

Ferrexpo plc
(“Ferrexpo” or the “Company” or the “Group”)

Full Year Financial Results for 2022

Ferrexpo plc (LSE: FXPO), a FTSE 250 iron ore pellet producer, announces its audited financial results for 2022.

Lucio Genovese, Non-executive Chair of Ferrexpo, commented:

"For Ferrexpo, the year 2022 will be defined not only by the events since 24 February 2022, but also by the resilience and commitment of our workforce and communities across Ukraine throughout Russia's invasion. With more than 95% of our workforce of 10,000 based in Ukraine, we have worked tirelessly to support them, their families and local communities since the start of the war, and we will continue to do so. Through years of investment in our people and our assets, working to build a resilient business, we have fortunately been able to continue to operate for most of the year. In doing so – we have been able to provide humanitarian support to communities across Ukraine, as well as support Ukraine's government via our continued contribution.

"Operationally, our assets have produced in line with accessible markets, with the closure of Ukraine's access to the Black Sea placing a significant impediment in our ability to access seaborne markets. We did, however, continue to deliver throughout the year to our European customers. This is testament to the long-term, sustainable relationships that we have built with our customer base.

"Looking to the future, we see positives in Ukraine's potential as a supplier of high grade, high quality iron ore to the global steel industry, particularly in Europe, which is taking significant steps to reduce its greenhouse gas emissions footprint and embark on decarbonisation pathways. As a company with existing capacity to be one of the world's largest producers of blast furnace iron ore pellets, we are well situated to serve this shift in the near-term. Beyond blast furnaces, a number of steelmakers worldwide are looking towards a longer term pathway to Green Steel and electric arc furnaces, with direct reduction pellets representing a known pathway for Green Steel production. As such, we have continued to develop our offering of this particular product, which represented 6% of our production in 2022 (2021: 4%).

"We have navigated a difficult year with resilience. Our team has shown commitment to our stakeholders – ranging from our humanitarian efforts, to supporting the Ukrainian government through their need for industry to keep operating. We have remained in constant dialogue with our customers and investors throughout this war, and I would like to thank all of our stakeholders for the commitment shown to us during 2022. We look forward to a brighter future for Ukraine, whereby Ukrainians can realise their country's true potential, and we look forward to supporting this next phase of growth."

Financial highlights for 2022:

- Revenue: 50% lower at US\$1.2 billion as a consequence of the war in Ukraine, with operational and logistics constraints imposed as a result (2021: US\$2.5 billion).
- Underlying EBITDA^A: 47% reduction to US\$765 million in 2022 (2021: US\$1,439 million), reflecting a balance of lower production and market factors, partially offset by an operating foreign exchange gain of US\$339 million.
- Net cash flows from operations of US\$301 million (2021: US\$1,094 million), with operations remaining profitable despite the significant challenges posed by the war in Ukraine.
- Capital investment^A of US\$161 million in 2022, with a range of sustaining and expansion projects progressed in 2022, despite the war in Ukraine (2021: US\$361 million).
- Net cash position maintained despite the restrictions imposed as a result of the war in Ukraine, with a 9% decline seen in 2022 to US\$106 million as at 31 December 2022 (31 December 2021: US\$117 million).

Financial summary for 2022:

US\$ million (unless otherwise stated)	Year ended 31.12.22	Year ended 31.12.21	% Change
Pellet production (kt)	6,053	11,220	(46%)
Sales volumes (kt)	6,183	11,350	(46%)
Average Platts ¹ 65% Fe iron ore fines price (US\$/t)	139	186	(25%)
Revenue	1,248	2,518	(50%)
Average C1 cash cost ^A (US\$/t)	83.3	55.8	+49%
Underlying EBITDA ^A	765	1,439	(47%)
Diluted EPS (US cents)	37.4	147.9	(75%)
Net cash flow from operating activities	301	1,094	(72%)
Capital investment ^A	161	361	(55%)
Net cash	106	117	(9%)
Cash and cash equivalents	113	167	(32%)

1. Source: S&P Global Commodity Insights.

Items denoted with 'A' are Alternative Performance Measures. See page 75 for more information.

Safety and wellbeing:

- Safety performance at Ferrexpo's operations remains strong, with a second successive fatality-free year and lost time injury frequency rate of 0.51 continues materially below the Group's historic trailing average (2017-2021: 0.83).
- Tragically, we are aware of the loss of 20 lives from our workforce serving in the armed forces of Ukraine.
- Focus on the wellbeing initiatives for our workforce, as the war in Ukraine enters its second year.

Market factors:

- Iron ore prices (65% Index)¹ declined by 25% to US\$139 per tonne, down from record highs as a result of post-Covid stimulus packages during 2021. Iron ore fines index remains in line with level seen in 2020 (2020: US\$122 per tonne).
- Pellet premiums continue to show resilience, demonstrating underlying strength of pellet market fundamentals, with Atlantic Pellet Premium² rising by 20% to US\$72 per tonne in 2022 (2021: US\$60 per tonne)³.
- Ferrum premium, which is the premium paid for high grade iron ores over medium grade iron ores, remained in line with 2021 at 15% of the benchmark medium grade index (2021: 16%), demonstrating resilient demand for higher grade iron ore, which helps steelmakers to improve blast furnace productivity and reduce their emissions¹.
- C3 freight index, indicative of global freight rates for iron ore shipments, fell 9% to US\$24 per tonne, reflecting the lower demand for iron ore during the year (2021: US\$27 per tonne)⁴.

Operational factors:

- Iron ore pellet production of 6.1 million tonnes in 2022 (2021: 11.2 million tonnes), with this 46% reduction coming as a consequence of the restrictions imposed by the war in Ukraine.
- Operations continued to ship products to customers throughout 2022, despite electricity shortages experienced in 4Q 2022.
- Full year iron ore sales of 6.2 million tonnes (2021: 11.4 million tonnes), with year on year performance mirroring iron ore pellet production.
- Investment in growth continues with completion of the first stage of the Group's press filtration complex, which will increase pellet quality and lower natural gas consumption per tonne of production, once operations return to nameplate capacity.
- C1 Cash Cost of Production^A ("C1 costs^A") of US\$83.3 per tonne reflect lower production volumes in 2022, higher input prices for key consumables and constraints imposed as a result of the conflict in Ukraine.
- As of late February 2023, the Group has resumed operations at the second (of four) pelletiser lines, following progress made in the stabilisation of Ukraine's electricity network. The Group intends to continue producing at between one and two pelletiser lines for the coming months, assuming that the war in Ukraine does not deteriorate the operating environment.

Environment, social and governance ("ESG") factors:

- Inaugural Climate Change Report published in December, with updated and broadened greenhouse gas emissions targets.
- Reduction in greenhouse gas emissions footprint in 2022, despite the war in Ukraine:
 - Scope 1 and 2 emissions cut by a further 1% (combined)⁵, placing Ferrexpo 31% below its baseline year of 2019.
 - Scope 3 emissions also cut by 1%; Group is now 3% below its baseline year (2019) for this category of emissions.
- Independent assurance process completed on reporting of selected emissions and safety data for 2022, in line with process completed for 2021 data.
- Publication of seventh standalone Responsible Business Report, covering ESG activities, in both English and Ukrainian, helping to engage with all stakeholders at the local and global level.
- Progress in diversity, equity and inclusion continues, with proportion of managerial roles held by women increasing to 20.9% (2021: 20.1%). Female representation in overall workforce of 28.7% in 2022 (2021: 29.2%).

Corporate governance topics:

- Executive Director Jim North confirmed as permanent Chief Executive Officer in February 2022.
- Resignation of Non-executive Director Kostyantyn Zhevago in December 2022.
- Yaroslava Blonska appointed Acting Chief Marketing Officer in August 2022.
- Independent Non-executive Director Ann-Christin Andersen has notified the Board that she will not stand for re-election at the Company's next Annual General Meeting in May 2023.
- Female representation of 43% on Ferrexpo's Board of Directors as at 31 December 2022 (31 December 2021: 38%).

1. Source: S&P Global Commodity Insights.

2. Source: S&P Global Commodity Insights.

3. Note that 2021 figure for Atlantic Blast Furnace pellet premium is restated.

4. Source: Baltic Exchange.

5. Emissions reduction progress is shown on a unit of production basis; please see page 8 of the Group's Climate Change Report for more information.

Stakeholder engagement activities

In light of the continued risks posed to Ferrexpo by the ongoing war in Ukraine, the Group's management team will not be hosting an open access call with investors. This approach is in line with the Group's 2021 Full Year Results and 1H 2022 Interim Results, and is a decision that has been made on the basis of the safety and wellbeing of our people in Ukraine. The Group's management team will, however, be hosting an event for analysts at 9:30am on 15 March 2023. For those interested in attending, please contact ferrexpo@tavistock.co.uk. Ahead of the aforementioned analyst event, a presentation will be uploaded to the Group's website at the following address:

<https://www.ferrexpo.com/investors/results-reports-and-presentations/>

The Group expects to host its Annual General Meeting in May 2023 and will update the market accordingly at this event.

Alternative Performance Measures

Words with the suffix A are defined in the Alternative Performance Measures – see pages 75 to 76 for more information.

In this report, the terms “Ferrexpo”, the “Company”, the “Group”, our “business”, “organisation”, “we”, “us”, “our” and “ourselves” refer to Ferrexpo plc and, except where the context otherwise requires, its subsidiaries.

Additional information

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The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulation (EU) No. 596/2014 as amended by The Market Abuse (Amendment) (EU Exit) Regulations 2019. The person responsible for making this notification is Mark Gregory, Company Secretary.

About Ferrexpo:

Ferrexpo is a Swiss headquartered iron ore company with assets in Ukraine and a premium listing on the London Stock Exchange in the FTSE 250 index (ticker FXPO). The Group produces high grade iron ore pellets, which are a premium product for the global steel industry and enable reduced carbon emissions and increased productivity for steelmakers when the Group's iron ore pellets are converted into steel, compared to more commonly traded forms of iron ore. Ferrexpo's operations have been supplying the global steel industry for over 50 years, and in 2022 the Group produced 6.1 million tonnes of iron ore pellets, despite the war in Ukraine. Historically, Ferrexpo has been the world's third largest exporter of pellets to the global steel industry, recently having a market share of approximately 9% in 2021. The Group has a global customer base comprising of premium steel mills around the world, which includes steel mills in Austria, Germany, Japan, South Korea, Taiwan, China, Slovakia, the Czech Republic, Turkey, Vietnam and America. For further information, please visit www.ferrexpo.com.

CHAIR'S STATEMENT

The year 2022 will long be remembered as a consequence of Russia's escalation of its invasion of Ukraine. It is a significant moment in the history of our planet, and we remain committed to Ukraine and our people at this difficult time.

At Ferrexpo, we are proudly Ukrainian. Ferrexpo has successfully operated in Ukraine for more than 15 years since our listing, and we have consistently invested in Ukraine, our people and our assets. Over this time, our constructive relationships have helped us build a company that is capable of producing some of the highest quality forms of iron ore that are commercially available.

The world has supported Ukraine as it defends itself from Russia's invasion. We have remained committed to Ukraine throughout this conflict, through providing vital humanitarian support to those in need, whilst continuing production and our contribution to the Ukrainian economy. We have nearly 10,000 people in our workforce, with 95% normally based in Ukraine, and we have strived to support them, their families and local communities throughout this conflict. On a national scale, Ferrexpo represents a significant contributor to the Ukrainian economy through taxes and royalties, as well as our consistent use of Ukraine's infrastructure and serving as a major employer in our region of Ukraine. We are proud that our resilient business model, and focus on high quality products, has enabled us to continue shipments to our European customers throughout 2022.

Resilience and commitment

In reviewing what we have learnt from the past year, two key themes are evident: resilience and commitment. Ukraine's resilience has been apparent in newspapers around the world for more than 380 days. At our operations, we have seen our workforce come together with local communities.

In an effort to streamline our support, we established a dedicated humanitarian fund early in the conflict, as it quickly became apparent that large businesses would need to support communities. Through more than 70 individual projects, I am proud to reflect on the direct support that we have been able to provide, and will continue to offer, with over US\$19 million of humanitarian aid provided to date. I am also proud that Ferrexpo has supported 3,500 internally displaced people fleeing the war as they pass through our area.

As the war enters its second year, we are mindful of the wellbeing of our workforce and the effects of living in a war zone. As such, we are offering free support services to those at our operations.

I am proud of the commitment that we have shown to our stakeholders, and indeed the commitment that they have shown us. In Ukraine, we have worked closely with communities to provide support through our newly formed humanitarian fund and the long-standing Ferrexpo Charity Fund. Resilience is also evident in our operations and marketing teams, with their efforts enabling us to continue shipping throughout 2022. As a modern company, we are increasingly reliant on electronic equipment for managing our operations, and therefore protecting our IT infrastructure from cyberattacks has been critical since the war began – more on our efforts here on page 47.

More broadly, we have also continued our decarbonisation strategy in publishing our Climate Change Report as scheduled in 4Q 2022, as well as providing clear and timely communications with stakeholders throughout the war. We are also grateful to our customers, who have shown commitment to our products, and I would like to thank them for their continued support, which is only possible through long-standing positive relationships.

Understanding our role in Ukraine

We are a major business in Ukraine and, as such, we are a significant contributor to the local economy and economy of Ukraine. In 2022, we contributed US\$164 million in taxes and royalties, and we have continued supporting our workforce through our continued operations. We are frequent and consistent users of Ukraine's utilities and infrastructure, helping to contribute to the functioning of Ukraine beyond our own operations. Through our position as one of the world's largest iron ore pellet producers, we are able to be a significant contributor to Ukraine's exports, representing 3% of total exports by value in 2022, despite a 46% decline in production and 25% lower iron ore prices in 2022.

Our footprint in Ukraine extends beyond our own operations, and we are proud to support local businesses and local communities. Of the people that we employ in Ukraine, almost all are based in local communities, and 79% of our recruitment in 2022 was from local communities.

Board developments

The past year has brought a number of changes to strengthen the Board; we welcomed Fiona MacAulay into the role of Senior Independent Director, Ann-Christin Andersen in the role of Chair of the Health, Safety, Environment and Community ("HSEC") Committee and Natalie Polischuk joined the Board in December 2021. Furthermore, Jim North was appointed as permanent CEO in February 2022. In addition, Non-executive Director Kostyantyn Zhevago stepped down from the Board in December 2022.

Looking to the future

Reflecting on our long-term strategy as a business, we remain committed to Ukraine and its potential. There is a significant challenge ahead, once the war ends, for companies and communities to help with the rebuilding and healing of Ukraine.

More broadly, we are pleased to see the global shift in the steel market towards higher grade, higher quality materials as a route to lower emissions across the steel value chain. High grade iron ore has been a strategic priority of

Ferrexpo's since listing in 2007, and we are proud to be able to help facilitate decarbonisation in the steel industry, which accounts for 7% of global greenhouse gas emissions¹.

The coming period will be difficult given the continued war in Ukraine, but if we are to look beyond the war, we continue to be excited by Ukraine's potential and the future that lies ahead in Green Steel. Through working with our stakeholders, we are proud to have built the business that we have today, and the potential that it has for the future.

Finally, I would like to thank all of our stakeholders, particularly those in Ukraine, for their continued commitment to Ferrexpo. I am hopeful that we will soon see an end to the conflict, and then we can look towards a brighter future for Ukraine.

Slava Ukraini.

Lucio Genovese

Chair, Ferrexpo plc

CASE STUDY: WAR IN UKRAINE

As a business operating in Ukraine at the current time, we have been significantly impacted by the ongoing war. Here we explore a selection of these impacts, and the outlook for further consequences.

Our people

Our first priority will always be the safety and wellbeing of our people. Currently, we have more than 1,500 people absent from our workforce, including approximately 650 members of our workforce serving in the Armed Forces of Ukraine², who we have supported with key protective equipment such as bulletproof vests. Certain areas of our business are affected more by absences than others, and the situation is helped by our operations running below capacity. We are increasingly working to assist wellbeing – including a programme to provide counselling to those returning from the armed forces, and a rehabilitation centre for those returning to work after service.

Regrettably, we are now aware of 20 members of our team have died whilst serving in Ukraine's military, and we are supporting their families².

Remembering those we have lost

As of 10 March 2023, we are aware of a total of 20 members of our team that have sadly died whilst serving in the Armed Forces of Ukraine, and we are supporting their families at this difficult time.

Dmytro Belikov, age 32	Serhiy Kharlamov, age 57	Oleksandr Scherbakov, age 28
Oleksiy Bridnya, age 33	Serhii Kondyk, age 31	Denys Svrydov, age 50
Andriy Chernya, age 37	Denys Koshovyi, 30	Yaroslav Taran, age 50
Oleksandr Chugainov, age 54	Rostyslav Ledovskyy, age 25	Oleksandr Terlenko, age 48
Maksym Chystyakov, age 24	Dmytro Lysachenko, age 28	Oleksiy Yatskov, age 36
Andrii Dukanych, age 33	Roman Lytvynenko, age 31	Anatoliy Zakupets, age 37
Oleksiy Khanilevych, age 24	Kostyantyn Orchikov, age 30	

Slava Ukraini.

Local communities

It was quickly apparent in the early stages of the conflict that the people of Ukraine would need humanitarian support at this difficult time. The Ferrexpo Humanitarian Fund has helped channel support to more than 70 projects since the start of the war² – see page 31 for more details.

Logistics constraints

The closure of Ukraine's access to the Black Sea has severely restricted our access to seaborne markets and has therefore limited our ability to pivot sales according to regional demand around the world – as seen previously during the global Covid-19 pandemic. Access to the seaborne market is possible today, but at an elevated cost and with additional restrictions.

Power supply

In late 2022, Russian attacks on civilian electrical infrastructure increased, with a significant impact on electricity generation and supply. Following the onset of this phase of the war, the Group was not able to achieve stable production for approximately ten weeks of 4Q 2022. As a means of reducing operational risk around further power shortages, we are replenishing pellet inventories at strategic locations, as well as exploring our options around self-generation of electricity.

Local currency and economy

The Ukrainian hryvnia depreciated by 34% during the course of 2022³, and this has impacted operating costs and carrying value of assets – see page 11 for more details. Looking forward, it is expected that, should the war continue,

1. Source: International Energy Agency ("IEA"), [link](#). (Accessed February 2023.)

2. Information as of 10 March 2023.

3. Source: NBU, [link](#). (Accessed 3 March 2023.)

the Ukrainian hryvnia will continue to depreciate further. Furthermore, the Ukrainian economy experienced an inflation rate of 27% in 2022¹.

Supplier constraints

Throughout 2022, we have continuously adapted to an ever-changing operating environment, including changing suppliers for key inputs as individual suppliers are forced to close their operations or divert logistics paths. We expect to have to continue to adapt and evolve our supply arrangements, to ensure supply and reduce risk, for as long as the war continues.

CEO'S REVIEW

The morning of 24 February 2022 will live long in the memory. Russia's invasion of Ukraine has defined our year, but we are proud of the resilience shown by our workforce in continuing to support Ukraine's economy.

We have a workforce of 10,000 people, with more than 95% of them based in central Ukraine and it is our duty to protect and support them. I am proud to have been a part of Ferrexpo in 2022, as we have sought to engage with our workforce and communities across Ukraine at such a difficult moment in history, to understand what we could do to help.

Supporting Ukraine

Through the creation of the Ferrexpo Humanitarian Fund, we have been in a position to provide direct support to those in need, as well as help our suppliers and customers provide contributions to fight the effects of the humanitarian crisis that is unfolding in Ukraine. Through this fund, and additional support projects provided directly by our subsidiaries, we have provided more than US\$19 million of targeted humanitarian assistance to date, supporting over 70 initiatives across eight regions of Ukraine. Each individual project is reviewed and approved by the Health, Safety, Environment and Community ("HSEC") Committee to ensure good governance practices remain, even in a war zone. For more on our humanitarian efforts, see page 31.

Despite the war in Ukraine and the difficulties our people have experienced in 2022, our safety performance has remained strong. We remain fatality-free for the second year running, and our lost time injury frequency rate continues to be materially below the level recorded by our peers. See page 21 for more on our safety performance.

Drive towards Green Steel

As a constituent of the steel value chain, we understand the importance of climate change and how this point in time represents a pivotal moment for the steel sector, with major investment planned in the coming decades. As a producer of a form of iron ore that helps steelmakers reduce emissions, we are in a position to supply the global steel industry with blast furnace pellets today to reduce emissions by 40%² as they switch away from sinter fines. In parallel, we are developing our offering of direct reduction pellets, which represent a potential pathway to low emissions Green Steel, positioning us well for the future.

Our progress in decarbonisation, which to date has seen us realise a 31% decrease in emissions since our baseline year, has begun well and we intend to maintain our positive momentum in reducing our emissions. We are excited by our stakeholders' desire to understand our decarbonisation pathway, and we are looking into ways to collaborate together going forward. Through our work with environmental consultants Ricardo Plc, we were also able to present expanded targets for our emissions reduction programme – please see our Climate Change Report, which was published in December 2022, for more details.

Operating in a time of war

Production volumes fell by 46% in 2022, primarily reflecting the constraints imposed by the war in Ukraine and the deterioration of the economic environment in Europe as energy prices and inflationary risks rose throughout the year. The war's restrictions on our access to the Black Sea have made logistics routes for sales outside of Europe less cost effective, but this topic is a clear catalyst for 2023 should our Black Sea access resume.

Sales volumes in 2022 reflected accessible markets, with sales in the first quarter remaining buoyant as short-term supply disruption led to steelmakers building raw materials inventories. Subsequently, sales declined throughout the year as the complexity of the restrictions on our business increased. We did, however, continue to deliver our products to our European customers throughout the year, which is a testament to the resilience and commitment of our marketing and operations teams.

A committed leadership team

Given the conflict in Ukraine, it is easy to overlook our achievements in bolstering the management and governance of our business. My appointment as permanent Chief Executive Officer was announced in February 2022. In the same month, Fiona MacAulay and Ann-Christin Andersen were appointed as Senior Independent Director and Chair of the HSEC Committee respectively, and on 30 December 2021 we announced the appointment of an additional Independent Non-executive Director, Natalie Polischuk. The appointments of Fiona, Ann-Christin and Natalie bolster our leadership from a diversity perspective, and we are seeing progress in our executive management team – Yaroslava Blonska was appointed Acting Chief Marketing Officer in October 2022, and in 2022 the proportion of our management positions held by women increased to 20.9% (2021: 20.1%).

1. Source: Reuters, [link](#). (Accessed 3 March 2023.)

2. Source: Independent research provided by CRU.

It is important to thank all of our stakeholders for their commitment to Ferrexpo in 2022. It is our committed workforce, the communities that grant us our licence to operate, our long-standing customer and supplier relationships, and other key relationships, that have helped to support us throughout this war. Through operating a resilient business model, we aim to come through this difficult time as a stronger company, and this would not be possible without this continued support.

Jim North

Chief Executive Officer, Ferrexpo

MARKET REVIEW

Reduced levels of price volatility were seen in 2022 compared to 2021. Whilst iron ore prices declined by 25%, blast furnace pellet premiums rose by 20%, which reflects shifting demand for high quality products.

The Group primarily generates its revenues through the sale of iron ore pellets, the pricing of which is governed by a number of quoted market benchmarks, generating a net realised pellet price. The main contributing components to the pricing of Ferrexpo's pellets are the high grade (65% iron, "Fe") iron ore fines index, the pellet premium, a rate applicable for the freight component of transporting material to customers, and any applicable additional premiums and discounts. The Group currently only produces high grade products, grading either 65% Fe or above, and therefore the following text focuses on the high grade index for iron ore fines pricing.

Iron ore fines prices

The index for high grade (65% Fe) iron ore fines began the year at US\$140 per tonne and rose to more than US\$190 per tonne as of early March, before steadily declining to a low of US\$91 per tonne in late October. The primary factor behind this initial rise during 1Q 2022 was the rising risk of conflict in Ukraine, ultimately followed by Russia's invasion commencing in February, which put pressure on global iron ore prices as steelmakers sought to source alternative suppliers to Russian iron ore. This short-term tightness in the iron ore market largely persisted into 2Q 2022, before the impact of elevated energy prices and concerns over the global economic outlook, particularly for the Chinese economy, began to erode confidence in end-user markets. Prices declined by approximately US\$40 per tonne between early June and early July, before exhibiting a more gradual decline thereafter, with market commentators citing concerns over steel margins in China and local restrictions within China related to the global Covid-19 pandemic as the reasons for this decline¹.

Moving into 2H 2022, efforts by steel mills to stockpile material slowed, as they began to secure access to alternative raw material supply channels, and demand for iron ore started to normalise. As such, the drivers behind price movements returned to Chinese supply/demand dynamics for iron ore and steel, with China representing the largest market for seaborne iron ore and the main determinant of iron ore prices globally. The beginning of 2H 2022 coincided with weak demand for iron ore and steel, especially with sentiment dampened by strict Covid-19 restrictions in China. A key effect of these restrictions was the impact on consumer sentiment in local property markets, which is a major user of finished steel in China. This generated a gradual decline in iron ore pricing until early 4Q 2022. Expectations arose in October regarding a potential unlocking of restrictions in China, but these were short-lived after the Chinese government reiterated existing policies, sending prices to the full year low of US\$91 per tonne in late October. Iron ore prices did ultimately recover as restrictions in China were eventually eased towards the end of 4Q 2022, ending the year at US\$131 per tonne.

Overall, the full year iron ore price declined by 25% in 2022, broadly reflecting weaker demand as a consequence of the conflict in Ukraine and concerns over the Chinese economy. It should also be noted that the comparative period (2021) represented a robust year across the commodity space, as governments worldwide continued to supply fiscal stimulus in response to Covid-19, with iron ore pricing in 2019 and 2020 being US\$104 and US\$122 per tonne respectively – in line with the figure for 2022¹.

Towards the end of 2022, it was widely expected that 2023 would see a contraction in global markets, with economies worldwide already witnessing a slowdown in growth during 2H 2022, as energy prices remained elevated and central banks sought to contain inflationary pressures by raising interest rates. However, recent news and developments in China, such as reports of a potential easing of Covid-19 restrictions, have resulted in iron ore prices rising to US\$138 per tonne as at the end of February 2023. Futures contracts reflect the current uncertainty in the market, with contracts for December 2023 deliveries (62% Fe Index) trading at a level US\$8 per tonne below today's spot market.²

The supply side of the iron ore fines market is widely expected to remain balanced in 2023, with supply from the major producers in Brazil and Australia expected to remain largely in line with the same level of output seen in 2022³.

High grade premiums

The premium for high grade iron ore, being the difference between the 65% Fe Index and the 62% Fe Index, contracted in 2022 in line with the benchmark indices, falling by 28%. This contraction is expected at times of steel market weakness, when steel margins are reduced and steelmakers seek to utilise lower grade inputs to reduce raw material costs, reflecting a more conservative approach. Similar to the fines index, the ferrum premium of US\$19 per tonne in 2022 was ahead of levels seen in recent years (2019 and 2020: US\$11 and US\$13 per tonne respectively)

1. Source: S&P Global Commodity Insights.

2. Source: CME Group, [link](#) (accessed 23 February 2023).

3. Source: Management estimate.

or in line with other recent years (2018: US\$21 per tonne). The year-on-year comparison, however, shows a 28% reduction, with 2021 being a relatively high year for commodities pricing (2021: US\$26 per tonne).¹

Given the correlation of the grade of iron ores and the degree of emissions produced by steelmakers, with higher grade ores requiring the production of lower emissions to generate steel, it is expected that the ferrum premium will continue to widen over the long term.

Pellet premiums

The pellet premium is a significant factor in the cash flow generation of a pellet producer, with this component of pricing typically representing a significant additional premium over and above the prevailing iron ore fines index. For example, the Atlantic Pellet Premium¹ represented a 60% premium above the 62% Fe iron ore fines index in 2022 (2021: 38%).

The high level of the pellet premium (relative to benchmark fines prices) reflects the scarcity of iron ore pellets relative to the global fines export market. In 2022, the global pellet export market represented approximately 111 million tonnes¹, compared to global fines export trade of 1.1 billion tonnes². In addition, iron ore pellets typically offer steelmakers the opportunity to raise mill productivity and lower emissions due to higher grades and the lack of a requirement for sintering, which is a process that typically utilises coal as its energy source.

Global exports of pellets decreased by approximately 15% in 2022, reflecting a reduction in supply from almost all major iron ore pellet exporters for a variety of reasons. Pellet exports from Russia have seen the largest year-on-year decrease, falling by approximately 7 million tonnes as steelmakers switch suppliers following Russia's invasion of Ukraine. Additionally, lower pellet demand from Chinese steel mills, with this demand down approximately 60% in 2022, has resulted in lower export volumes for pellet producers that have historically supplied this market – with Brazilian and Indian exporters accounting for approximately half of this decrease¹.

Regionally, 2022 saw a clear split in the health of global steel markets, with those markets more closely correlated to Russian energy supply (such as Europe) seeing the greatest decline in demand for pellets. European steel mills imported approximately one third lower volumes of iron ore pellets in 2022, with this reduction seen in both Western and Eastern Europe. Outside of China, Asian steel mills saw a lower reduction in buying activity, with a 14% reduction year-on-year. The Middle East and North Africa ("MENA") region, which is a region less dependent on Russian energy supply, saw a 7% increase in pellet buying activity in 2022.

An additional factor helping to promote our exports to the MENA region is that this region typically purchases direct reduction ("DR") pellets. Since DR pellets have a lower emissions footprint than other forms of iron ore, we are directing our strategy towards this product and actively growing our footprint in this region.

As a result of tightness in pellet markets outside of China in 2022, both the Atlantic pellet premium and DR pellet premium rose materially during the year, and therefore trended in the opposite direction to iron ore fines prices. This divergence is due to iron ore fines and pellets having different key drivers – China accounted for 75% of global iron ore fines imports in 2022 (2021: 76%)², and is therefore the dominant market for this product. For pellets, the key markets are Europe and markets in North East Asia, where independent steelmakers³ in these two regions collectively accounted for 60% of defined pellet imports in 2022 (2021: 58%)¹. Factors related to climate change and decarbonisation, with the pace of legislative change faster in Europe than other markets, are expected to have a greater bearing on the pricing of iron ore pellets as a result of this link to European buying.

Summary of industry key statistics

(All figures US\$/tonne, unless stated otherwise)	2022	2021	YoY change
Iron ore fines price (62% Fe, CFR China) ⁴	120	160	(25%)
Iron ore fines price (65% Fe, CFR China) ⁴	139	186	(25%)
Average 65% Fe spread over 62% Fe ⁴	19	26	(28%)
Atlantic (blast furnace) pellet premium ⁴	72	60 ⁵	+20%
Direct reduction pellet premium ⁴	87	73 ⁵	+18%
C3 freight (Brazil – China) ⁶	24	27	(9%)
C2 freight (Brazil – Netherlands) ⁶	13	14 ⁵	(11%)
Global steel production (million tonnes) ⁷	1,832	1,912	(4%)

Within the year, the Atlantic pellet premium⁴ rose by 41% in 1H 2022 (in contrast to the iron ore fines price, which remained broadly flat). Stockpiling efforts, which were in response to increased risk of supply disruption following Russia's invasion of Ukraine in February 2022, resulted in an increase in pellet premiums in 1H 2022. This buying

1. Source: Management estimate

2. Source: CRU.

3. Defined as steelmakers that do not have material volumes of integrated iron ore supply, excluding pellet imports listed without a defined destination (12% of the total pellet market, typically relating to exports from certain producers in the Commonwealth of Independent States ("CIS") and India).

4. Source: S&P Global Commodity Insights.

5. Figures restated compared to 2021 Annual Report.

6. Source: Baltic Exchange.

7. Source: World Steel Association.

activity was, however, not matched by end-user demand and raw material stockpile inventories increased, particularly in Europe. With high prices for raw materials and energy inputs, steel margins in Europe decreased in the middle of 2022, subsequently prompting several blast furnaces to suspend operations in Europe. By October, a total of ten blast furnace steelmaking facilities in the region idled at least part of their operations².

High pellet inventories, coupled with low blast furnace steel output, resulted in a reduction in pellet demand, and Atlantic pellet premiums fell to approximately US\$60 per tonne towards the end of 4Q 2022.

Whilst pellet buying in European and Asian regions declined in 2022, a significant proportion of pellet sales are conducted via long-term contract – providing an additional degree of stability (for example, 96% of Ferrexpo's pellet sales in 2022 were under long-term contract). This therefore provides stability for individual pellet producers, and the overall pellet market, throughout the commodity cycle.

