	**(1,968)**	(976)
Utilities	**(1,560)**	(3,593)
Consultants	**(1,370)**	(3,759)
Site security	**(1,218)**	(2,210)
Site establishment	**(989)**	(3,826)
Travel	**(530)**	(531)
Other	**(257)**	(219)
	(33,912)	(52,171)

Expenditure at the Platreef Project was capitalized as property, plant and equipment in the assets under construction category (see Note 5).

Until December 31, 2019, costs incurred at the Kipushi Project were also deemed necessary to bring the project to commercial production and were therefore capitalized. Between Q1 2020 and Q2 2022, the Kipushi Project was on reduced activities and incurred limited costs of a capital nature. All costs during this period were expensed as “Exploration and project evaluation expenditure” on the consolidated statements of comprehensive income (see Note 6). All costs incurred at the Kipushi Project from July 1, 2022 have been capitalized to property, plant and equipment.

7. Income taxes

(a) Rate reconciliation

A reconciliation of the provision for income taxes is as follows:

	December 31, 2022	December 31, 2021
	$'000	$'000
Profit (loss) before income taxes	**320,737**	(29,622)
Statutory tax rate	**27.00%**	27.00%
Expected income tax recovery based on combined Canadian federal and provincial statutory rates	**(86,599)**	7,998
Add (deduct):		
Previously unrecognized deferred tax asset recognized	**128,402**	75,041
Non-taxable income - Share of profit from joint venture	**68,629**	28,550
Non-taxable interest on loan advanced to joint venture	**40,787**	25,351
Non-taxable income - Interest on loan to subsidiary	**6,817**	3,214
Non-taxable income (non-deductible expenses) - unrealized gain (loss) on fair valuation of financial liability	**6,183**	(25,299)
Different effective tax rates in foreign jurisdictions	**2,875**	4,407
Other non-taxable income	**1,914**	450
Amendments to prior year tax submissions	**294**	50
Tax effect of tax losses not recognized	**(38,338)**	(34,572)
Other non-deductible expenses	**(10,409)**	(5,034)
Non-deductible expenses - Stock based compensation	**(7,186)**	(5,222)
Income tax recovery	**113,369**	74,934

(b) Deferred tax balances

The Company's deferred tax liabilities and assets are as follows:

	December 31, 2022	December 31, 2021
	$'000	$'000
Deferred tax liability to be recovered after more than 12 months		
Deferred interest on loans	**1,775**	–
Deferred tax liability	**1,775**	–
Deferred tax asset to be recovered after more than 12 months		
Property, plant and equipment and mining capital expenditure	**162,039**	31,148
Unrealized foreign exchange losses	**42,387**	34,900
IFRS 16 leases	**2,944**	60
Tax losses carried forward	**242**	754
Deferred interest on loans	**–**	5,716
Deferred tax asset to be recovered within 12 months		
Provisions and prepayments	**744**	584
Deferred tax asset	**208,356**	73,162

7. Income taxes (continued)

(b) Deferred tax balances (continued)

Deferred income tax assets are recognized for tax loss carry-forwards to the extent that the realization of the related tax benefit through future taxable profits is probable. The Company recognized the previously unrecognized deferred tax asset relating to the Platreef Project in the year ended December 31, 2021. Due to the conclusion of the stream-financing agreements and the announcement of the exceptional results of the independent 2022 Feasibility Study, the Company considers it highly probable that the Platreef Project will have future taxable profits that will be available against which the deductible temporary differences can be utilized.

The Company recognized the previously unrecognized deferred tax asset relating to the Kipushi Project on June 30, 2022. Due to the signing of a new agreement between the Company and Gécamines to return the Kipushi Project to commercial production, and the positive findings of the independent 2022 Feasibility Study, the Company considers it probable that the Kipushi Project will have future taxable profits that will be available against which the deductible temporary differences can be utilized.

On February 23, 2022, the South African corporate income tax rate changed from 28% to 27%, effective for years of assessment ending on or after March 31, 2023. The change in tax rate is considered to be substantively enacted after year-end. The impact on the deferred tax asset recognized at the Platreef Project as a result of the change in the South African corporate income tax rate is estimated to be $2.9 million which was expensed in 2022.

(c) Unrecognized deductible temporary differences

The Company's unrecognized deductible temporary differences and unused tax losses consist of the following amounts:

	December 31, 2022	December 31, 2021
	$'000	$'000
Non-capital loss carryforwards	**305,870**	324,619
Foreign exploration expenses and share issuance costs	**19,696**	8,222
Investment in RK1	**11,289**	11,289
Capital assets	**127**	94,597
Capital loss carryforwards	**–**	18,597
Unrecognized deductible temporary differences	**336,982**	457,324

The Company has foreign subsidiaries that have undistributed earnings of $679.8 million (December 31, 2021: $643.2 million). The Company can control the timing of the repatriation and it is probable that these amounts will not be repatriated for the foreseeable future. Therefore, deferred tax has not been provided in respect of these earnings.

7. Income taxes (continued)

(d) Loss carryforwards

The Company's unrecognized deferred tax assets related to unused tax losses have the following expiry dates:

		Local currency '000	U.S. dollar equivalent $'000	
Congolese franc	CDF	189,982,021	93,876	(b)
Canadian dollar	C$	198,935	146,770	2028 to 2038
Euro	€	51,727	55,118	(d)
British pound	£	5,694	6,858	(a)
Barbados dollar	BBD	5,949	2,990	(c)
Namibian dollar	NAD	4,382	258	(a)
			305,870	

(a) These losses can be carried forward indefinitely, subject to continuity of trading.
(b) These losses are accumulated and set-off against future taxable income when mining operations commence.
(c) These tax losses can be carried forward for 7 years from the date of incurrence.
(d) Tax losses incurred prior to January 2017 can be carried forward indefinitely, subject to continuity of trading. Tax losses incurred thereafter can be carried forward for 17 years.

8. Loans receivable

	December 31, 2022	December 31, 2021
	$'000	$'000
Loan to HPX (i)	**69,629**	61,894
Loss allowance - Loan to HPX	**(1,201)**	(184)
Social development loan (ii)	**43,684**	41,776
Loss allowance - Social development loan	**(523)**	(523)
Loan to Nzuri Exploration Holding Company Pty Ltd (iii)	**327**	327
Other loans receivable	**188**	188
	112,104	103,478
Non-current loans receivable	**92,475**	41,768
Current loans receivable	**19,629**	61,710
	112,104	103,478

(i) In April 2019, the Company extended a secured loan of $50 million to High Power Exploration Inc. (HPX). The loan receivable earned interest at a rate of 8% per annum until April 25, 2021. Following the signing of an amendment to the loan facility agreement on June 16, 2021, the scheduled maturity date of the loan was extended to April 25, 2022. In addition, the loan facility agreement was amended such that the rate of interest for the period after April 25, 2021 is fixed at 11% per annum compounded monthly. From the date of default (April 25, 2022), the rate at which interest is earned increased to 15% per annum compounded monthly. Interest of $7.7 million was earned during the year ended December 31, 2022 (December 31, 2021: $5.2 million) (see Note 26). The principal amount of the loan and accrued interest is convertible in whole, or in part, by the Company at its sole discretion into shares of treasury common stock of HPX. The Company is negotiating an updated scheduled maturity date with HPX.

The Company recorded an expected credit loss allowance of $1.2 million as at December 31, 2022 in accordance with IFRS 9 for the loan receivable from HPX (December 31, 2021: $0.2 million).

8. Loans receivable (continued)

(ii) A long-term loan receivable from Gécamines of $10 million was ceded to the Company on completion of the purchase of Kipushi on November 28, 2011, by the seller. An additional $20 million was requested and advanced to Gécamines during November 2012.

The loan receivable is unsecured and earns interest at USD 12-month LIBOR plus 3%. Repayment will be made by offsetting the loan against future royalties and dividends payable to Gécamines from future profits earned at Kipushi. The fair value of the receivable at acquisition date was estimated by the Company by calculating the present value of the future expected cash flows using an effective interest rate of 9.2%. The carrying value of the long-term loan receivable as at December 31, 2022 is $43.2 million (December 31, 2021: $41.3 million). Interest of $1.9 million was earned during the year ended December 31, 2022 (December 31, 2021: $1.0 million) (see Note 26).

The Company recorded an expected credit loss allowance of $0.5 million as at December 31, 2022 in accordance with IFRS 9 for the social development loan.

(iii) In September 2019, the Company, through its wholly-owned subsidiary, Ivanhoe DRC Holding Limited, extended a loan to Nzuri Exploration Holding Company Pty Ltd (“Nzuri”). The loan was advanced to fund exploration activities of a subsidiary of Nzuri in the DRC. The Company has a 10% equity investment in Nzuri (see Note 10).

9. Promissory note receivable

The Company has the following promissory note receivable:

	December 31, 2022	December 31, 2021
	$'000	$'000
Promissory note receivable from Crystal River	**26,770**	26,731
Loss allowance	**(14)**	(14)
	26,756	26,717

The promissory note receivable with a carrying value of $26.8 million is a non-interest-bearing, 10-year promissory note, of which $8.3 million is receivable by the Company as the purchase consideration for selling 1% of its share in Kamoa Holding to Crystal River (see Note 4). The remaining $18.5 million is receivable for subsequent funding provided to Kamoa Holding on Crystal River’s behalf. The promissory note is payable on the earlier of December 8, 2025 or the next business day following the completion of the sale, transfer or disposition of the shares held by Crystal River in Kamoa Holding.