Looking ahead to 2023, it is expected that the overall size of the pellet export market will revert to a similar size as seen in recent years (c.130 million tonnes), with the pace of this recovery dependent on the war in Ukraine and any resulting easing of constraints related to energy supply (particularly energy supply into Europe). China's expected easing of Covid-19 restrictions boosted iron ore fines pricing in late 2022, albeit with relatively little firm evidence of increased economic output¹. Should China deliver a recovery in its growth rate, which saw 3% growth in 2022 compared to 8% in 2021², it should be expected that blast furnace pellet premiums will stabilise at current levels. Pellet demand from European steel mills in 2023 is expected to be linked to energy prices, inflation rates and the outlook of the war in Ukraine. To mitigate risks to the Ferrexpo business, it is important for the Group to resume access to ex-European markets in 2023 to provide support for realised pellet premiums.

Freight rates

During the year, the C3 freight rate, which describes the cost of shipping dry bulk materials from Brazil to China, rose from a low of US\$17 per tonne in January to a peak of US\$38 per tonne in May, with this increase associated with rising energy costs and buoyant commodity markets. In 2H 2022, the same freight index declined to US\$22 per tonne by the end of 3Q 2022, where it then largely remained for 4Q 2022. This decline in 2H 2022 can be attributed to an economic slowdown in China, partially related to local "zero Covid" rules, lower energy prices and lower commodity pricing driving reduced demand for shipping.

At US\$24 per tonne, the average C3 freight rate for 2022 represented a level US\$3 per tonne below the previous year as global demand for dry bulk cargoes weakened.

Looking ahead, freight rates are expected to remain above historical averages seen in years prior to the global Covid-19 pandemic, with elevated levels already seen in 2021 and 2022. This shift reflects higher energy costs and the potential for costs associated with stricter environmental regulation to be passed on to end users.

Steel

Ferrexpo's iron ore pellets are used by steelmakers to produce steel. Factors such as global steel production, pricing and margins therefore have a direct impact on the benchmark indices used in the pricing of pellets.

World steel production in 2022 fell by 4% to 1.8 billion tonnes, with a 2% contraction in China and larger declines in developing economies such as the European Union (11% decrease), Japan (7% decrease) and the United States (6% decrease)³. Even before the war in Ukraine started, production rates were slower at the start of the year than in 2021, with global output down 6% as of February 2022. This deficit largely remained intact throughout the remainder of the year.

Pricing for hot rolled coil ("HRC") in Europe began the year at €960 per tonne, before rising sharply to over €1,400 in late March, as steelmakers were able to transfer the rising cost of raw material inputs to end users. European economies demonstrated slowing growth throughout 2022, as a consequence of Russia's invasion of Ukraine, elevated energy prices and inflationary pressures, and consequently have shown lower levels of end-user demand for steel. As a result, HRC steel prices declined to below €700 per tonne by the end of the year, representing a level 33% below the start of the year. A similar trend was seen in China throughout 2022, albeit to a less pronounced extent, due in part to a lower exposure to Russian energy. Chinese HRC prices rose in 1Q 2022 to approximately 10% above the start of the year, then declined to 21% below this level as of the end of the year⁴.

Looking ahead to 2023, the World Steel Association's Short Range Outlook, issued in October 2022, projects a small recovery in steel production, with 1% growth to 1.8 billion tonnes. This growth is attributed to infrastructure demand, despite concerns over high inflation, monetary tightening and China's slowdown.

Developments in Green Steel

A number of major steel producers announced initiatives to produce Green Steel in 2022, which is the manufacturing of steel without the use of fossil fuels⁵, often announcing agreements with end users (typically with the automotive sector) for the offtake of this material. The cost of Green Steel is estimated to be up to 60% higher than current prices, with this difference primarily related to the expected additional cost of producing and using green hydrogen.⁶

1. Management estimate.

2. Source: World Bank, [link](#). (Accessed 3 March 2023.)

3. Source: World Steel Association.

4. Source: Bloomberg.

5. As defined by the World Economic Forum, [link](#). (Accessed 3 March 2023.)

6. Source: SteelOrbis, [link](#). (Accessed 3 March 2023.)

Whilst trial quantities of Green Steel were produced in Sweden in 2022, widespread commercial production is not expected to commence until the medium to long term¹.

CASE STUDY: LOGISTICS FLEXIBILITY IN A WAR

The war in Ukraine has highlighted the importance of having flexibility and diversity within our logistics chain, with Ukraine's railways and our inland waterway subsidiary providing essential services during the year.

Disruption due to conflict in 2022

As summarised on page 5, the war in Ukraine in 2022 has resulted in several disruptive effects on Ukraine's logistics network, from the closure of Ukraine's access to the Black Sea, to targeted attacks on the railway network. Indirect effects of the war also included the diversion of Ukraine's grain shipments to non-Ukrainian ports, putting additional pressure on Ukraine's railway network.

Owner-operator model

At Ferrexpo, we have long sought to own and operate our logistics network, either through the purchase of our own rail wagons, operating our own inland waterway (barging) subsidiary First-DDSG, or owning a stake in a berth at a port in Ukraine. This practice lowers operating costs (as utilising state-owned railcars has an additional operating cost associated with them), improves product quality control (since we can manage the maintenance of our own railway wagons and vessels), and reduces operational risk. This final point has been key during the war in Ukraine, when accessing European customers has been periodically difficult via Ukraine's railway network.

Resilience in logistics

Whilst total shipments declined by 46% in 2022, shipments to Europe (being the only practical market for us during the majority of 2022) only declined by 23%, as we managed to maintain vital logistics pathways to European customers. This achievement is in part thanks to our strong relationship with Ukraine's railway operator, which has maintained its operations under exceptional circumstances, despite numerous attacks.

A key consideration for us to increase our production volumes will be when we will gain additional clarity on our ability to deliver our products to customers. A major development would be the reopening of Ukraine's ports, or the re-establishment of access to seaborne markets via an alternative port that is both cost effective and capable of handling material volumes. We are in advanced discussions with an alternative port operator and are looking to resume seaborne shipments in the near term.

FINANCIAL REVIEW

Through a focus on premium products and effective cost controls, the Group has maintained strong margins on our sales, facilitating a stable net cash position year-on-year.

Summary

The war in Ukraine has shaped the operational and financial performance of our business in 2022, with production and sales volumes 46% lower as a result of the restrictions imposed by the conflict in Ukraine (see page 5 for a summary of the impacts felt). Key drivers for the Group's financial performance in 2022 include a significant impairment of US\$254 million and a net foreign exchange gain of US\$276 million (operating gain less non-operating loss), both of which are related to the war in Ukraine.

The Group's lower production and sales, combined with escalating energy prices and global inflation, C1 cash cost of production^A ("C1 costs^A") rose by 49%, resulted in a decline in Underlying EBITDA^A and profit after tax by 47% and 75% respectively. Despite the war, we continued to invest in our assets in 2022, with a further US\$161 million of capital investment^A.

Revenue

Group revenues declined by 50% to US\$1.2 billion in 2022 (2021: US\$2.5 billion), which principally reflects the restrictions imposed on our business due to the war in Ukraine (see page 5 for a summary of effects of the conflict), which reduced pellet production by 46% to 6.1 million tonnes in 2022 (2021: 11.2 million tonnes).

Additional factors governing the Group's revenue in 2022 include a 25% decline in the benchmark iron ore price (65% Fe), a 6% reduction in freight rates, and an increase in pellet premiums. For more information on the market factors governing pricing of the Group's products, please see pages 7 to 10.

Furthermore, during the course of the year the Group grew stockpiles of finished products during 1H 2022 as the war in Ukraine created instability in logistics pathways. Stockpiles were subsequently reduced in 2H 2022 as the operating environment for production deteriorated, but sales volumes generally continued. This pattern ultimately reflected in total production and sales volumes remaining broadly in line in 2022 (2021: in line).

Seaborne freight revenue arising from cost and freight ("CFR") sales decreased revenue by US\$94 million compared to 2021, reflecting the net effect of lower sales volumes to seaborne markets.

Revenues from the Group's barging and bunker operations, First-DDSG Logistics Holding, increased by US\$4 million in 2022 compared with 2021 as a result of higher freight rates and bunker volumes and prices.

C1 cash cost of production^A

The Group's average C1 costs^A for 2022 was US\$83.3 per tonne, compared with US\$55.8 per tonne in 2021, reflecting a 49% year-on-year increase. Key drivers behind the higher level of C1 costs^A include the 46% reduction in both iron ore pellet production and sales volumes, with the war resulting in an amended logistics landscape in 2022. The Group's higher unit C1 costs^A were impacted to a greater extent by the Group's fixed cost base in 2022, as a result of 46% lower pellet production volumes.

In addition to the factors discussed earlier in this section, 2022 saw significant cost inflation associated with energy prices and global inflation, driven in part by the war in Ukraine and restricted global energy supply. As an example of the variability of energy costs during the year, the Brent price of crude oil rose from US\$87 per barrel in January 2022 to a monthly peak of US\$123 per barrel in June 2022 (40% increase), before declining to US\$81 per barrel in December 2022¹. This escalation in energy pricing during the course of the year represents a significant factor in the Group's operating costs given that energy has historically represented more than 40% of the Group's C1 costs^A – see page 14 for more information.

In more detail, the energy-related components of the Group's C1 costs^A are electricity (primarily used in beneficiation operations), natural gas and biofuels (used in the Group's pelletiser) and liquid fuels such as diesel (principally used in mining operations). These energy costs represented a combined 49% of the Group's C1 costs^A in 2022 (2021: 45%), with natural gas prices in Ukraine increasing by 129% between 3Q 2021 (at a time when prices were in line with the average for 2021), and 1Q 2022, when supply risks relating to Russia's invasion of Ukraine were realised. Since this initial price spike, natural gas prices declined by 31% between 1Q and 4Q 2022, reflecting lower than expected demand in global markets. Electricity prices in Ukraine followed a similar trend in 2022, rising by 45% between 3Q 2021 and 1Q 2022, before prices subsequently retreated 18% by 4Q 2022².

As detailed in the Group's 2021 Annual Report and Accounts, Ukraine implemented a new royalty regime for iron ore producers that came into force in January 2022. This regime comprises a royalty payment based on the spot iron ore (62% Fe) fines price, with no reference to pellet premiums or freight rates, which is structured as follows: (1) at monthly iron ore prices (62% Fe) less than or equal to US\$100 per tonne, a royalty rate of 3.5% will apply to iron ore product sales, (2) at prices less than or equal to US\$200 per tonne, a royalty rate of 5% will apply and (3) at prices above US\$200 per tonne, a royalty rate of 10% will apply. Royalties are not tiered and therefore the rate applied will apply to the full price of the iron ore product being sold. The regime outlined above compares to the previous iron ore royalty calculation, whereby the Group paid a flat royalty rate of approximately US\$3.5 per tonne of all tonnes sold. As shown in the Market Review section (see table on page 12), benchmark iron ore fines prices for material

1. Source: Bloomberg.

2. Movements shown are based on quarterly averages.

grading 62% Fe averaged US\$120 per tonne in 2022 (2021: US\$160 per tonne)¹. Given the level of monthly iron ore pricing in 2022, the impact of the royalty rate on C1 costs^A was US\$7 per tonne in 2022.

In line with previous years, the Group's C1 costs^A represent the cash costs of production of iron pellets from own ore (to the mine gate), divided by production volume from own ore, and excludes non-cash costs such as depreciation, pension costs and inventory movements, as well as the costs of purchased ore, concentrate and gravel. The C1 cash cost of production^A (US dollars per tonne) is regarded as an Alternative Performance Measure ("APM"). For further information, please see pages 75 to 76.

Key Financial Performance Indicators

US\$ million (unless stated otherwise)	2022	2021	YoY change
Total pellet production (kt)	6,053	11,220	(46%)
Sales volumes (kt)	6,183	11,350	(46%)
Iron ore price (65% Fe Index, US\$/t) ²	139	186	(25%)
Revenue	1,248	2,518	(50%)
C1 cash cost of production ^A (US\$/t)	83.3	55.8	+49%
Underlying EBITDA ^A	765	1,439	(47%)
Underlying EBITDA ^A margin	61%	57%	+4pp
Debt servicing	42	215	(80%)
Capital investment ^A	161	361	(55%)
Closing net cash	106	117	(9%)

Selling and distribution costs

Total selling and distribution costs were US\$236 million in 2022 (2021: US\$340 million), reflecting lower sales to seaborne markets due to the war in Ukraine. As a result, international freight costs from CFR sales decreased by US\$120 million compared to 2021.

General and administrative expenses

General, administrative and other expenses in 2022 were US\$64 million (2021: US\$72 million), with this decrease mainly due to the net impact of higher inflation and lower production volumes, with the latter a direct consequence of the war in Ukraine.

Currency

Ferrexpo prepares its accounts in US dollars. The functional currency of the Group's operations in Ukraine is the Ukrainian hryvnia, which has historically represented approximately half of the Group's operating costs.

In 2022, the hryvnia depreciated by 34% from UAH 27 per US dollar as of 31 December 2021 to UAH 37 per US dollar as of 31 December 2022. The National Bank of Ukraine ("NBU") set the exchange rate at approximately UAH 37 per US dollar as of 21 July 2022, within the framework of the Martial Law entered into force since 24 February 2022. As a result of the introduced Martial Law, the NBU has introduced significant currency and capital control restrictions in Ukraine. These measures limit the possibility to convert local currency into US dollars, and the ability to transfer US dollars between onshore and offshore accounts of the Group. See Note 15 (Commitments, contingencies and legal disputes) for further information.

Ukrainian hryvnia vs. US dollar²

UAH per USD

Spot 28.02.23
36.5686

Opening rate 01.01.22
27.2782

Closing rate 31.12.22
36.5686

Average 2022
32.3423

Average 2021
27.2862

Operating foreign exchange losses

Given that the functional currency of the Ukrainian subsidiaries is the hryvnia, a depreciation of the hryvnia against the US dollar results in foreign exchange gain on the Group's Ukrainian subsidiaries' US dollar denominated

1. Source: S&P Global Commodity Insights.

2. Source: National Bank of Ukraine.

receivable balances (from the sale of pellets). The operating foreign exchange gain in 2022 was US\$339 million compared to a loss of US\$38 million in 2021, when the hryvnia appreciated.

Non-operating foreign exchange gains/losses

Non-operating foreign exchange gains are mainly due to the reclassification of US dollar denominated inter-company loans from quasi equity to operating loans. In 2022, the Group recorded a non-operating foreign exchange loss of US\$63 million (2021: loss of US\$3 million), which was driven by a 34% depreciation of the hryvnia during the year against the US dollar, as well as fluctuations in the euro/US dollar exchange rate. For further information, please see Note 6 (Foreign exchange gains and losses) to the Consolidated Financial Statements.

Underlying EBITDA^A

Underlying EBITDA^A in 2022 decreased by 47% to US\$765 million, with this decrease reflecting a 46% reduction in sales volumes, lower market factors, including a 25% reduction in the benchmark iron ore fines price, and a 49% increase in C1 costs^A.

The Group's Underlying EBITDA^A for 2022 includes a non-cash operating forex gain of US\$339 million (2021: non-cash operating forex loss of US\$38 million).

Interest

Interest expense on loans and borrowings declined by 95% to US\$0.5 million compared to US\$10 million in 2021, due to the repayment of the Group's pre-export finance ("PXF") facility in June 2021. Other than trade finance lines (utilised only in Q1 2022 for an average cost of 2.19%), the Group did not have any financial debt in 2022 and, therefore, no related financial expense (2021: average cost of debt of 4.7% driven by the PXF that was fully repaid in June 2021).

Further details on finance expense are disclosed in Note 7 (Net finance expense) to the Consolidated Financial Statements.

At the same time, interest income increased by 46% to US\$0.9 million compared to US\$0.6 million in 2021, reflecting the higher global interest rate environment.

Tax

In 2022, the Group's income tax expense was US\$119 million (2021: US\$200 million). The effective tax rate for 2022 was 35.0% (2021: 18.7%). The increase in the effective tax rate was predominantly driven by an impairment loss of US\$254 million on the Group's non-current operating assets, which is not tax deductible.

In 2022, the Group paid income taxes of US\$110 million (2021: US\$228 million), of which US\$91 million were paid in Ukraine (2021: US\$221 million).

Further details on taxation are disclosed in Note 8 (Taxation) to the Consolidated Financial Statements.

Items excluded from underlying earnings

The Group has recognised an impairment charge of US\$254 million as a result of a reduction in the carrying value of the Group's assets in Ukraine, and the devaluation of the local currency exchange rate seen in 2022. Please see Note 10 (Plant, property and equipment) to the Consolidated Financial Statements for more information.

In the prior period, an impairment charge of US\$231 million was recognised as at 31 December 2021, with this relating to stockpiled low grade ore as it cannot be reliably predicted as to when this material will be processed.

Please see Note 12 (Inventories) to the Consolidated Financial Statements for more information.

Profit for the period

Profit for the period decreased by 75% to US\$220 million compared with US\$871 million in 2021, reflecting a 62% decrease in operating profit, as well as a foreign exchange gain of US\$339 million compared to a foreign exchange loss of US\$38 million in 2021.

Cash flows

Operating cash flow before changes in working capital decreased by 70% to US\$434 million, while the working capital outflow in 2022 was US\$20 million (compared to an outflow of US\$139 million in 2021). The overall decrease in the working capital outflow largely reflects a balance of lower trade accounts receivable and higher inventories and VAT receivable, and a decrease in trade and other payables, which collectively provided a lower net effect in 2022.

As a result of lower operating cash flow, the net cash flow from operating activities decreased by 72% to US\$301 million in 2022 (2021: US\$1,094 million).

With respect to capital allocation, investment decreased by 55% to US\$161 million (2021: US\$361 million), while dividends paid during the 2022 calendar year decreased by 75% to 26.4 US cents compared to 105.6 US cents in 2021.

Capital investment^A

Capital expenditure in 2022 was US\$161 million compared to US\$361 million in 2021. Of this amount for 2022, sustaining and modernisation capex was US\$57 million (2021: US\$113 million), covering activities at all of Ferrexpo's major business units. Given operational and logistics constraints relating to Russia's invasion of Ukraine in 2022, the Group maintained its levels of investment relating to sustaining capital investment, and reduced activities relating to expansion capital investment^A, particularly in relation to projects that are expected to deliver returns in the medium to long term. As such, major projects advanced in 2022 include US\$25 million spent on stripping activities for future production growth, US\$17 million spent on the completion of the Group's press filtration complex and US\$2 million

on completion of the MFC-2 project, which will help raise pelletising capacity in the near term once operations return to full capacity.

Ferrexpo continued to invest in the primary crushers upgrade project, investing US\$4 million. A total of US\$37 million was spent on the Group's concentrator and pelletiser as part of the Wave 1 Expansion Programme, and a further US\$4 million was invested in infrastructure facilities. The Group also spent US\$11 million in the development and exploration of the Belanovo, Galeschynske and Northern deposits, and US\$2 million in a hydrolysis plant for the trial of hydrogen use as a fuel in the Group's pelletiser. The Group also invested US\$3 million in the procurement of new railcars in 2022. For further information on the Group's activities to grow its business in 2022, please see page 18.

Shareholder returns

Total dividends paid to date in respect of 2022 are 13.2 US cents (2021 total: 52.8 US cents). The Group has a shareholder returns policy outlining the Group's intention to deliver 30% of free cash flows as dividends in respect of a given year. To date, the Group has announced dividends in respect of the 2022 financial year representing 55% of the Group's free cash flow in 2022.

Debt and maturity profile

Ferrexpo has maintained a strong balance sheet in 2022, including low levels of gross debt and had a net cash position as of 31 December 2022. As of 31 December 2022, the Group's net cash position was US\$106 million (31 December 2021: US\$117 million net cash position). The Group had no debt facilities as of 31 December 2022, compared with US\$50 million as of 31 December 2021.

The balance of cash and cash equivalents held in Ukraine amounts to US\$45 million as at 31 December 2022 (31 December 2021: US\$52 million). Despite the foreign exchange control measures imposed under Martial Law in Ukraine (see Note 30 Commitments, contingencies and legal disputes), this balance is fully available to the Group for its operations in Ukraine and is therefore not considered restricted.

As of 31 December 2022, the credit ratings agency Moody's had a long-term corporate and debt rating for Ferrexpo of Caa2, with a negative outlook. The credit ratings agency Fitch maintains a CCC+ rating on the Group. While the credit rating of Ferrexpo is capped by the sovereign credit rating of Ukraine, the ceilings for credit ratings ascribed to Ferrexpo by both Moody's and Fitch are higher (one notch above sovereign, Caa3, for Moody's and three notches above sovereign, CC, for Fitch).

During the course of 2022, as risks relating to the Russian invasion of Ukraine escalated after 24 February 2022, the credit ratings agencies took a number of steps to update their assessments of Ukrainian issuers. As of 14 February 2023, Moody's had a long-term corporate and debt rating for Ferrexpo of Caa3, with a negative outlook. Similarly, as of 29 July 2022, Fitch had a long-term corporate and debt rating for Ferrexpo plc of CCC+. Whilst the credit rating of Ferrexpo is capped by the sovereign credit rating of Ukraine, the credit rating ascribed to Ferrexpo by Fitch is higher. The credit ratings agency Standard & Poor's has temporarily suspended the credit rating for Ferrexpo plc, following an action to suspend coverage of all Ukrainian issuers in March 2022.

Related party transactions

The Group enters into arm's length transactions with entities under the common control of Kostyantyn Zhevago and his associates. For further information, please see Note 16 (Related party disclosures).

Breakdown of C1 costs^A in 2022

Electricity	22%
Gas + Biofuel	19%
Fuel (including diesel)	8%
Maintenance and repairs	20%
Personnel costs	9%
Royalties and other taxes	9%
Materials	6%
Grinding bodies	6%
Blasting	2%

Note: above numbers are rounded to nearest percentage.

C1 costs^A in 2022 increased by 49% in 2022 to US\$83 per tonne, with this increase principally related to the increasing unit cost of energy such as natural gas, fuel (principally diesel) and electricity. This change is demonstrated in the chart above, with energy-related costs comprising 49% of our C1 costs^A in 2022 (2021: 45%).

In light of the ongoing war in Ukraine, scaling back of production activities and devaluation of the local currency in Ukraine, maintenance and repair costs fell to 20% in 2022 (2021: 22%), and materials costs reduced to 6% in 2022 (2021: 8%). The Group's decision to continue paying its workforce despite lower production volumes resulted in a small increase in percentage terms to 9% in 2022 (2021: 8%).

Royalties increased from 6% in 2021 to 9% in 2022 – please see page 11 for details of the revised royalty regime that was implemented at the start of the year.

CASE STUDY: FACTORS LEADING TO THE GROUP RECORDING AN IMPAIRMENT LOSS

Rising risks and a depreciating local currency contribute to a lower carrying value of assets.

Despite the Russian invasion into Ukraine on 24 February 2022, the Group continued to operate throughout the majority of 2022, albeit at a much lower capacity. However, the situation in Ukraine continues to represent a significant risk to the Group's operations and the point of time of the recovery of the production and sales volumes to pre-war levels is currently uncertain. As a result, the Group continuously adjusts its long-term model in order to reflect the latest developments in terms of possible production and sales volumes as well as latest market prices and production costs, which are adversely affected by lower production volumes. These factors, combined with a higher discount rate to be used as a result of an increased Country Risk Premium for Ukraine, had an adverse impact on the value in use of the Group's non-current operating assets.

In accordance with IAS 36 Impairment of assets, the Group recorded an impairment loss of US\$254 million as of 30 June 2022 as the carrying value of the assets was exceeding the computed value in use by this amount.

OPERATIONAL REVIEW

The Group managed to maintain production throughout the majority of 2022, and continued shipments to customers for the entire year, despite the challenges posed by the ongoing Russian invasion of Ukraine.

As a producer of a bulk commodity, our access to logistics is key in our ability to produce and sell our products. As a consequence of the war in Ukraine, our activities in 2022 were therefore appropriately scaled throughout the year, according to the number of customers that were accessible at any given time. Furthermore, attacks on Ukraine's state-owned electricity network in 4Q 2022 limited our ability to produce. Shipments were, however, maintained throughout the year, which is testament to the commitment of our operating and marketing teams.

Health and safety

2022 represented our second successive year with no fatalities, and we maintained our strong performance in relation to our key safety metric (lost time injury frequency rate). Please see page 21 for more information on our safety performance in 2022.

Reserves and resources

Ferrexpo controls licences covering a number of deposits located along the Kremenchuk Magnetic Anomaly, which is a magnetite deposit that extends for more than 50 kilometres. The Group has active mines on three deposits and additional licences for deposits immediately to the north of our active operations.

Across the Group's three active mines, we have a JORC-compliant Ore Reserve estimate of 1.6 billion tonnes of iron ore, with an iron ("Fe") content of 32% Fe (2021: 1.6 billion tonnes grading 32% Fe).

Our JORC-compliant Mineral Resource estimate across our three active mines is 5.7 billion tonnes of iron ore, with an iron ("Fe") content of 32% Fe (2021: 5.8 billion tonnes grading 32% Fe), which is inclusive of Ore Reserves.

In addition, at a number of exploration properties immediately north of our active mines, we have exploration stage properties with a combined non-JORC compliant Mineral Resource estimate of 14 billion tonnes of iron ore, grading 34% Fe (collectively referred to as the "Northern Deposits").

A table detailing the Group's JORC-compliant Ore Reserves and Mineral Resources as at 1 January 2023 is provided on page 17 of this report.

Mining activities

Throughout the year, we have scaled our mining operations according to the ore requirement of the processing plant, which has been set by the degree of accessible customer markets. See page 5 for more information on the various impacts imposed by the conflict in 2022.

Overall mining volumes across the Group saw a total movement of 55 million tonnes across our three mines in 2022 (2021: 152 million tonnes), with this 64% decline in total movement reflective of the war in Ukraine and the 46% decrease in sales volumes during the year.

Following the outbreak of Russia's invasion, mining activities initially focused on both the Poltava and Yeristovo mines, with strong European demand for iron ore, and therefore production volumes remained in line in 1Q 2022. Subsequently, production volumes in 2Q 2022 fell by 22% as logistics constraints increased and European steel mills curtailed buying activities having established larger raw inventories to mitigate supply risks.

With additional logistics restrictions in 3Q 2022, principally relating to attacks on the railway network and increased demand due to the grain season in Ukraine, the Group further lowered its production and focused its ore mining activities on the Yeristovo mine, to optimise mining costs.

Finally, in 4Q 2022, Russian attacks on state-owned electricity infrastructure resulted in a lack of power at our processing plant. In response, mining activities were paused given the lack of ore demand for production.

In light of the restrictions described above, mining tonnages at all three mines fell by between 50% and 80% during 2022, with a lower reduction of ore mining activities seen at both Poltava and Yeristovo mines (30–50% reduction).

Operational performance

(000't unless otherwise stated)	2022	2021	YoY change
Production			
Iron ore mined	18,837	33,764	(44%)
Strip ratio	1.9	3.5	(45%)
Iron ore processed	17,375	31,111	(44%)
Concentrate production	8,430	14,655	(42%)
Pellet production	6,053	11,220	(46%)
– Direct reduction pellets (67% Fe)	353	431	(18%)
– Premium blast furnace pellets (65% Fe)	5,700	10,790	(47%)
– Basic blast furnace pellets (62% Fe)	–	–	–
Commercial concentrate production	124	234	(47%)
Iron ore sales			
– Pellets	6,055	11,115	(46%)
– Concentrate	128	234	(45%)
– Total products sold	6,183	11,349	(46%)

Processing activities

As referenced above, processing activities were scaled according to accessible markets throughout the year, given the ongoing war in Ukraine. As such, processing volumes decreased by 44% during 2022 to 17 million tonnes, reflecting the above restrictions and reduced demand for iron ore pellets as a result of lower steel margins in Europe (being the main customer market for the Group given restricted access to seaborne markets).

A key area of focus of the Group's processing operations in 2022 was developing our offering of direct reduction ("DR") iron ore pellets, which is a product that is typically used in electric arc furnaces ("EAFs"). Since an EAF represents a more energy efficient process than the main alternative method of steelmaking (blast furnace), DR pellets have a materially lower Scope 3 carbon emissions footprint for the Group, whilst also generating higher pellet premiums for us through a higher iron ore grade.

In 2022, we produced 353 kilotonnes of DR pellets, which is a decrease of 18% on the previous year, but the proportion of total pellet output increased to 6% (2021: 4%). Through further developing our understanding of this product, as well as using 2022 as an opportunity to establish new relationships with potential customers, we are confident that we will emerge from the conflict in Ukraine with a more developed footprint for global DR pellet markets.

The war in Ukraine has created delays and uncertainty over our ability to sell our production at specific points in 2022.

To maintain the strength of our balance sheet throughout the conflict, we have sought to avoid the creation of significant stockpiles of finished iron ore pellets, as these capture operating costs, but do not deliver immediate opportunities to realise revenues. However, iron ore pellets do not materially degrade if stockpiled, and therefore it is not detrimental to the Group if material is temporarily stockpiled.

Given fluctuations in logistics availability during 2022, the Group accumulated a stockpile inventory of 1.0 million tonnes by the middle of 2Q 2022, with production scaled in 2H 2022 to ensure an effective drawdown of these stockpiles. As a result, the Group ended the year with stockpiles similar in size to the Group's stockpiles as at 31 December 2021 (approximately 0.1 million tonnes larger as of January 2023). The Group's stockpiles are located at our operations in Ukraine or at staging points across our logistics network, either within Ukraine or at key rehandling locations overseas.

Growth programme

Our Wave 1 Expansion programme, which would see us increase our production capacity by an additional three million tonnes of iron ore pellets per annum, remains an objective of the Group. Significant investment in this programme remains on hold whilst there are elevated risks associated with the war in Ukraine, but it is our intention to resume activities once the risk profile of the Group normalises.

Despite the war in Ukraine, a number of growth projects were completed or continued in 2022. These projects principally relate to projects that were close to completion as of February 2022, or represent low cost, high value projects that were deemed suitable for completion during the year. Please see page 18 for more information on growth projects completed in 2022.

Sustainability programme

We continued to implement our various sustainability initiatives throughout 2022, reducing our Scope 1 and 2 emissions footprint (combined basis) by 1% (now 31% below our baseline year of 2019), and further increasing gender diversity amongst our management team. Please see pages 19 to 32 for more information on our sustainability programme.

Logistics activities

A major impact of the war in Ukraine in 2022 has been on our ability to ship our products. Please see page 5 for a summary of the impacts incurred due to the conflict.

The Group's logistics network covers our use of the Ukrainian railway network, and beyond, for accessing European customers by rail. In addition, we have our inland waterway subsidiary First-DDSG for barging material along the River Danube. Our access to the seaborne market is typically via a berth at the Ukrainian port of Pivdennyi (formerly known as Yuzhny), but Russia's invasion in 2022 has limited Ukraine's access to the Black Sea. We have established potential routes into the seaborne market via alternative ports, and we are in advanced discussions to increase volumes of material shipped via these routes.

The logistics capacity of the Ukrainian railway network has remained under pressure during the year as a result of (a) Russia's attacks, and (b) the grain season in the summer of 2022, which reduced spare capacity across the network. Furthermore, power cuts across Ukraine in 4Q 2022 placed additional limits on the railway network's carrying capacity.

In terms of barging operations, First-DDSG's operations provided logistics flexibility at an important time for the business, helping facilitate shipments via an alternative logistics route.

Outlook

The Group expects that production volumes will continue to be linked to the volume of accessible sales in 2023.

We are currently operating with two of our four pelletiser lines, with this production predominantly being delivered to European customers. Should Ukraine's access to the Black Sea be restored, or should we be able to establish a port agreement that is consistent, scalable and economically viable, then returning to the seaborne market could potentially represent a catalyst for increasing output at our operations in the coming year. The Group demonstrated its flexibility in logistics during the global Covid-19 pandemic, when pellet sales to customers in China and South East Asia increased from 30% in 2019 to 56% in 2020, as demand in other regions fell. It would be the Group's intention to utilise this flexibility in global markets in 2023 if regular access to seaborne markets were to resume. An additional factor is the continued availability of the railway network in Ukraine, which is frequently subject to attacks by Russia. Additional factors affecting the Group's access to the railway network in Ukraine may relate to demand from other railway users, with shifting demand patterns likely as Ukraine's economy adapts to a complex operating environment.

Furthermore, attacks on Ukraine's state-owned electricity infrastructure have previously impacted our ability to operate, and this is a factor that should be monitored in 2023, should these attacks continue.

It is our intention to maintain our global inventory of finished iron ore pellets at a stockpile level in line with previous years, but this may not be possible given periodic fluctuations in logistics availability. Should changes in the level of available logistics result in an increased inventory of pellets, the Group may elect to moderate production volumes in 2023 to ensure a stockpile drawdown, similar in scale to that seen in 2H 2022.

Given the wide range in potential logistics and production outcomes in 2023, it is difficult to provide a clear expectation on overall production volumes for 2023. Should, however, the conflict risks associated with the war in Ukraine subside during 2023, then the Group would expect to return to its nameplate capacity as soon as it is practical to do so.

JORC-Compliant Ore Reserves and Mineral Resources¹

	Proven			Probable			Total		
	Mt	Fe total %	Fe magnetic %	Mt	Fe total %	Fe magnetic %	Mt	Fe total %	Fe magnetic %
JORC-compliant Ore Reserves									
Gorishne-Plavynske-Lavrykivske ("GPL")	303	33	26	823	31	23	1,126	32	24
Yerystivske	211	30	25	290	33	26	501	32	26
Total	514	32	26	1,113	32	24	1,627	32	25

	Measured			Indicated			Inferred			Total		
	Mt	Fe total %	Fe magnetic %	Mt	Fe total %	Fe magnetic %	Mt	Fe total %	Fe magnetic %	Mt	Fe total %	Fe magnetic %
JORC-compliant Mineral Resources												
Gorishne-Plavynske-Lavrykivske ("GPL")	469	35	29	1,621	30	22	744	32	24	2,834	31	24
Yerystivske	260	35	29	571	34	27	382	33	27	1,213	34	27
Bilaniyske	336	31	24	1,149	31	23	217	30	21	1,702	31	23
Total	1,065	34	27	3,341	31	23	1,343	32	24	5,749	32	24

1. The Group's JORC-compliant Ore Reserves and Mineral Resources shown above are based on an independent review completed by Bara Consulting, and are shown on a depleted basis as of 1 January 2023. The Group previously reported a resource estimate of 326Mt for the Galeschynske deposit, which is the subject of a legal dispute and is therefore not shown above; please see page 71 for more information.

CASE STUDY: INVESTMENT IN GROWTH PROJECTS

Newly completed press filtration complex expected to deliver a 3% reduction in natural gas consumption¹.

In light of the ongoing war in Ukraine, we have paused our main expansion project – the Wave 1 Expansion Programme, which amounts to more than US\$600 million of total investment, growing our production capacity by approximately 25%. The Wave 1 Expansion continues to represent a significant growth project, and we intend to resume activities once the conflict risks in Ukraine are reduced.

The past year, however, did see a number of growth projects completed at our Ukrainian operations. Total investment during 2022 was US\$161 million, of which US\$104 million was in growth projects, and the majority of this expenditure was on projects either nearing completion as of February 2022 or those which represent low cost, high return opportunities.

The main project completed in 2022 is the press filtration project in our beneficiation plant, which will help deliver more efficient removal of moisture from concentrate as it exits the beneficiation plant. The equipment installed includes Metso press filtration technology, which represents a modern alternative to our existing vacuum filter system.

Benefits¹ are expected to include:

- Lower moisture levels will result in lower energy costs in the pelletiser, where we heat pellets to cure and harden them. Consequently, natural gas consumption rates are expected to be 3% lower on average across all pellet types, with associated benefits for C1 costs^A and Scope 1 greenhouse gas emissions.
- Improved product quality, since excess moisture in green (unfired) pellets can lead to cracking as they are heated. The Cold Compression Strength (“CCS”) of our pellets, which is a key metric for pellet quality, is forecast to increase by 8% for our Ferrexpo Premium Pellets (65% Fe).
- Through more effective moisture removal, we will be able to increase throughput of material throughout our processing plant, resulting in 3% higher throughput rates (on average).
- A more efficient process will also result in lower losses of iron as concentrate is converted to pellets. This will result in a 0.2% Fe uplift in pellet grades (average).

1. Note that figures shown here in this case study are preliminary management estimates.

RESPONSIBLE BUSINESS REVIEW

In reviewing the past year, our engagement with local stakeholders in Ukraine has been key to understanding our role. Companies have been essential to the local response during Russia's invasion in 2022, supporting workforces, their families and local communities.

At Ferrexpo, we are proud to support Ukraine. Through our local presence and position as a long-term investor in the country, we have been able to provide targeted support throughout the war. However, our efforts in 2022 have not been limited to humanitarian aid, and we have continued to make good progress in a number of areas.

As a responsible business, we understand our role in Ukraine today: supporting our people and communities across Ukraine, and providing this support through our experience and in-country presence. We are long-term investors in Ukraine, its people and its economy, which is only possible through positive, long-term partnerships with our Ukrainian stakeholders.

Our community engagement and support throughout the conflict in Ukraine has primarily been conducted via our Ferrexpo Humanitarian Fund (see page 31 for more details). We also have our long-standing Ferrexpo Charity Fund, which has been providing direct support to communities for more than 11 years now. In 2022, we were also proud to publish our seventh Responsible Business Report, which was published in both English and Ukrainian for the first time – an important step in us broadening our engagement with our local stakeholders.

Understanding the task ahead

It is clear that the war will have a long-lasting impact on Ukraine. At this point in time, it is important to understand the various impacts of the war on the people and communities of Ukraine, as well as Ferrexpo. Through this understanding, we can begin to tailor our approach to our Responsible Business activities in the future, in particular, our efforts in respect of the health and wellbeing of our people and local communities, as well as targeted humanitarian support.

With this in mind, we intend to revisit our materiality assessment of sustainability topics in the coming year, once the risks associated with the conflict have subsided. An assessment today would likely be skewed by a need for near-term humanitarian support, which we are already providing. With time, there will be an opportunity to understand the longer-term needs of local communities, and we will tailor our approach according to the results of this work.

Safety and wellbeing

Health and safety is of paramount importance to us at Ferrexpo, and I am proud that our operations delivered another strong year in safety. We have taken numerous measures to protect our workforce from the threat of the conflict in Ukraine. As the war has progressed, we have also begun providing support for the wellbeing of our workforce, as we are conscious of the impact that living in a war might have on an individual's mental and physical health (see page 20 for more).

Levelling up our climate reporting

Understanding our environmental footprint and reducing our greenhouse gas emissions are key topics for modern companies. In 2022, despite the war in Ukraine, we continued to reduce our emissions, which fell by a further 1% in 2022, and this now puts us 31% below our baseline year of 2019¹. We also maintained our focus on developing our climate change strategy in 2022, publishing our inaugural Climate Change Report in December 2022, which serves to summarise our first phase of work with environmental consultants Ricardo Plc. In this report, we highlight a potential net zero pathway for our operations, as well as providing a detailed look at various climate change related risks and opportunities. Through this bespoke work, and our progress in reducing emissions to date, we were also able to upgrade our Scope 1 and 2 target for 2030 to 50% (from 30%)¹ and broaden our suite of targets to include Scope 3 emissions – setting reduction targets of 10% and 50% for 2030 and 2050 respectively². Our Scope 3 emissions are closely linked to our output of direct reduction ("DR") pellets, and more can be found on this subject in our Climate Change Report.

Building an inclusive culture

We continue to make progress in our approach to diversity. Our gender diversity initiative – the "Fe_munity" women in leadership programme – has recently accepted its third intake of future female leaders of our business, and in 2022 we broadened this initiative to welcome women from across Ukraine. To help drive change, we are also now providing grants to aid career journeys – more on this on page 30.

Driving change and transformation is an integral part of being a sustainable business. This can be through embedding a culture of safety at our operations, which is now showing tangible progress, through to our approach to diversity, equity and inclusion ("DEI"), driven by our first diversity and inclusion officer at our operations. Looking forward, we are seeing an emerging phase of cultural change in biodiversity, with baseline studies underway.

I am proud to be a part of Ferrexpo, having seen the good work in sustainability being conducted in Ukraine during my most recent site visit in late 2021. We are proud to support communities across Ukraine at this time and look to a more positive future, when the war is over. It is a pleasure to witness the changes underway in sustainability at Ferrexpo, and I would like to thank everyone involved, from our workforce for their efforts to drive this change, to our customers, investors and suppliers for their engagement on sustainability topics.

Ann-Christin Andersen

Chair, HSEC Committee

1. Scope 1 and 2 emissions combined, on a per tonne of production basis.

2. Scope 3 emissions on a per tonne of production basis

Responsible Business: Safety and Our People

Our workforce comprises 10,000 employees and contractors; with more than 95% of our team located in Ukraine, it is critical that we protect our workforce from immediate dangers, but also help support their health and wellbeing at this difficult time.

Case Study: Supporting wellbeing in a war zone

Businesses in Ukraine at the present time are playing a critical role in supporting individuals and communities within Ukraine. As a business located outside of the main conflict zone, Ferrexpo has been able to support more than 3,500 internally displaced people as they relocate themselves and their families away from danger, with accommodation available at our hotels and other properties in the local area.

For our workforce, we have provided psychological support, wellbeing classes and on-site yoga. For communities, we have trained local teachers to help extend our wellbeing programme to local schools, and are continuing to provide community support via the Ferrexpo Humanitarian Fund and Ferrexpo Charity Fund (see page 30 for more).

We are also supporting Ukrainian culture at this critical time, with initiatives such as marking Ukraine's first Statehood Day in July, hosting a poetry reading competition and publishing a book of employee poems to celebrate Ukrainian Writing and Language Day in November 2022.

Protecting our people

At Ferrexpo, we have a global workforce comprising almost 10,000 employees and contractors, with more than 95% based in Ukraine, and their safety is our first priority. Given the scale of our workforce, it was never an option to evacuate our people during the war in Ukraine, and therefore we have had to take extensive measures to protect our workforce with a war unfolding.

Measures taken have included remote working for those with suitable roles, to ensure that they were as far from the front line as possible. Measures for our on-site workforce have included the provision of air-raid shelters, adjusting shift patterns to align with night-time curfews and the provision of free meals in light of disruption to supply chains in local communities. In the early phase of the conflict, when uncertainty arose over the continued provision of social services, the Group commenced an on-site childcare facility for the children of employees, which was staffed by Ferrexpo volunteers, to ensure that children could be close by and safe during such an uncertain period of time. As the war evolved, the need for such facilities diminished as life began to resume in Ukraine, with schools opening and a 'new normal' beginning.

As the conflict evolved in 2022, so did our response – in 2H 2022, we focused our efforts on the supply of key equipment such as armoured ambulances and food packages to towns along the front line. We have also moved to provide wellbeing initiatives to help our workforce and community as they adapt to the stress of living in a war zone, with free psychological support.

We now have approximately 650 employees who are currently serving in the Armed Forces of Ukraine¹. We are proud of their efforts to defend Ukraine, and have supported them by providing personal protective equipment and other non-lethal equipment.

Operational safety initiatives maintained

Despite the focus on the war in Ukraine, we are proud that our operations teams managed to record another year of excellent safety performance. In 2022, the Group recorded a second successive year without a fatality, and the Group's lost time injury frequency rate ("LTIFR") continues at a level materially below both our historic average² and the Group's iron ore producing peers in Western Australia³.

As demonstrated in the table over the page, the Group's performance in lagging indicators of safety remained largely in line with 2021 on lost time injuries and total injury frequency rates. Near miss events saw a significant decrease, as did significant incidents. In terms of leading indicators, the Group's adoption of ISO 45001:2019 in 2021 resulted in increased reporting of hazards in 2022 – demonstrating an improving culture for reporting and understanding the safety of the working environment. Health and safety inductions and training hours were both significantly reduced in 2022, reflecting the indirect effects of the war in Ukraine, with a large number of our workforce currently located off-site and lower levels of recruitment during the year.

External recognition for wellbeing programme

In January 2022, the Group learnt that it had passed a Sedex Members Ethical Trade Audit ("SMETA") social responsibility audit, which is a study into a company's occupational health and safety, environment, working conditions, and suppliers' goodwill, with the Group undertaking this exercise for the first time. In passing this audit, the independent auditor highlighted the quality of medical care, management of social security and medical insurance provided by Ferrexpo to its employees.

1. Information as of 14 March 2023.

2. LTIFR full year average for 2017-2021.

3. Source: Government of Western Australia, [link](#). (Accessed 3 March 2023.)

Health and safety performance (2021/2022)

	2022	2021	Change
Safety indicators (lagging)			
Fatalities ¹	0	0	–
Lost time injuries ¹	10	9	+11%
Lost time injury frequency rate (“LTIFR”) ¹	0.51	0.41	+24%
All injuries frequency rate (“AIFR”) ^{2,3}	0.99	0.97	+2%
Near miss events ²	1	5	(80%)
Significant incidents ²	8	12	(33%)
Restricted work days ²	934	497	+88%
Severity rate (average lost days per incident) ²	104	55	+88%
Safety indicators (leading)²			
Health and safety inspections	5,413	3,293	+64%
Health and safety meetings	1,388	1,165	+19%
Health and safety inductions	5,332	11,602	(54%)
Training hours	6,828	11,786	(42%)
Hazard reports	740	595	+24%
High visibility management tours	157	124	+27%

Responsible Business: Environmental Stewardship

Despite the war in Ukraine, we were able to publish an upgraded suite of carbon emissions targets following the publication of our inaugural Climate Change Report in December 2022. Work continues in our collaboration with environmental consultants Ricardo Plc, with a life cycle assessment to be published in 2023.

In October 2021, we announced our collaboration with environmental consultants Ricardo Plc, with work completed to date summarised in our first standalone Climate Change Report, which was published in December 2022.

Details of this work are provided in this section, and as part of this bespoke piece of work, we were able to present a potential net zero pathway for us to achieve our carbon emissions goals for 2050 (covering all emissions except Scope 3 emissions from steelmaking). The pathway developed shows a potential route to reduce absolute emissions of carbon dioxide by 92%, despite a projected 100% increase in output of iron ore pellets in the same timeframe.

To achieve this pathway, we intend to investigate a number of key modern technologies across our operations, to minimise our consumption in three key areas: diesel (predominantly in mining), electricity (processing) and natural gas (pelletising). These three aspects of our business collectively accounted for 77% of Scope 1 emissions and 100% of Scope 2 emissions in 2022. Shown below are a number of the technologies we intend to investigate to help reduce our emissions and achieve our net zero ambitions.

- Battery technology;
- Trolley-assist technology;
- Biofuels (sunflower husks);
- Clean power purchasing;
- Renewable energy; and
- Direct reduction (“DR”) pellets.

Climate Change Report published

Following the Group’s announcement of our collaboration with environmental consultants Ricardo Plc, and work throughout 2022, the Group was able to publish its inaugural standalone Climate Change Report in December 2022. In this report, we cover climate change related legislation that is being enacted in the various jurisdictions into which we sell our products, and the risks and opportunities that these changes may present to our business model. Through this work, it is clear that legislative change is fastest in the European Union (“EU”), with an established emissions trading scheme setting €98 per tonne of CO₂ as the price of carbon emissions within the region as of early 2023⁴. The EU’s Carbon Border Adjustment Mechanism, due to begin its implementation phase in 2025, will result in significant, far reaching effects, well beyond the borders of the EU. Further details of this legislation are provided on page 17 of our Climate Change Report (available at www.ferrexpo.com).

A second area of focus in the Climate Change Report looks at the risks and opportunities relating to climate change that are specific to Ferrexpo, and these are summarised in the Task Force on Climate-related Financial Disclosures (“TCFD”) on page 24 of this report.

1. Indicators shown on a Group basis.

2. Indicators shown for Ukrainian operations only.

3. Figure incorrectly provided as TRIFR in prior report.

4. Source: European Union Emissions Trading System, [link](#). (Accessed 3 March 2023.)

Our Climate Change Report also presents a potential net zero pathway for decarbonisation, highlighting the technologies required and timing of investments, to achieve net zero iron ore pellet production by 2050. Through this work, we have established an estimated capital cost of US\$3.3 billion and a carbon abatement cost of US\$145 per tonne. The Group is able to have a relatively low carbon abatement cost due to the timing of capital expenditures for decarbonisation at its operations. Since more than 80% of the estimated capital cost of decarbonisation relates to the implementation of green hydrogen in our pelletiser and our own renewables power, both of which are projects that are predominantly implemented after 2030, and therefore the net present value of this capital investment^A is reduced due to its timing. In the meantime, we are fortunate to be able to rely on clean power sourced directly from the Ukrainian grid, as we have been able to selectively purchase low carbon forms of electricity since 2019.

Carbon targets upgraded

Through the work to develop our decarbonisation pathway that was completed as part of our Climate Change Report, we were able to announce updated and expanded carbon emissions reduction targets in December 2022. Following the success seen across 2019 and 2020, with Ferrexpo reducing its Scope 1 and 2 emissions footprint by 30% over this period, we were able to announce an increase to our 2030 goal, and we are now targeting a 50% reduction in this timeframe.¹ Through greater understanding of our Scope 3 emissions, we have also been able to introduce targets for this category, and are now targeting a 10% reduction by 2030².

Scope 1 ("S1") ¹ emissions	Scope 2 ("S2") ¹ emissions	Subtotal (S1+S2) ¹	Scope 3 ("S3") ² emissions
Our performance in 2022			
(3%)	+2%	(1%)	(1%)
Our performance since benchmark year (2019–2022 inclusive)			
(1%)	(52%)	(31%)	(3%)
Our medium-term goals (2030)			
		(50%)	(10%)
Our long-term goals (2050)			
		Net zero	(50%)

A list of definitions for each Scope of carbon emissions is provided on page 40 of the Climate Change Report.

Scope 1 emissions

Our Scope 1 (direct) emissions principally relate to three activities at our operations – diesel consumption (primarily used in mining activities), natural gas (primarily used in pelletising activities) and gasoil (primarily used in inland waterway logistics activities). Collectively, these three sources of emissions represented 97% of Scope 1 emissions in 2022 (2021: 98%). In addition, we track a further 15 sources of Scope 1 emissions across our operations, ensuring that multiple aspects of our operations are covered in our emissions estimates.

Absolute Scope 1 emissions fell by 48% in 2022, reflecting the reduced level of production as a result of the war. Despite the conflict, we managed to reduce our emissions on a per unit of production basis by 3%, which reflects a reduction of stripping activities in the Group's mines and increased biofuel consumption in the pelletiser.

In line with data for 2021, our calculations of our Scope 1 and Scope 2 emissions have been independently assured for a second successive year, with this work aimed at providing additional confidence in our climate change reporting. Please see below for more information.

Scope 2 emissions

Our Scope 2 (indirect) emissions relate exclusively to our purchasing of electricity from third parties, with electricity predominantly used in our concentrator³. On an absolute basis, this category of emissions fell by 45%, in line with the lower level of production seen in 2022 due to the war in Ukraine. On a unit basis, Scope 2 emissions rose by 2%, reflecting the impact of the war in Ukraine and associated power outages in 4Q 2022, in addition to the increased output of direct reduction pellets, which require additional processing compared to blast furnace pellets.

Scope 3 emissions

For Ferrexpo, this category of emissions primarily relates to the type of iron ore pellet produced, since the downstream processing of iron ore accounted for 95% of Scope 3 emissions in 2022. Through increasing the output of direct reduction ("DR") pellets to 6% of total pellet production (2021: 4%), we have seen a reduction in Scope 3 emissions on a unit basis by 3% since 2019, with DR pellets carrying a 49% lower carbon footprint than blast furnace pellets⁴.

1. Scope 1 and Scope 2 emissions are presented on a per tonne of production basis.

2. Scope 3 emissions savings are presented on a per tonne of production basis.

3. Prior to the 2021 Annual Report and Account, Scope 2 calculations included the purchase of steam for heating purposes, which have subsequently been excluded following the independent assurance process completed in 2022. For more information, please see the Reporting Criteria document provided alongside the 2021 Annual Report and Accounts on the Group's website.

4. Source: CRU. Natural gas based direct reduction without carbon capture. See page 10 of the 2021 Annual Report for more information.

Independent assurance

In line with the process completed for 2021, the Group has completed an independent assurance process for its Scope 1 and Scope 2 carbon emissions for 2022 (in addition to key safety metrics). For more information, please see the Limited Assurance Report, which is provided alongside the Group's full year financial results.

Our Scope 3 emissions are not yet independently assured, with an expansion of the remit of the independent assurance process to include this category expected to represent the next phase of this process.

Greenhouse gas emissions footprint and energy consumption (2021/2022)

	2022 Data (% change to 2021)		2021 Data	
	Absolute basis (kilotonnes CO ₂ e, unless stated)	Unit basis (kg CO ₂ e per tonne)	Absolute basis (kilotonnes CO ₂ e, unless stated)	Unit basis (kg CO ₂ e per tonne)
Scope 1 emissions	341 (-48%)	55 (-3%)	649	57
Scope 2 emissions	223 (-45%)	36 (+2%)	404	35
Subtotal (S1+S2) emissions	564 (-46%)	91 (-1%)	1,053	92
Scope 3 emissions	7,642 (-47%)	1,237 (-1%)	14,362	1,254
Total emissions	8,206 (-47%)	1,329 (-1%)	15,415	1,346
Biofuels emissions (reported separately)	6 (-37%)	1 (+18%)	10	1
Energy consumption (kWh)	3,052,942,993 (-44%)	-	5,489,232,550	-

Methodology

Ferrexpo's methodology for calculating its GHG emissions footprint utilises, where possible, emissions factors provided by the Greenhouse Gas Protocol, which is in line with reporting requirements under the Global Reporting Initiative's ("GRI") framework for reporting sustainability topics. Through using carbon factors provided by the Greenhouse Gas Protocol, the Group is able to provide carbon dioxide-equivalent emissions figures ("CO₂e") that also account for emissions of both methane (CH₄) and nitrogen oxide (N₂O).

Water

We operate in an environment where we have multiple interactions with the water cycle, from the water ingress into our mines, to recycling water in our processing operations, to the River Dnipro, which is located next to our operations. Testing of water quality has continued throughout 2022, despite the war in Ukraine, with any discharged water quality tested across more than 12 different chemical elements or attributes.

In our processing plant, where water is utilised in the processing of iron ore, we once again recycled 98% of process water (2021: 98%). We are currently reviewing the possibility of removing water prior to pumping material to our tailings dam, which would have the advantage of reducing water consumption as well as energy use, with operations needing to pump a significantly lower mass of material to our tailings dam if tailings are dry stacked. It is estimated that water consumption in the processing plant would decline by up to 20% through the use of this technology.

Waste generation

The Group generates waste in the form of solid waste in its mining operations (overburden in the form of waste rock and sand), as well as emissions of other gases and dust from our mines and processing operations.

Waste removal in our mines declined by 70% in 2022, which is as a result of the war in Ukraine and lower production volumes (see page 5 for more details of the war's impact on our business in 2022). Overburden and waste removed from our mining operations is non-hazardous and is stored in on-site waste dumps designed by our mine planning department.

Aside from greenhouse gases, gaseous emissions include those emitted from our processing operations (NO₂, SO₂, and CO), with emissions from such sources declining by 50–60% during the year, in line with mining volumes. A range of projects related to dust suppression in our processing complex were completed in 2022, resulting in dust emissions falling by 62%, which represents a level ahead of the production decrease seen in 2022 (46% decrease).

Elsewhere in our operations, we expanded our domestic waste recycling programme to include additional operating subsidiaries in Ukraine (FYM, FBM and Ferrostroy), with collection bins and sorting facilities launched in 2022. All four of our main operating subsidiaries in Ukraine now have active recycling programmes, and the focus for 2023 will be encouraging cultural change to increase recycling rates throughout our business.

ISO-certified systems

Ferrexpo now has an ISO-compliant environment management system (ISO 14001:2015) at both FPM and FBM, with the latter achieving accreditation during 2022. This is in addition to accreditation of our Energy Management System (ISO 50001:2018) at the same two subsidiaries, with FBM also acquiring this accreditation in 2022.

Biodiversity baseline expanded

Despite the pressures imposed due to the war in Ukraine, our Environmental Department in Ukraine continues to make good progress on a range of initiatives at our operations, including an update to the Zoo-biota interactive map identifying species of animals in the vicinity of our operations, including 58 of more than 500 species listed in

the Red Book of Ukraine. Furthermore, work was completed in 2022 on a second interactive map, covering species of plants located in the vicinity of our operations (including 24 out of 410 species in the Red Book of Ukraine).

Climate change: reporting journey

The Transition Pathway Initiative Global Climate Transition Centre (“TPI Centre”, www.transitionpathwayinitiative.org/) is an independent, authoritative source of research and data on the progress of the financial and corporate world in transitioning to a low carbon economy. The TPI Centre publishes a “Management Quality Staircase”¹ that allows companies and stakeholders to map their progress in terms of climate governance maturity against five levels, as shown in the table below.

Following the publication of our Climate Change Report and Scope 3 targets in December 2022, in addition to independent assurance work completed in July 2022, we have assessed our progress to have reached Level 4 of reporting. The TPI Centre’s Staircase is particularly helpful for understanding the forward-looking component of our reporting journey that lies ahead, and highlights a need for us to develop our understanding of the impact of climate change on our business costs as an area of focus for future work.

Responsible Business: TCFD Disclosures

Recognising the need to provide reliable information on climate-related risks, opportunities and issues, and preparing disclosures throughout the year, including reporting informed by the recommendations and recommended disclosures produced by the TCFD.

Table: TPI Centre’s Management Quality Staircase

Level 0 Unaware	Level 1 Awareness	Level 2 Building capacity	Level 3 Integrated into operational decision-making	Level 4 Strategic assessment
Does not recognise climate change as a significant issue for the business	Explicitly recognises climate change as a significant issue for the business Has a policy commitment to action on climate change	Has set energy efficiency (relative or absolute) GHG emissions reduction targets Has published information on its Scope 1 & 2 GHG emissions	Company has nominated a board member or committee with explicit responsibility for oversight of the climate change policy Company has set quantitative targets for reducing Scope 1 & 2 GHG emissions (relative or absolute) Company reports on its Scope 3 emissions Has had its Scope 1 & 2 GHG emissions data verified Company supports domestic and international efforts to mitigate climate change	Company has reduced its Scope 1 & 2 GHG emissions over the past 3 years Company provides information on its business costs associated with climate change Company has set long-term quantitative targets (>5 years) for reducing its GHG emissions Company has incorporated ESG issues into executive remuneration

Compliance Statement (FCA’s Listing Rule 9.8.6(8)R)

For the purposes of Listing Rule 9.8.6R(8), Ferrexpo considers that it has made climate-related financial disclosures consistent with the four TCFD recommendations and 11 TCFD recommended disclosures save in relation to the following areas, where full compliance remains a work in progress:

- Strategy Recommended Disclosure c) (strategic and organisational resilience).

In developing the Group’s approach to climate-related risks, we intend to perform in-depth financial analysis of our operations’ exposure to such risks to determine operational and strategic resilience once baseline studies have been completed. It is expected that future phases of work, which will lead into this financial modelling, will require site visits to our operations in Ukraine, which are not possible at the current time. We will provide further updates on this work stream in due course.

In determining this, we have taken into account the TCFD’s Guidance for All Sectors and Supplemental Guidance for Non-Financial Groups, as well as other relevant materials. This assessment reflects the progress that Ferrexpo has made on its climate-related reporting over the course of the year, as well as those areas where full compliance with the TCFD’s recommended disclosures (and some aspects of the related guidance) forms part of our ongoing work streams.

1. Source: TPI Centre, [link](#). (Accessed 3 March 2023.)

The following recommended disclosures are set out in our Climate Change Report 2022 (published in December 2022), which is available on the Group's website at www.ferrexpo.com/investors/results-reports-and-presentations:

- Governance Recommended Disclosure a) (Board oversight of climate-related risks and opportunities) – see page 11.
- Governance Recommended Disclosure b) (management's role in assessing and managing climate-related risks and opportunities) – see pages 11 and 12.
- Strategy Recommended Disclosure a) (description of climate-related risks and opportunities identified over the short, medium and long term) – see pages 14 to 37.
- Strategy Recommended Disclosure b) (impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning) – see pages 20 to 21 and 28 to 37.
- Risk Management Recommended Disclosure a) (processes for identifying and assessing climate-related risks) – see pages 14 to 37.
- Risk Management Recommended Disclosure b) (processes for managing climate-related risks) – see pages 20 to 21 and 28 to 37.
- Metrics and Targets Recommended Disclosure a) (metrics used by the organisation to assess climate-related risks and opportunities) – see pages 8 and 42.
- Metrics and Targets Recommended Disclosure b) (Scope 1, 2 and 3 emissions disclosures) – see pages 8 to 10.

We have set out these recommended disclosures in this separate report to enable us to provide information for interested stakeholders in the context of our wider work on mapping the Group's carbon footprint and exposure to climate-related risks and opportunities, alongside details of the next steps we are taking.

The following recommended disclosures are set out in our Responsible Business Report 2021 (published August 2022), which is available on the Group's website at www.ferrexpo.com/investors/results-reports-and-presentations:

- Governance Recommended Disclosure b) (management's role in assessing and managing climate-related risks and opportunities) – see pages 77 to 81.
- Strategy Recommended Disclosure a) (description of climate-related risks and opportunities identified over the short, medium and long term) – see pages 77 to 81.
- Strategy Recommended Disclosure b) (impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning) – see pages 77 to 81.
- Risk Management Recommended Disclosure a) (processes for identifying and assessing climate-related risks) – see pages 77 to 81.
- Risk Management Recommended Disclosure b) (processes for managing climate-related risks) – see pages 77 to 81.
- Risk Management Recommended Disclosure c) (identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management) – see page 48.
- Metrics and Targets Recommended Disclosure a) (metrics used by the organisation to assess climate-related risks and opportunities) – page 43.
- Metrics and Targets Recommended Disclosure b) (Scope 1, 2 and 3 emissions disclosures) – page 43.

We have set out these recommended disclosures in this separate report to enable us to provide in more granular detail an overview of the various physical and transition risks the Group is facing, the time horizons over which these may emerge, their financial implications and our risk mitigation efforts.

Scenario analysis selection

In undertaking our modelling exercise, climate scenarios were selected on the basis of giving a range of outcomes (rate of environmental change and severity of change) as a result of different levels of legislative ambition taken by governments in the coming years. Scenarios were also selected on the basis of being produced by a range of reputable independent authorities on climate change.

1. International Energy Agency ("IEA") Sustainable Development Scenario ("SDS")	2. IEA Stated Policies Scenario ("STEPS")	3. IPCC Shared Socioeconomic Pathway 4 ("SSP4")
<i>Description: a "well below" 2°C scenario, achieved through policies that adhere to the Paris Agreement.</i>	<i>Description: a worst case, "business as usual scenario" (one of two modelled here). A more conservative benchmark whereby governments are assumed to not reach all announced goals.</i>	<i>Description: a worst case, "business as usual scenario" (one of two modelled here). Divided approach to climate change continues to widen through unequal investments in human capital.</i>
Summary: <p>This path sets out a plausible path to concurrently achieve universal access to energy, the objectives of the Paris Agreement, and a reduction in air pollution.</p>	Summary: <p>The STEPS scenario provides a more conservative benchmark for the future, because it does not take it for granted that governments will reach all announced goals. Instead, it takes a more granular, sector-by-sector look at what has actually been put in place to reach these and other energy-related objectives, taking account not just of existing policies and measures, but also a look at those that are under development.</p>	Summary: <p>Inequality (A Road Divided). Highly unequal investments in human capital, combined with increasing disparities in economic opportunity and political power, lead to increasing inequalities and stratification both across and within countries.</p>
Characteristics: <ul style="list-style-type: none"> – A well below 2°C pathway. – Surge in clean energy policies and green investment. – All existing net zero pledges achieved in full. – Extensive efforts to realise near-term emissions reductions. – Number of western economies to reach net zero emissions by 2050, China by 2060, and a number of other countries by 2070 latest. – In alignment with the United Nations Sustainable Development Goals. 	Characteristics: <ul style="list-style-type: none"> – Sector-by-sector look at what has actually been put in place to reach goals and other energy-related objectives. – Takes into account not just existing policies and measures but also those under development. – Includes "Fit for 55" measures announced by the European Commission in July 2021 (55% reduction in emissions by 2030 compared with 1990 baseline). 	Characteristics: <ul style="list-style-type: none"> – A gap widens between an internationally connected society that contributes to knowledge and capital intensive sectors of the global economy, and a fragmented collection of lower income, poorly educated societies that work in a labour intensive, low-tech economy. – Social cohesion degrades, and conflict and unrest become increasingly common. – Technology development is high in the high-tech economy and sectors. – Globally connected energy sector diversifies, with investments in both intensive fuels like coal and unconventional oil, but also low carbon sources.