10. Investments

	December 31, 2022	December 31, 2021
	$'000	$'000
Fair value through profit or loss		
Investment in Renergen Ltd. (i)	**7,947**	–
Investment in other listed entities (ii)	**1,050**	1,144
Investment in unlisted entity (iii)	**655**	655
	9,652	1,799

(i) On March 11, 2022, the Company made an equity investment in Renergen Ltd. ("Renergen"). Renergen is a public limited liability company, incorporated in South Africa and is listed on the Johannesburg Stock Exchange and the Australian Stock Exchange. Renergen in an emerging helium and domestic natural gas producer, which holds the rights to renewable natural gas fields with high helium concentrations, in particular the Virginia Gas Project located in the Free State province of South Africa.

Under the terms of the initial subscription agreement, the Company subscribed for 5,631,787 shares, representing an approximate 4.35% interest in Renergen's issued and outstanding shares. The Company paid a subscription price of R35.63 per share for a total consideration of R200,632,412 (approximately $13.3 million). The subscription price per share was equal to 95% of the volume-weighted average traded price of Renergen's shares on the Johannesburg Stock Exchange measured over the 30 trading days prior to March 11, 2022.

The trading value of the shares as at December 31, 2022 is R134.9 million ($7.9 million). A loss of $3.5 million on the fair valuation of the financial asset was recognized for the year ended December 31, 2022. The movement in the fair value of the shares is shown in the table below:

	December 31, 2022	December 31, 2021
	$'000	$'000
Acquisition of shares	**13,329**	–
Loss on fair valuation of shares	**(3,533)**	–
Unrealized foreign currency losses	**(1,849)**	–
Balance at the end of the year	**7,947**	–

(ii) The Company holds shares in other listed entities which have been classified as financial assets at fair value through profit or loss. The trading value of the listed shares as at December 31, 2022 is $1.0 million (December 31, 2021: $1.1 million). A loss of $0.1 million on the fair valuation of the financial asset was recognized for the year ended December 31, 2022 (December 31, 2021: loss of $0.3 million).

(iii) On September 12, 2019 the Company, through its wholly owned subsidiary, Ivanhoe DRC Holding Limited, subscribed for 10% of the ordinary shares of Nzuri Exploration Holding Company Pty Ltd ("Nzuri"). Nzuri is an Australian company, a subsidiary of which is conducting mining exploration activities in the DRC.

11. Leases

Right-of-use asset

	December 31, 2022	December 31, 2021
	$'000	$'000
Rented surface infrastructure and equipment (Kipushi) (i)	**6,070**	8,129
Office building (ii)	**1,470**	904
	7,540	9,033

(i) A right-of-use asset is recognized in terms of IFRS 16 for the use of the surface infrastructure and equipment at the Kipushi mine.

(ii) The Company leases an office building in Sandton, South Africa. On November 1, 2022, the Company entered into a second lease agreement for additional office space in the Sandton building.

Lease liability

	December 31, 2022	December 31, 2021
	$'000	$'000
Rented surface infrastructure and equipment (Kipushi) (i)	**9,370**	10,494
Office building (ii)	**1,391**	747
Non-current lease liability	**10,761**	11,241
Office building (ii)	**226**	384
Rented surface infrastructure and equipment (Kipushi) (i)	**320**	345
Current lease liability	**546**	729

(i) The lease liability was initially measured at the present value of the lease payments payable over the life of mine and has been discounted at an incremental borrowing rate of 8%. The lease payments have been determined in accordance with the contract, which allocates a fixed rate monthly and it has been estimated that the lease will continue for the duration of the life of mine.

(ii) The Rand-denominated lease liability was initially measured at the present value of the lease payments payable over a lease term of six years and has been discounted at an incremental borrowing rate of between 10.25%-10.50% (December 31, 2021: 10.25%). The lease payments have been determined in accordance with the contract which includes an escalation clause of 7.5% per annum. From November 1, 2022, the Company entered into a second lease agreement for additional office space in the Sandton building.

Amounts recognized in the consolidated statements of comprehensive income:

	December 31, 2022	December 31, 2021
	$'000	$'000
Depreciation charge on right-of-use assets (i)	**(543)**	(894)
Interest on lease liability (ii)	**(543)**	(987)
	(1,086)	(1,881)

11. Leases (continued)

Amounts recognized in the consolidated statements of comprehensive income (continued)

(i) Of the $0.54 million recognized, $0.26 million is included in other expenditure while $0.28 million is included in exploration and project evaluation expenditure on the consolidated statements of comprehensive income. Right-of-use assets are depreciated over the term of the lease on a straight-line basis.

(ii) Included as finance costs on the consolidated statements of comprehensive income.

12. Cash and cash equivalents

	December 31, 2022	December 31, 2021
	$'000	$'000
Cash and cash equivalents	**597,451**	608,176
	597,451	608,176

The cash and cash equivalents disclosed above include $13.6 million of restricted cash held by Ivanplats (Pty) Ltd., the owner of the Platreef Project. The cash is restricted for use as guarantees in respect of the Platreef Project.

13. Other receivables

	December 31, 2022	December 31, 2021
	$'000	$'000
Refundable taxes (i)	**20,900**	2,084
Receivables from joint venture (ii)	**6,752**	5,998
Accounts receivable	**2,660**	1,379
Other	**572**	1,235
Loss allowance	**(1)**	(1)
	30,883	10,695
Non-current other receivables	**15,141**	–
Current other receivables	**15,742**	10,695
	30,883	10,695

(i) Refundable taxes are net of an impairment provision for value-added taxes receivable in foreign jurisdictions where recoverability of those taxes is uncertain. On June 30, 2022, the Company recognized the previously impaired value-added taxes receivable at the Kipushi Project. Due to the signing of a new agreement between the Company and Gécamines to return the Kipushi Project back to commercial production and the positive findings of the independent 2022 Feasibility Study, the Company considers it probable that the Kipushi Project will recover the value-added taxes receivable.

(ii) Receivables from joint venture include amounts receivable from the Kamoa Holding Limited joint venture for administration consulting services rendered by the Company and for the sale of equipment to the joint venture by Kipushi.

14. Prepaid expenses

	December 31, 2022	December 31, 2021
	$'000	$'000
Advance payments to suppliers	**24,257**	1,361
Other prepayments	**2,022**	1,626
Prepaid insurance	**1,925**	1,799
Deposits	**262**	162
	28,466	4,948

Prepaid expenses are amounts paid in advance which give the Company rights to receive future goods or services.

15. Convertible notes

	December 31, 2022	December 31, 2021
	$'000	$'000
Convertible notes - host liability		
Balance at the beginning of the year	**437,414**	–
Proceeds on issuance of convertible notes	**–**	424,500
Transaction costs incurred	**–**	(10,469)
Carrying value of host liability	**437,414**	414,031
Interest for the year	**42,284**	31,689
Repayments of interest during the year	**(14,375)**	(8,306)
Balance at the end of the year	**465,323**	437,414
Convertible notes - embedded derivative liability		
Balance at the beginning of the year	**244,200**	–
Proceeds on issuance of convertible notes	**–**	150,500
(Gain) loss on fair valuation of embedded derivative liability	**(22,900)**	93,700
Balance at the end of the year	**221,300**	244,200
Non-current host liability	**462,290**	434,381
Current host liability	**3,033**	3,033
	465,323	437,414
Non-current embedded derivative liability	**221,300**	244,200
	221,300	244,200

On March 17, 2021 the Company concluded a private placement offering of $575 million of 2.50% convertible senior notes maturing in 2026. The notes will be convertible at the option of holders, prior to the close of business on the business day immediately preceding October 15, 2025, only under certain circumstances and during certain periods, and thereafter, at any time until the close of business on the second scheduled trading day immediately preceding the maturity date. Upon conversion, the convertible notes may be settled, at the Company's election, in cash, common shares or a combination thereof. Due to this election right and conversion feature, the convertible notes have an embedded derivative liability that is measured at fair value with changes in value being recorded in profit or loss, as well as the host loan that is accounted for at amortized cost.

15. Convertible notes (continued)

The convertible senior notes are senior unsecured obligations of the Company, which accrue interest payable semi-annually in arrears at a rate of 2.50% per annum. The notes will mature on April 15, 2026, unless earlier repurchased, redeemed or converted. The initial conversion rate of the notes is 134.5682 Class A common shares of the Company per $1,000 principal amount of notes, or an initial conversion price of approximately $7.43 (equivalent to approximately C$9.31) per common share. The initial conversion price of the notes represents a premium of approximately 37.5% over the last reported sale price of the Company's common shares on the date of pricing being March 11, 2021, which was C$6.77 per share as reported on the Toronto Stock Exchange.

The gross proceeds of $575 million were apportioned between the host loan and the embedded derivative liability by first determining the fair value of the derivative, which was $150.5 million on March 17, 2021. Transaction costs of $10.5 million associated with the host loan were capitalized to the liability whereas transaction costs of $3.7 million associated with the embedded derivative liability were expensed in the consolidated statements of comprehensive income.

The effective interest rate of the host liability was deemed to be 9.39%. The carrying value of the host liability was $465.3 million as at December 31, 2022 (December 31, 2021: $437.4 million). The fair value of the embedded derivative liability on December 31, 2022 was $221.3 million (December 31, 2021 $244.2 million).

A fair value gain of $22.9 million (December 31, 2021: fair value loss of $93.7 million) was recognized in the consolidated financial statements, largely due to a strengthening of the U.S. dollar from the beginning of the year to December 31, 2022.

The following key inputs and assumptions were used in the binomial tree model when determining the fair value of the embedded derivative liability:

	March 17, 2021	**December 31, 2021**	**December 31, 2022**
Share price	C$7.00	C$10.32	C$10.70
Credit spread	630 basis points	356 basis points	419 basis points
Volatility	42%	40%	40%
Borrowing cost	50 basis points	25 basis points	25 basis points
Fair value of derivative liability	$150.5m	$244.2m	$221.3m

16. Deferred revenue

	December 31, 2022	December 31, 2021
	$'000	$'000
Balance at the beginning of the year	**69,562**	–
Gold streaming facility - initial recognition	**150,000**	50,000
Palladium and platinum streaming facility - initial recognition	**75,000**	25,000
Financing costs associated with the streaming facilities (Note 25)	**20,778**	–
Transaction costs incurred	**(1,099)**	(5,438)
Exchange gain on translation of foreign operations	**(3,516)**	–
Balance at the end of the year	**310,725**	69,562

On December 8, 2021, the Company announced that Ivanplats (Pty) Ltd., its South African subsidiary and owner of the Platreef Project, had concluded stream-financing agreements with Orion Mine Finance ("Orion") and Nomad Royalty Company ("Nomad"), together the "Stream Purchasers", for a $200 million gold-streaming facility and a $100 million palladium and platinum-streaming facility.

16. Deferred revenue (continued)

Under the stream agreements, Orion provided a total of $225 million in funding, and Nomad provided $75 million in funding. The stream facilities are a prepaid forward sale of refined metals, with prepayments totalling $300 million, available in two tranches. The first prepayment of $75 million was received by the Company in December 2021, following the closing of the transaction. The remaining $225 million was received in September 2022, after successfully fulfilling the conditions precedent.

Under the terms of the $200 million gold stream agreement, the Stream Purchasers will receive an aggregate total of 80% of contained gold in concentrate until 350,000 ounces have been delivered, after which the stream will be reduced to 64% of contained gold in concentrate for the remaining life of the facility. The expected life of this facility will extend from the effective date of the stream agreement until the date when 685,280 ounces of gold have been delivered to the Stream Purchasers. The Stream Purchasers will purchase each ounce of gold at a price equal to the lower of the market price of gold or US$100 per ounce.

Delivery of the gold under the stream agreement will be made by delivering gold credits to the Stream Purchasers' metal accounts.

Under the terms of the US$100 million palladium and platinum stream agreement, Orion will receive an aggregate total of 4.2% of contained palladium and platinum in concentrate until 350,000 ounces have been delivered, after which the stream will be reduced to 2.4% for the remaining life of the facility. The expected life of this facility will extend from the effective date of the stream agreement until the date when 485,115 ounces of palladium and platinum have been delivered to the purchaser, which will pay for each ounce at a price equal to 30% of the market price of palladium and platinum. Delivery of the palladium and platinum under the stream agreement will be made by delivering palladium and platinum credits to the Stream Purchasers' metal accounts. The advance payment of $300 million (December 31, 2021: $75 million), net of transaction costs of $6.5 million (December 31, 2021: $5.4 million), is recognized as a contract liability (deferred revenue) under IFRS 15.

The stream-financing agreements are accounted for as deferred revenue as the Company has applied judgment in concluding that the contracts fall within the "own-use" exemption in IFRS 9. Therefore, the contracts are not accounted for under the requirements of IFRS 9, but were deemed to fall within the scope of IFRS 15 as the Company intends to settle the obligations through delivery of its own production from the Platreef mine once commissioned.

In accordance with IFRS 15, the Company has recognized a notional financing charge of $20.8 million for the year ended December 31, 2022 due to the time between receiving the upfront streaming payments and the date that the related performance obligations will be satisfied. The Company has estimated that the ZAR-based nominal pre-tax rate is 15.37% under the gold stream agreement, and 14.81% under the palladium and platinum stream agreement.

Settlements on the stream-financing arrangements will start once the commissioning of the Platreef Project has been completed. The commissioning is scheduled for 2024.

17. Borrowings

	December 31, 2022	December 31, 2021
	$'000	$'000
Unsecured - at amortized cost		
Loan from ITC Platinum Development Limited (i)	**36,937**	33,991
Secured - at amortized cost		
Loan from Citi bank (ii)	**3,886**	4,351
	40,823	38,342

(i) On June 6, 2013, the Company, through its subsidiary Ivanplats (Pty) Ltd, ("Ivanplats") the owner of the Platreef Project, became party to a $28.0 million loan payable to ITC Platinum Development Limited. The loan is repayable only once Ivanplats has residual cashflow, which is defined in the loan agreement as gross revenue generated by Ivanplats, less all operating costs attributable thereto, including all mining development and operating costs. The loan incurs interest of USD 3-month LIBOR plus 2% calculated monthly in arrears. Interest is not compounded. Using prevailing market interest rates for an equivalent loan of USD 3-month LIBOR plus 7% at June 6, 2013, the carrying value of the loan as at December 31, 2022, is $36.9 million (December 31, 2021: $34.0 million) with a contractual amount due of $35.8 million (December 31, 2021: $35.1 million). The difference of $1.1 million (December 31, 2021: $1.1 million) between the contractual amount due and the carrying value of the loan is the benefit derived from the low-interest loan. Interest of $1.2 million (December 31, 2021: $0.6 million) was recognized during the year ended December 31, 2022 and was capitalized as borrowing costs together with the low-interest loan accretion of $1.7 million (December 31, 2021: $1.6 million).

(ii) The Citi bank loan of $3.9 million (£3.2 million) is secured by the Rhenfield property (see Note 29). The loan is an interest-only term loan repayable on August 28, 2025, and incurs interest at a rate of 1-month Sterling Overnight Index Average (SONIA) plus 1.90% payable monthly in arrears. Interest of $0.1 million was incurred for the year ended December 31, 2022 (December 31, 2021: $0.1 million).

18. Cash-settled share-based payment liability

	December 31, 2022	December 31, 2021
	$'000	$'000
B-BBEE share-based payment liability (i)	**5,886**	5,286
Deferred share unit liability	**5,162**	4,401
	11,048	9,687
Non-current cash-settled share-based payment liability	**9,023**	8,292
Current cash-settled share-based payment liability	**2,025**	1,395
	11,048	9,687

(i) On June 26, 2014, the Company sold a 26% interest in the Company's Platreef mining project for which it has recognized a cash-settled share-based payment liability which is estimated to vest over 20 years. The liability is valued using an option pricing model taking into account the terms and conditions on which the right was granted (see Note 24).

19. Advances payable

	December 31, 2022	December 31, 2021
	$'000	$'000
Advances payable to Gécamines	**3,123**	2,908
	3,123	2,908

Advances payable to Gécamines are unsecured and bear interest at USD 12-month LIBOR plus 4% and represent the loan advanced to Kipushi by Gécamines prior to the acquisition of Kipushi by the Company. The advances will be repaid once Kipushi begins to generate and distribute its profit which is defined as the operating surplus less operating charges, general costs and amortizations and profit tax for each fiscal year.

20. Trade and other payables

	December 31, 2022	December 31, 2021
	$'000	$'000
Trade payables	**38,425**	11,943
Trade accruals	**18,931**	10,826
Payroll tax and other statutory liabilities	**3,653**	3,975
Other payables	**628**	55
	61,637	26,799

The Company has policies in place to ensure trade and other payables are paid within agreed terms.

21. Share capital

(a) Shares issued

The Company is authorized to issue an unlimited number of Class A Shares. On June 28, 2022, the Company's share capital structure was amended by deleting the Class B common shares without par value and the preferred shares without par value, none of which were outstanding.

As at December 31, 2022, 1,216,754,579 (December 31, 2021: 1,209,665,401) Class A Shares were issued and outstanding. All shares in issue have been fully paid.

(b) Options

The Company issues share options as a security-based compensation arrangement. Share options are granted at an exercise price equal to the weighted average price of the shares on the TSX for the five days immediately preceding the date of the grant. As at December 31, 2022, 81,794,911 share options have been granted and exercised, and 13,264,957 have been granted and are outstanding.

All outstanding share options granted before December 2019 vest in four equal parts, commencing on the one year anniversary of the date of grant and on each of the three anniversaries thereafter. The maximum term of these options is five years. All share options granted during and after December 2019 vest in three equal parts, commencing on the one year anniversary of the date of grant and on each of the two anniversaries thereafter. The maximum term of these options awarded is seven years.

21. Share capital

(b) Options (continued)

A summary of changes in the Company's outstanding share options is presented below.