Source: Ricardo Plc.

Scenario metric	IEA SDS (Sustainable Development Scenario)	IEA STEPS (Stated Policies Scenario)	IPCC SSP4 (Shared Socioeconomic Pathway 4)
Average global temperature increase (°C) by 2050	1.7°C (▼)	2.0°C (◄►)	2.2°C (▲)
Average global temperature increase (°C) by 2100	1.6°C (▼)	2.6°C (◄►)	3.7°C (▲)
Policy intervention	Increased policy beyond what has already been committed to, from 2021 (▲)	Only policies that are active in 2021, including what has been committed to and what has been proposed (◄►)	Increased policy after 2030, demonstrating a rapid transition to decarbonisation (◄►)
Time horizon	Present day to 2100	Present day to 2100	Present day to 2100
Transition risks (as a function of carbon price, with pricing correct as of studies completed in June 2022)	HIGH (▲) (US\$95/t) in 2050 Global carbon price	MEDIUM (◄►) (US\$90/t) in 2050 Global carbon price	MEDIUM (◄►) Regional carbon price in the short term, global carbon price in the long term
Orderly or disorderly transition	Orderly (▼)	Potential for orderly or disorderly	Disorderly (▲)

Legend for above table: Symbols denote the potential overall impact on Ferrexpo (determined via stakeholder interviews and desktop studies, categorised on basis of occurrence and likelihood, see risk matrix on page 27 of the Group's Climate Change Report).

(▼) Denotes risk factors that are deemed low risk to Ferrexpo.

(◄►) Denotes risk factors that are deemed medium risk to Ferrexpo.

(▲) Denotes risk factors that are deemed high risk to Ferrexpo.

Material topics

(Note: √ denotes key focus area for Ferrexpo.)

External factor	Key focus area?
Market and technology shift	
Increasing demand for low carbon emissions steelmaking	√
Movement towards circular economy principles	√
Mineral commodity shift: From iron ore to other minerals	
Policy and legal	
Shipping: Targets and regulations on carbon emissions	√
Carbon pricing/tax: Targets and regulations on carbon emissions	√
Energy crisis in Ukraine	√
Reporting: Targets and regulations on carbon emissions	
Increase in insurance costs	
Reputation	
Increased consumer and investor climate consciousness	√
Climate action transparency: Increased demand from consumer and investors	
Physical risks	
Water stress (chronic)	
Sea level rise (chronic)	√
Increase in storm intensity (acute)	√
Climate-induced conflict	√
Surface temperature rise	
Opportunity for increased community and host country engagement over climate change related issues	

Code	Issue area	Matrix score	Top risk areas identified
CC	Climate-induced conflict	LOW	
CEP	Movement towards circular economy principles	LOW	
CP	Carbon pricing/tax: Targets and regulations on carbon emissions	LOW/ MEDIUM	#3
CPU	Energy crisis in Ukraine	MEDIUM	
IIC	Increase in consumer and investor climate consciousness	LOW/ MEDIUM	
LCS	Demand for low carbon emissions steelmaking	HIGH	#1
SCE	Shipping: Targets and regulations on carbon emissions	MEDIUM/ HIGH	#2
SI	Increase in storm intensity (acute)	MEDIUM	
SR	Sea level rise (chronic)	LOW	

The information on the previous page is taken from the work completed in our collaboration with environmental consultants Ricardo Plc, with a full summary provided in our inaugural Climate Change Report, which was published in December 2022 and is available on the Group's website (www.ferrexpo.com). The results presented above emerged from the scenario analysis described on pages 22 to 37 of this report.

As shown above, the top three risk areas identified are (1) low carbon steel (risk relating to market and technology shift), (2) shipping targets and regulations (policy and legal risk), and (3) carbon pricing and tax (also a policy and legal risk).

In respect of low carbon steel, we have commenced a process to produce greater volumes of direct reduction ("DR") pellets, which are a higher grade form of iron ore and are a known technological pathway to low emissions Green Steel (via the electric arc furnace method of steelmaking). Independent research shows that Ferrexpo's DR pellets have a 49% lower greenhouse gas emissions footprint than our blast furnace pellets, and therefore offer us a substantial Scope 3 emissions saving¹.

In respect of efforts to understand potential climate change related risks for the other key risk areas (shipping targets and regulations and carbon pricing), please see pages 31 and 32 of our Climate Change Report.

In terms of next steps with regard to climate change reporting, we are currently finalising a life cycle assessment of iron ore pellets, which will be a peer-reviewed study into the environmental emissions footprint of iron ore pellets during their entire life cycle, benchmarked against the most commonly traded form of iron ore (sinter fines). In order to capture the emissions generated through converting iron ore to steel, which account for more than 89% of our total emissions in 2022 (2021: 89%), this study will look at the footprint of iron ore from mining through to steel production, and will therefore cover the different emissions footprints of blast furnace and electric arc furnace steelmaking. This report is expected to be available in the first half of 2023.

Summary disclosure against TCFD recommendations

Strategy

Climate-related risks and opportunities over the short, medium and long term

Climate change is considered to be a Principal Risk to the Group, and this risk is detailed on page 48 of this report, alongside risk mitigation actions. A description of the specific climate-related issues potentially arising in the short, medium and long term that could have a material financial impact on the Group is included on pages 22-37 of the Group's Climate Change Report, available at <http://www.ferrexpo.com>. These include transition risks and physical risks associated with the transition to a lower carbon economy. The time horizons for these risks and opportunities to emerge are also described being short-term (less than two years), medium-term (more than two but less than ten years) or long-term (greater than ten years). The definition of each time horizon is broadly aligned to the Group's medium-term climate change targets for 2030, with a ten-year window for action following the Group's baseline year, with short-term and long-term horizons set at either side of this definition. The Group's risk identification process is described on pages 33 to 34 of this report.

Impact on the Ferrexpo business, strategy and financial planning

Consideration of topics relating to climate change is a fundamental aspect of Ferrexpo's business model, with the Group releasing a standalone report on climate change in December 2022. Through the recent work completed with environmental consultants Ricardo Plc, the Group was able to upgrade and broaden its suite of carbon emissions reduction targets. The Group has a clear understanding of the likely technologies to help meet these targets, and these are shown on page 21 of this report. Climate-related risks and opportunities have directed the Group to increase its focus on direct reduction pellets, which have a lower emissions footprint and represent a pathway to low emissions steelmaking. In producing the Group's products, Ferrexpo is seeking to research and implement new technologies that will lower the Scope 1 and 2 emissions footprint of the Group's products, with the Group's solar power pilot plant to trial renewable power generation, and plans to build a hydrolysis plant to trial the use of hydrogen as a fuel in the Group's pelletiser as examples of such activities. A summary of potential technological pathways to lower emissions pellet production is provided on page 21 of this report. Climate-related issues input into financial planning processes through the consideration of the potential carbon emissions footprint of existing and proposed operating projects and capital investment^A projects. Given the current war in Ukraine and reduced level of operating activities in Ukraine, the Group is currently not assessing new operational or capital investment^A projects. Following a reduction in the risks associated with the war in Ukraine, it is expected that new investments will be assessed using a price of carbon that is reflective of the prevailing carbon price within the EU Emissions Trading System, as was the case prior to the war in Ukraine. Climate-related factors are expected to negatively impact financial performance in the short to medium term (operating costs and increased capital investment^A), but present opportunities in the long term through the expected rise in demand for iron ore products that are relevant for low emissions steelmaking (Green Steel).

Resilience based on climate change scenarios

The Group has included an analysis of climate change scenarios, which was conducted by environmental consultants Ricardo Plc as part of the work completed for the Group's Climate Change Report described in further detail on page 21. The Group intends to perform in-depth financial analysis of our operations' exposure to such risks to determine operational and strategic resilience once baseline studies have been completed. It is expected that future phases of work will require site visits to our operations in Ukraine, which are not possible at the current time. The Group will provide further updates on this work stream in due course.

Governance

The Board's role in oversight of climate-related risks and opportunities

The Board of Directors has ultimate oversight of the Group's strategy, including its approach to the effect of climate change on the Group's business model. Climate change was a standing agenda item at all five scheduled Board meetings throughout the year. Further details of the Board's consideration of climate change and its oversight of the Group's goals and targets for addressing climate-related issues are on pages 34 and 35. The HSEC Committee has been delegated management of climate-related issues, which includes three members of the executive management team, and reports the Group's progress on climate change related matters to the Board of Directors. Independent Non-executive Director Ann-Christin Andersen is the Director primarily responsible for climate-related matters and Chair of the HSEC Committee, which met four times during

1. Source: CRU. Natural gas based direct reduction without carbon capture.

	the year (2021: four) and climate change has been a standing agenda item at all scheduled HSEC Committee meetings throughout the year.
Management's role in assessing risks and opportunities	In addition to the role of the Health, Safety, Environment and Community ("HSEC") Committee described above, the Group's executive management team monitors and assesses climate-related risks through its risk monitoring activities as part of the Group's Finance, Risk Management and Compliance Committee, which met ten times in 2022 (2021: ten). The Group's process for risk monitoring is described on page 33. The HSEC Committee receives information about climate-related issues through activities such as internal briefings by members of the executive management team and briefings from external advisors. Feedback from this Committee is provided to the Board on a regular basis.

Risk management

Processes for identifying and assessing climate-related risks	The Group regularly assesses risks applicable to the Group through its Finance, Risk Management and Compliance Committee, which assesses risks based on the probability of occurrence and severity of impact should an event occur. An overview of the Principal Risks facing the Group, and the risk mitigation measures that the Group has put in place in relation to these, is provided on pages 34 to 49, with climate change identified as a Principal Risk and detailed on page 48 of this report. Within the topic of climate change, the Group's management has identified specific risks and opportunities relating to climate change, ranging from policy and legal topics, physical effects, emerging technologies, market factors and reputational differentiators.
Managing climate-related risks	The Group's approach to managing and mitigating risks, including climate-related risks, is provided in the Principal Risks section, on page 48 of this report. Risks, including climate-related risks, are prioritised according to their assessment under the Group's materiality matrix.
How Ferrexpo integrates these risks into the Group's overall risk management	Ferrexpo's governance relating to climate change risks has been designed to ensure that the management of the financial risks from climate change are integrated across the whole governance system and embedded into the existing risk management framework. The Group's approach to assessing and managing risk, including climate-related risks, is described on page 48. Risks relating to climate change are determined in the same way as other principal and emerging risks, and the relative significance of climate risks is assessed based on monetary impact, probability, maximum foreseeable loss, trend and mitigating actions. A summary of the Group's approach to risk identification and risk mitigation activities is provided on pages 34 to 49 of this report.

Metrics and targets

Metrics used to assess climate-related risks and opportunities	The Group uses a wide range of climate-related metrics including GHG emissions (Scopes 1, 2 and 3 and emissions intensity), as well as consumption of diesel, electricity and natural gas - see further on pages 22 and 23. Metrics relating to carbon reduction progress are incorporated into remuneration policies.
Greenhouse gas emissions	Details of the Group's Scope 1, 2 and 3 emissions are provided on page 23 of this report.
Targets	Our carbon emissions reduction targets are summarised on page 22 of this report.

Responsible Business: Diversity, equity and inclusion

Ferrexpo has initiated a number of diversity, equity and inclusion ("DEI") initiatives, which help us to form a baseline understanding of our workforce composition and to shape DEI efforts.

Ferrexpo's diversity initiatives are focused on helping us to develop a modern business with a diverse workforce and an inclusive working environment. Our efforts in DEI have increased significantly in recent years, with increased stakeholder focus and a greater focus on companies having a sustainable, inclusive culture. Our DEI efforts have continued in 2022, despite the war in Ukraine, as DEI helps to generate a positive working environment that supports people's mental health and wellbeing, regardless of age, gender or other characteristics.

Progress continues to accelerate following the appointment of our first DEI officer in Ukraine in 2021, and we are continuing to gain a better understanding of our workforce and corporate culture.

DEI progress in 2022

In 2022, we made significant progress in advancing our strategy to implement a 360-degree approach to DEI. Further to the Group's Diversity, Equity and Inclusion Policy that was established in 2019, our local operating entities adopted a policy to further define and understand definitions and behavioural patterns for fostering a more inclusive working environment. This policy is designed to prohibit all forms of discrimination (on the basis of disability, pregnancy and parenthood, race, national or ethnic origin, age, gender, sexual orientation, political opinion, and social origin). As part of this policy, we now have an internal mechanism for addressing DEI-related concerns and resolving potential incidents of discrimination.

In February 2022, Ferrexpo hosted an event as part of the United Nations' "HeForShe" movement, which is aimed at providing solidarity amongst the male population for gender diversity initiatives. More than three million men around the world signed declarations of support, with 135 Ferrexpo employees taking part at a mass-participation event. Through their participation, Ferrexpo aims to raise awareness of gender diversity topics and help to fight discrimination.

Our Inclusion School, which is a training programme for our employees in Ukraine, began in 2021, and restarted in late 2022. Topics covered in this programme are aimed at fostering inclusiveness and diversity, and how this can help Ferrexpo's business model. More than 200 of Ferrexpo's employees completed this course in 4Q 2022. Online learning covers topics such as identifying different forms of discrimination, why it is important to eliminate prejudice and how tolerance can help Ukraine to tackle its wartime challenges. Similarly, the expansion of our "Fe_munity" programme in 2022 (see Case Study opposite), our Inclusion School was also extended during 2022 to include local authority employees who are keen to learn more about challenging prejudice and discrimination.

Additionally, through the Ukrainian translation of the Group's 2021 Responsible Business Report, we have been able to communicate our recent progress in DEI to a broader audience within Ukraine – this report is available on our website at: www.ferrexpo.com/investors/results-reports-and-presentations/.

Gender diversity targets for 2030

At Ferrexpo, we have a gender diversity target of ensuring 25% of managerial roles are filled by women by 2030. To date, our diversity efforts have enabled us to progress the level of women in management roles from 18% in 2019 to 21% in 2022, which has been possible through a range of diversity initiatives in Ukraine and across the Group, as well as sustainability-linked incentives within the Group's remuneration policy.

We are specifically targeting diversity at the managerial level, rather than total diversity, as this helps to encourage career progression and opportunities for women, which may not otherwise be available. Our workforce does, however, include a higher proportion of women (2022: 29%) than our mining-sector peers that operate in the developing world¹.

Women's Empowerment Principles

As part of our DEI implementation plan, Ferrexpo became a signatory to the Women's Empowerment Principles ("WEPs") in October 2022, which is a United Nations-supported initiative for business leaders to express support for advancing gender equality. In undertaking WEPs' Gender Gap Analysis Tool in 2022, Ferrexpo achieved a rank of "Leader" within this framework, with this assessment made on the basis of existing policies and our approach to 18 different aspects of DEI, including: addressing the gender pay gap, parental leave and initiatives to create a working environment free from violence, harassment and sexual exploitation.

External recognition in 2022

Our DEI efforts are not going unnoticed, with external recognition of the forward thinking that Ferrexpo is introducing to its business.

In October 2022, the Group was ranked in the top ten of employers in Ukraine for diversity, equity and inclusion by the Ukrainian Corporate Equality Index, which is a national survey of corporate policies, rules and practices of private companies to prohibit discrimination in the workplace.

Diversity inclusion

As a large company operating within Ukraine, we are subject to a local requirement for the employment of our people to include a minimum of 4% as those with a registered disability, which is a requirement that continues to be met through our employment of 321 individuals with disabilities in 2022 (4% of employee workforce). The majority of these individuals are located at our operations in central Ukraine, working at FPM and FYM.

Recently, we have published case studies celebrating the contribution of those with disabilities at our operations on our social media channels, including individuals working in our social services department, mining department and in the local museum, which we support through our Charity Fund. We also sponsor disabled athletes to help promote healthy lifestyles, and have previously sponsored individuals to attend World Championship canoeing events.

Case Study: DEI initiative expands in 2022

Our "Fe_munity" women in leadership programme expanded in 2022 to include women from across Ukraine.

The "Fe_munity" programme commenced in 2020 and over the course of three intakes of participants, has helped to form an integral aspect of our efforts to meet our goal of reaching 25% of managerial positions held by women by 2030.

Given the events of 2022, the Group was made aware of a need to support the careers of women across Ukraine, and we decided to open up enrolment into our "Fe_munity" programme to all participants, irrespective of the sector in which they work. In September 2022, the FEMUNITY.UA project hosted 50 female participants from all over Ukraine, with lectures over three months, led by eight guest speakers and 32 mentors.

In addition, "Progression Grants" are now being offered to participants to help accelerate their learning and career development.

Responsible Business: Communities

Ferrexpo's assets have a long association with local communities, and this connection has been important in 2022, enabling us to provide direct assistance to communities during Russia's invasion of Ukraine.

Ferrexpo Humanitarian Fund

In the early stages of the war, it quickly became apparent that large organisations within Ukraine would play an important part in supporting the people of Ukraine, particularly as the government of Ukraine focused on fighting a full scale invasion. As a result, the Board of Directors approved the formation of the Ferrexpo Humanitarian Fund early in the conflict, with the goal of providing direct assistance to communities affected by Russia's invasion in 2022. Each project is individually approved by the Health, Safety, Environment and Community ("HSEC") Committee members to ensure good governance in the approval process. To date, more than 70 projects have been implemented, and details of this work are provided in the Case Study over the page. Additional support has been provided throughout the war, with our help in funding the "Unbreakable Mother" programme, which offers residential stays and psychological support for women and children who have been affected by the war in Ukraine.

1. Comprising mining companies in the FTSE 350 Index where the main focus of mining is outside of Australia and Canada.

Ferrexpo Charity Fund

Our Ferrexpo Charity Fund has operated in Ukraine for more than 11 years, and aims to provide direct support to local communities situated close to our operations in central Ukraine. Funding for the Ferrexpo Charity Fund, which is in addition to the Ferrexpo Humanitarian Fund (see above), was UAH 77 million in 2022 (2021: UAH 87 million). Work by the Ferrexpo Charity Fund focused on providing budgetary support for local authorities, support for educational and medical institutions and direct aid to individuals in the form of food and support packages.

Sustainability reporting for all stakeholders

In August 2022, we published our latest standalone Responsible Business Report, with this timing in line with previous years despite the impact of the war in Ukraine. This is a credit to our communications team in Ukraine, who managed to achieve this timing despite spending many days in air-raid shelters and in remote locations, sheltering from the conflict.

We also achieved a significant milestone in our sustainability reporting in 2022 – in November, we managed to publish our first official sustainability report in Ukrainian, helping our local stakeholders to understand the efforts being undertaken to support Ukraine and develop our business at the current time. We value all of our stakeholder groups, and are proud to reach a broader spectrum of stakeholders through reporting in Ukrainian.

Case Study: Humanitarian efforts

Across all initiatives, including direct donations provided by Ferrexpo subsidiaries, we have provided the equivalent of approximately US\$19 million of support for Ukrainian humanitarian causes since the outset of Russia's invasion in 2022. Examples of projects supported include:

- **Housing refugees:** More than 3,500 internally displaced people have been housed at our accommodation facilities.
- **Providing free meals:** Initially we dedicated our catering facilities to providing three free meals a day to employees. More recently, these efforts have been re-diverted to feeding local communities. In total, we have donated 528 tonnes of food to local communities.
- **Vehicle donations:** Equivalent of over US\$5 million of vehicles donated to the Ukrainian authorities (armed forces and local territorial defence units). Donations also include six armoured ambulances donated in November 2022.
- **Medical support:** Through liaison with local medical facilities, we have provided PPE for local hospitals, the equivalent of US\$600,000 of helmets and body armour for emergency response workers in the Poltava region and a total of nine ambulances.
- **On-site children's centre:** Throughout the early phase of the war, schools remained closed and children's learning was put on hold. In response, Ferrexpo facilitated an on-site childcare facility to keep employees' children close and allow children to continue their studies, with up to 120 children attending daily.
- **IT support:** We provided the equivalent of 6,000 items of modern technology, such as laptops, monitors, printers, mobile phones and modems, to help to support local authorities' efforts to coordinate the registration and housing of internally displaced people.

In addition, to support Ukrainian culture, we recently asked employees to express their personal experiences of the war in poetry, and we collated their words to form a collective tribute: "I want to live without war". In honour of Defenders Day in Ukraine, we brought five of our colleagues together to recite the poem, spreading a message of hope for a peaceful future for Ukraine in these difficult times. Please see the link below for a video of this project.

We have also sought to preserve a record of this point in Ukraine's history, understanding the need for documenting the experiences of those suffering during Russia's invasion. We have invited displaced people to voluntarily record details of the war with our in-house communications team, with a goal of preserving a record of the acts of bravery and resilience in defending Ukraine for future generations. This project has to date recorded 45 hours of footage from 59 contributors, and we will continue to record people's reflections as the war continues.

Responsible Business: Governance

With good corporate governance, companies are able to build trust with their stakeholders. Through trust, companies can enjoy the benefits of a strong brand that stakeholders can associate with.

Board composition

Effective corporate governance starts with the Board of Directors ("Board"). As of the date of this document, Ferrexpo's Board comprises seven Directors – including one Executive Director (Jim North) and five Independent Non-executive Directors.

Board changes

In December 2022, Non-executive Director Kostyantyn Zhevago resigned from the Board. Mr Zhevago is the ultimate beneficial owner of the Group's largest shareholder – Fevamotnico S.a.r.l ("Fevamotnico"). Due to the proportion of the Group's issued shares held by Fevamotnico, a relationship agreement exists between Ferrexpo and Fevamotnico, under which Mr Zhevago has the right to appoint a nominee to the Board.

Board position appointments

During the year, Independent Non-executive Director Fiona MacAulay was appointed as Senior Independent Director ("SID"), which is an important role that helps facilitate dialogue between fellow Directors and the Chair, and enables shareholders to speak directly with the Board.

In early 2022, following the appointment of Fiona MacAulay as SID, the Board underwent a number of changes. Independent Non-executive Director Ann-Christin Andersen moved to take up the role of Chair on the Health, Safety, Environment and Community ("HSEC") Committee. Independent Non-executive Director Natalie Polischuk, who joined the Board in December 2021, was appointed as a member of the HSEC and Audit Committees in February 2022.

Finally, in February 2022, Jim North was appointed as Chief Executive Officer on a permanent basis, reflecting Mr North's successful period as Interim CEO, with Mr North already appointed as an Executive Director.

FTSE Women Leaders Review

The FTSE Women Leaders Review is an independent, business-led framework supported by the Government, which sets recommendations for Britain's largest companies to improve the representation of Women on Boards and in Leadership positions. As a result of this work, the FTSE Women Leaders Review recommends that companies listed within the FTSE 350 have at least 40% female representation at Board level by the end of 2025, as well as at least one woman appointed as chair, senior independent director ("SID"), CEO or CFO by the end of 2025.

As of the date of this report, Ferrexpo's Board is 43% female (31 December 2021: 38%), meaning that Ferrexpo satisfies the recommendation for Board gender diversity set by the FTSE Women Leaders Review, as well as the requirement for a female in one of the stated roles, with Fiona MacAulay as the Group's SID.

Parker Review

The Parker Review was an independent review in 2021 led by Sir John Parker, which considered how to improve the ethnic and cultural diversity of UK Boards to better reflect their employee base and the communities they serve. In order to encourage progress in ethnic diversity, the Parker Review proposed a target of one Director from an ethnic minority group on the Boards of FTSE 250 companies by December 2024. The search for an independent Non-executive Director from a minority ethnic group has been launched and is ongoing.

Corporate governance controls

The Group's financial advisors are Liberum Capital Limited ("Liberum"), which also provide broking services to the Group. As a London-listed company, it is best practice for the Company to have a Sponsor to provide advice and guidance on certain corporate matters, with BDO LLP appointed in this role.

Stakeholder engagement

As a responsible, modern company, we aim to engage with our shareholders, to understand their concerns and priorities. Shareholder engagement is conducted via a range of methods – from various reports published on an annual basis (Annual Report and Accounts, Responsible Business Report and Climate Change Report), to our corporate website and social media channels.

We also endeavour to engage with stakeholders located within Ukraine and overseas, with this made possible through communications in both Ukrainian and English. In 2022, we communicated in both languages across the majority of our social media channels and the 2021 Responsible Business Report, as well as selected press releases.

Related party matters

The Group has a controlling shareholder that also has a number of different businesses with which the Group has a commercial relationship.

In order to maintain strong levels of corporate governance, and to ensure that these business relationships are conducted on an arm's length basis, the Group has both the Committee of Independent Directors at the Board level and the Executive Related Party Matters Committee at the management level.

As discussed in previous Annual Report and Accounts, the Committee of Independent Directors ("CID") conducted a review in connection with the Group's sponsorship arrangements with FC Vorskla and concluded its enquiry in March 2021. Arrangements were put in place by Kostyantyn Zhevago and his associated entities, which were executed by 31 July 2022, and the CID can confirm that, as of the date of this Annual Report and Accounts, these arrangements have now been completed.

RISK MANAGEMENT

Ferrexpo identifies and assesses risks based on each risk's probability of occurrence and the severity of any event. The Group aims to mitigate the potential impact of each risk through its management of day-to-day activities, taking a prudent approach to risk where possible.

Risk identification

Ferrexpo aims to manage risks across its business through the early identification of potential risks before they emerge, with senior managers and the Group's executive management team responsible for maintaining risk registers for each area of the Ferrexpo business. Risk registers are regularly reviewed and updated, with local risk owners reporting to senior management teams on a regular basis.

The Group risk register records risks on the basis of the likelihood of occurrence and level of potential impact on the Ferrexpo business. A total of 44 risks were included on the Group risk register as of December 2022, with risks ranging from the war in Ukraine (both direct and indirect), risks relating to operating in Ukraine, operational risks such as the risk of a pit wall failure, health and safety-related risks, and risks relating to information technology and climate change. Further to the Group risk register, which records the risks with the most serious potential impact and likelihood of occurrence, operating entities maintain their own local risk registers, which feed into the Group risk register. In late 2022, the Group implemented an enterprise risk management ("ERM") tool to help record and monitor risks, which is the platform for the reporting and assessment of risks within the Group.

The Group considers emerging risks to be risks that are newly developing, or increasing in potential severity of impact, or changing risks that are difficult to quantify.

The risks that are assessed by the Group's management to be Principal Risks are presented on pages 34 to 49.

Risk mitigation

Risks are inherent in operating a business and it is through effective risk identification, risk management, prudent decision making and other risk mitigation measures, that the Group can understand and reduce the risks that the business faces. The Group's management team, however, understands that it cannot eliminate risk. The Group's approach to risk mitigation for each of the Group's Principal Risks is presented below.

Risk governance framework

Risks are reported internally on a monthly basis, as part of the Finance, Risk Management and Compliance ("FRMC") Committee, with the Group's senior leadership team reviewing the Group-level risk matrix, which plots the likelihood of occurrence against the potential severity of impact, and identifying material changes in either variable to all of the risks listed. Over 40 risks are reported on the Group risk register to the FRMC Committee on a monthly basis, with each risk attributed a potential monetary impact should an event occur. The FRMC Committee reports to the Group's Executive Committee, which in turn reports to the Board, which has the ultimate responsibility for the Group's approach to risk management. The Audit Committee, a sub-committee of the Board, assists the Board in its regular monitoring of the risks faced by the Group. The Group's internal audit function assists with the process of risk review, and conducts ad hoc reviews of risk management controls and procedures.

Risk assessment for 2023

The risk matrix opposite depicts the Principal Risks facing the Group.

Page 54 of the 2021 Annual Report and Accounts highlighted a rising risk profile facing the Group in 2022, with significant uncertainty relating to rising tensions between Russia and Ukraine. Through the course of 2022, a number of these potential risks have eventuated, following Russia's invasion of Ukraine in February 2022, which has had a significant impact on the Group's ability to operate. Further details on the conflict risk facing the Group are provided on page 35 of this report.

In addition to the war in Ukraine, a secondary effect of the conflict is the increased political alignment within Ukraine. It is unclear as to the eventual impact of this change on the Group, which in turn creates a potential risk for the Group should the political landscape shift adversely. Further details of the risks associated with operating in Ukraine are provided on page 36.

The ongoing global Covid-19 pandemic remains a Principal Risk facing the Group, despite the gradual unwinding of government restrictions around the world relating to containing infection rates and treating those infected. Given the lower impact of more recent strains of Covid-19, the direct impact of this risk is seen as reduced compared to previous years. For further details on this risk, please see page 49.

Climate change is a rising Principal Risk, and the Group is facing both physical and transitional risks, with increased reporting requirements likely in the near term. This topic is covered on pages 24 and 48 of this report, with particular reference to climate change related risk reporting under the Task Force on Climate-related Financial Disclosures ("TCFD") framework.

Risk management process

Ferrexpo Board <ul style="list-style-type: none"> – Takes overall responsibility for maintaining sound risk management and internal control systems. – Sets strategic objectives and defines risk appetite. – Monitors the nature and extent of risk exposure, which includes principal and emerging risks. 		
Audit Committee <ul style="list-style-type: none"> – Supports the Board in monitoring risk exposure and risk appetites. – Reviews effectiveness of risk management and control systems. 	Executive Committee <ul style="list-style-type: none"> – Assesses and mitigates Group-wide risk. – Monitors internal controls. 	Health, Safety, Environment and Community (“HSEC”) Committee <ul style="list-style-type: none"> – Oversees corporate social responsibility related matters and performance. – Has specific focus on safety and climate change related risks.
Finance, Risk Management and Compliance (“FRMC”) Committee	<ul style="list-style-type: none"> – Monitors centralised financial risk management structures. – Monitors Group compliance. 	
Internal audit function	<ul style="list-style-type: none"> – Supports the Audit Committee in reviewing the effectiveness of risk management. – Tests internal control systems and recommends improvements. 	
Operational level	<ul style="list-style-type: none"> – Risk management processes and internal controls embedded across all Ferrexpo operations. 	

Principal Risks

Principal Risks are those considered to have the greatest potential impact on the Ferrexpo business, assessed on the basis of impact and probability.

Introduction

This section outlines the Principal Risks facing the Group in 2022, each of which have the ability to negatively impact the Group, either in isolation or in tandem with other risk areas. Principal Risks are defined as factors that may negatively affect the Group’s ability to operate in its normal course of business, and may be internal, in the form of risks derived through the Group’s own operations and activities, or external, such as political risks, market risks or climate change related risks. The Principal Risks listed here are not exhaustive, nor are they mutually exclusive, and therefore one risk area may negatively impact another risk area.

Principal Risks include, but are not necessarily limited to, those that could result in events or circumstances that might threaten the Group’s business model, future performance, solvency or liquidity and reputation.

Risks are inherently unpredictable, and, therefore, the risks outlined in this report are considered the main risks facing the Group. New risks may emerge during the course of the coming year, and existing risks may also increase or decrease in severity of impact and/or likelihood of occurrence, and this is why it is important to conduct regular reviews of the Group’s risk register throughout the year. The Group maintains a more extensive list of risks, covering over 40 different risks at the Group level, with additional risks considered in local risk registers at each operating entity. The Group risk register is reviewed on a monthly basis for completeness and relevance by the Group’s Finance, Risk Management and Compliance (“FRMC”) Committee, which ultimately reports into the Board for further review and approval of the risk register. The Group risk register is also reviewed by the Audit Committee at least four times a year. The members of the Executive Committee manage risk within the business on a day-to-day basis. The Committee includes the Chief Executive Officer, Chief Financial Officer, Chief Marketing Officer, Group Chief Human Resources Officer and General Director of Ferrexpo Poltava Mining.

The Group’s management team continually reviews and updates its view on, and approach to, risks facing the Group. This section of the Annual Report and Accounts primarily covers risks facing the Group in 2022, but also early 2023, up until the publication date of this report. A further update on the Principal Risks will be provided in the Interim Financial Results, which is due to be published in August 2023.

Key theme: Russian invasion of Ukraine in 2022

On 24 February 2022, Russia launched a full scale military invasion of Ukraine, with the conflict continuing as of the date of this report. This event has significantly changed the operating environment for businesses in Ukraine on an unprecedented scale. Please see page 35 for more information on this risk area.

Key theme: Ukraine country risk

This area has been listed as a Principal Risk facing the Group since listing in 2007, and the Group has successfully operated amid challenging circumstances for more than 15 years. The war in Ukraine has served to escalate a

number of risks relating to Ukraine, including risks relating to the political environment and the independence of the legal system. Please see page 36 for more information on this risk area.