	2022		2021	
	Number of options	**Weighted average exercise price**	Number of options	Weighted average exercise price
		$		$
Balance at the beginning of year	**17,312,182**	**3.12**	18,734,807	2.69
Granted	**1,259,090**	**8.36**	2,095,280	6.47
Exercised	**(5,244,069)**	**2.71**	(2,744,790)	2.95
Forfeited	**(62,246)**	**3.02**	(773,115)	2.51
Balance at the end of the year	**13,264,957**	**3.78**	17,312,182	3.12

1,259,090 options were granted in 2022. The fair value of options granted is estimated on the date of grant using the Black-Scholes option pricing model. An expense of $4.1 million will be amortized over the entire vesting period for the options granted during the year ended December 31, 2022 (December 31, 2021: $5.1 million), of which $1.9 million (December 31, 2021: $1.8 million) was recognized in the year ended December 31, 2022. An additional expense of $4.7 million was recognized in the year ended December 31, 2022 (December 31, 2021: $6.0 million) relating to options granted during prior years.

The following weighted average assumptions were used for the share option grants in the table above:

	2022	**2021**
Risk-free interest rate	1.94%	0.35%
Expected volatility [(i)]	52.69%	52.93%
Expected life	3.50	3.50
Expected dividends	$Nil	$Nil

(i) Expected volatility was based on the historical volatility of a peer company analysis.

A reconciliation of the number of share options exercised to shares issued for the year ended December 31, 2022 and December 31, 2021 is presented below:

	2022		2021	
	Number of options exercised	**Number of shares issued**	Number of options exercised	Number of shares issued
Ordinary exercise	**1,762,995**	**1,762,995**	2,131,297	2,131,297
Exercised by Share Appreciation Rights (i)	**3,481,074**	**2,509,842**	613,493	336,049
Total	**5,244,069**	**4,272,837**	2,744,790	2,467,346

(i) In terms of the equity incentive plan, participants have the right in lieu of receiving the shares to which the options relate, to receive the number of shares calculated by deducting the exercise price from the fair market value of the shares and dividing this result by the fair market value of the shares immediately prior to exercise.

21. Share capital (continued)

(b) Options (continued)

The following table summarizes information about share options outstanding and exercisable as at December 31, 2022:

	Options outstanding		Options exercisable	
Expiry date	Number of shares	Weighted average exercise price	Number of shares	Weighted average exercise price
		$		$
March 14, 2023	133,739	3.77	133,739	3.77
June 30, 2023	44,416	5.52	44,416	5.52
December 4, 2023	2,000,000	1.98	2,000,000	1.98
January 12, 2024	1,000,000	1.90	750,000	1.90
December 5, 2026	2,000,000	2.59	2,000,000	2.59
January 13, 2027	4,570,222	3.02	2,551,623	3.02
August 17, 2027	170,000	3.85	86,666	3.85
November 1, 2027	100,000	3.84	66,666	3.84
January 22, 2028	844,797	5.52	266,264	5.52
March 31, 2028	82,131	5.18	27,377	5.18
June 30, 2028	61,597	6.92	20,532	6.92
August 10, 2028	879,169	7.49	293,056	7.49
September 30, 2028	66,096	6.47	22,032	6.47
December 31, 2028	53,700	7.89	17,900	7.89
January 27, 2029	911,141	8.86	–	–
March 31, 2029	66,688	9.35	–	–
June 30, 2029	103,322	5.90	–	–
September 30, 2029	100,414	6.04	–	–
December 31, 2029	77,525	7.79		
	13,264,957	3.78	8,280,271	2.88

As at December 31, 2021, the Company had 17,312,182 share options outstanding at a weighted average exercise price of $3.12. Of this amount, 8,782,746 share options were exercisable at a weighted average exercise price of $2.53.

(c) Share unit awards

The Company issues restricted share units (“RSUs”) and performance share units (“PSUs”) as a security-based compensation arrangement. Each RSU and PSU represents the right of an eligible participant to receive one Class A Share.

RSUs and PSUs vest in three equal parts, commencing on the initial vesting date established at grant and on each of the two anniversaries thereafter, subject to the satisfaction of any performance conditions.

21. Share capital (continued)

(c) Share unit awards (continued)

A summary of changes in the Company's RSUs and PSUs is presented below.

	2022	2021
Balance at the beginning of the year	**6,300,049**	2,107,464
RSUs issued	**1,375,041**	5,478,846
PSUs issued	**372,113**	–
RSUs vested	**(2,738,292)**	(1,216,071)
RSUs cancelled	**(71,748)**	(70,190)
Balance at the end of the year	**5,237,163**	6,300,049

An expense of $14.6 million will be amortized over the vesting period for the RSUs and PSUs granted during the year ended December 31, 2022 (December 31, 2021: $40.1 million), using the fair value of a common share at time of grant. The weighted average fair value of a common share at the time that the RSUs and PSUs were granted in 2022 was $8.34 (December 31, 2021: $7.32). An expense of $18.5 million (December 31, 2021: $8.5 million) was recognized for the year ended December 31, 2022 relating to RSUs and PSUs granted, of which $3.8 million related to RSUs and PSUs granted in 2022 (see Note 24).

(d) Deferred share units

The Company issues deferred share units ("DSUs") as a security-based compensation arrangement to non-executive directors of the Company. Each DSU represents the right of an eligible participant to receive one Class A Share or the cash equivalent thereof. The debt component of the compound instrument represents the entire fair value of the award and is disclosed below.

A summary of changes in the Company's DSUs is presented below.

	2022	2021
Balance at the beginning of the year	**545,578**	376,884
DSUs issued	**200,991**	196,073
DSUs settled	**(93,214)**	(27,379)
Balance at the end of the year	**653,355**	545,578

An expense of $1.6 million (December 31, 2021: $1.1 million) was recognized for the DSUs granted during the year ended December 31, 2022. A gain of $0.9 million (December 31, 2021: loss of $1.3 million) was recognized for DSUs granted during prior years due to the decrease in the Company's share price which resulted in a decrease in the deferred share unit liability. In accordance with the DSU plan, directors may elect to receive settlement of their DSUs in cash or shares. An expense of $0.7 million (December 31, 2021: 0.2 million) was recognized for 93,214 DSUs that were settled on December 31, 2022 (December 31, 2021: 27,379) of which 15,165 were settled in cash (December 31, 2021: 5,849) and 78,049 (December 31, 2021: 21,530) were settled in shares.

DSUs vest over the calendar year in which they are granted and are settled on December 31st of the calendar year that is three years following the award date of each respective DSU.

(e) Bonus shares

The Company recognized no expense during the year ended December 31, 2022 relating to bonus shares issued (December 31, 2021: $0.5 million relating to 66,336 bonus shares issued).

22. Foreign currency translation reserve

	December 31, 2022	December 31, 2021
	$'000	$'000
Balance at the beginning of the year	**(62,508)**	(37,056)
Exchange loss arising on translation of foreign operations	**(1,322)**	(25,452)
Balance at the end of the year	**(63,830)**	(62,508)

Exchange differences relating to the translation of the results and net assets of the Company's foreign operations from their functional currencies to the Company's presentation currency are recognized directly in other comprehensive loss and accumulated in the foreign currency translation reserve.

23. Non-controlling interests

	December 31, 2022	December 31, 2021
	$'000	$'000
Balance at the beginning of the year	**(116,824)**	(104,176)
Share of total comprehensive income (loss) for the year	**23,338**	(12,648)
Balance at the end of the year	**(93,486)**	(116,824)

The total non-controlling interest at December 31, 2022 is $93.5 million (December 31, 2021: $116.8 million), of which $69.6 million (December 31, 2021: $66.3 million) is attributed to Ivanplats (Pty) Ltd and $28.8 million (December 31, 2021: $54.7 million) is attributed to Kipushi Corporation SA. The remainder relates mainly to the non-controlling interest attributable to Ivanplats Holding SARL.

Set out below is the summarized financial information for each subsidiary that has non-controlling interests that are material to the Company. The amounts disclosed for each subsidiary are before intercompany eliminations.

Summarized statements of financial position	**Ivanplats (Pty) Ltd**		**Kipushi Corporation SA**	
	2022	2021	**2022**	2021
	$'000	$'000	**$'000**	$'000
Non-current assets	**526,270**	400,127	**301,453**	395,944
Non-current liabilities	**(1,039,061)**	(769,703)	**(622,578)**	(530,666)
Total non-current net liabilities	**(512,791)**	(369,576)	**(321,125)**	(134,722)
Current assets	**209,454**	88,251	**30,098**	3,440
Current liabilities	**(31,393)**	(13,362)	**(29,545)**	(17,893)
Current net assets (liabilities)	**178,061**	74,889	**553**	(14,453)
Net liabilities	**(334,730)**	(294,687)	**(320,572)**	(149,175)

23. Non-controlling interests (continued)

Summarized statements of comprehensive income	Ivanplats (Pty) Ltd		Kipushi Corporation SA	
	2022	2021	**2022**	2021
	$'000	$'000	**$'000**	$'000
(Loss) profit for the year	**(19,665)**	58,266	**80,940**	(50,647)
Other comprehensive loss	**(14,039)**	(27,176)	**–**	–
Total comprehensive (loss) income	**(33,704)**	31,090	**80,940**	(50,647)
Total comprehensive (loss) income allocated to non-controlling interests	**(3,370)**	3,109	**25,901**	(16,207)

(i) The effective non-controlling interest for Ivanplats (Pty) Ltd is 10% and for Kipushi Corporation SA is 32%.

Summarized statements of cash flow	Ivanplats (Pty) Ltd		Kipushi Corporation SA	
	2022	2021	**2022**	2021
	$'000	$'000	**$'000**	$'000
Cash flows from operating activities	**233,605**	76,171	**(17,702)**	(26,226)
Cash flows from investing activities	**(122,148)**	(51,186)	**(39,747)**	(1,262)
Cash flows from financing activities	**–**	51,800	**59,178**	27,718
Effect of foreign exchange rates	**(5,896)**	(29)	**–**	–
Net increase (decrease) in cash and cash equivalents	**105,561**	76,756	**1,729**	230

24. Share-based payments

The share-based payment expense of the Company is summarized as follows:

	December 31, 2022	December 31, 2021
	$'000	$'000
Equity settled share-based payments		
Share unit awards expense (Note 21(c))	**(18,492)**	(8,497)
Share options (Note 21(b))	**(6,637)**	(7,752)
Bonus shares (Note 21(e))	**–**	(496)
	(25,129)	(16,745)
Cash settled share-based payments		
Deferred share unit expense (Note 21(d))	**(1,487)**	(2,595)
B-BBEE transaction expense	**(600)**	(662)
	(27,216)	(20,002)

24. Share-based payments (continued)

Of the share-based payment expense recognized for the year ended December 31, 2022, $0.6 million (December 31, 2021: $0.7 million) related to the Platreef B-BBEE transaction, with the remaining $26.6 million (December 31, 2021: $19.3 million) being the expense for share options, share unit awards and deferred share units which have been granted to employees and were recognized over the vesting period.

25. Finance costs

Finance costs are summarized as follows:

	December 31, 2022	December 31, 2021
	$'000	$'000
Interest on convertible notes (see Note 15)	**(42,284)**	(31,689)
Interest on convertible notes capitalized (see Note 5)	**5,099**	–
Interest on borrowings (see Note 17)	**(3,087)**	(2,257)
Interest on borrowings capitalized (see Note 5)	**2,946**	2,162
Finance costs on deferred revenue (see Note 16)	**(20,778)**	–
Finance costs on deferred revenue capitalized (see Note 16)	**20,778**	–
Lease liability unwinding (see Note 11)	**(543)**	(987)
Interest on advances payable (see Note 19)	**(215)**	(120)
	(38,084)	(32,891)

26. Finance income

Finance income is summarized as follows:

	December 31, 2022	December 31, 2021
	$'000	$'000
Interest on loan to joint venture (i)	**151,066**	93,892
Interest on bank balances	**14,565**	2,256
Interest on long term loan receivable - HPX (ii)	**7,734**	5,155
Interest on long term loan receivable - Gécamines (iii)	**1,908**	984
Other	**25**	3
	175,298	102,290

(i) The Company earns interest at a rate of USD 12-month LIBOR plus 7% on the loan advanced to the Kamoa Holding joint venture (see Note 4).
(ii) The Company earned interest at a rate of 8% per annum on the long-term loan receivable from HPX until April 25, 2021. Following the signing of an amendment to the loan agreement on June 16, 2021, the interest rate was fixed at 11% per annum compounded monthly for the period after April 25, 2021 until April 25, 2022, after which the rate at which interest is earned increased to 15% per annum compounded monthly (see Note 8 (i)).
(iii) The Company earns interest at a rate of USD 12-month LIBOR plus 3% on the long-term loan receivable from Gécamines (see Note 8 (ii)), although an effective interest rate of 9.2% was applied from initial recognition.

27. Other income

Other income is summarized as follows:

	December 31, 2022	December 31, 2021
	$'000	$'000
Administration consulting income (i)	**3,499**	3,955
Other	**(592)**	(455)
	2,907	3,500

(i) Administration consulting income is fees charged by the Company to the Kamoa Holding joint venture for administration, accounting and other services performed for the joint venture (see Note 4).

28. Profit per share

The basic profit per share is computed by dividing the profit attributable to the owners of the Company by the weighted average number of common shares outstanding during the period. The diluted profit per share reflects the potential dilution of common share equivalents, such as outstanding stock options and restricted share units, in the weighted average number of common shares outstanding during the year, if dilutive.

	December 31, 2022	December 31, 2021
	$'000	$'000
Basic profit per share		
Profit attributable to owners of the Company	**410,864**	55,242
Weighted average number of basic shares outstanding	**1,212,387,222**	1,208,351,955
Basic profit per share	**0.34**	0.05
Diluted profit per share		
Profit attributable to owners of the Company	**410,864**	55,242
Weighted average number of diluted shares outstanding	**1,228,089,887**	1,221,707,575
Diluted profit per share	**0.33**	0.05

28. Profit per share (continued)

The weighted average number of shares for the purpose of diluted profit per share reconciles to the weighted average number of shares used in the calculation of basic profit per share as follows:

	December 31, 2022	December 31, 2021
Weighted average number of basic shares outstanding	**1,212,387,222**	1,208,351,955
Shares deemed to be issued for no consideration in respect of:		
- stock options	**9,544,523**	9,906,569
- restricted share units	**6,158,142**	3,449,051
Weighted average number of diluted shares outstanding	**1,228,089,887**	1,221,707,575

29. Joint operations

The Company has a 50% interest in Rhenfield Limited, a British Virgin Islands registered company. Rhenfield Limited purchased buildings in London, England which the Company uses for office space. The buildings have a carrying value of $8.4 million (December 31, 2021: $9.5 million) and are included in property, plant and equipment (see Note 5). The buildings have been pledged as security for bank loans under a mortgage (see Note 17).

30. Related party transactions

The financial statements include the financial results of Ivanhoe Mines Ltd., its subsidiaries, joint ventures and joint operations listed in the following table:

		% equity interest as at		
Name	**Country of Incorporation**	**December 31, 2022**	December 31, 2021	
Direct Subsidiaries				
Ivanhoe Mines (Barbados) Limited	Barbados	**100%**	100%	(i)
African Copperbelt Exploration Ltd.	Barbados	**100%**	100%	(i)
Kengere Holding Limited	Barbados	**100%**	100%	(i)
Ivanhoe Mines US LLC	United States of America	**100%**	100%	(i)
Ivanhoe Mines UK Limited	United Kingdom	**100%**	100%	(ii)
Ivanplats Holding SARL	Luxembourg	**97%**	97%	(i)
Ivanhoe Mines Consulting Services (Beijing) Co., Ltd	China	**100%**	100%	(vi)
Indirect Subsidiaries				
Ivanhoe DRC Holding Ltd.	Barbados	**100%**	100%	(i)
Kipushi Holding Limited	Barbados	**100%**	100%	(i)
Ivanhoe Exploration Holding Ltd.	Barbados	**100%**	100%	(i)
Magharibi Holding Ltd.	Barbados	**100%**	100%	(i)
Makoko Holding Ltd.	Barbados	**100%**	100%	(i)
Mwangezi Holding Ltd.	Barbados	**100%**	100%	(i)
Lubudi Holding Ltd.	Barbados	**100%**	100%	(i)
Lueya Holding Ltd.	Barbados	**100%**	100%	(i)
Ivanhoe Newriver Holding Ltd.	Barbados	**100%**	100%	(i)
Ikekete Holding Ltd.	Barbados	**100%**	0%	(i)
Kampemba Holding Ltd.	Barbados	**100%**	0%	(i)
Mulomba Holding Ltd.	Barbados	**100%**	0%	(i)
Ivanhoe Mines DRC SARL	DRC	**100%**	100%	(ii)
Ivanhoe Mines Exploration DRC SARL	DRC	**100%**	100%	(iii)
Lufupa SASU	DRC	**100%**	100%	(iii)
Magharibi Mining SAU	DRC	**90%**	90%	(iii)
Makoko SA	DRC	**90%**	90%	(iii)
Kengere Mining SA	DRC	**75%**	75%	(iii)
Kipushi Corporation SA	DRC	**68%**	68%	(iii)
Namwana Exploration SA	DRC	**90%**	90%	(iii)
Ivanhoe (Namibia) (Pty) Ltd.	Namibia	**100%**	100%	(iii)
GB Mining & Exploration (SA) (Pty) Ltd.	South Africa	**100%**	100%	(vii)
Ivanhoe Mines SA (Pty) Ltd.	South Africa	**100%**	100%	(ii)
Ivanplats (Pty) Ltd.	South Africa	**64%**	64%	(iii)
Kico Services (Pty) Ltd.	South Africa	**100%**	100%	(ii)
Palrho Exploration (Pty) Ltd.	South Africa	**100%**	100%	(iii)
Ivanhoe (Zambia) Ltd.	Zambia	**100%**	100%	(iii)
Joint ventures				
Kamoa Holding Limited	Barbados	**49.50%**	49.50%	(iv)
Joint operations				
Rhenfield Limited	British Virgin Islands	**50%**	50%	(v)

30. Related party transactions (continued)

(i) This company acts as an intermediary holding company to other companies in the Group.
(ii) This company provides administration, accounting and other services to the Group on a cost-recovery basis.
(iii) This company is incorporated with the intention of engaging in exploration, development and mining activities.
(iv) This company is a joint venture of the Group. See Note 4 for information regarding the shareholding of this company.
(v) This company is a joint operation of the Group. See Note 29 for information on this company.
(vi) This company provides administration, investor relations and marketing services to the Group in China.
(vii) This company is an asset holding company.