Key theme: climate change

An important topic for any modern business, with discussions with multiple stakeholder groups centring on the Group's efforts to reduce emissions both in the Ferrexpo business, but also in the Group's value chain (Scope 3 emissions). As a consequence of rising stakeholder focus on this topic, the Group published its first standalone report on climate change in December 2022. Please see page 48 for more information on this risk area.

Key theme: cybersecurity

As a business seeking to modernise, the Group is increasingly reliant on electronic software for the management of key operational and administrative activities. As a business primarily operating in Ukraine, the Group has faced heightened cybersecurity threats from malicious parties since 2014, coinciding with Russia's initial invasion of Ukraine's sovereignty. Please see page 47 for more information on this risk area.

Key theme: Covid-19

The war in Ukraine has resulted in significantly lower levels of testing for Covid-19 throughout the country, and therefore this represents a potentially unmonitored risk in the general population of Ukraine. Please see page 49 for more information on this risk area.

Each Principal Risk is linked to the aspects of the Group's strategy that could be impacted if an event were to occur.

1. Produce high quality pellets.
2. Achieve low cost production.
3. Maintain strong relationships with a network of premium customers.
4. Conduct business in a safe and sustainable manner.
5. Retain a balanced approach to capital allocation.

1. Country risk

1.1. Conflict risk (external risk)

Responsibility	Risk appetite / Change	Link to strategy
Board of Directors and Chief Executive Officer	Low / Increasing	1, 2, 3, 4 and 5

On 24 February 2022, Russia began a full scale invasion of Ukraine that has significantly impacted every layer of the Ukrainian state, including the focus of the government, companies' ability to operate and the health and wellbeing of each individual within Ukraine. Prior to this date, major concerns were raised about the possibility of an invasion, following a significant build-up of military equipment and personnel along Ukraine's borders. Following 24 February 2022, people and companies within Ukraine have faced direct military action in the form of damage and destruction caused by military conflict, as well as indirect impacts of the war, such as electricity blackouts and the closure of the Black Sea for Ukrainian ports.

Ferrexpo's main operations are in the Poltava region of central Ukraine, which has not seen any direct combat between Russian and Ukrainian forces. The entirety of Ukraine has, however, faced numerous missile strikes and power outages, and the Poltava region is no exception. The Group's facilities have not been directly targeted by Russian missile strikes, but a number of neighbouring third party facilities such as the Kremenchuk oil refinery and state owned electricity infrastructure have been damaged by such attacks. Such damage has materially affected the Group's ability to source fuel and receive electricity, with damage to electrical infrastructure in October 2022 resulting in the partial suspension of production activities (as announced on 11 October 2022). Following repair work completed on the electrical grid in the fourth quarter of 2022, the Group resumed activities in December 2022, with sufficient power to operate one pelletiser line. This situation has continued, with the Group restarting a second pelletiser line in March 2023, and the Group able to ship its products throughout January and February 2023.

The war in Ukraine has placed an unprecedented strain on the economy of Ukraine, with a number of businesses closing, rising unemployment, and tax revenues falling, in addition to other factors negatively impacting revenues. At the same time, spending on the military and social programmes both increased significantly in 2022. Consequently, the government of Ukraine has sought to increase revenues through changes to its fiscal policies, such as increases to railway tariffs, as well as implementing measures to stabilise the economy, such as enacting laws for the repatriation of funds and currency controls. A number of these measures have the potential to either directly or indirectly impact Ferrexpo negatively through consequences such as lower revenues and/or a more restrictive operating environment. Furthermore, given the strain placed on the economy of Ukraine, the exchange rate for the Ukrainian hryvnia depreciated significantly in 2022, with the government introducing a peg for the hryvnia to the US dollar. After the invasion of Ukraine in February 2022, this peg was set at UAH 29.25 per US dollar, and was subsequently moved to UAH 36.5 per US dollar in July 2022. Such a rapid devaluation of the local currency in Ukraine, which was approximately UAH 27.28 per US dollar as recently as the end of 2021, has had a significant impact on the Group's costs, assets and shareholders' equity. For more information, please see page 11.

As a result of the war, a proportion of the Group's workforce in Ukraine has enlisted in the Armed Forces of Ukraine, relocated to safer locations and/or moved to care for loved ones. Additionally, perceptions around the negative outlook for Ukraine and/or the Group may result in key individuals seeking employment outside the Group. As such, the Group faces potential risks around being able to adequately staff its operations and other functions within its business.

Additional risks related to the war in Ukraine include, but are not limited to, restrictions related to the cost effective and timely transport of the Group's products, restrictions in accessing markets, rising costs related to reduced output and/or alternative supply arrangements and the impact on employee wellbeing. A summary of the war's impacts is provided on page 5 of this report.

Risk mitigation

The health and safety of the Group's workforce, and those connected to the Ferrexpo business such as suppliers and logistics operators, is the primary concern.

Whilst it is difficult for a company such as Ferrexpo to defend itself from direct military activity such as Russia's invasion or a missile strike, the Group has taken several measures over the course of the year to help keep its workforce, and their families and local communities safe from the threat posed by Russia's invasion. Measures during the year have included remote working for those able to do so, timing of shift patterns to fit with curfew hours, the provision of on-site childcare facilities to ensure children are close and employees are not having to travel unnecessarily, the provision of air-raid shelters and the provision of protective equipment such as armoured vests and helmets for employees serving in the Armed Forces of Ukraine. The Group has also engaged in extensive discussions with local authorities, and has stepped up to provide financial assistance through the Ferrexpo Humanitarian Fund, managed by the Ferrexpo Charity Fund, with oversight by the Board of Directors of Ferrexpo to ensure good governance in all support activities. Please see page 31 for more on this subject.

The Group will continue to take measures as required to protect its workforce, and their families and local communities, for the duration of the war, and during the post-war period where continued support is required. The Group has a long track record of providing direct support to the communities in which it operates, with the Ferrexpo Charity Fund in operation for more than 11 years.

1.2. Ukraine country risk (external risk)

Responsibility	Risk appetite / Change	Link to strategy
Board of Directors and Chief Executive Officer	Medium / Increasing	1, 2, 3, 4 and 5

The considerations outlined here are separate to the risks relating to the ongoing war in Ukraine, but some or all of them may be exacerbated by the current conflict (see page 35 for risks relating specifically to the conflict in Ukraine).

Ferrexpo's main operations are in Ukraine, which is considered to be a developing economy under the classifications provided by the World Bank¹. Ukraine is a country that placed 77th in the United Nations' Development Programme's ("UNDP") Human Development Index², and is therefore classified as having a "high" level of human development (based on factors such as life expectancy and levels of education). This ranking places it in a similar bracket to China (79th) and Sri Lanka (73rd), other countries considered to be developing economies. As a result of operating in a developing economy, the Group is subject to a number of elevated risks, such as the fiscal and political stability of Ukraine, independence of the judiciary, access to key inputs and capital, exposure to monopolies and other influential businesses (particularly those that are related parties to the government of Ukraine), in addition to a range of other factors. As a result of being a business in a developing economy, the Group is exposed to heightened risks around corruption, with Ukraine placing 122nd in Transparency International's Corruption Perception Index ("CPI")³. Whilst Ukraine's score in the CPI has improved from a low of 25 in 2013 to 33 in 2022, and its global position has improved by 28 places (including an improvement of six places in 2022 alone), the country continues to remain below the global average.

Through the Group's exposure to an operating environment in a developing economy, Ferrexpo has been subject to a number of risk areas that are heightened relative to those expected of a developed economy. Risks associated with the war in Ukraine are covered on page 35 of this report, but there are indirect risks associated with the war, such as the increasing political unity within Ukraine and determination to drive political, fiscal or economic change, the latter of which is often associated with financial and military agreements struck with western governments and/or western organisations. This change can be exhibited in a number of practical applications, which can include, but are not limited to, changes to the regulatory environment, potential increases to tax and/or royalty rates, increased disclosure requirements or operational restrictions. Changes may be made as a result of government decision making, a third party international partner and/or lender, or another party within Ukraine, and therefore the rationale for changes may not correlate with the official agenda of the government of Ukraine. As a result of this local instability,

1 Source: World Bank, [link](#). (Accessed 3 March 2023.)

2 Source: UNDP, [link](#). (Accessed 3 March 2023.)

3. Source: Transparency International, [link](#). (Accessed 3 March 2023.)

which is amplified by the war in Ukraine (see page 35), sources of capital for businesses deriving their revenues from Ukraine are limited at the present time, which in turn reduces the operational flexibility of the Group.

The independence of the judiciary in Ukraine has been frequently referenced in the Principal Risks section of the Group's Annual Report and Accounts, and this is a consideration that remains particularly relevant for the Group today. As described in Note 15 (Commitments, contingencies and legal disputes) to the Consolidated Financial Statements, the Group is currently subject to several legal proceedings in Ukraine that are similar in part to previously heard legal proceedings, and it cannot be guaranteed that the Ukrainian legal system will always provide a ruling in line with the laws of Ukraine or international law. As disclosed in the 2021 Annual Report and Accounts, the Group is currently subject to a claim pursuant to which the claimants are seeking to invalidate a share sale and purchase agreement dated 2002 relating to the acquisition of 40.19% of Ferrexpo Poltava Mining, the Group's main operating subsidiary in Ukraine (the "Claim"). Following a first hearing of the Claim in 2021, a court in Ukraine found in favour of the Group. An appeal was heard in September 2022, with the appeal court ruling in favour of the claimants and ordering that 40.19% of Ferrexpo Poltava Mining be transferred to the claimants (as announced by the Group on 20 September 2022). Subsequent to this ruling, the Group has moved to commence proceedings at the Supreme Court of Ukraine, with a preliminary hearing held on 1 December 2022 whereby it was agreed for the case to be transferred to the Grand Chamber of the Supreme Court, with the next hearing scheduled to take place on 15 March 2023. As at the date of this report the claimants have not sought to enforce the appeal court ruling, but it remains possible that they could seek to do so notwithstanding the on-going proceedings before the Grand Chamber of the Supreme Court. If the Group is unsuccessful at the hearing before the Grand Chamber of the Supreme Court, and the original 2002 share sale and purchase agreement is held to be invalid, this would have a material adverse impact on the Group, including through the loss of a significant proportion of the Group's main operating asset in Ukraine.

As referenced in the Group's previous public reporting, including in the Group's Interim Results published in August 2022, there are outstanding allegations relating to the Group's controlling shareholder, Kostyantyn Zhevago, that remain unresolved, and there is a risk that assets owned or controlled (or alleged to be owned or controlled) by the Group's controlling shareholder may be subject to restrictions, in Ukraine or elsewhere, or that the Group may be impacted by, or become involved in, legal proceedings relating to these matters, in Ukraine or elsewhere.

On 27 December 2022, it was announced that Mr Zhevago had been detained whilst in France, and subsequently released on bail, at the request of the authorities in Ukraine, who are reportedly seeking his extradition to Ukraine in connection with allegations relating to a former Ukrainian bank owned by Mr Zhevago (Bank Finance & Credit). Following this event, Mr Zhevago resigned his position as Non-executive Director on the Board of Directors. The legal case relates to the potential extradition of Mr Zhevago, and associated legal claims being made in Ukraine, and remains outstanding as of the date of this report. The risks relating to the Group as a result of this legal action, and potential further legal action, cannot be accurately estimated at the present time, nor can the potential timeline for resolving any matters.

As a consequence of recent events relating to the Group's controlling shareholder, as outlined above, the Group may experience adverse effects, such as negative media attention for the Group, a reduced ability to operate within Ukraine and/or overseas due to negative perceptions of the Group, and a restricted operating environment for aspects of the Group's business, such as closure (or suspension) of relationships with stakeholder groups such as banking services. The Group's relationships both upstream and downstream may also be negatively impacted by events related to the Group's controlling shareholder, such that the Group is limited and/or impaired in its ability to do business overseas in a specific country and/or region. In addition, restrictions imposed on the Group's controlling shareholder (and/or negative perceptions of the Group's controlling shareholder) may potentially adversely impact the Group within Ukraine, with a restriction on the Group's ability to successfully operate its business model. A number of legal claims or legislative actions within Ukraine are known as of today – as detailed in this section, and further actions to restrict the Group's ability to operate may arise in the future. It is difficult for the Group to predict the scale or nature of such restrictions, and therefore the Group is limited in its ability to pre-empt and mitigate risks in this area.

The Group is subject to a number of actions by the government of Ukraine that threaten to destabilise, or have the effect of destabilising, the operating environment in which the Group exists. For example, in previous years, the government of Ukraine has cancelled exploration licences by Presidential decree, providing minimal detail in terms of an explanation or rationale.

As previously referenced in the Group's 2021 Annual Report and Accounts, in June 2021, the government of Ukraine cancelled a mining licence for an early-stage exploration project known as Galeschynske, which is a licence held by Ferrexpo Belanovo Mining and located to the north of the Belanovo mine (without forming part of this mine). This matter remains outstanding, and there remains a risk that this dispute may increase in scale and/or severity for the Group. The Group has been informed of other licence disputes by the government, which are similar in scale to the licence dispute discussed above. It is difficult for the Group to predict the outcome of existing licence disputes, and whether new claims and/or disputes may arise in relation to the Group's operating licences.

In 2022, the government of Ukraine questioned the documentation relating to the management of a now-dormant waste dump that was originally constructed and operated prior to Ukraine's independence in 1991. The Group continues to engage with local authorities and the national government of Ukraine, aiming to constructively resolve questions and concerns raised. Please see section titled "Ecological Claims" on page 71 for more information.

As previously referenced in the Group's 2021 Annual Report and Accounts, a number of the Group's subsidiaries in Ukraine received letters from the Office of the Prosecutor General, notifying them of an ongoing investigation into a

potential underpayment of royalties between 2018 and 2021 (the “Investigation”). On 3 February 2023, one of the Group’s senior managers in Ukraine received a notice of suspicion in relation to this Investigation. On 6 February 2023, as part of the Investigation, a court order was issued in Ukraine freezing the bank accounts of Ferrexpo Poltava Mining (“FPM”). These actions by the government of Ukraine mirror actions taken in similar investigations into other metals and mining companies in Ukraine, and therefore represent a scenario that the Group was aware of and able to partially mitigate the associated risks. The Group is engaging with the authorities in Ukraine and intends to appeal the court order issued as part of the Investigation. Stakeholders should note that the Group may not be able to successfully challenge this court order to freeze FPM’s bank accounts and/or may not be able to successfully challenge the claims being made as part of the Investigation. As of late February 2023, the Group has managed to get certain aspects of this court order to be repealed, enabling the Group to pay certain amounts such as salaries (but other restrictions remain in place).¹

The Group’s exposure to operating in Ukraine can result in high velocity risks. Risk velocity relates to how fast a risk may escalate in scale and affect an organisation, with high velocity risks considered to be those that move rapidly from a starting point of having a low likelihood and/or scale of impact, to having a high likelihood and/or scale of impact. Examples of high velocity risks would be natural disasters and armed conflict, both of which could be difficult to predict in advance and could have a significant impact on a business.

The risk factors discussed here in this section, either individually or in combination, have the ability to materially adversely impact the Group’s ability to operate its pellet production and other facilities, ability to export its iron ore products, access to new debt facilities and ability to repay debt, ability to reinvest in the Group’s asset base, either in the form of sustaining capital investment^A (to maintain production or expansion), capital investment^A for future growth, or the Group’s ability to pay dividends, could result in a material financial loss for the Group and/or could result in a loss of control of the Group’s assets.

Risk mitigation

Ferrexpo operates in accordance with relevant laws and utilises internal and external legal advisors as required to monitor and adapt to legislative changes or challenges.

The Group maintains a premium listing on the London Stock Exchange and as a result is subject to high standards of corporate governance, including the UK Corporate Governance Code and UK Market Abuse Regulation. Ferrexpo has a relationship agreement in place with Kostyantyn Zhevago, which stipulates that the majority of the Board of Directors must be independent of Mr Zhevago and his associates. For all related party transactions, appropriate procedures, systems and controls are in place and adhered to.

Ferrexpo prioritises a strong internal control framework including high standards of compliance and ethics. The Group operates a centralised compliance structure that is supported and resourced locally at the Group’s operations. Ferrexpo has implemented policies and procedures throughout the Group including regular training. Ferrexpo prioritises sufficient total liquidity^A levels and strong credit metrics to ensure smooth operations should geopolitical or economic weakness disrupt the financial system of Ukraine. Ferrexpo looks to maintain a talented workforce through skills training and by offering competitive wages, taking into account movements of the Ukrainian hryvnia against the US dollar and local inflation levels.

Ferrexpo has a high profile given its international client base and London listing, and it is important that Ferrexpo’s Board of Directors and relevant senior management continue to engage with the Group’s stakeholders to effectively communicate the economic contribution that Ferrexpo makes to Ukraine and to show that it operates to high international standards.

1.3. Counterparty risk (external risk)

Responsibility	Risk appetite / Change	Link to strategy
Board of Directors and Chief Executive Officer	Low / Increasing	4

As a business operating in an emerging market, and also as a business operating in a country that is currently engaged in an armed conflict, there are significant risks in respect of the Group’s business interactions with third party suppliers of goods and services. Risks may relate to a number of subject areas, including (but not limited to) governance and corruption risks, risk of collapse, risks relating to monopolies and/or situations whereby alternative suppliers may not be available, and counterparty risks relating to the conflict in Ukraine whereby counterparties may be exposed to Russia (with such relationships potentially not being known to the Group). The Russian invasion of Ukraine in 2022 has imposed a significant strain on the economy of Ukraine and has therefore heightened the counterparty risks facing the Group.

A secondary effect of the ongoing war in Ukraine is that the Group may be impacted in its ability to conduct effective due diligence on counterparties given the imposition of martial law in Ukraine, and other war-related restrictions. The Group has had to change a number of key suppliers in 2022, and in doing so, has had to conduct due diligence checks as part of each new relationship, which carries inherent risk to the Group.

¹ As of 28 February 2023.

Counterparty risks may result in direct consequences for the Group such as financial harm and operational issues in sourcing material, and also include indirect consequences such as damage to the Group's reputation either within Ukraine or with international stakeholders, such as investors, lenders and customers.

Additionally, as outlined on page 36 (Ukraine Country Risk), recent events relating to the Ultimate Beneficial Owner ("UBO") of the Group have resulted in secondary effects on a number of business relationships of the Group. The Group is currently managing these risks either through existing relationships or through new relationships, and it should be noted that any new (or change of existing) business relationship carries an inherent counterparty risk to the Group.

In recent times, the global Covid-19 pandemic has placed a significant strain on the financial stability of third parties and has also increased the risk of collapse of counterparties. Whilst the direct effects of Covid-19 are less evident in Ukraine and Europe in 2022, this remains a risk, particularly given the global footprint of Ferrexpo's business model. As referenced on page 49, risks relating to Covid-19 are heightened in Ukraine at the present time given the national government's focus on defending its sovereignty in light of Russia's ongoing invasion. Consequently, testing for Covid-19 has been significantly reduced, and the associated risks related to counterparty failure are heightened as a result.

Risk mitigation

In terms of supplier governance, the Group's Compliance Department conducts regular checks on all suppliers, screening entities for a number of risks and elevating those deemed to be higher risk for further checks and consideration as to their eligibility. For entities that the Group conducts business with, the Group has developed a Code of Conduct for Suppliers, which as of 2022 is referenced in 90% of all contracts and over 1,300 due diligence checks completed on potential third party suppliers (2021: 95%). Note that the decrease in proportion of contracts referencing compliance clauses is attributable to the ongoing conflict in Ukraine, and associated restrictions.

The Group's exposure to the failure of a counterparty, or the failure of a party to provide its contracted goods and services, is managed through the Group engaging with a range of suppliers, where possible, in addition to sufficient cash reserves to maintain the Group's overall liquidity. Where it is not possible and/or practical to source goods and services from multiple providers, the Group considers alternative goods and services to meet its needs and to reduce single party risk.

With regard to the structures in place to monitor and manage counterparty risk, the Finance, Risk Management and Compliance ("FRMC") Committee, is an executive sub-committee of the Board charged with ensuring that systems and procedures are in place for the Group to comply with laws, regulations and ethical standards. The FRMC Committee met ten times in 2022 (2021: ten) and is attended by the Group Compliance Officer and, as necessary, by the local compliance officers from the operations, who present regular reports and ensure that the FRMC Committee is given prior warning of regulatory changes and their implications for the Group. The FRMC Committee enquires into the ownership of potential suppliers deemed to be "high risk", and oversees the management of conflicts of interests below Board level and general compliance activities (including under the UK Bribery Act 2010, the Modern Slavery Act, the Criminal Finances Act, and the EU General Data Protection Regulation).

The Group aims to minimise risk around the timely provision of goods and services through maintaining sufficient cash reserves and liquidity, as well as maintaining alternative suppliers should one counterparty fail.

The Board aims to ensure adherence to the highest standards of diligence, oversight, governance and reporting with all charitable donations, with the Health, Safety, Environment and Community ("HSEC") Committee required to provide approval for community support expenditures.

2. Market related risks

2. Risks relating to the global demand for steel

Responsibility	Risk appetite / Change	Link to strategy
Board of Directors and Chief Executive Officer	Medium / Stable	3 and 5

The Group is a constituent of the global steel value chain, which is a sector that is heavily reliant on global connectivity, and global factors that affect the supply and demand balance of both steel and the raw materials required for making steel.

Steel is typically made using processes that involve iron ore, a degree of scrap steel (depending on the process method) and a source of energy (which can include coal, natural gas and electricity). Prices for these key inputs can be volatile, and are factors that will move independently of any single steel producer's control, and will therefore have the ability to significantly impact the profitability of individual steel producers. Additional factors governing the input costs, and therefore profitability, of steelmakers include: the availability and cost of labour, requirements for capital investments to sustain and/or grow output, the availability of raw materials and energy sources (in addition to unit costs), the cost and availability of logistics routes and the presence of lower cost competitors in key markets.

Global steel demand varies considerably and can be significantly influenced by factors outside of the control of a steel producer, such as political instability (e.g. the war in Ukraine), global energy prices, and outlook for the global

economy. In addition to these macro-economic environment factors, individual steel producing facilities and regions may be impacted by national, regional and local factors such as political instability, political intervention, weather events, cybersecurity events, and climate change, amongst other factors.

Given that the factors listed here have the potential to materially impact the profitability of steel mills, individual companies and/or facilities may respond to higher costs and/or weaker market conditions by reducing or halting steel production, until more favourable market environment returns. This in turn could have a material effect on suppliers to such businesses, such as Ferrexpo.

A more recent trend has seen a surge in awareness of climate change related issues, which is driving increased changes within various levels of the operating environment for steel companies – from local and regional government enacting legislation related to climate change, to customers and local communities demanding that steel production involve lower emissions. Efforts to counter the effects of climate change in the steel industry, which typically focus on the reduction of carbon emissions in the production of steel, are likely to generate higher operating costs in the near term, and higher requirements for capital investment^A in the medium to long term. Furthermore, whilst steelmakers' operating costs are likely to increase in the near-term as a result of emissions reduction measures, end users of steel may not agree to higher steel prices, and therefore profit margins are likely to decrease until such costs are successfully passed through to end user markets.

The structure of the global steel industry relies on a consistent supply of materials to steel mills and a consistent offtake of finished steel by customers. As a consumer of bulk commodities, such as iron ore and coal, the timely and reliable delivery of these materials is required for stable steel prices, since any disruption in the delivery process can create short and medium-term spikes in steel prices. Equally, a scenario whereby global markets encounter an excessive supply of steel, either through an unforeseen downturn in end-user demand, or disruptive increases in steel supply, could have a negative effect on steel prices.

Global steel markets also rely on the consistent availability of logistics pathways, and events such as the Russian invasion of Ukraine in 2022 or the global Covid-19 pandemic, served to demonstrate the possibility of short-term pricing fluctuations (both positive and negative) when global logistics chains fail to function properly.

Risk mitigation

Under normal circumstances, the Group has the ability to mitigate risks around demand for steel through its global customer base, with the Group having the ability to shift sales to regions exhibiting higher demand for steel. This was demonstrated in 2020 during the global Covid-19 pandemic, when Ferrexpo's sales to China were increased significantly in response to a shift in demand away from Europe and North East Asia. At the present time, however, the Group has largely been unable to access the seaborne market for the majority of 2022 due to Russia closing Ukraine's access to the Black Sea. When the Group has been able to access the seaborne market, it has not been in material quantities, or on financially favourable terms, and therefore the Group's ability to shift significant sales volumes to regions other than Europe has been impaired in 2022. The ability of the Group to pivot its sales is a measure that the Group intends to utilise once consistent and sizeable access to the seaborne market is re-established, either through a Ukrainian port, or otherwise.

Other risk mitigation activities include the Group's ability to produce high quality forms of iron ore, which typically command higher premiums with customers and also tend to be more in demand throughout the economic cycle.

Ferrexpo operates in a country whereby the local currency, the Ukrainian hryvnia, is a currency that is linked to the performance of commodity prices, and historically the Group has experienced depreciation in the hryvnia at times of lower commodity prices, which in turn reduces the Group's dollar-denominated cost base. Movements in the hryvnia-dollar exchange rate can, however, be influenced by other factors and may not necessarily reduce costs at times of low iron ore prices.

3. Risks related to realised pricing

3.1. Changes in pricing methodology (external risk)

Responsibility	Risk appetite / Change	Link to strategy
Chief Executive Officer and Chief Marketing Officer	Medium / Stable	1, 3 and 5

Pricing formulas for iron ore pellets are governed by a number of factors, including the iron ore fines price, a premium for additional ferrum content (if applicable), pellet premiums, freight rates and additional quality premiums and discounts depending on the type of iron ore pellet or concentrate supplied and its chemistry. Industry-wide factors, which are outside of the Group's control, can influence the methodology for pricing iron ore products, in addition to the various premiums and discounts that are applied by individual customers and individual regions. Premiums or discounts paid for specific characteristics may change and adversely impact the Group's ability to market specific products.

Should the standard method pricing methodology change in the future, it could have a negative impact on the Group in the form of lower realised prices for iron ore pellets and/or iron ore concentrate, and therefore resulting in a negative impact on the Group's financial performance. Additional potential impacts of changing perceptions around pricing methodology could include a restriction in the Group's ability to sell its products to specific customers and/or customer

regions, should such stakeholders elect to pursue a different pricing methodology with an alternative supplier of iron ore products.

As a producer of high grade forms of iron ore (grading 65% Fe and above), over time, the Group has developed customer pricing agreements with customers on the basis of high grade benchmark fines indices (grading 65% Fe). Such agreements enable the Group to realise the value of the iron content in its products, with high grade (65% Fe) fines index trading an average of US\$19 per tonne above the medium grade (62% Fe) in 2022 (2021: US\$26 per tonne)¹. The premiums paid for material priced using the high grade benchmark index reflects the restricted supply of high grade iron ores into the global market, with the majority of supply being either low or medium grade iron ores. Premiums paid for higher grade iron ores (referred to as the “ferrum premium”) also reflect the operational benefits to steel mills through higher blast furnace productivity and lower emissions profiles associated with higher grade input materials.

Should customer agreements return to pricing of its products using the medium grade benchmark, the Group could potentially experience lower net realised pricing for its products.

The Group also relies on pricing structures for its pellets to include a pellet premium, which reflects the high quality, pelletised nature of the iron ore delivered to customers. Given the benefits of pellets to steelmakers (namely improved furnace productivity and/or reduced greenhouse gas emissions), it is accepted practice that steelmakers pay an additional premium for iron ore pellets (the “pellet premium”). Pellet premiums have varied significantly in recent years, which reflects both supply and demand-related factors. Given the scale of the pellet premium relative to the iron ore fines index and pelletising costs, any move away from the market paying pellet premiums would have a significant impact on our profitability and our differentiation within the global landscape of iron ore producers. Furthermore, a number of pellet premiums are quoted by third parties, which are computed in a variety of ways. Any switch from using one specified pellet premium to another quoted pellet premium, may also result in lower realised pricing for the Group.

Risk mitigation

The Group aims to price its products through clear and consistent engagement with customers, with the Group seeking to develop mutually beneficial long-term relationships. Through consistent supply and consistent high quality of the Group’s products, Ferrexpo aims to maintain strong relationships with its customers.

Through strong customer relationships, the Group aims to ensure that the net realised prices received for its iron ore products are in line with the international benchmarks for pricing of similar products, in addition to premiums paid for the quality and/or form (i.e. pellet) of the iron ore being traded.

Ferrexpo endeavours to achieve the prevailing market price at all times, and the Group aims to be a low cost producer and therefore cash flow positive throughout the commodities cycle.

3.2. Lower iron ore prices (external risk)

Responsibility	Risk appetite / Change	Link to strategy
n/a (Ferrexpo is not large enough to influence global demand)	Medium / Stable	1, 3 and 5

This factor is one that is connected to risks related to the global demand for steel (see page 39), since demand for steel directly impacts the pricing of raw materials used to produce steel, such as iron ore.

As a company that derives the majority of its revenues from iron ore products, Ferrexpo is inherently exposed to iron ore prices, either in the form of benchmark iron ore fines prices, or pellet premiums. Variations in iron ore prices come in a number of forms, from the underlying iron ore price, to the premium paid for the grade of iron ore (the “ferrum premium”), or discounts applied for the naturally occurring waste elements in each ore such as silica and alumina.

The iron ore fines price is the largest component of pricing for the Group’s products, which averaged US\$139 per tonne in 2022 (high grade iron ore fines index, 2021: US\$186 per tonne)². As discussed in the Market Review section (see page 7, iron ore fines prices are predominantly affected by Chinese demand for iron ore, which represented 75% of global imports of iron ore fines in 2022 (2021: 76%), and the economic outlook for China³.

The quoted price for iron ore fines is called the benchmark index, and is applicable for forms of iron ore that have a specified chemistry that is amenable for steelmaking, such as the percentage of each waste material contained (e.g. silica, alumina, phosphorus). The Group’s products typically conform to the requirements of the benchmark index, and therefore tend not to have penalties applied as a result. Iron ores that do not comply with the benchmark index, however, will be subject to a range of penalties, which may vary significantly depending on a range of market factors and technical requirements of each steel mill. Any variation in the quality and/or chemistry of the Group’s iron ore that is mined in a given period could therefore result in penalties being incurred.

1. Source: S&P Global Commodity Insights.

2. Source: S&P Global Commodity Insights.

3. Source: CRU.

A secondary component of the pricing structure of the Group's products is the pellet premium, which is applied to the sale of iron ore pellets. This premium is significant to the Group, and can represent a premium in excess of 50% of the benchmark iron ore fines index. This component of the pricing structure of the Group's products is discussed in detail on page 8.

Should reputational concerns over the Group and its UBO affect existing or potential relationships, the Group may no longer be able to realise the same level of product pricing as previously experienced.

Risk mitigation

The Group aims to mitigate price risk through producing high grade, low impurity iron ore products, which receive premiums when sold to customers, rather than penalties and/or discounts. Through such products, the Group has been able to build a high-margin business, which in turn enables further investment in the Group's production facilities.

In addition, the Group aims to be a low cost producer of iron ore products. Through operating with a lower cost base than the Group's peers, particularly when the premiums paid for grade and form (pellets) are considered, Ferrexpo aims to remain competitive on a global basis.

Furthermore, Ferrexpo's operating costs are partly correlated with commodity prices. When the commodities cycle is in a downward phase, Ferrexpo typically receives a lower selling price, but the Group's cost base also tends to decline as a result of local currency devaluation. The Ukrainian hryvnia is a commodity-related currency and historically over the long-term it has depreciated during periods of low commodity prices, although movements of the Ukrainian hryvnia against the US dollar can also be influenced by short-term political factors, in addition to other factors.

Ferrexpo regularly reviews its options in respect of hedging the price of its output. The Group's current strategy is to not enter into such hedging agreements due to the relatively low liquidity of this market and high cost of entering into such arrangements. The Group will continue to review this strategy as the market for hedging iron ore pellets develops over time, which may eventually reduce the effective cost of such arrangements.

3.3. Pellet premiums

Responsibility	Risk appetite / Change	Link to strategy
Chief Executive Officer and Chief Marketing Officer	Medium / Stable	1, 3 and 5

Pricing of the Group's products includes a component referred to as the pellet premium, which references the pelletised nature of Ferrexpo's products, which reduces the degree of processing required prior to steelmaking. As a consequence of this reduction in processing at the steelmaking stage, buyers of iron ore pellets will pay a premium over and above the prevailing iron ore fines price. The pellet premium is one of the principal factors that enables the Group to generate a significant margin on its products, and therefore allows for a higher degree of investment in the Ferrexpo business.