The following table summarizes related party expenses incurred and income earned by the Company, primarily on a cost-recovery basis, with companies related by way of directors or shareholders in common. Amounts in brackets denote expenses.

	December 31, 2022	December 31, 2021
	$'000	$'000
Kamoa Holding Limited (a)	**151,066**	93,892
High Power Exploration Inc. (b)	**7,731**	5,169
Kamoa Services (Pty) Ltd. (c)	**4,359**	3,943
Kamoa Copper SA (d)	**1,424**	2,098
Ivanhoe Electric Inc. (e)	**186**	–
Ivanhoe Mines Energy DRC SARL (f)	**146**	152
Ivanhoe Capital Aviation Ltd. (g)	**(4,500)**	(4,483)
Ivanhoe Capital Services Ltd. (h)	**(503)**	(479)
CITIC Metal Africa Investments Limited (i)	**(240)**	(308)
Global Mining Management Corporation (j)	**(228)**	(571)
Ivanhoe Capital Pte Ltd. (k)	**(3)**	(19)
	159,438	99,394
Finance income	**158,800**	99,047
Cost recovery and management fee	**5,927**	6,193
Office and administration	**19**	(212)
Travel	**(4,428)**	(4,517)
Salaries and benefits	**(635)**	(537)
Directors fees	**(240)**	(308)
Consulting	**(5)**	(272)
	159,438	99,394

The transactions summarized above were in the normal course of operations and were measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

As at December 31, 2022, trade and other payables included $0.3 million (December 31, 2021: $0.1 million) with regards to amounts due to parties related by way of director, officers or shareholder in common. These amounts are unsecured and non-interest bearing.

Amounts included in other receivables due from parties related by way of director, officers or shareholder in common as at December 31, 2022 amounted to $6.9 million (December 31, 2021: $6.1 million). Of this, $6.6 million related to receivables from the joint venture (December 31, 2021: $6.0 million).

The directors of the Company are considered to be related parties and remuneration paid to the directors is disclosed in the Company's Management Proxy Circular available on the Company's website.

30. Related party transactions (continued)

(a) Kamoa Holding Limited ("Kamoa Holding") is a company registered in Barbados. The Company has an effective 49.5% ownership in Kamoa Holding. The Company earns interest on the loans advanced to Kamoa Holding (see Note 4).

(b) High Power Exploration Inc. ("HPX") is a private company incorporated under the laws of Delaware, USA. A director of the Company is a director and member of executive management of HPX. The Company extended a secured loan of $50 million to HPX. The loan receivable earned interest at a rate of 8% per annum until April 25, 2021. Following the signing of an amendment to the loan agreement on June 16, 2021, the interest rate was fixed at 11% per annum compounded monthly for the period after April 25, 2021 until April 25, 2022, after which the rate at which interest is earned increased to 15% per annum compounded monthly. The Company is negotiating an updated scheduled maturity date with HPX (see Note 8).

(c) Kamoa Services (Pty) Ltd. ("Kamoa Services") is a company registered in South Africa. On March 31, 2021 the Company sold its 100% interest in Kamoa Services to Kamoa Holding. The Company now has an effective 49.5% ownership in Kamoa Services. The Company provides administration, accounting and other services to Kamoa Services on a cost-recovery basis.

(d) Kamoa Copper SA ("Kamoa Copper") is a company incorporated in the DRC. The Company has an effective 39.6% ownership in Kamoa Copper (see Note 4). The Company provides administration, accounting and other services to Kamoa Copper on a cost-recovery basis.

(e) Ivanhoe Electric Inc. ("Ivanhoe Electric") is a company incorporated under the laws of Delaware, USA. A director of the Company is a director and member of executive management of Ivanhoe Electric. The Company provides services to Ivanhoe Electric on a cost-recovery basis.

(f) Ivanhoe Mines Energy DRC Sarl ("Energy") is a company incorporated in the DRC. The Company has an effective 49.5% ownership in Energy (see Note 4). The Company provides administration, accounting and other services to Energy on a cost-recovery basis.

(g) Ivanhoe Capital Aviation Ltd. ("Aviation") is a private company owned indirectly by a director of the Company. Aviation operates an aircraft for which the Company contributes toward the running costs.

(h) Ivanhoe Capital Services Ltd. ("Services") is a private company owned indirectly by a director of the Company. Services provides for salaries administration and other services to the Company in Singapore and Beijing on a cost-recovery basis.

(i) Citic Metal Africa Investments Limited ("Citic Metal Africa") is a private company incorporated in Hong Kong. Citic Metal Africa is a shareholder in the Company and nominates two directors who serve of the Company's Board of Directors.

(j) Global Mining Management Corporation ("Global") is a private company based in Vancouver, Canada. The Company and a director of the Company hold an indirect equity interest in Global. Global provides administration, accounting and other services to the Company on a cost-recovery basis.

(k) Ivanhoe Capital Pte Ltd. ("Capital") is a private company owned indirectly by a director of the Company. Capital provides administration, accounting and other services in Singapore on a cost-recovery basis.

31. Cash flow information

(a) Net change in working capital items:

	December 31, 2022	December 31, 2021
	$'000	$'000
Net (increase) decrease in		
Prepaid expenses	**(23,518)**	(1,044)
Other receivables	**(5,047)**	(4,263)
Consumable stores	**(16)**	22
Net increase in		
Trade and other payables	**34,838**	4,122
Deferred share unit liability	**–**	1,974
	6,257	811

(b) Net debt reconciliation

The following tables set out an analysis of net debt and the movements in net debt for each of the years presented.

	December 31, 2022	December 31, 2021
	$'000	$'000
Cash and cash equivalents (see Note 12)	**597,451**	608,176
Investment in listed entities (see Note 10)	**8,997**	1,144
Convertible notes - host liability (see Note 15)	**(465,323)**	(437,414)
Convertible notes - embedded derivative liability (see Note 15)	**(221,300)**	(244,200)
Borrowings (see Note 17)	**(40,823)**	(38,342)
Lease liabilities (see Note 11)	**(11,307)**	(11,970)
Net debt	**(132,305)**	(122,606)

	Liabilities from financing activities				**Other assets**	**Total**
	Borrowings	**Host liability**	**Embedded derivative**	**Leases**		
	$'000	**$'000**	**$'000**	**$'000**	**$'000**	**$'000**
Net surplus (debt) as at January 1, 2021	**(36,197)**	**–**	**–**	**(11,904)**	**264,235**	**216,134**
Cash flows	–	(405,725)	(150,500)	716	346,297	(209,212)
Foreign exchange	17	–	–	357	(946)	(572)
Other changes (i)	(2,162)	(31,689)	(93,700)	(1,139)	(266)	(128,956)
Net (debt) surplus as at December 31, 2021	**(38,342)**	**(437,414)**	**(244,200)**	**(11,970)**	**609,320**	**(122,606)**
Cash flows	–	14,375	–	713	7,088	22,176
New leases	–	–	–	755	–	755
Foreign exchange	465	–	–	(262)	(6,334)	(6,131)
Other changes (i)	(2,946)	(42,284)	22,900	(543)	(3,626)	(26,499)
Net (debt) surplus as at December 31, 2022	**(40,823)**	**(465,323)**	**(221,300)**	**(11,307)**	**606,448**	**(132,305)**

(i) Other changes include non-cash movements, including accrued interest expense which is presented appropriately as operating cash flows in the consolidated statements of cash flows when paid.

32. Financial instruments

(a) Fair value of financial instruments

The Company's financial assets and financial liabilities are categorized as follows:

Financial instrument	Level	**December 31, 2022**	December 31, 2021
		$'000	$'000
Financial assets			
Financial assets at fair value through profit or loss			
Investment in Renergen	Level 1	**7,947**	–
Investment in other listed entities	Level 1	**1,050**	1,144
Investment in unlisted entity	Level 3	**655**	655
Amortized cost			
Loan advanced to joint venture	Level 3	**1,536,601**	1,385,535
Cash and cash equivalents (c)		**597,451**	608,176
Loans receivable	Level 3	**112,104**	103,478
Promissory note receivable	Level 3	**26,756**	26,717
Other receivables (a) (c)		**9,983**	8,611
Financial liabilities			
Financial liabilities at fair value through profit or loss			
Convertible notes - embedded derivative liability	Level 3	**221,300**	244,200
Amortized cost			
Convertible notes - host liability (d)	Level 3	**465,323**	437,414
Borrowings	Level 3	**40,823**	38,342
Trade and other payables (b) (c)		**57,356**	22,769
Advances payable	Level 3	**3,123**	2,908

(a) Other receivables in the above table excludes refundable taxes receivable.
(b) Trade and other payables in the above table excludes payroll tax, other statutory liabilities, indirect taxes payable and other payables.
(c) Cash and cash equivalents, other receivables and trade and other payables are not assigned a fair value hierarchy due to their short-term nature.
(d) The estimated fair value is $482.4 million (December 31, 2021: $519.8 million) based on market-related year-end rates.