An example of a quoted pellet premium is the monthly Atlantic Pellet Premium, as quoted by S&P Global Commodity Insights, which averaged US\$72 per tonne in 2022 (2021: US\$60 per tonne¹) and therefore represented a significant premium to the benchmark iron ore fines price. Note, however, that numerous pellet premiums exist, and the Group may agree pellet premiums individually with customers that do not mirror quoted pellet premiums.

Factors governing the pellet premium in any given year include the overall supply of iron ore pellets, which tends to be a relatively stable industry, and the overall demand for iron ore pellets. Demand factors can be related to the health of the global economy and steelmakers' desire to maximise output, which tends to result in higher pellet buying activity to increase a steel mill's productivity. Pellet demand can also be impacted by increasing regulation around emissions reduction, since iron ore pellets do not need to be sintered like other forms of iron ore. Since sintering is a process that typically involves the use of coal, steelmakers that utilise a greater proportion of pellets in a blast furnace's input materials (partially replacing sinter fines) can reduce the overall emissions footprint of steel production.

The overall supply of iron ore pellets is relatively constrained, with existing producers typically producing at their nameplate capacity and the construction of new pelletiser capacity usually requiring significant capital investment^A to build production facilities, in addition to the associated infrastructure required for delivering a bulk commodity to end users. As a consequence, limited new pelletising capacity has been built in the past five years. Supply-side disruption has been a more prominent factor in recent years, with the failure of two tailings dams in Brazil resulting in significant volatility in supply from two of the largest pellets exporters to the global steel industry. Both of the companies involved in these incidents have now resumed production from the affected production facilities, and therefore the market has resumed a degree of supply-side balance not previously seen in recent years.

Should reputational concerns over the Group and its UBO affect existing or potential relationships, the Group may no longer be able to realise the same level of pellet premiums as previously experienced.

Risk mitigation

Despite being one of the largest iron ore pellet exporters, the Group is not sufficiently sized to be a price setting company when it comes to iron ore pellet premiums and therefore the Group's realised pellet premium tends to follow the level set by the main market participants.

It is the Group's strategy to target the low cost production of its iron ore products, thereby enabling the Group to remain profitable for a range of realised pellet premiums. More specifically, Ferrexpo has historically operated with one of the lower costs of pelletising across the spectrum of global iron ore pellet production, and therefore swing producers have tended to moderate the pellet premium at times of low pricing, through removing pellet supply from the market. The Group uses natural gas in its pelletising operations and has had to operate below its nameplate capacity for a period of 2022 due to the ongoing war in Ukraine. As such, pelletising costs increased to US\$29 per tonne in 2022 (2021: approximately US\$19 per tonne)¹. Despite this increase, the Group has managed to keep pelletising costs below the prevailing pellet premium for the year.

The strategy of targeting low cost production is enhanced through Ferrexpo's location in Ukraine, with the Ukrainian hryvnia having a close correlation to commodity pricing, which therefore tends to devalue at times of low commodity pricing, reducing the Group's cost base.

3.4. Freight rates (external risk)

Responsibility	Risk appetite / Change	Link to strategy
Chief Executive Officer and Chief Marketing Officer	Low / Increasing	2, 3 and 5

The pricing of a bulk commodity, such as Ferrexpo's iron ore products, typically includes a component of the net realised pricing that considers the cost of transporting material to the customer. For Ferrexpo, this pricing typically refers to either the C3 or C2 freight indices (published by the Baltic Exchange), as these are reflective of the shipping cost for accessing either the Asian or European market (respectively). Freight rates are a deduction from the pricing received from the pellet, and therefore higher freight rates will result in lower net realised pricing for the Group, and vice versa.

The factors driving freight rates include the prevailing fuel cost for ships, the availability of vessels at a given point in time, and insurance policies required for ships to service the required route (the latter being a significant factor for chartering parties looking to ship via the Black Sea during the present time).

As a guide, the C3 freight index increased from below US\$20 per tonne in early 2022, to over US\$38 per tonne in May 2022, with this rise associated with the war in Ukraine and rising energy costs. Freight rates declined to US\$20 per tonne towards the end of the year, and averaged US\$24 per tonne for the full year (2021: US\$27 per tonne)².

Additionally, the war in Ukraine has had an effect on the Group's ability to charter vessels with shipowners, as the closure of Ukraine's access to the Black Sea has resulted in limited deliveries of the Group's iron ore pellets to the seaborne market, with external factors impacting freight rates. Whilst the increased costs associated with trading within the Black Sea have been reflected in freight rates since the outset of the war in Ukraine, the Group is still managing to charter vessels at market level due to the Group's strong relationships with shipowners.

Further freight-related realised effects, or potential risks, of the war in Ukraine include: an increase in the insurance premiums required for vessels travelling to Black Sea ports (Ukrainian ports or otherwise), the potential closure of the Bosphorus strait and the Black Sea potentially becoming non-committal for shipowners.

The Group is also aware of potential risks that relate to recent events with the Group's UBO (see page 36), which may affect Ferrexpo's ability to conduct business relationships with freight providers. Should third party concerns relating to these matters prevent Ferrexpo from engaging in business relationships with specific freight providers, then the Group may incur higher costs relating to booking of freight from a smaller group of providers.

Risk mitigation

The Group has its own in-house freight manager, which helps the Group to receive a competitive rate for freight cargoes. The Group's management team includes freight specialists based in Singapore, where many shipping brokers and owners are located, and it is therefore possible to maintain a detailed understanding of both the global freight market and shipowners.

As a result of the Group's operations being located in Ukraine, seaborne freight chartering has been reduced in 2022 (following Russia's closure of the Black Sea to Ukrainian ports – see page 35 for more), and as such the Group has increasingly relied on its European customer network for sales. Despite this, the international freight rate is still relevant for the business, as many contracts reference a quoted freight rate.

The Group currently does not enter into hedging arrangements for freight rates, which is an approach consistent with the Group's strategy on other forms of hedging. This approach is continually reviewed by the Group's management team, and such arrangements may be entered into if it is deemed to be beneficial to the Group.

1. Source: S&P Global Commodity Insights.

2. Source: Baltic Index.

The Group's freight department regularly monitors freight-related risks associated with the war in Ukraine, or otherwise, with an aim of ensuring effective decision making in light of changes to the operating landscape.

4. Operating risks

4.1. Risks relating to producing our products

Responsibility	Risk appetite / Change	Link to strategy
Chief Executive Officer, Chief Operating Officer and Chief Marketing Officer	Medium / Increasing	2, 3 and 5

The Group's operations involve the mining of iron ore, which requires detailed planning of blasting, excavation and transport operations, to deliver sufficient quantities of iron ore to the Group's processing plant, which crushes, grinds and beneficiates the material that it processes from native iron ore grades (ranging approximately 25-30% Fe) to high grade concentrate (either 65% or 67% Fe) for Ferrexpo's current product portfolio. Pelletising operations then subsequently convert high grade iron ore concentrate to pellets via a series of kilns that operate at approximately 1,300°C. The above processes are complex and carry inherent risks as a result. The Group is able to mitigate such risks through a range of activities and the collective experience of the Group's executive management team, but it may not be possible to eliminate all risk factors.

As a business with its main operating assets located in Ukraine, the Group has faced significant risks relating to the ongoing war in Ukraine, which are summarised in the Principal Risks shown on page 35 of this report. The Group has also faced a number of indirect consequences of the war in its operations, such as a number of skilled personnel departing Ferrexpo's operations to either serve in the Armed Forces of Ukraine or relocating away from the conflict, the Ukrainian authorities requiring the delivery of specific equipment for military use (typically light vehicles), the reduced availability of specific materials relevant for the conflict such as detonators and fuel and restrictions on operating practices, such as scheduled blasting of in-situ rock in mining operations.

Outside of risks that directly relate to the war in Ukraine, the Group faces material risks relating to its mining operations that include (but are not limited to) health and safety-related risks, the risk of a pit wall failure or fall of ground incident in the Group's mines, equipment failure (either due to operator oversight, failures in maintenance practices or failure despite acceptable levels of maintenance), weather events preventing access to the Group's mines, poor planning processes resulting in a lack of high grade iron ore for processing, or the failure of drilling to identify the correct location of ore and waste material. Risks in the processing plant, covering the beneficiation and pelletisation of material, also include (but are not limited to) equipment failure and/or unscheduled equipment downtime, a lack of spare parts, a lack of key input materials, unsuitable equipment for processing of certain ore types, operating restrictions and extreme weather events (or other events potentially related to climate change) that may impact the ability to produce or store the Group's products. As operations continue to be modernised, the Group also faces cybersecurity-related risks from cyber threats and other factors that may impair the Group's ability to operate its electronic equipment – see page 47 for more details.

The risks described above are typically short-term events and the Group also faces longer-term risks, such as climate change (see page 48) and country risks related to Ukraine (see page 36). Potential risks related to climate change are also detailed on pages 21 to 29 of this report, and have been identified through the Group's recent collaboration with environmental consultants Ricardo Plc.

The Group is also aware of potential risks that relate to recent events with the Group's UBO (see page 36), which may affect Ferrexpo's ability to source key input materials and labour either within Ukraine or overseas. Should third party concerns relating to these matters prevent Ferrexpo from engaging in business relationships with specific providers of materials and/or labour, then the Group may have challenges in its ability to produce, or incur higher costs relating to the sourcing of the same inputs from a smaller group of providers and/or smaller group of people.

Risk mitigation

The Group employs an experienced management team and has a management structure in place to monitor, and where necessary, manage risks as and when these risks escalate. The Group's business model is in a sector that has inherent risk in the mining and processing of materials, with these risks being manageable and, where possible, mitigation measures are utilised to ensure the safe operation of the Group's facilities to ensure the efficient production of the Group's iron ore products. The Group maintains a risk register of more than 40 risk areas (as of January 2023), which is monitored on a frequent basis by the Group's operational teams and reported to the relevant management committees. Where an operational risk is deemed to be sufficiently significant in terms of potential impact and/or likelihood, appropriate risk mitigation measures are sought, often with the assistance of third party specialists, where relevant.

4.2. Risks relating to delivering our products to customers

Responsibility	Risk appetite / Change	Link to strategy
Chief Executive Officer, Chief Operating Officer and Chief Marketing Officer	Medium / Increasing	2, 3 and 5

The Group is a producer of a bulk commodity, meaning that its business model relies on timely and consistent access to a logistics network with sufficient capacity to transfer a large volume of material to the Group's customer base around the world. Any interruption to the scale, availability or reliability of this logistics network has the potential to significantly impact the Group's ability to operate its business model and generate cash flow. The nature of being a producer of a bulk commodity means that should an interruption of logistics occur, there may be little time or excess funding available to efficiently remedy the situation and/or stockpile excess material, potentially resulting in a temporary suspension of the Group's production facilities and an associated impact on the Group's ability to generate revenues.

The Group's logistics network is diverse in nature, covering the Group's use of the railway network in Ukraine and further afield across Europe, a stake in a berth at a port facility in south west Ukraine (used for loading vessels for the seaborne market), and an inland waterway logistics business along the River Danube.

Examples of risks relating to the Group's logistics network, aside from those specifically relating to the ongoing Russian invasion of Ukraine (covered on page 35), range from those potentially impacting railway logistics, which include (but are not limited to) the unexpected closure and/or suspension of sections of the railway network in Ukraine or Europe required for deliveries, a reduction in rail capacity related to the phasing out of outdated equipment and insufficient investment in replacement equipment, potential political interference in the Group's ability to book railway capacity and/or railway wagons, extreme weather events (either related to climate change or otherwise) and a lack of personnel to operate the railways effectively. The Group faces similar risks relating to its use of inland waterway logistics on the River Danube, and in addition includes risks relating to abnormally high and low water levels, which may impede passage of vessels. Such risks are expected to be exacerbated in the future by the potential impact of climate change. Similar risks are posed to the Group and its ability to access seaborne markets should extreme weather events (either climate change related or otherwise) impact operations at the port of Pivdennyi or other ports used by the Group, or shipping routes such as the Suez Canal.

The Group is also aware of potential risks that relate to recent events with the Group's UBO (see page 36), which may affect Ferrexpo's ability to secure bookings on key logistics routes either within Ukraine or overseas. Should third party concerns relating to these matters prevent Ferrexpo from engaging in business relationships with specific logistics providers, then the Group may incur difficulties in its ability to ship products, or may incur higher costs relating to the sourcing of logistics options along alternative routes.

Risk mitigation

Since listing in 2007, the Group has sought to invest in its logistics capabilities and overall capacity, to ensure cost effective and sufficient access to a logistics network. This has involved the purchase of railcars, with the Group now operating a fleet of 3,033 railcars (with this figure increasing by 183 in 2022), which reduces operating costs and helps to ensure product quality whilst pellets are in transit to customers. Similarly, the Group owns a 49.9% stake in a berth at the port of Pivdennyi in south west Ukraine, along with a trans-shipment vessel ("Iron Destiny"), which previously enabled the Group to load trans-shipment vessels for the seaborne market. Iron Destiny was outside of Ukrainian waters undergoing routine maintenance at the time of Russia's invasion of Ukraine on 24 February 2022, therefore ensuring that the Group still controls this asset. The Group also owns its inland waterway logistics provider (First-DDSG), which is based in Vienna, Austria, and has locations along the River Danube.

In order to maintain timely access to its logistics network, the Group also maintains close working relationships with logistics providers such as the Ukrainian railway operator, the port operator at Pivdennyi, as well as government bodies in Ukraine that are relevant for the Group's logistics operations.

4.3. Risks relating to health and safety

Responsibility	Risk appetite / Change	Link to strategy
Chief Executive Officer, Chief Operating Officer and Chief Human Resources Officer	Low / Increasing	1, 2, 3, 4 and 5

Without effective management of health and safety related risks, the nature of mining and processing of iron ore into iron ore pellets can involve inherent risks. The processes involved in the mining and processing of metalliferous rock has progressed significantly in recent years, but risks remain if policies and procedures are not followed correctly, or if equipment is not used correctly.

Mining activities involve the use of large equipment, such as haul trucks, excavators and bulldozers, with each item of equipment weighing a considerable number of tonnes and which are expected to regularly move around to a number of locations throughout a shift. The operation of mining equipment is inherently dangerous if operators are not correctly trained, or if due care and attention are not applied when operating each item of equipment. Activities within a mine include the drilling and blasting of native rock, excavation and transport of blasted rock to either the processing plant or waste dumps, watering of surfaces to reduce dust emissions and the construction of waste dumps to a specified design. Activities are typically conducted 24 hours a day, and whilst the Group has extensive lighting on equipment and around mining areas, low light conditions are a risk for operators.

Risk mitigation

The Group has a well trained workforce, comprising 7,978 individuals and 1,796 contractors, with an extensive training programme. In 2022, the Group provided 6,143 training courses to employees, 64% of which were safety-related courses (2021: 6,442 courses). The Group also trains contractors, as safety risks do not vary according to an individual's contract status, with 170 safety-related courses provided to contractors in 2022 (2021: 931 courses).

The Group's approach to mitigating safety risks is to understand the causal factors of safety incidents, through creating risk registers for each activity being undertaken or area within the Group's main operations. The Group also records leading indicators of safety, with an aim to monitor and improve these factors, to reduce the risk of a safety-related incident occurring. Examples of leading indicators include the number of: training courses undertaken, high visibility safety tours by senior managers, safety inspections and hazard reports completed. In the instance of a safety-related event occurring, the Group aims to learn for each event, to reduce the risk of a repeat occurrence. Lagging indicators of safety help the Group's management team to record the effectiveness of safety measures being implemented, and the main indicators used to track performance are the Group's lost time injury frequency rate ("LTIFR"), total recordable injury frequency rate and fatalities.

Throughout its operations, the Group is seeking to implement modern forms of technology, including autonomous equipment, which help to remove operators from hazardous working environments. Examples of such would be the Group's autonomous trucks in the Yeristovo mine.

4.4. Risks relating to operating costs

Responsibility	Risk appetite / Change	Link to strategy
Chief Executive Officer and Chief Financial Officer	Low / Increasing	2 and 5

The Group's business comprises a number of open-pit mining operations, an iron ore processing complex and a range of ancillary activities related to the production of iron ore pellets and concentrate, which requires a range of input goods and services. The Group's costs are subject to a range of factors, some of which are controlled by the Group, whilst others are outside of the Group's control, meaning that resulting profitability may fluctuate.

The Group operates in an energy intensive industry, and therefore requires a range of commodity-based inputs such as diesel and natural gas, as well as electricity, which are all subject to market factors outside of Ferrexpo's control that will influence the Group's overall profitability. Examples of such would be the movement of natural gas prices in 2022, which rose as a consequence of Russia's invasion of Ukraine from less than US\$600 per thousand cubic metres in 3Q 2021, to a peak of more than US\$1,200 per thousand cubic metres in 1Q 2022, before declining to below US\$900 per thousand cubic metres in 4Q 2022.

Further to energy costs, inflationary pressures were seen on a global scale in 2022, with Ukraine no exception. Cost inflation has the potential to affect a wide range of the Group's input costs at its operations, with the Group potentially not able to effectively counter such pressures due to the benchmark pricing of the Group's products.

A primary cause of cost inflation has been the Group's inability to operate at its nameplate capacity due to the war in Ukraine, resulting in higher unit costs. Additionally, inflationary pressures have been seen on a global basis in 2022, which are reflected in energy prices, capital costs for equipment and maintenance costs. Inflation in Ukraine in 2022 was estimated by the government of Ukraine to be 26.6%¹ (2021: 9.4%²), reflecting the exceptional circumstances experienced in 2022. Given that the Russian invasion of Ukraine remains ongoing, it is expected that

1. Source: Reuters, [link](#). (Accessed 3 March 2023.)

2. Source: World Bank, [link](#). (Accessed 3 March 2023.)

the negative impacts of the war will continue to be experienced by the Group, such as lower production and higher unit costs.

The use of natural gas is a key component of the Group's pelletising operations and its use is therefore essential for the production of iron ore pellets.

The Group is also aware of potential risks that relate to recent events with the Group's UBO (see page 36), which may affect Ferrexpo's ability to source key input materials and labour either within Ukraine or overseas. Should third party concerns relating to these matters prevent Ferrexpo from engaging in business relationships with specific providers of materials and/or labour, then the Group may incur difficulties in its ability to produce, or incur higher costs relating to the sourcing of the same inputs from a smaller group of providers and/or smaller group of people.

Risk mitigation

The Group has operated through a number of commodity cycles and the Group's operations have been in production for more than 50 years, and through this experience of operating, the Group's management team has developed an understanding of cost effective production and the required level of goods and services to maximise the Group's profitability at any given level of production.

The Group has a number of measures in place to reduce and minimise operating costs, where possible, to ensure that the Group maintains its profitability throughout the commodity cycle. For input goods that are a requirement of the production of pellets, the Group aims to minimise use and develop alternative materials (substitutes) for use in the Group's operations, which would help reduce reliance on a single input (or limited number of inputs), and therefore reduce risks relating to the cost and supply of individual inputs. As an example, a partial substitute would be the use of sunflower husks in the Group's pelletiser, which is used to fuel the pelletiser. In 2022, the Group successfully sourced 21% of the pelletiser's heating energy from sunflower husks (2021: 18%). Other examples of substitution of goods within the Group's operations include the use of different manufacturers of mining equipment, with different suppliers of spare parts, which reduces operational risks and can reduce operational costs.

4.5. Risks relating to information technology ("IT") systems and cybersecurity

Responsibility	Risk appetite / Change	Link to strategy
Chief Executive Officer	Low / Increasing	1, 2 and 3

The Group is increasingly reliant on modern technology for the safe, efficient and cost effective production of its products. With IT systems becoming increasingly more important to the Group's business model, the risks associated with IT security and the continued availability of IT systems have increased in recent years, particularly in light of the increased complexity of cyberattacks on IT systems. Cybersecurity threats may take the form of, but are not limited to: malware, ransomware, phishing, denial-of-service attacks, and password attacks.

Cyberattacks, such as malware and ransomware, are often unreported in the mainstream media by companies and governments to avoid negative publicity. It is therefore difficult to ascertain the full extent to which the Group is facing cybersecurity risks. In the past, published cyberattacks affecting companies and governments have closed or limited a company's ability to produce, or have withheld or disclosed confidential information, and have withheld access to key operational infrastructure.

The Group is exposed to heightened risks related to cybersecurity at the present time given Russia's ongoing invasion of Ukraine, which is a conflict taking place in a number of environments, including attacks on IT systems in Ukraine. Attacks can be expected on any IT system in Ukraine as a result of the conflict, and therefore, organisations such as Ferrexpo may be the target of an attack due to its location, rather than its business activities. Consequently, it is difficult for the Group to predict the source, scale or nature of any cyberattack, which may appear random in nature.

Risk mitigation

The Group's IT department conducts regular reviews of the general IT landscape and provides regular cyber awareness training for employees as well as ad hoc notification when new threats are identified. The Group also regularly reviews requirements on data protection, with email security bulletins circulated to ensure internal IT users are provided with up-to-date information on cybersecurity. The Group has also implemented a dynamic approach to anti-malware policies, to ensure an adaptive approach for new threats as they emerge.

Efforts in 2022 have had a focus on finalising an extensive third party audit (ISO 2700x, "Information Security Standards") of cybersecurity and internal IT/automation processes. This audit had previously commenced in 2021, with a number of findings identified early on during the war in Ukraine in 2022 that helped to mitigate threats, which was achieved in part through members of the audit team acting as a "red team". As a result of this audit, immediate mitigation actions were taken across the Group's IT equipment and infrastructure, including upgrades to the latest standards. Purchases of specific software and hardware were made in 2022, with deployment to enhance cybersecurity.

In parallel, the Group has had to respond to the possibility of cyberwarfare and conventional warfare tactics, with the commissioning of additional IT infrastructure in bomb shelters a good example of that response. Other examples include the deployment of extensive power control systems, and urgent upgrades and migrations due to vulnerabilities.

Further to existing practices and protocols, the Group regularly updates the software and hardware in use throughout its business, to reduce the Group's exposure to known weaknesses in cybersecurity.

5. Risks relating to climate change

Responsibility	Risk appetite / Change	Link to strategy
Board of Directors and Chief Executive Officer	Low / Increasing	1, 2, 3, 4 and 5

Climate change represents a significant challenge for the modern world, with governments, business organisations, communities and individuals around the world seeking to adapt to a low-emissions future.

Climate change poses a number of physical and transition risks as the world seeks to reduce emissions and its reliance on technologies and activities that are relatively intensive for the emission of greenhouse gases. Physical risks are those that affect the physical environment – such as (but not limited to) increased heat events, prolonged droughts and low water levels, dust emissions, and the increased severity of precipitation events. Transition risks are those that relate to society's shift to a low emissions future, such as reputational risks and the risk of technologies becoming redundant in a low-emissions future, amongst other potential effects. A review of potential climate change related risks was conducted as part of the work carried out with environmental consultants Ricardo Plc in 2022, with this work detailed in the Group's Climate Change Report. A materiality assessment as part of this work identified the following as the main risk areas facing Ferrexpo: (a) demand for low carbon emissions steelmaking, (b) shipping: targets and regulations on carbon emissions and (c) carbon pricing/tax: targets and regulations on carbon emissions. Further details of the work completed in collaboration with Ricardo Plc are available in Ferrexpo's Climate Change Report on the Group's website (www.ferrexpo.com).

At this stage in the global development curve on climate change science and decarbonisation efforts, there is a heightened degree of stakeholder focus on decarbonisation efforts. Given this focus, there is an associated expectation of progress being made that may not match the availability of relevant technology and equipment, or the financial viability of any technology, and therefore there is a risk of rising stakeholder concern if a company's decarbonisation plans and/or targets are not effectively communicated, or are deemed insufficient. Should stakeholders require further action or increased efforts for decarbonisation of a business, this may create additional financial, operational and reputational risks for the business.

Risk mitigation

The Group understands the importance of climate change, both in its impact on the business, as well as the Group's potential impact on climate change. The Group aims to reduce its emissions over time and has set a series of reduction targets for its greenhouse gases (principally carbon dioxide) for the medium and long term (2030 and 2050 respectively). In December 2022, the Group published its inaugural standalone Climate Change Report, which represents the first phase of work completed with environmental specialists Ricardo Plc. This report details a number of measures that the Group is either utilising today to reduce emissions, or plans to use in the future, in order to achieve these emissions targets. The full report is available on the Group's website (www.ferrexpo.com).

The Group has a streamlined approach to reducing emissions, focusing where possible on activities that generate the greatest emissions, as well as identifying low cost solutions that may reduce the Group's activities. The main source of the Group's overall emissions (being Scopes 1, 2 and 3 collectively) is the downstream use of iron ore pellets in steelmaking, which accounted for 85% of total emissions in the Group's baseline year of 2019. In order to reduce this aspect of emissions, the Group is increasing its focus on production of direct reduction ("DR") pellets, which are used in an alternative method of steelmaking (the direct reduced iron – electric arc furnace process), which results in DR pellets generating 49% lower emissions when converted to steel, compared to the Group's blast furnace pellets, as assessed by independent consultants CRU.

With regard to Scope 1 and 2 emissions, the Group has initiated a number of projects to reduce these categories of emissions. The project yielding the greatest impact is the Group's clean power purchasing strategy, which has resulted in Scope 2 emissions falling by 52% since 2019, helping to deliver a 31% saving in Scope 1 and 2 emissions combined. In addition, the Group is studying the electrification of its mining fleet and use of green hydrogen in the Group's pelletiser, with diesel and natural gas representing 80% of the Group's Scope 1 emissions in 2022 (2021: 85%).

Through these projects, the Group aims to produce iron ore pellets on a net zero basis by 2050. For further details of the net zero pathway identified through working with Ricardo Plc, as well as the Group's carbon emissions reduction targets, please see the Group's Climate Change Report for 2022 on the Group's website (www.ferrexpo.com).

6. Risks relating to the global Covid-19 pandemic

Responsibility	Risk appetite / Change	Link to strategy
Board of Directors and Chief Executive Officer	Low / Decreasing	1, 2, 3, 4 and 5

The global Covid-19 pandemic continues to affect communities around the world, with varying levels of infection in different countries resulting in a range of Covid-19 related measures in place with local and regional governments, which may impact the Group's ability to do business in individual countries, or conduct cross-border trade. Whilst governments around the world are gradually reducing Covid-19 related measures and restrictions, there are reports of elevated infection rates in a number of countries, particularly those that have recently reopened and/or have relatively low vaccination rates in sections of society, such as the elderly or specific regions within a country. The Covid-19 virus has demonstrated an ability to mutate into different strains and therefore it should be considered a risk that an as-yet unknown variant of Covid-19 may emerge that has the potential to significantly impact communities to a greater extent than previous variants.

As a business operating in Ukraine, Russia's continued invasion of Ukraine in 2022 has resulted in significantly lower testing for Covid-19 and as a result infection rates are largely unknown at the present time. As such, without widespread testing or active measures to prevent transmission, the spread of the Covid-19 virus in Ukraine represents a potential risk, particularly if more transmissible and/or severe strains of this virus were to emerge in the near term. Given the focus of the government on the defence of its territorial integrity, it is unlikely that testing and/or preventative measures will resume until the war in Ukraine de-escalates or a ceasefire is called. The Group may therefore be required to increase its efforts to monitor and test for infections amongst its workforce, and increase efforts to assist local authorities with a community testing programme, should rates of infection increase and/or the impact of individual infections become more severe. Whilst the response to Covid-19 by both the Group and local authorities was proactive prior to the war in Ukraine commencing in February 2022, it should be expected that the response to Covid-19 may be now more reactive in nature, and therefore any impact of infections in the Group's workforce and/or local communities may be felt to a greater extent before counter-measures are successfully initiated to aid affected individuals and reduce infection rates.

Risk mitigation

The Group has maintained a number of Covid-19 measures that were introduced in 2020 and were successful in the Group maintaining low rates of infection at its operations in 2020 and 2021. Such measures include social distancing, mask wearing (where relevant) and electronic cameras capable of measuring an individual's body temperature. The Group maintains the ability to reintroduce other measures, such as changes to the timing of shift patterns, the dissemination of food outside of canteens and widespread testing of employees and contractors, should the risks associated with Covid-19, or the impact of infections, increase to a material level of impact on the business.

The Group has also continued to support the local authorities' efforts to vaccinate the local population, including the Group's workforce. As of February 2022, over 6,000 of the Group's employees in Ukraine (out of a total employee workforce of 7,850) had received a single dose of a Covid-19 vaccination and over 5,400 had received a second dose. Following the outbreak of war in Ukraine, reporting of Covid-19 vaccinations has been reduced however.

The Group continues to support medical institutions in local communities through the Ferrexpo Charity Fund, which has been in operation for more than 11 years and represents one of the main avenues for the Group to provide direct community support (other avenues include direct support provided by the Group's own operating subsidiaries, FPM, FYM and FBM). Further details of community support funding are provided on page 30 of this report.

STATEMENT OF DIRECTORS' RESPONSIBILITIES

Statement by the Directors under the UK Corporate Governance Code

The Directors are responsible for preparing the Annual Report and the financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare such financial statements for each financial year. Under that law the Directors are required to prepare the Group financial statements in accordance with International Financial Reporting Standards as adopted in the United Kingdom ("UK adopted IFRS") and have also chosen to prepare the Parent Company financial statements in accordance with the United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 101 Reduced Disclosure Framework, and applicable law).

Under company law, the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and the Parent Company and of their profit or loss for that period.

In preparing the financial statements, the Directors are required to:

- select suitable accounting policies and apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable UK adopted International Financial Reporting Standards have been followed for the Group financial statements and United Kingdom Accounting Standards, comprising FRS 101 Reduced Disclosure Framework have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Group's and Parent Company's transactions and disclose with reasonable accuracy at any time the financial position of the Group and Parent Company and enable them to ensure that its financial statements comply with the Companies Act 2006. The Directors are also responsible for safeguarding the assets of the Group and Parent Company and for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Responsibility Statement of the Directors in respect of the Annual Report and Accounts

We confirm that to the best of our knowledge:

- a) the Group financial statements, prepared in accordance with UK adopted IFRS, give a true and fair view of the assets, liabilities, financial position and profit of the Company and the subsidiary undertakings included in the consolidation taken as a whole and attention is drawn to the material uncertainty in terms of the Group's ability to continue as a going concern in Note 2 Basis of preparation of the Consolidated Financial Statements on page 57;
- b) the Parent company financial statements, which have been prepared in accordance with United Kingdom Accounting Standards, comprising FRS 101 Reduced Disclosure Framework, give a true and fair view of the Company's assets, liabilities and financial position of the Parent Company;
- c) the Strategic Report includes a fair review of the development and performance of the business and the position of the Company and the subsidiary undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face; and
- d) the Annual Report and financial statements, taken as a whole, is fair, balanced and understandable, and provides the information necessary for shareholders to assess the Group's and Company's position, performance, business model and strategy.

This responsibility statement was approved by the Board of Directors on 14 March 2023 and is signed on its behalf by:

Lucio Genovese
Chair

Jim North
Chief Executive Officer
14 March 2023

INDEPENDENT AUDITOR'S REPORT TO THE SHAREHOLDERS OF FERREXPO PLC ON THE PRELIMINARY ANNOUNCEMENT OF FERREXPO PLC

As the independent auditor of Ferrexpo Plc we are required by UK Listing Rule LR 9.7A.1 (2) to agree to the publication of Ferrexpo Plc's preliminary statement of annual results for the year ended 31 December 2022.

The preliminary statement of annual results for the year ended 31 December 2022 includes the 2022 full year results and the disclosures required by the Listing rules including:

- Financial Highlights and 2022 Financial Summary;
- Chair's Statement;
- Management commentary included under the following headings; Ferrexpo's Response to COVID-19, Market Review, Financial Review, Operations Review, Growth Plans, HSEC's Chair Review, Health and Safety Review, Climate Change, TCFD Reporting, Workforce Development and Inclusion, Community Support and Development, Corporate Governance, Risk Management, Responsible Business and Principal Risks Sections;
- Statement of Directors' Responsibilities;
- Consolidated Income Statement;
- Consolidated Statement of Comprehensive Income;
- Consolidated Statement of Financial Position ;
- Consolidated Statement of Cash Flows;
- Consolidated Statement of Changes in Equity;
- Notes to the Consolidated Financial Statements; and
- Alternative Performance Measures.

The Directors of Ferrexpo Plc are responsible for the preparation, presentation and publication of the preliminary statement of annual results in accordance with the UK Listing Rules.

We are responsible for agreeing to the publication of the preliminary statement of annual results, having regard to the Financial Reporting Council's Bulletin "The Auditor's Association with Preliminary Announcements made in accordance with the requirements of the UK Listing Rules".

Status of our audit of the financial statements

Our audit of the annual financial statements of Ferrexpo plc for the year ended 31 December 2022 is complete and we signed our auditor's report on 14 March 2023. Our auditor's report is not modified although it includes a separate section in respect of a material uncertainty related to going concern.

Procedures performed to agree to the preliminary announcement of annual results

In order to agree to the publication of the preliminary announcement of annual results of Ferrexpo Plc we carried out the following procedures:

- Confirmed that the preliminary statement includes the minimum information required by the Listing Rules.
- Checked that the figures in the preliminary statement have been accurately extracted from the audited financial statements.
- Checked the consistency of presentation of the financial information in the preliminary statement with the audited financial statements.
- Read management commentary, the financial information in the consolidated financial statements and notes thereof and considered if the management commentary is:
 - Fair, balanced and understandable
 - Materially consistent with the financial statements and with the contents of the annual report
 - Consistent with the information and our knowledge obtained in the course of the audit of the financial statements of Ferrexpo Plc for the year ended 31 December 2022.
- Considered if for Alternative Performance Measures (APMs) and associated narrative:
 - APMs are clearly defined and have been given meaningful labels
 - The use and relevance of APMs is explained
 - APMs have been reconciled to the most relevant figures in the financial statements
 - Comparatives have been included
- Considering whether the financial information in the preliminary announcement is misstated, either because it is stated incorrectly or because it is presented in a misleading manner.

Rakesh Shaunak FCA

Senior Statutory Auditor

For and on behalf of MHA MacIntyre Hudson,

Statutory Auditor

London

14 March 2023

CONSOLIDATED INCOME STATEMENT

US\$000	Notes	Year ended 31.12.22	Year ended 31.12.21
Revenue	4	1,248,490	2,518,230
Operating expenses	3/5	(1,192,046)	(1,411,911)
Other operating income		9,233	9,499
Operating foreign exchange gains/(losses)	6	339,439	(37,808)
Operating profit		405,116	1,078,010
Share of profit from associates		557	4,468
Profit before tax and finance		405,673	1,082,478
Finance income	7	929	637
Finance expense	7	(4,446)	(8,940)
Non-operating foreign exchange losses	6	(63,497)	(3,200)
Profit before tax		338,659	1,070,975
Income tax expense	8	(118,662)	(199,982)
Profit for the year		219,997	870,993
<i>Profit attributable to:</i>			
Equity shareholders of Ferrexpo plc		219,995	870,987
Non-controlling interests		2	6
Profit for the year		219,997	870,993
<i>Earnings per share:</i>			
Basic (US cents)	9	37.41	148.2
Diluted (US cents)	9	37.35	147.9

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

US\$000	Notes	Year ended 31.12.22	Year ended 31.12.21
Profit for the year		219,997	870,993
<i>Items that may subsequently be reclassified to profit or loss:</i>			
Exchange differences on translating foreign operations		(664,296)	82,196
Income tax effect	8	13,036	(3,313)
Net other comprehensive (loss)/income that may be reclassified to profit or loss in subsequent periods		(651,260)	78,883
<i>Items that will not be reclassified subsequently to profit or loss:</i>			
Remeasurement gains on defined benefit pension liability		5,336	9,882
Net other comprehensive income not being reclassified to profit or loss in subsequent periods		5,336	9,882
Other comprehensive (loss)/income for the year, net of tax		(645,924)	88,765
Total comprehensive (loss)/income for the year, net of tax		(425,927)	959,758
<i>Total comprehensive (loss)/income attributable to:</i>			
Equity shareholders of Ferrexpo plc		(425,919)	959,778
Non-controlling interests		(8)	(20)
		(425,927)	959,758

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

US\$000	Notes	As at 31.12.22	As at 31.12.21
Assets			
Property, plant and equipment	10	807,861	1,216,693
Right-of-use assets		6,342	7,776
Goodwill and other intangible assets	11	8,249	43,586
Investments in associates		5,167	7,034
Inventories	12	6,277	8,414
Other non-current assets		37,451	96,484
Deferred tax assets	8	14,471	32,946
Total non-current assets		885,818	1,412,933
Inventories	12	224,454	202,399
Trade and other receivables		24,699	192,363
Prepayments and other current assets		13,352	68,162
Income taxes recoverable and prepaid	8	4,674	636
Other taxes recoverable and prepaid		88,762	48,040
Cash and cash equivalents	13	112,945	167,291
Total current assets		468,886	678,891
Total assets		1,354,704	2,091,824
Equity and liabilities			
Issued capital		121,628	121,628
Share premium		185,112	185,112
Other reserves		(2,636,891)	(1,986,131)
Retained earnings		3,580,329	3,510,793
Equity attributable to equity shareholders of Ferrexpo plc		1,250,178	1,831,402
Non-controlling interests		67	75
Total equity		1,250,245	1,831,477
Interest-bearing loans and borrowings	3/14	1,354	2,143
Defined benefit pension liability		16,456	26,074
Provision for site restoration		4,284	3,873
Deferred tax liabilities	8	1,347	141
Total non-current liabilities		23,441	32,231
Interest-bearing loans and borrowings	3/14	5,194	48,206
Trade and other payables		30,509	72,824
Accrued and contract liabilities		19,593	52,613
Income taxes payable	8	20,564	37,138
Other taxes payable		5,158	17,335
Total current liabilities		81,018	228,116
Total liabilities		104,459	260,347
Total equity and liabilities		1,354,704	2,091,824

The financial statements were approved by the Board of Directors and authorised for issue on 14 March 2023 and signed on behalf of the Board.

Lucio Genovese
Non-executive Chair

Jim North
Chief Executive Officer & Executive Director

CONSOLIDATED STATEMENT OF CASH FLOWS

US\$000	Notes	Year ended 31.12.22	Year ended 31.12.21
Profit before tax		338,659	1,070,975
<i>Adjustments for:</i>			
Depreciation of property, plant and equipment, right-of-use assets and amortisation of intangible assets	10/11	96,977	115,111
Finance expense	7	1,675	5,729
Finance income	7	(929)	(637)
Losses on disposal and liquidation of property, plant and equipment	5	1,665	4,695
Write-offs and impairments	5	260,308	235,618
Share of profit from associates		(557)	(4,468)
Movement in allowance for doubtful receivables		6,729	690
Movement in site restoration provision		1,578	551
Employee benefits		3,745	4,936
Share-based payments		490	856
Operating foreign exchange (gains)/losses	6	(339,439)	37,808
Non-operating foreign exchange losses	6	63,497	3,200
Other adjustments		–	(4,914)
Operating cash flow before working capital changes		434,398	1,470,150
<i>Changes in working capital:</i>			
Decrease/(increase) in trade and other receivables		210,267	(102,827)
Increase in inventories		(90,385)	(65,170)
(Decrease)/increase in trade and other payables (incl. accrued and contract liabilities)		(55,529)	40,186
Increase in other taxes recoverable and payable (incl. VAT)		(84,110)	(11,073)
Cash generated from operating activities		414,641	1,331,266
Interest paid		(918)	(7,031)
Income tax paid	8	(110,243)	(227,930)
Post-employment benefits paid		(2,220)	(2,475)
Net cash flows from operating activities		301,260	1,093,830
Cash flows from investing activities			
Purchase of property, plant and equipment and intangible assets	10	(161,010)	(360,869)
Proceeds from disposal of property, plant and equipment and intangible assets		103	1,030
Interest received		894	583
Dividends from associates		711	3,967
Net cash flows used in investing activities		(159,302)	(355,289)
Cash flows from financing activities			
Proceeds from loans and borrowings	14	–	42,146
Repayment of loans and borrowings	14	(42,209)	(257,430)
Principal elements of lease payments	14	(5,786)	(5,517)
Dividends paid to equity shareholders of Ferrexpo plc	9	(155,095)	(619,377)
Net cash flows used in financing activities		(203,090)	(840,178)
Net decrease in cash and cash equivalents		(61,132)	(101,637)
Cash and cash equivalents at the beginning of the year		167,291	270,006
Currency translation differences		6,786	(1,078)
Cash and cash equivalents at the end of the year	13	112,945	167,291

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

US\$000	Attributable to equity shareholders of Ferrexpo plc					Non-controlling interests	Total equity
	Issued capital	Share premium	Other reserves	Retained earnings	Total capital and reserves		
At 1 January 2021	121,628	185,112	(2,065,896)	3,250,534	1,491,378	95	1,491,473
Profit for the year	–	–	–	870,987	870,987	6	870,993
Other comprehensive income/(loss)	–	–	78,909	9,882	88,791	(26)	88,765
Total comprehensive income/(loss) for the year	–	–	78,909	880,869	959,778	(20)	959,758
Share-based payments	–	–	856	–	856	–	856
Equity dividends to shareholders of Ferrexpo plc	–	–	–	(620,610)	(620,610)	–	(620,610)
At 31 December 2021	121,628	185,112	(1,986,131)	3,510,793	1,831,402	75	1,831,477
Profit for the year	–	–	–	219,995	219,995	2	219,997
Other comprehensive (loss)/income	–	–	(651,250)	5,336	(645,914)	(10)	(645,924)
Total comprehensive (loss)/income for the year	–	–	(651,250)	225,331	(425,919)	(8)	(425,927)
Share-based payments	–	–	490	–	490	–	490
Equity dividends to shareholders of Ferrexpo plc (Note 9)	–	–	–	(155,795)	(155,795)	–	(155,795)
At 31 December 2022	121,628	185,112	(2,636,891)	3,580,329	1,250,178	67	1,250,245

Although accounts are published in US dollars and dividends are declared in US dollars, the shares are denominated in UK pounds sterling and dividends are therefore paid in UK pounds sterling. See Note 9 Earnings per share and dividends paid and proposed for dividends paid during the year.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Note 1: Corporate information

The financial information set out in this statement does not constitute statutory accounts as defined in section 435 of the Companies Act 2006. This set of financial results was approved by the Board on 14 March 2023. The financial information for the years ended 31 December 2022 and 31 December 2021 has been extracted from the statutory accounts for each year.

The auditors' report on the 2022 statutory accounts was (i) unqualified, (ii) included a separate section with regard to a material uncertainty related to going concern, in respect of which the report was not qualified and (iii) did not contain statements under section S498(2) or S498(3) of the Companies Act 2006. The audited statutory accounts for the year ended 31 December 2021 have been delivered to the Registrar of Companies.

Ferrexpo plc will publish on or around 30 March 2023 its Annual Report and Accounts for the year ended 31 December 2022 on its corporate website www.ferrexpo.com. The audited statutory accounts for the year ended 31 December 2022 will be delivered to the Registrar of Companies following the Company's annual meeting convened for 25 May 2023.

Organisation and structure

Ferrexpo plc (the "Company") is incorporated and registered in England, which is considered to be the country of domicile, with its registered office at 55 St James's Street, London SW1A 1LA, UK. The Company is listed on the London Stock Exchange and is a member of the FTSE 250 Index. Ferrexpo plc and its subsidiaries (the "Group") operate two mines and a processing plant near Kremenchug in Ukraine, have an interest in a port in Odessa and sales and marketing activities around the world including offices in Switzerland, Dubai, Japan, China, Singapore and Ukraine. The Group also owns logistics assets in Austria, which operate a fleet of vessels operating on the Rhine and Danube waterways and an ocean-going vessel, which provides top-off services. The Group's operations are vertically integrated from iron ore mining through to iron ore concentrate and pellet production and subsequent logistics. The Group's mineral properties lie within the Kremenchug Magnetic Anomaly and are currently being extracted at the Gorishne-Plavinske-Lavrykivske ("GPL") and Yerystivske deposits.

Despite the ongoing war in Ukraine, the Group has managed to continue its operations, although on a significantly lower level. The Group had first to redesign its mining and processing plans in order to align them to available logistics network for the sales to its customers in the different markets. In the last quarter of the financial year 2022, after the intensified Russian attacks on the critical infrastructure in Ukraine, the Group's production was also dependent on the available power supply. The war continues to pose a threat to the Group's mining, processing and logistics operations within Ukraine. See Note 2 Basis of preparation, Note 4 Revenue and Note 10 Property, plant and equipment for further information.

The largest shareholder of the Group is Fevamotinicco S.a.r.l. ("Fevamotinicco"), a company incorporated in Luxembourg. Fevamotinicco is ultimately wholly owned by The Minco Trust, of which Kostyantyn Zhevago and two other members of his family are the beneficiaries. At the time this report was published, Fevamotinicco held 49.5% (2021: 50.3%) of Ferrexpo plc's issued voting share capital (excluding treasury shares).

Note 2: Basis of preparation

Whilst the preliminary announcement has been prepared in accordance with International Financial Reporting Standards ("IFRS") adopted for use in the United Kingdom ("UK adopted IFRS") and with the Companies Act 2006, as applicable to companies reporting under international accounting standards, this announcement does not itself contain sufficient information to comply with IFRS. The Board approved the full financial statements that comply with IFRS on 14 March 2023. The financial statements have been prepared under the historical cost convention as modified by the recording of pension assets and liabilities and the revaluation of certain financial instruments.

The Group's principal risks likely to affect its future development, performance and position are set out on pages 34 to 49. The financial position of the Group, its cash flows, liquidity position and borrowing facilities are described in the Financial Review on pages 11 to 14.

Going concern

As at the date of the approval of these consolidated financial statements, the war in Ukraine that commenced with the Russian invasion into Ukraine on 24 February 2022 is still ongoing. Even though the Group managed to operate throughout the financial year 2022, albeit at a much lower capacity, the situation in the country continues to pose a threat to the Group's mining, processing and logistics operations and represents a material uncertainty in terms of the Group's ability to continue as a going concern.

The material uncertainty is predominantly related to the recent level of supply of power to the Group's operations in Ukraine, compounded by the risks to the health, safety and wellbeing of the Group's workforce, the Group's ability to operate its assets, the supply of key input materials required for the production process and the provision and availability of logistics capacity required for the delivery of the Group's products to customers in its key markets, as outlined in more detail in the Principal risks on pages 34 to 49. These risks might have an adverse impact on the Group's cash generation during the period covered by the going concern assessment. As announced on 11 October 2022, the Group had to temporarily suspend its production of iron ore pellets as a result of Russian missile strikes on state-owned electrical infrastructure. Although the Group restarted production in December 2022, the level of the production remains dependent on Russian attacks on critical infrastructure in Ukraine, which affects the level of supply of power. In addition to the supply of power, the Group's operation continues to be adversely affected by the fact that the Group's seaborne sales through the port of Pivdennyi are still suspended as Ukraine's Black Sea ports are closed as a result of the Russian invasion. Therefore, the Group currently operates between one and two of its four pelletiser lines based on the available guaranteed supply of power and in order to align production volumes to meet the volume of sales that are currently accessible to the Group.

As at 31 December 2022, the Group had produced 6,053 thousand tonnes of iron ore pellets, representing a decrease of 46% compared to the comparative year ended 31 December 2021, and sold 6,183 thousand tonnes of its products, compared to 11,350 thousand tonnes during the comparative year.

Despite this unprecedented and challenging situation during the financial year 2022, the Group's net cash position has only decreased from US\$116,942 at the beginning of the year thousand to US\$106,397 thousand as of 31 December 2022, demonstrating that the Group managed to adjust its business operation to the new environment in order to preserve the available liquidity as much as possible. As at the date of the approval of these consolidated financial statements, the Group is in a net cash position of approximately US\$114,600 thousand with an available cash balance of approximately US\$120,400 thousand. In addition to the available cash balance, the Group has an outstanding trade receivable balance of approximately US\$34,100 thousand from its pellet and concentrate sales in January and February 2023, which are expected to be collected in the next few weeks.

In addition to the outstanding trade receivable balance and as a result of the congestions at the different border crossings relevant to the Group, pellet volumes at a value of approximately US\$21,300 thousand loaded on rail cars are waiting for the border crossing. The revenue for these volumes will only be recognised upon the border crossing when control is passed to the customer. The Group's finished goods inventory,

including the volumes subject to border crossing, is 555 thousand tonnes as of 31 December 2022, compared to 568 thousand as of 31 December 2021, and is expected to reduce over time once the logistics constraints within Ukraine ease.

As part of management's going concern assessment, the Group continuously adjusts its long-term model in order to reflect the latest developments in terms of possible production and sales volumes as well as latest market prices and production costs, which are adversely affected by lower production volumes. This long-term model is also used for the impairment test of the Group's non-current operating assets and the key assumptions used when preparing this model are disclosed in Note 10 Property, plant and equipment on pages 66 and 67.

The latest base case of the long-term model shows that the Group has sufficient liquidity to continue its operations at a reduced level for the entire period of the management's going concern assessment, covering a period of 18 months from the date of the approval of these consolidated financial statements, even allowing for reasonably possible or plausible adverse changes in respect of realised prices, lower production and sales volumes as well as higher production costs. This base case assumes a production and sales volume of 50% and 75% below the pre-war level for the financial years 2023 and 2024, before recovering in 2025 to pre-war levels. However, as mentioned above, the production and sales volumes are heavily dependent on the level of supply of power as well as the logistics network available to the Group. The sensitivities prepared for reasonable adverse changes show tighter available liquidity under some scenarios, but sufficient available liquidity to operate as planned for the next 18 months.

The Group also prepared reverse stress tests for more severe adverse changes, such as a combination of all reasonably possible or plausible adverse changes in respect of realised prices and production costs, which is unlikely to happen in combination as a result of the natural hedge of iron ore prices and prices for key input materials, as well as lower production and sales volumes, but also for a further delay of the full recovery by another year. The stress test for the most severe adverse changes shows that the Group would have depleted all its liquidity by the end of the financial year 2023, without making use of any available mitigating actions within its control, such as further reductions of uncommitted development capital expenditures and operating costs. The use of these mitigating actions would allow the Group to be cash positive for almost 18 months after the approval of these consolidated financial statements.

The Group has assessed that, taking into account:

- i) its available cash and cash equivalents;
 - ii) its cash flow projections, adjusted for the effects caused by the war in Ukraine, for the period of management's going concern assessment covering a period of 18 months from the date of the approval of these consolidated financial statements; and
 - iii) the feasibility and effectiveness of all available mitigating actions within the Group management's control for identified uncertainties,
- a material uncertainty still remains as some of the uncertainties remain outside of the Group management's control, with the duration and the impact of the war still unable to be predicted at this point of time.

As at the date of the approval of these consolidated financial statements, the Group's operations, located adjacent to the city of Horishni Plavni, have not been directly targeted by Russian missile strikes, but this remains a risk. Should the area surrounding the Group's operations become subject to the armed conflict, there would be a significant risk posed to the safety of the Group's workforce and the local community, as well as a significant risk to key assets and the infrastructure required for the Group to operate effectively. See the update on the Group's Principal Risks section on pages 35 and 36 for further information.

Considering the current situation of the war in Ukraine, all identified available mitigating actions addressing the uncertainties caused by the war, as outlined on pages 35 and 36, and the results of the management's going concern assessment, the Group continues to prepare its consolidated financial statements on a going concern basis. However, many of the identified uncertainties are outside of the Group management's control and are of unpredictable duration and severity, which may cast significant doubt upon the Group's ability to continue as a going concern.

In addition to the war-related uncertainties described above, the Group is also exposed to the risks associated with operating in a developing economy, which may or may not be exacerbated by the war and/or the current circumstances facing the Group's controlling shareholder (see Ukraine country risk on pages 36 to 38). As a result, the Group is exposed to a number of risk areas that are heightened compared to those expected in a developed economy, such as an environment of political, fiscal and legal uncertainties. Although the Group has operated successfully in difficult circumstances in recent years, the war in Ukraine and other circumstances facing the Group has led to an escalation of a number of risks, including risks relating to the political environment and the independence of the legal system, which could have a material negative impact on the Group's business and reputation. For more information on critical judgements made by management in preparing these consolidated financial statements, see also Note 15 Commitments, contingencies and legal disputes. The critical judgements made are predominantly in respect of the ongoing share dispute and the imposed currency control measures in Ukraine under the Martial Law.

If the Group is unable to continue to realise assets and discharge liabilities in the normal course of business, it would be necessary to adjust the amounts in the statement of financial position in the future to reflect these circumstances, which may materially change the measurement and classification of certain figures contained in these consolidated financial statements.

Changes in accounting policies

New standards and interpretations adopted

The accounting policies and methods of computation adopted in the preparation of the consolidated financial statements are consistent with those followed in the preparation of the Group's annual financial statements for the year ended 31 December 2021 except for the adoption of new standards, interpretations and amendments to UK adopted IFRS effective as of 1 January 2022.

All new standards, interpretations and amendments adopted as of 1 January 2022 did not have a material impact on the Group's consolidated financial statements for the year ended 31 December 2022. Full disclosure of the list of new standards, interpretations and amendments adopted during the year will be provided in Note 3 New accounting policies included in the Group's 2022 Annual Report and Accounts.

Furthermore, the Group does not expect an impact on its consolidated financial statements from all other standards, interpretations and amendments issued at the reporting date, but not yet to be adopted for these financial statements.

Use of critical estimates and judgements

The preparation of consolidated financial statements in conformity with IFRSs requires management to make estimates and judgements that affect the amounts reported in the consolidated financial statements and accompanying notes. These estimates and judgements are based on information available as at the date of authorising the consolidated financial statements for issue. Actual results could therefore differ from those estimates and judgements. The Group identified a number of areas involving the use of critical estimates and judgements made by management in preparing the consolidated financial statements and supporting information is embedded within the following disclosure notes:

Critical estimates

- Note 10 Property, plant and equipment – impairment consideration as a result of Russian invasion into Ukraine
- Note 11 Goodwill and other intangible assets – impairment consideration as a result of Russian invasion into Ukraine

- Note 12 Inventories – net realisable value of stockpiled low-grade and weathered ore

Critical judgements

- Note 2 Basis of preparation – going concern assumption
- Note 8 Taxation – tax legislation in Ukraine and development in international tax environment
- Note 15 Commitments, contingencies and legal disputes – assessment of matters in an environment of political, fiscal and legal uncertainties

Note 3: Segment information

The Group is managed as a single segment, which produces, develops and markets its principal product, iron ore pellets, for sale to the metallurgical industry. While the revenue generated by the Group is monitored at a more detailed level, there are no separate measures of profit reported to the Group's Chief Operating Decision-Maker ("CODM"). In accordance with IFRS 8 *Operating segments*, the Group presents its results in a single segment, which are disclosed in the consolidated income statement for the Group.

Management monitors the operating result of the Group based on a number of measures, including underlying EBITDA, gross profit and net cash.

Underlying EBITDA and gross profit

The Group presents the underlying EBITDA as it is a useful measure for evaluating its ability to generate cash and its operating performance. The Group's full definition of underlying EBITDA is disclosed in the Glossary on page 75.

US\$000	Notes	Year ended 31.12.22	Year ended 31.12.21
Profit before tax and finance		405,673	1,082,478
Losses on disposal and liquidation of property, plant and equipment		1,665	4,695
Share-based payments		490	856
Write-offs and impairments	5	260,308	235,618
Depreciation and amortisation		96,977	115,112
Underlying EBITDA		765,113	1,438,759

US\$000	Notes	Year ended 31.12.22	Year ended 31.12.21
Revenue	4	1,248,490	2,518,230
Cost of sales	5	(582,445)	(727,818)
Gross profit		666,045	1,790,412

Net cash

Net cash as defined by the Group comprises cash and cash equivalents less interest-bearing loans and borrowings.

US\$000	Notes	As at 31.12.22	As at 31.12.21
Cash and cash equivalents	13	112,945	167,291
Interest-bearing loans and borrowings – current	14	(5,194)	(48,206)
Interest-bearing loans and borrowings – non-current	14	(1,354)	(2,143)
Net cash		106,397	116,942

Net cash is an Alternative Performance Measure ("APM"). Further information on the APMs used by the Group, including the definitions, is provided on pages 75 and 76.

Disclosure of revenue and non-current assets

The Group does not generate significant revenues from external customers attributable to the UK, the Company's country of domicile. The information on the revenues from external customers attributed to the individual foreign countries is given in Note 4 Revenue. The Group does not have any significant non-current assets that are located in the country of domicile of the Company. The vast majority of the non-current assets are located in Ukraine.

Note 4: Revenue

Revenue for the year ended 31 December 2022 consisted of the following:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Revenue from sales of iron ore pellets and concentrate	1,144,079	2,323,238
Freight revenue related to sales of iron ore pellets and concentrate	43,557	137,595
Total revenue from sales of iron ore pellets and concentrate	1,187,636	2,460,833
Revenue from logistics and bunker business	54,491	50,393
Revenue from other sales and services provided	6,363	7,004
Total revenue	1,248,490	2,518,230

Since February 2022, the Group's seaborne sales through the port of Pivdennyi have been suspended as Ukraine's Black Sea ports are closed due to the war with Russia. Historically, the sales through the port of Pivdennyi have represented approximately half of the Group's sales. As a result, the Group has had to divert its iron ore pellet sales to the European market through the available railway network and its barging operation on the Danube. The market in Europe was however not able to absorb all the volumes that would have been sold to other markets with ocean-going vessels.

Revenue for the year ended 31 December 2022 includes the effect from the derecognition of contract liabilities of US\$7,648 thousand (2021: US\$8,487 thousand) deferred as revenue in the comparative year ended 31 December 2021. As at 31 December 2022, freight-related revenue in the amount of US\$75 thousand was deferred as the performance obligations was not fulfilled and included in the balance of the contract liabilities.

Export sales of iron ore pellets and concentrate by geographical destination showing separately countries that individually represented 10% or more of export sales in either the current or prior year were as follows:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Europe, including Turkey	944,859	1,354,048
<i>Austria</i>	460,492	527,200
<i>Czech Republic</i>	148,128	106,350
<i>Slovakia</i>	138,302	80,288
<i>Turkey</i>	86,640	270,514
<i>Germany</i>	38,195	291,235
<i>Others</i>	73,102	78,461
China & South East Asia	164,397	770,584
<i>China</i>	71,041	549,885
<i>Others</i>	93,356	220,699
North East Asia	47,496	223,409
Middle East & North Africa	29,982	23,928
North America	902	88,864
Total exports	1,187,636	2,460,833

The Group markets its products across various regions. The disclosure of the segmentation reflects how the Group makes its business decisions and monitors its sales. During the financial year 2022, the Group's sales of iron pellets and concentrate were significantly impacted by the ongoing war in Ukraine. Due to the ongoing war, the Group's seaborne sales through the port of Pivdennyi have been suspended and sales had to be diverted to the market in Europe.

During the year ended 31 December 2022, sales made to five customers accounted for 66% of the revenues from export sales of ore pellets and concentrate (2021: 53%).

Sales to customers that individually represented more than 10% of total sales in either current or prior year are as follows:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Customer A	461,394	616,064
Customer B	148,128	106,350
Customer C	138,302	80,288
Customer D	38,195	290,511
Customer E	2,492	211,231

Note 5: Operating expenses

Operating expenses for the year ended 31 December 2022 consisted of the following:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Cost of sales	582,445	727,818
Selling and distribution expenses	236,085	340,301
General and administrative expenses	63,847	72,163
Other operating expenses	309,669	271,629
Total operating expenses	1,192,046	1,411,911

Total operating expenses include:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Inventories recognised as an expense upon sale of goods	540,010	697,900
Employee costs (excl. logistics and bunker business)	92,144	104,018
Inventory movements	(52,953)	(51,603)
Depreciation of property, plant and equipment and right-of-use assets	95,127	113,429
Amortisation of intangible assets	1,851	1,682
Royalties	43,461	40,871
Costs of logistics and bunker business	55,916	47,254
Audit and non-audit services	2,055	1,694
Community support donations	14,536	6,449
Write-offs and impairments	260,308	235,618
Losses on disposal and liquidation of property, plant and equipment	1,665	4,695

US\$000	Notes	As at 31.12.22	As at 31.12.21
Write-off of inventories		269	247
Write-off of property, plant and equipment	10	5,562	3,233
Write-off of intangible assets		–	931
Write-off of receivables and prepayments		–	96
Total write-offs		5,831	4,507
Impairment of property, plant and equipment	10	219,931	–
Impairment of goodwill and other intangible assets		29,103	–
Impairment of other non-current assets		5,443	–
Impairment of inventories	12	–	231,111
Total impairments		254,477	231,111
Total write-offs and impairments		260,308	235,618

Impairment of property, plant and equipment, goodwill and other intangible assets as well as of other non-current assets are caused by the Russian invasion into Ukraine in February 2022, which was considered as a non-adjusting post balance sheet event as at 31 December 2021 and became an adjusting event for the year ended 31 December 2022. See Note 10 Property, plant and equipment and Note 11 Goodwill and other intangible assets for further information.

Impairment of inventories for the comparative year ended 31 December 2021 is related to the stockpiled low-grade ore for which the start of the processing and the volume expected to be utilised could not be reliably estimated. As at the date of the approval of the consolidated financial statements as at 31 December 2022, the start of the processing and the volume expected to be utilised cannot be reliably estimated. Further information is provided in Note 12 Inventories.

Write-offs of property, plant and equipment and intangible assets for the comparative year ended 31 December 2021 is primarily related to the cancellation of the licence for the Galeschynske project, which is in the exploration phase. Whilst the Group is focused on returning this licence to its previous state, all capitalised costs associated with this licence have been written off as the outcome is currently uncertain. For further information see Note 15 Commitments, contingencies and legal disputes and the update on the Group's Principal Risks on pages 36 to 38 in terms of the Ukraine country risk.

Auditor remuneration

US\$000	Year ended 31.12.22	Year ended 31.12.21
Audit services		
Ferrexpo plc Annual Report and Accounts	1,631	1,269
Subsidiary entities	185	196
Total audit services	1,816	1,465
Audit-related assurance services	255	229
Total audit and audit-related assurance services	2,071	1,694
Non-audit services		
Other services	2	–
Total non-audit services	2	–
Total auditor remuneration	2,073	1,694

Auditor remuneration paid is in respect of the audit of the financial statements of the Group and its subsidiary companies and, when applicable, for the provision of other services not in connection with the audit. Audit services for the year ended 31 December 2022 include US\$242 thousand relating to year-end audit for the financial year 2021 incurred as a result of the war in Ukraine.

Note 6: Foreign exchange gains and losses

Foreign exchange gains and losses for the year ended 31 December 2022 consisted of the following:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Operating foreign exchange gains/(losses)		
Conversion of trade receivables	340,189	(37,791)
Conversion of trade payables	(623)	38
Other	(127)	(55)
Total operating foreign exchange gains/(losses)	339,439	(37,808)
Non-operating foreign exchange losses		
Conversion of interest-bearing loans	(77,678)	(3,229)
Conversion of cash and cash equivalents	9,711	(181)
Other	4,470	210
Total non-operating foreign exchange losses	(63,497)	(3,200)
Total foreign exchange gains/(losses)	275,942	(41,008)

The translation differences and foreign exchange gains and losses are predominantly dependent on the fluctuation of the exchange rate of the Ukrainian hryvnia against the US dollar and the outstanding US dollar denominated receivable balances in Ukraine. Following the Russian invasion into Ukraine on 24 February 2022, the National Bank of Ukraine pegged the Ukrainian hryvnia at 29.255 to the US dollar in order to mitigate the adverse impact from the war on the local financial system. On 21 July 2022, the National Bank of Ukraine devalued the local currency to 36.568 to the US dollar with immediate effect. This devaluation of the local currency had a positive effect on the Group's production costs and resulted in operating foreign exchange gains on the conversion of the Ukrainian subsidiaries' trade receivables denominated in US dollar. The depreciation of the Ukrainian hryvnia of c. 34% also reduces the Group's net assets as assets and liabilities of the Ukrainian

subsidiaries are denominated in the local currency. The exchange differences arising on translation of non-US dollar functional currency operations (mainly in Ukrainian hryvnia) are included in the translation reserve.

The table below shows the closing and average rates of the most relevant currencies of the Group compared to the US dollar.