32. Financial instruments (continued)

(a) Fair value of financial instruments (continued)

IFRS 13 - Fair value measurement, requires an explanation about how fair value is determined for assets and liabilities measured in the financial statements at fair value and establishes a hierarchy into which these assets and liabilities must be grouped based on whether inputs to those valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company's assumptions. The two types of inputs create the following fair value hierarchy:

- Level 1: observable inputs such as quoted prices in active markets;
- Level 2: inputs, other than the quoted market prices in active markets, which are observable, either directly and/or indirectly; and
- Level 3: unobservable inputs for the asset or liability in which little or no market data exists and therefore require an entity to develop its own assumptions.

Investment in listed entities
The fair value is the market value of the listed shares at the end of the period.

Investment in unlisted entity
The Company acquired these shares on September 12, 2019. No significant changes occurred between acquisition date and December 31, 2022 and the Company has therefore determined that the purchase price approximates the fair value.

Loan advanced to the joint venture
Carrying amount is a reasonable approximation of fair value. The loan incurs interest at a variable rate of USD 12-month LIBOR plus 7% which approximates the current market interest rate.

Long-term loans receivable (Loan to HPX)
Carrying amount is a reasonable approximation of fair value. The interest rate is considered to be an arm's length rate. Country risk is considered to be low and the loan is secured by the shares of HPX.

Long-term loans receivable (Social development loan)
Carrying amount is a reasonable approximation of fair value. The fair value of the receivable at acquisition date was estimated by the Company by calculating the present value of the future expected cash flows using an effective interest rate of 9.2%.

Promissory note receivable
Carrying amount is a reasonable approximation of fair value. The creditworthiness of the promissory note holder is considered to be high (see Note 32(b)(ii)). The promissory note is payable on the earlier of December 8, 2025 or the next business day following the completion of the sale, transfer or disposition of the shares held by Crystal River in Kamoa Holding.

Other receivables
Carrying amount is a reasonable approximation of fair value due to the short-term nature of the receivable (less than 1 month).

Convertible notes (host liability)
The fair value of the liability on initial recognition was estimated by the Company by calculating the present value of the future expected cash flows using an effective interest rate of 9.39%. The fair value of the liability at year-end was estimated by the Company by calculating the present value of the contractual cash flows using a market related interest rate.

Convertible notes (embedded derivative liability)
The fair value of the liability is determined at the end of each reporting period and the fair value gain or loss is recognized in the consolidated statements of comprehensive income.

32. Financial instruments (continued)

(a) Fair value of financial instruments (continued)

Borrowings (Loan from ITC Platinum Development Limited)
Carrying amount is a reasonable approximation of fair value. The fair value of the loan is determined using a discounted future cashflow analysis based on an interest rate of USD 3-month LIBOR plus 7% and the loan is carried at this value (see Note 17(i)).

Borrowings (Loan from Citi bank)
Carrying amount is a reasonable approximation of fair value. The loan is an interest-only term loan repayable on August 28, 2025, and incurs interest at a rate of 1-month Sterling Overnight Index Average (SONIA) plus 1.90% payable monthly in arrears, which approximates the current market interest rate (see Note 17(ii)).

Trade and other payables
Carrying amount is a reasonable approximation of fair value due to the short-term nature of the receivable (less than 1 month).

Advances payable
Carrying amount is a reasonable approximation of fair value. This loan bears interest at USD 12-month LIBOR plus 4% which approximates the current market interest rate.

(b) Financial risk management objectives and policies

The risks associated with the Company's financial instruments and the policies to mitigate these risks are set out below. Management manages and monitors these exposures to ensure appropriate measures are implemented in a timely and effective manner.

(i) Foreign exchange risk

The Company incurs certain of its expenses in currencies other than the U.S. dollar. The Company also has foreign currency denominated monetary assets and liabilities. As such, the Company is subject to foreign exchange risk as a result of fluctuations in exchange rates. The Company has a policy to enter into derivative instruments to manage foreign exchange exposure as deemed appropriate.

The carrying amount of the Company's foreign currency denominated monetary assets and liabilities at the respective statement of financial position dates are as follows:

	December 31, 2022	December 31, 2021
	$'000	$'000
Assets		
South African rand	**227,987**	104,110
Canadian dollar	**8,875**	12,247
British pounds	**2,909**	4,259
Australian dollar	**958**	917
Liabilities		
South African rand	**(29,718)**	(10,635)
Canadian dollar	**(5,911)**	(1,493)
British pounds	**(2,945)**	(3,971)
Australian dollar	**–**	(283)

32. Financial instruments (continued)

(b) Financial risk management objectives and policies (continued)

Foreign currency sensitivity analysis

The following table details the Company's sensitivity to a 5% increase or decrease in the U.S. dollar against the foreign currencies presented. The sensitivity analysis includes only outstanding foreign currency denominated monetary items not denominated in the functional currency of the Company or the relevant subsidiary, and adjusts their translation at the end of the period for a 5% change in foreign currency rates. A positive number indicates a decrease in loss for the year where the foreign currencies strengthen against the U.S. dollar. The opposite number will result if the foreign currencies depreciate against the U.S. dollar.

	December 31, 2022	December 31, 2021
	$'000	$'000
Canadian dollar	**148**	538
Australian dollar	**48**	32
South African rand	**(227)**	(182)
British pounds	**(16)**	(24)

(ii) Credit risk

Credit risk is the risk of an unexpected loss if a customer or third party to a financial instrument fails to meet its contractual obligations. Credit risk for the Company is primarily associated with the loan to the joint venture, promissory note receivable, long-term loans receivable, other receivables and cash and cash equivalents.

The Company reviews the recoverable amount of their financial assets at each statement of financial position date to ensure that adequate impairment losses are made for irrecoverable amounts. The Company has considered the requirement of IFRS 9 to recognize a loss allowance for expected credit losses on financial assets. The general approach was applied to these financial assets, where the 12-month expected credit losses are calculated. The Company did not apply lifetime expected credit losses as there has not been a significant increase in credit risk in the year.

A significant increase in credit risk would include:

- Existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant change in the borrower's ability to meet its debt obligations.
- An actual or expected significant change in the operating results of the borrower.
- Significant increases in credit risk on other financial instruments of the same borrower.
- An actual or expected significant adverse change in the regulatory, economic, or technological environment of the borrower that results in a significant change in the borrower's ability to meet its debt obligations.
- Significant changes in the value of the collateral supporting the obligation or in the quality of third-party guarantees or credit enhancements, which are expected to reduce the borrower's economic incentive to make scheduled contractual payments or to otherwise have an effect on the probability of a default occurring.

The Company assesses whether an impairment is required on loan receivables. A range of cash flow scenarios are considered, taking into account forward-looking information which may impact recoverability of loan receivables.

32. Financial instruments (continued)

(b) Financial risk management objectives and policies (continued)

(ii) Credit risk (continued)

The loan advanced to the joint venture will be repaid as and when there is residual cash flow in Kamoa Holding. The expected credit loss is considered to be negligible.

The promissory note receivable will be repaid using proceeds from the sale of Crystal River's 1% stake in Kamoa Holding. The expected credit loss is considered to be negligible.

The principal amount of the long-term loan receivable from HPX and accrued interest thereon is convertible in whole, or part, by the Company at its sole discretion into shares of treasury common stock of HPX. The Company recorded an expected credit loss allowance of $1.2 million as at December 31, 2022 in accordance with IFRS 9 (December 31, 2021 $0.2 million).

Repayment of the long-term loan receivable from Gécamines will be made by offsetting the loan against future royalties and dividends payable to Gécamines which arise from future profits to be earned at Kipushi. The Company recorded an expected credit loss allowance of $0.5 million as at December 31, 2022 in accordance with IFRS 9.

The credit risk on cash and cash equivalents is limited because the cash and cash equivalents are composed of deposits with major banks who have investment-grade credit ratings assigned by international credit ratings agencies and have low risk of default. Management closely monitors its holdings in DRC bank accounts for credit risk.

The Company continues to monitor its credit risk and assess expected credit losses. The identified impairment loss in 2022 is negligible.

(iii) Liquidity risk

In the management of liquidity risk of the Company, the Company maintains a balance between continuity of funding and the flexibility through the use of borrowings. Management closely monitors the liquidity position and expects to have adequate sources of funding to finance the Company's projects and operations, including the commitments as disclosed in Note 34.

The following table details the Company's expected remaining contractual maturities for its financial liabilities. The table is based on the undiscounted cash flows of financial liabilities based on the earliest date on which the Company can be required to satisfy the liabilities.

32. Financial instruments (continued)

(b) Financial risk management objectives and policies (continued)

(iii) Liquidity risk (continued)

	Less than 1 month	1 to 3 months	3 to 12 months	More than 12 months	Total un-discounted cash flows
	$'000	$'000	$'000	$'000	**$'000**
As at December 31, 2022					
Convertible notes	3,033	–	–	575,000	**578,033**
Non-current borrowings	–	–	–	40,226	**40,226**
Trade and other payables (a)	51,689	987	4,680	–	**57,356**
As at December 31, 2021					
Convertible notes	3,033	–	–	575,000	**578,033**
Non-current borrowings	–	–	–	39,462	**39,462**
Trade and other payables (a)	20,819	758	1,192	–	**22,769**

(a) Trade and other payables in the above table excludes payroll tax, other statutory liabilities and indirect taxes payable.

(iv) Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk. Financial instruments affected by market risk include the convertible notes, loan advanced to the joint venture and borrowings.

The Company measures the embedded derivative liability portion of the convertible notes at fair value at each reporting date, recognizing changes in the fair value in the statements of comprehensive income. This requirement to “mark-to-market” the derivative features could significantly affect the results in the statement of comprehensive income. If the Company’s share price had been C$1.00 higher than it was on December 31, 2022, the fair value of the embedded derivative liability would have increased by $39.2 million, which would have resulted in the Company recording a loss on the fair valuation of the embedded derivative liability of $16.3 million instead of the gain of $22.9 million.

(v) Interest rate risk

The Company’s interest rate risk arises mainly from long-term borrowings, the long-term loan receivable and the loan advanced to the joint venture. The Company’s main exposure to interest rate risk arises from the fact that the Company earns and incurs interest on interest rates linked to LIBOR. If interest rates (including applicable LIBOR rates) had been 50 basis points higher or lower and all other variables were held constant the Company’s profit for the year ended December 31, 2022 would have increased or decreased by $10.0 million (December 31, 2021: $9.3 million) and is comprised as follows:

	December 31, 2022	December 31, 2021
	$'000	$'000
Loan advanced to the joint venture (see Note 4)	**7,231**	6,367
Cash and cash equivalents	**2,459**	2,675
Other interest-bearing amounts	**325**	283
	10,015	9,325

33. Capital risk management

The Company includes as capital its common shares and share option reserve. The Company's objectives are to safeguard its ability to continue as a going concern in order to pursue the development of its mineral properties and to maintain a flexible capital structure which optimizes the costs of capital at an acceptable risk.

The Company manages the capital structure and makes adjustments to it in light of changes in economic conditions and the risk characteristics of the underlying assets. To maintain or adjust the capital structure, the Company may attempt to issue new shares, issue new debt and acquire or dispose of assets to satisfy cash requirements. In order to facilitate the management of its capital requirements, the Company prepares annual expenditure budgets that are updated as necessary depending on various factors, including capital deployment, results from the exploration and development of its properties and general industry conditions. The annual and updated budgets are approved by the Board of Directors.

In order to maximize ongoing development efforts, the Company does not pay dividends. The Company's investment policy is to invest its cash in highly liquid, short-term, interest-bearing investments, selected with regard to the expected timing of expenditures from operations.

	December 31, 2022	December 31, 2021
	$'000	$'000
Net debt (See Note 31(b))	**(132,305)**	(122,606)
Total equity	**2,841,131**	2,376,997
Net debt to equity ratio (%)	**(4.7%)**	(5.2%)

As the Company has a number of development projects, it is largely equity funded.

34. Commitments and contingencies

From time to time, the Company becomes subject to claims or assessments made by tax or other authorities in the ordinary course of its business. Such claims may be made against the Company, or its subsidiaries and affiliates, or its joint ventures. Given the complexity, scope and multi-jurisdictional nature of the Company's business, such claims may arise in several jurisdictions and may involve complex legal, tax or accounting matters. Management assesses the Company's liabilities and contingencies for all tax years open to claims or assessment based upon the latest information available. The Company accrues for such claims, or makes a provision, in its financial statements, when a liability resulting from the claim is both probable and the amount can be reasonably estimated. In order to assess such likelihood management reviews claims with the benefit of internal and external legal advice where appropriate.

The Company is currently subject to several such claims, all of which have been determined by management, with the benefit of legal advice, to be without merit and justification and therefore not probable that a liability would arise therefrom. Where an estimated liability is determined as probable, management has determined that such liability would not have a material effect on the consolidated financial statements of the Company. Such determinations are based on current information and advice, which is subject to change based on changed facts or circumstances. Accordingly, management may re-assess any prior determination regarding the likelihood of a probable liability at any time.

34. Commitments and contingencies (continued)

As at December 31, 2022, the Company's commitments that have not been disclosed elsewhere in the consolidated financial statements are as follows:

	Less than 1 year	1 - 3 years	4 - 5 years	After 5 years	Total
	$'000	$'000	$'000	$'000	$'000
As at December 31, 2022					
Platreef project					
Shaft 2 construction	52,966	25,397	–	–	**78,363**
Concentrator	31,580	4,122	–	–	**35,702**
Infrastructure	24,980	8,666	–	–	**33,646**
Underground mine development	23,635	-	–	–	**23,635**
Electric fleet (i)	14,255	-	–	–	**14,255**
Engineering, procurement and	13,567	-	–	–	**13,567**
Surface facilities	8,219	-	–	–	**8,219**
Owners' costs	6,110	-	–	–	**6,110**
Ventilation shafts	3,997	-	–	–	**3,997**
Shaft 1 construction	2,265	-	–	–	**2,265**
Project services and studies	2,105	-	–	–	**2,105**
Solar panels	2,023	-	–	–	**2,023**
Kipushi project					
Concentrator Plant	54,552	7,298	–	–	**61,850**
Analytical Laboratories	15,329	–	–	–	**15,329**
Other	171	–	–	–	**171**
As at December 31, 2021					
Shaft 1 changeover (Platreef project)	17,570	–	–	–	**17,570**
Shaft 2 construction (Platreef project)	6,106	–	–	–	**6,106**

(i) The initial development is using mainly battery electric drill rigs and load haul dumpers manufactured by Epiroc, a leading mining equipment manufacturer, at its facilities in Örebro, Sweden. The partnership with Epiroc for emissions-free mining equipment is an important first step toward reducing the carbon footprint of the Platreef Project.

35. Key management personnel compensation

The remuneration of directors and other members of key management were as follows:

	December 31, 2022	December 31, 2021
	$'000	$'000
Short-term benefits	**10,604**	13,723
Share-based payments	**24,031**	18,682
	34,635	32,405

36. Segmented information

At December 31, 2022, the Company has four reportable segments, being the Platreef property, Kamoa Holding joint venture, Kipushi properties and the Company's treasury offices.

An operating segment is defined as a component of the Company:

- that engages in business activities from which it may earn revenues and incur expenses;
- whose operating results are reviewed regularly by the entity's chief operating decision maker; and
- for which discrete financial information is available.

For these four reportable segments, the Company receives discrete financial information that is used by the chief operating decision maker to make decisions about resources to be allocated to the segment and to assess its performance.

The reportable segments are principally engaged in the development of mineral properties in South Africa (see Note 6); exploration and development of mineral properties through a joint venture in the DRC (see Note 4); and the upgrading of mining infrastructure and refurbishment of a mine in the DRC respectively (see Note 6).

The following is an analysis of the non-current assets by geographical area and reconciled to the Company's financial statements:

	South Africa	**DRC**	**Other**	**Total**
	$'000	**$'000**	**$'000**	**$'000**
Non-current assets				
As at December 31, 2022	544,225	2,624,900	137,497	**3,306,622**
As at December 31, 2021	405,592	2,045,818	80,056	**2,531,466**

36. Segmented information (continued)

	December 31, 2022	December 31, 2021
	$'000	$'000
Segment assets		
Kamoa Holding joint venture	**2,047,040**	1,641,795
Platreef property	**753,041**	494,194
Kipushi properties	**627,011**	440,168
Treasury (ii)	**502,467**	600,325
All other segments (i)	**39,726**	41,724
Total	**3,969,285**	3,218,206
Segment liabilities		
Treasury (ii)	**701,406**	689,429
Platreef property	**374,711**	113,768
Kipushi properties	**32,642**	20,420
All other segments (i)	**19,395**	17,592
Total	**1,128,154**	841,209
Segment profits (losses)		
Kamoa Holding Limited joint venture	**254,180**	105,742
Kipushi properties	**112,416**	(33,828)
Treasury (ii)	**90,449**	(86,035)
Platreef properties	**4,929**	70,892
All other segments (i)	**(27,868)**	(11,459)
Total	**434,106**	45,312
Capital expenditures		
Platreef properties	**125,559**	49,179
Kipushi properties	**47,547**	1,262
All other segments (i)	**1,741**	2,274
Total	**174,847**	52,715
Exploration and project evaluation expenditure		
Kipushi properties	**(18,688)**	(32,651)
All other segments (i)	**(15,224)**	(19,520)
Total	**(33,912)**	(52,171)

(i) The Company's other divisions that do not meet the quantitative thresholds of IFRS 8 Operating Segments, are included in the segmental analysis under All other segments.

(ii) Treasury includes mainly cash balances, the promissory note receivable, the investments, the loan to HPX and the convertible notes.

37. Approval of the financial statements

The consolidated financial statements of Ivanhoe Mines Ltd., for the year ended December 31, 2022, were approved and authorized for issue by the Board of Directors on March 10, 2023.

38. Events after the reporting period

The directors are not aware of any other matters or circumstances arising since the end of the year and up to the date of these financial statements, not otherwise dealt with in this report.