	Average exchange rates		Closing exchange rates	
	As at 31.12.22	As at 31.12.21	Year ended 31.12.22	Year ended 31.12.21
Against US\$				
UAH	32.342	27.286	36.569	27.278
EUR	0.951	0.845	0.934	0.882

Note 7: Net finance expense

Finance expense and income for the year ended 31 December 2022 consisted of the following:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Finance expense		
Interest expense on loans and borrowings	(479)	(9,567)
Less capitalised borrowing costs	479	5,343
Net interest on defined benefit plans	(2,678)	(3,211)
Bank charges	(871)	(632)
Interest expense on lease liabilities	(233)	(474)
Other finance costs	(664)	(399)
Total finance expense	(4,446)	(8,940)
Finance income		
Interest income	888	609
Other finance income	41	28
Total finance income	929	637
Net finance expense	(3,517)	(8,303)

Note 8: Taxation

Critical judgements

Tax legislation

The Group operates across a number of jurisdictions through its value chain and prices its sales between its subsidiaries using international benchmark prices for comparable products covering product quality and applicable freight costs. The Group judges these to be on terms which comply with applicable legislation in the jurisdictions in which the Group operates.

On 27 June 2022, the Supreme Court of Ukraine ruled partially in favour of the State Fiscal Service of Ukraine ("SFS") in respect of a claim made by the SFS, despite two favourable verdicts received by the Group's subsidiary from lower court instances. The claim was in respect of a tax audit performed for the period from 1 September 2013 to 31 December 2015 at the Group's major subsidiary in Ukraine with a focus on cross-border transactions. As a result of this court decision, an amount of UAH234 million (US\$7,999 thousand) became a legally binding obligation and was paid in July 2022. The partially negative verdict of the Supreme Court of Ukraine might have an adverse impact on the tax audits described below as the STS might use the court verdict as a precedent.

On 18 February 2020, the State Tax Service of Ukraine ("STS"), formerly known as SFS, commenced two tax audits for cross-border transactions between the Group's major subsidiary in Ukraine and two subsidiaries of the Group outside of Ukraine in relation to the sale of iron ore products during the financial years 2015 to 2017. The audits were halted in March 2020 due to a Covid-19 related quarantine imposed in Ukraine and resumed on 10 February 2021. On 14 June 2021, the STS commenced another tax audit for the financial years 2015 to 2017 for cross-border transactions of another Ukrainian subsidiary with the same two subsidiaries of the Group outside of Ukraine. Both audits have been suspended when Ukraine declared Martial law, but resumed again on 25 January 2023. Based on legislation in Ukraine, the results of these audits are to be provided by the STS within 18 months after commencement. The period for both audits has been interrupted first by the Covid-19 related quarantine imposed between March 2020 and February 2021 and then on 24 February 2022 due to the declaration of Martial law as a result of the Russian invasion into Ukraine. The deadlines to provide the reports for the audits have not expired as of 31 December 2022 and are 10 June 2023 and 15 November 2023, respectively.

Despite the verdict received from the Supreme Court of Ukraine, the Group still considers that it has complied with applicable legislation for all cross-border transactions undertaken and is of the opinion that the court did not appropriately consider relevant technical grounds and the applicable legislation when ruling on this case. In the case of new claims, the Group will continue to defend its methodology applied to determine the prices between its subsidiaries, but is aware that there is a risk that the independence of the judicial system and its immunity from economic and political influences in Ukraine is not upheld. As of the approval of these consolidated financial statements, no claims have been made by the STS in respect of the audits commenced in 2020 and 2021. As a consequence, no provision has been recorded as at 31 December 2022 for transactions and years subject to the audits commenced by the STS as it is impossible to reasonably quantify the potential exposure.

Separate from the cases mentioned above, on 23 June 2020 Ferrexpo Poltava Mining ("FPM") received a court ruling, which grants access to information and documents to the State Bureau of Investigators in Ukraine ("SBI") in relation to the sale of iron ore products to two subsidiaries of the Group outside of Ukraine during the years 2013 to 2019. The court ruling relates to pre-trial investigations carried out by the SBI in relation to potential tax evasion by the Group in Ukraine. At the time of the approval of these consolidated financial statements, there is very little information provided in the court ruling in respect to the alleged offences. There is no quantified claim made by the SBI and the ruling is primarily seeking disclosure of information in order to allow the SBI to determine whether there have potentially been any offences. The Ukrainian subsidiaries cooperated with the SBI and provided the requested information as per the court ruling in order to support these pre-trial investigations. As of the date of approval of these consolidated financial statements, there have been no actions or any new requests received from the SBI.

As required by IFRIC 23 Uncertainty over income tax treatments, the Group reviewed and reassessed its exposure in respect of all uncertain tax positions, including the audits of cross-border transactions in Ukraine under the provisions of this interpretation. The Ukrainian legislation and regulations on taxation are not always clearly written and are therefore subject to varying interpretations and inconsistent enforcement by local,

regional and national tax authorities. In case of any claims made by the STS and considering the uncertainties of the legal and tax framework in Ukraine, the Group will defend its pricing methodology applied during these years in the courts in Ukraine. An unfavourable outcome of any future court proceedings would have an adverse impact on the Group's total income tax expense and effective tax rate in future periods. See also the Principal Risks section on pages 36 to 38 for further information on the Ukraine country risk.

Except for the matters in Ukraine mentioned above, the Group is not aware of any significant challenges by local tax authorities in any jurisdictions in which the Group operates. However, the application of international and local tax legislation and regulations can be complex and requires judgement to assess possible associated risks, particularly in relation to the Group's cross-border operations and transactions.

The income tax expense for the year ended 31 December 2022 consisted of the following:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Current income tax		
Current income tax charge	100,064	202,335
Amounts related to previous years	6,389	(1,010)
Total current income tax	106,453	201,325
Deferred income tax		
Origination and reversal of temporary differences	12,209	(1,343)
Total deferred income tax	12,209	(1,343)
Total income tax expense	118,662	199,982

Tax effects on items recognised in other comprehensive income consisted of the following for the year ended 31 December 2022:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Tax effect of exchange differences arising on translating foreign operations	(13,036)	3,313
Total income tax effects recognised in other comprehensive (credit)/charge	(13,036)	3,313

The weighted average statutory corporate income tax rate is calculated as the average of the statutory tax rates applicable in the countries in which the Group operates, weighted by the profits and losses before tax of the subsidiaries in the respective countries, as included in the consolidated financial information. The weighted average statutory corporate income tax rate was 13.8% for the financial year 2022 (2021: 15.5%). A reconciliation between the income tax charged in the accompanying financial information and income before taxes multiplied by the weighted average statutory tax rate for the year ended 31 December 2022 is as follows:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Profit before tax	338,659	1,070,975
Notional tax charge computed at the weighted average statutory tax rate of 13.8% (2021: 15.5%)	46,769	166,330
Derecognition of deferred tax assets ¹	14,757	1,107
Expenses not deductible for local tax purposes ²	4,615	721
Income exempted for local tax purposes ³	(158)	(238)
Effect from utilisation of non-recognised deferred taxes ⁴	–	(5,852)
Effect from capitalised tax loss carry forwards on historic tax losses ⁴	–	(1,578)
Effect from non-recognition of deferred taxes ⁵	34,882	41,442
Effect from non-recognition of deferred taxes on current year losses ⁶	2,884	–
Effect of different tax rates on local profit streams ⁷	(3,412)	(1,131)
Withholding tax on dividends ⁸	11,540	–
Prior year adjustments to current tax ⁹	6,389	(1,010)
Effect from share of profit from associates ¹⁰	(100)	(803)
Other (including translation differences)	496	994
Total income tax expense	118,662	199,982

1. The majority of the derecognition in 2022 is an allowance of US\$10,749 thousand booked on deferred tax assets recognised by two of the Group's subsidiaries in Ukraine as a result of uncertainties as some of the temporary differences are not expected to unwind in the near future. Considering the material uncertainty in terms of the Group's going concern, the relevant period for the recovery of the recognised net balance of deferred tax assets has been aligned to the period of the going concern assessment. The remaining amount in 2022 is primarily related to deferred tax assets recognised in 2019 in light of the change of the tax law in Switzerland and the derecognition of deferred taxes initially recognised at one of the Group's subsidiaries in Ukraine. As a result of the ongoing war in Ukraine, it is currently not expected that this specific subsidiary will have taxable profits in the near future. The amount derecognised in 2021 is related to deferred tax assets recognised in Switzerland in light of the mentioned change of the tax law. These deferred tax assets recognised were in connection with available transitional measures for companies losing the special tax status available under the old tax law. The derecognition is due to the fact that the taxable profits of the Swiss subsidiaries were lower than forecasted. Whilst the initial recognition is considered of a non-recurring nature, the derecognition might recur depending on the taxable profits of the Swiss subsidiaries in the future.
2. The effects in 2022 and 2021 predominantly relate to expenses not deductible in Ukraine. This effect is expected to be of a recurring nature as a portion of operating expenses in Ukraine is historically not deductible for tax purposes according to the enacted local tax legislation.
3. The effects in 2022 and 2021 relate to income expected to be tax exempted in the United Kingdom as primarily related to the adoption of IFRS 9. This effect is considered to be of a recurring nature.
4. The effect relates to a subsidiary in Ukraine, for which no deferred tax asset was recognised for available tax losses at the end of the comparative year ended 31 December 2021. During the financial year 2021, the subsidiary became profitable and available tax losses incurred in previous years were used to offset the profit. As all available losses are either used or recognised as a deferred tax asset as at 31 December 2021, this effect is considered to be of a non-recurring nature.
5. The effect in 2022 predominantly relates to the impairment loss of US\$254,477 thousand on the Group's non-current operating assets as a result of the war in Ukraine, net of the effect from the changed depreciation pattern for the impaired assets. In 2021, the effect relates to the impairment loss of US\$231,111 thousand on stockpiled low-grade ore recorded in one of the Group's subsidiaries in Ukraine. Both impairment losses are not tax deductible in Ukraine. Whilst the effect in 2022 could be of a recurring nature, also depending on the situation in Ukraine, the effect in 2021 is considered to be of a non-recurring nature. In the case that the situation in Ukraine will significantly improve, there is a chance that the recorded impairment losses will recover in a future period. Such potential positive effects are expected to be tax exempted. There are other expenses in Ukraine and the United Kingdom, which are historically not deductible for tax purposes according to the enacted local tax legislation and considered to be of a recurring nature.
6. The effect relates mainly to a subsidiary in Ukraine. Due to the uncertainty in respect of the timing of the subsidiary becoming profitable for local tax purposes, no deferred tax asset has been recognised. This effect was considered to be of a recurring nature until this subsidiary becomes operative and profitable.
7. The effects relate to the different tax rates applying to different income streams in Swiss subsidiaries as a result of their specific tax status. The effect is of a recurring nature.

8. The effect in 2022 relates to effects of dividends paid by one of the subsidiaries in Ukraine, which are subject to withholding tax, whereas the dividend income was not subject to income taxes under the participation exemption regime in place in Switzerland. The effect in future years depends on the level of dividend payments made.
9. The effect in 2022 primarily relates to a negative decision received in respect of the transfer pricing claim for the financial year 2015, for which a final decision was received from the relevant court instance in 2022. The effect in 2021 relates to final tax assessments received in Switzerland. Similar effects, irrespective of the jurisdiction, are likely to occur in the future. In addition to the effect in Switzerland in 2021, included therein is the release and recognition of provisions, which are expected to be non-recurring.
10. Share of profit from associates is generally recognised net of taxes of the associates. This effect is of a recurring nature.

The Group operates across a number of jurisdictions and its effective tax rate is subject to various factors outside of the Group's control. This includes the volatility in the global iron ore pellet market and foreign exchange rate movements, primarily between the Ukrainian hryvnia and the US dollar. The effective tax rate of the financial year 2022 was 35.0% as a result of the recorded impairment loss totalling US\$254,477 thousand on the Group's non-current operating assets which is not tax deductible in Ukraine (see Note 10 Property, plant and equipment for further information) and due to the fact that no deferred tax asset was recognised for the resulting temporary differences. Further to that, the Group recorded an allowance of US\$10,749 thousand on deferred tax assets recognised by two of the Group's subsidiaries in Ukraine. Without these two effects, the effective tax rate would have been 18.2%.

The effective tax rate of 18.7% for the financial year 2021, was affected by the impairment loss on the stockpiled low-grade ore, which was also not tax deductible in Ukraine, compared to the weighted average statutory corporate income tax rate of 15.5%.

The net balance of income tax payable changed as follows during the financial year 2022:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Opening balance	(36,502)	(57,132)
Charge in the consolidated income statement	(106,453)	(201,325)
Booked through other comprehensive (loss)/income	13,036	(3,313)
Tax paid	110,243	227,930
Translation differences	3,786	(2,662)
Closing balance	(15,890)	(36,502)

The net income tax payable as at 31 December 2022 consisted of the following:

US\$000	As at 31.12.22	As at 31.12.21
Income tax receivable balance	4,674	636
Income tax payable balance	(20,564)	(37,138)
Net income tax payable	(15,890)	(36,502)

Temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes and the recognition of available tax loss carry forwards result in the following deferred income tax assets and liabilities at 31 December 2022:

US\$000	Consolidated statement of financial position		Consolidated income statement	
	As at 31.12.22	As at 31.12.21	Year ended 31.12.22	Year ended 31.12.21
Property, plant and equipment	13,474	23,757	(4,106)	895
Right-of-use assets	526	532	129	92
Intangible assets	3,956	5,942	(1,944)	(1,456)
Inventories	205	478	(152)	123
Allowance for restricted cash and deposits	–	3,837	(2,862)	–
Defined benefit pension liability	459	537	(77)	(560)
Other	1,325	1,679	177	450
Tax losses recognised	255	2,157	(1,901)	1,657
Total deferred tax assets/change	20,200	38,919	(10,736)	1,201
Thereof netted against deferred tax liabilities	(5,729)	(5,973)		
Total deferred tax assets as per the statement of financial position	14,471	32,946		
Property, plant and equipment	(320)	(559)	239	33
Intangible assets	(384)	(470)	(33)	(472)
Financial assets	(4,076)	(4,133)	56	289
Inventories	(1,334)	–	(1,334)	–
Lease obligations	(503)	(590)	(305)	(53)
Other	(459)	(362)	(96)	345
Total deferred tax liabilities/change	(7,076)	(6,114)	(1,473)	142
Thereof netted against deferred tax assets	5,729	5,973		
Total deferred tax liabilities as per the statement of financial position	(1,347)	(141)		
Net deferred tax assets/net change	13,124	32,805	(12,209)	1,343

The movement in the deferred income tax balance is as follows:

	Year ended 31.12.22	Year ended 31.12.21
US\$000		
Opening balance	32,805	30,473
Charge in consolidated income statement	(12,209)	1,343
Translation differences	(7,472)	989
Closing balance	13,124	32,805

The net deferred tax asset balance of US\$13,124 thousand includes deferred tax assets totalling US\$14,448 thousand related to temporary differences of the Group's two major subsidiaries in Ukraine, with the remaining balance reflecting deferred tax liabilities of subsidiaries outside of Ukraine. The recoverability of these deferred tax assets depends on the level of taxable profits realised by the two subsidiaries in future periods and the duration of the unwind of the temporary differences. Considering the material uncertainty in terms of the Group's going concern, the relevant period for the recovery of the recognised net balance of deferred tax assets has been aligned to the period of the going concern assessment. Despite the fact that the two Ukrainian subsidiaries realised taxable profits for the financial year 2022 and taxable profits are also expected for the period covered by the going concern assessment, an allowance of US\$10,749 thousand was booked as at 31 December 2022 as a result of uncertainties in terms of the timing of the unwind of some of the temporary differences. The level of taxable profits in Ukraine depends on many factors, such as the level of supply of power, the volatility in the global iron pellet market and foreign exchange rate changes, but also on the implications of the ongoing war in Ukraine as a whole.

As at 31 December 2022, the Group had available tax loss carry forwards in the amount of US\$68,691 thousand (2021: US\$78,188 thousand) for which no deferred tax assets were recognised. US\$41,687 thousand (2021: US\$44,591 thousand) are related to losses incurred in Ukraine and Austria and those losses do not expire. The remaining balance totalling US\$27,004 thousand (2021: US\$33,598 thousand) relates to losses incurred in Hungary, of which US\$13,736 thousand (2021: US\$19,545 thousand) expire after more than eight years.

No deferred tax liabilities have been recognised on temporary differences in the amount of US\$663,536 thousand (2021: US\$1,282,355 thousand) arising from undistributed profits from subsidiaries as no distributions are planned. Other temporary differences of US\$270,939 thousand have not been recognised as of 31 December 2022 (2021: US\$7,765 thousand), of which the vast majority relates to temporary differences on property, plant and equipment in Ukraine. The increase compared to the comparative period is primarily due to non-recognised deferred tax assets on the impairment loss of US\$254,477 thousand during the financial year 2022.

Future developments

Following an agreement reached by the Finance Ministers from the G7 in July 2021 backing the creation of a global minimum corporate tax rate of at least 15%, over 140 countries and jurisdictions have agreed to the OECD/G20 Inclusive Framework on BEPS, also referred to as BEPS 2.0, including Ukraine, United Arab Emirates and Switzerland. The new framework aims to ensure that large multinational enterprises pay a fair share of tax wherever they operate and to set a global minimum tax rate. Earliest possible implementation is in 2024 and it is expected that implementation in key countries will commence soon. Whilst some details are still unknown, the United Arab Emirates and Switzerland announced the adjustment of their local tax legislation by 1 June 2023 and 1 January 2024 respectively, resulting in an increase of the local corporate tax rate.

Based on the current understanding of the anticipated changes to the global tax landscape, the Group expects an increase of its future effective tax rate once adjustments are made to relevant local tax legislation. The Group's future effective tax rate is expected to be in a range of 15.0% to 19.0%. As mentioned above, this effective tax rate is also dependent on the volatility in the global iron ore pellet market and on foreign exchange rate movements, primarily between the Ukrainian hryvnia and the US dollar, and any one-off events, such as impairment losses that might not be tax deductible in some jurisdictions.

Note 9: Earnings per share and dividends paid and proposed

Distributable reserves

Ferrexpo plc (the "Company") is the Group's holding company, with no direct operating business, so its ability to make distributions to its shareholders is dependent on its ability to access profits held in the subsidiaries. The Group's consolidated retained earnings shown in the consolidated statement of changes in equity do not reflect the profits available for distribution in the Group as of 31 December 2022.

	Year ended 31.12.22	Year ended 31.12.21
Earnings for the year attributable to equity shareholders – per share in US cents		
Basic	37.41	148.2
Diluted	37.35	147.9
Profit for the year attributable to equity shareholders – US\$000		
Basic and diluted earnings	219,997	870,993
Weighted average number of shares – thousands		
Basic number of Ordinary Shares outstanding	588,017	587,699
Effect of dilutive potential Ordinary Shares	931	1,028
Diluted number of Ordinary Shares outstanding	588,948	588,727

Dividends proposed and paid

Considering the continued unpredictable situation in Ukraine, no further dividends are proposed for the financial year 2022 as at the date of the approval of these consolidated financial statements. Taking into account the provisions of the Companies Act 2006 and relevant thin capitalisation rules, the total available distributable reserves of Ferrexpo plc is US\$118,624 thousand as of 31 December 2022 (2021: US\$170,800 thousand). Future distributable reserves at the Ferrexpo plc level are also dependent on the payment of dividends by the subsidiaries to the respective parent companies within the Group and certain Group companies are currently restricted from paying dividends outside of Ukraine as a result of Ukrainian currency control measures imposed under the Martial Law. The recorded impairment loss as of 31 December 2022 and the war-related uncertainties, as well as the uncertainties related to the political environment and the independence of the legal system and other circumstances facing the Group (see Note 15 Commitments, contingencies and legal disputes) could have a negative impact on the potential for future dividend payments.

US\$000	Year ended 31.12.22
Dividends paid during the year	
Final dividend for 2021: 6.6 US cents per Ordinary Share	38,679
Interim dividend for 2022: 13.2 US cents per Ordinary Share	76,899
Interim dividend for 2021: 6.6 US cents per Ordinary Share	39,517
Total dividends paid during the year	155,095

Although accounts are published in US dollars and dividends are declared in US dollars, the shares are denominated in UK pounds sterling and dividends are therefore paid in UK pounds sterling.

Companies Act requirements in respect of dividend payments

During the financial year 2021, the Directors became aware of a technical issue in respect of the interim dividend declared on 4 August 2021 and, following investigations of the issue, of technical issues in respect of dividend payments made by the Company in 2010 and 2011. The technical issues were ratified by a shareholders' resolution passed at the general meeting of the shareholders of Ferrexpo Plc on 15 June 2022.

US\$000	Year ended 31.12.21
Dividends proposed	
Interim dividend for 2021: 6.6 US cents per Ordinary Share	38,788
Total dividends proposed	38,788

The interim dividend for 2021 was declared on 22 December 2021 and paid on 28 January 2022.

US\$000	Year ended 31.12.21
Dividends paid during the year	
Interim dividend for 2021: 39.6 US cents per Ordinary Share	231,011
Final dividend for 2020: 13.2 US cents per Ordinary Share	77,890
Special interim dividend for 2020: 39.6 US cents per Ordinary Share	233,097
Special interim dividend for 2020: 13.2 US cents per Ordinary Share	77,379
Total dividends paid during the year	619,377

Note 10: Property, plant and equipment

During the year ended 31 December 2022, the additions to property, plant and equipment totalled US\$200,329 thousand (31 December 2021: US\$316,898 thousand) and the net book value of the disposals of property, plant and equipment totalled US\$22,799 thousand (31 December 2021: US\$7,765 thousand). The total depreciation charge for the year was US\$94,162 thousand (31 December 2021: US\$120,751 thousand).

The carrying value of property, plant and equipment includes capitalised borrowing costs on qualifying assets totalling US\$35,694 thousand (31 December 2021: US\$55,768 thousand).

Critical estimates

As at the date of the approval of these consolidated financial statements, the war in Ukraine that commenced with the Russian invasion into Ukraine on 24 February 2022 is still ongoing. Even though the Group managed to operate throughout the financial year 2022, the ongoing war had an adverse impact on the Group's cash flow generation and it is expected that this will continue to be the case until the war comes to an end. During the financial year 2022, the Group's cash flow generation was heavily affected by the fact that the Group's seaborne sales through the port of Pivdennyi have been suspended as a result of closed Black Sea ports in Ukraine since the beginning of the war and the level of supply of power following severe Russian missile strikes on state-owned electrical infrastructure.

The beginning of the war on 24 February 2022 was treated as a non-adjusting post balance sheet event in the consolidated financial statements for the year ended 31 December 2021, but became an adjusting event in the consolidated financial statements for the period ended 30 June 2022.

The Group's impairment test is based on cash flow projections over the remaining estimated lives of the GPL and the Yerstivske deposits, which are expected to expire in 2058 and 2048, respectively, according to the current approved mine plans. The cash flow projection is based on a financial long-term model approved by senior management and the estimated production volumes do not take into account the effects of expected future mine life extension programmes. A number of significant judgements and estimates are used when preparing the financial long-term model of the Group, which are, together with the key assumptions used, reviewed by the Audit Committee with a specific consideration given to the realistically plausible production volumes in light of the disrupted supply of power and the logistics network available to the Group, sales price and production cost forecasts as well as the used discount rate.

Based on the base case of the Group's updated long-term model prepared for 2022 interim accounts, the value in use of the Group's single cash generating unit's operating non-current assets, including property, plant and equipment, goodwill and other intangibles as well as other non-current assets, was US\$254,477 thousand below the total carrying value of these assets, reflecting an impairment loss in this amount. US\$219,931 thousand of the total impairment loss was allocated to various asset categories within property, plant and equipment, US\$27,340 thousand to goodwill, which was then fully impaired as of 30 June 2022 and US\$1,763 thousand to various asset categories within intangible assets. The remaining US\$5,443 thousand reduced the carrying amount of assets included within other non-current assets.

The impairment test as of 31 December 2022 was prepared based on a long-term model updated in February 2023. Based on the cash flow generation forecasted in the new model and a nominal pre-tax discount rate of 23.4%, compared to 20.4% as at 30 June 2022 and a pre-war WACC of 13.8% as of 31 December 2021, no further impairment has to be recorded as of 31 December 2022. The carrying value as of 31 December 2022 reflects the impairment of US\$254,477 thousand recorded as of 30 June 2022 and the devaluation of the Ukrainian hryvnia from 29.255 to 36.569 compared to the US dollar in July 2022, which reduced the carrying value by US\$201,375 thousand.

An average iron ore price of US\$105 per tonne of 65% Fe fines CFR North China was used in the assumptions for the cash flow projection for the next five years. In determining the future long-term selling price, the Group takes into account external and internal analysis of the longer-term and shorter-term supply and demand dynamics throughout the world and considers local supply and demand balances affecting its major customers and the effects this could have on the longer-term price. In light of the ongoing disruption of the supply of power due to the war, the production capacity used for the cash flow projections is expected to be 50% and 75% of the pre-war level for the financial years 2023 and 2024, before recovering in 2025 to the pre-war level. As mentioned above, the Group's operation in 2022 was also affected by the absence of a

significant portion of seaborne sales due to the closed Black Sea ports in Ukraine. It is expected that currently available logistic networks will be sufficient to transport the lower level of produced pellets to the Group's international customers, predominantly in Europe for the time being, but also to customers in Asia. The increase of the available production capacity assumed in the past for the years covered by the long-term model has been adversely affected by the Russian invasion into Ukraine as the work on certain growth projects had to be halted or slowed down. There is no perpetual growth rate applied for the cash flow projections beyond the last year covered by the Group's long-term model. Cost of production and shipping is considered taking into account local inflationary pressures, major exchange rate developments between the Ukrainian hryvnia and the US dollar, the longer-term and shorter-term trends in energy supply and demand and the effect on costs along with the expected movements in steel-related commodity prices, which affect the cost of certain production inputs. An average devaluation of the hryvnia of 9.7% per year was assumed over the next 5 years in the Group's cash flow projection. For the purpose of the impairment test, the future cash flows were discounted using a nominal pre-tax discount rate of 23.4% (2021: 13.8%) per annum, reflecting the current situation in the country as underlying macro-economic data used for the computation of the WACC was also adversely affected by the war in Ukraine resulting in a significant increase of Ukraine's country risk premium. The key assumptions in respect of production and sales volumes, and of production costs, are largely dependent on the easing of conflict risks facing the Group business, and therefore a wide range of alternative outcomes are possible, reflecting a high level of uncertainty.

The key assumptions used for the preparation of the Group's long-term model are:

Key assumptions	Basis
Future production	Proved and probable reserves and power expected to be available
Commodity prices	Contract prices and longer-term price estimates
Capital expenditures	Future sustaining capital expenditures
Cost of raw materials and other production/distribution costs	Expected future cost of production
Exchange rates	Longer-term predictions of market exchange rates
Nominal pre-tax discount rate	Cost of capital risk adjusted for the resource concerned

The recorded impairment during the financial year 2022 will be re-assessed at the end of any future reporting periods. If there are positive developments in the Group's future cash flow generation and the relevant macro-economic data, a portion of the impairment loss might reverse in future periods. Conversely, an adverse change in the above key assumptions would further reduce the value in use of the Group's operating non-current assets.

A delay of the recovery of the production and sales volumes to a pre-war level by another year, with all other assumptions remaining unchanged, would reduce the value in use of the Group's non-current operating assets by approximately another US\$149,000 thousand. A reduction of the realised price by US\$5 per tonne for the entire period covered by the long-term model would increase the impairment loss by approximately US\$224,000 thousand and a decrease of the production and sales volume by 10%, combined with an increase of the production costs by 5%, again for the entire period, would increase the impairment loss by approximately US\$308,000 thousand. An increase of the pre-tax real discount rate by 3.0% would result in an increase of US\$164,000 thousand, with all other assumptions remaining unchanged.

Note 11: Goodwill and other intangible assets

During the year ended 31 December 2022, the additions to the intangible assets totalled US\$548 thousand (31 December 2021: US\$3,985 thousand). The total amortisation charge for the period was US\$1,851 thousand (31 December 2021: US\$1,681 thousand).

Critical estimates

The Russian invasion into Ukraine and the ongoing war resulted in an impairment loss of US\$254,477 thousand on the Group's operating non-current assets, of which US\$27,340 thousand were allocated to goodwill, which was then fully impaired as of 30 June 2022, and US\$1,763 thousand to various asset categories within intangible assets. See Note 10 Property, plant and equipment for further information on the impairment test performed as at 31 December 2022.

Note 12: Inventories

Critical estimates

Low-grade and weathered ore

Historically, inventories classified as non-current comprised low-grade and weathered ore that were, based on the Group's processing plans, not planned to be processed within the next 12 months. As at the date of the approval of the consolidated financial statements as at 31 December 2022, it cannot be reliably predicted when additional processing capabilities will be available to specifically process the stockpiled low-grade ore, which was fully impaired as at the end of the comparative year ended 31 December 2021.

The stockpiled low-grade ore is still considered as an asset for the Group and some or all of the impairment loss of US\$231,111 thousand might reverse in the future, once changed facts and circumstances can be considered in the net realisable value test of this asset. As at 31 December 2022, there are no changes in facts and circumstances to be considered. The ongoing war in Ukraine makes it currently difficult to accelerate the commenced engineering studies for the exploration of possible options for new processing capabilities for the specific purpose of processing low-grade ore.

The remaining balance of non-current inventories as at 31 December 2022 relates to weathered ore, which is expected to be processed after more than 12 months.

At 31 December 2022, inventories comprised:

US\$000	As at 31.12.22	As at 31.12.21
Raw materials and consumables	51,437	57,575
Spare parts	91,334	80,886
Finished ore pellets	52,625	48,058
Work in progress	25,832	13,496
Other	3,226	2,384
Total inventories – current	224,454	202,399
Weathered ore	6,277	8,414
Total inventories – non-current	6,277	8,414
Total inventories	230,731	210,813

Inventories classified as non-current comprise low-grade and weathered ore that are, based on the Group's current processing plans, not planned to be processed within the next 12 months. The processing of this stockpile will take more than 12 months and the beginning and duration of the processing depend on the Group's future mining activities, processing capabilities and anticipated market conditions.

Following the impairment loss recorded at the end of the financial year 2021, the volume of low-grade ore extracted during the year ended 31 December 2022 in the amount of US\$9,690 thousand was fully recognised in the consolidated income statement and included in the cost of sales.

Note 13: Cash and cash equivalents

As at 31 December 2022, cash and cash equivalents comprised:

US\$000	As at 31.12.22	As at 31.12.21
Cash at bank and on hand	112,945	158,052
Cash equivalents	–	9,239
Total cash and cash equivalents	112,945	167,291

The debt repayments net of proceeds during the period ended 31 December 2022 totalled US\$48,249 thousand (31 December 2021: US\$221,188 thousand) affecting the balance of cash and cash equivalents.

Further information on the Group's gross debt is provided in Note 14 Interest-bearing loans and borrowings.

The balance of cash and cash equivalents held in Ukraine amounts to US\$45,229 thousand as at 31 December 2022 (31 December 2021: US\$52,326 thousand). Despite the foreign exchange control measures imposed under Martial Law in Ukraine (see Note 15 Commitments, contingencies and litigation), this balance is fully available to the Group for its operations in Ukraine and is therefore not considered restricted.

Cash equivalents as at the end of the comparative year ended 31 December 2021 relate to cash deposits for letters of credit available within three months from the date of inception of the letters of credit while cash deposits available only after three months from the date of inception totalling US\$18,962 thousand were classified as other current assets.

Note 14: Interest-bearing loans and borrowings

This note provides information about the contractual terms of the Group's major finance facilities.

US\$000	As at 31.12.22	As at 31.12.21
Current		
Lease liabilities	5,194	6,060
Trade finance facilities	–	42,146
Total current interest-bearing loans and borrowings	5,194	48,206
Non-current		
Lease liabilities	1,354	2,143
Total non-current interest-bearing loans and borrowings	1,354	2,143
Total interest-bearing loans and borrowings	6,548	50,349

The Group has no uncommitted trade finance facilities available as at 31 December 2022, primarily due to the situation in Ukraine, compared to US\$140,000 as at the end of the comparative year ended 31 December 2021, of which US\$42,146 were drawn.

Trade finance facilities were secured against receivable balances related to these specific trades.

The table below shows the movements in the interest-bearing loans and borrowings:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Opening balance of interest-bearing loans and borrowings	50,349	266,478
<i>Cash movements:</i>		
Repayments of syndicated bank loans – secured	–	(256,666)
Repayments of other bank loans – unsecured	–	(764)
Principal and interest elements of lease payments	(6,103)	(5,904)
Change of trade finance facilities, net	(42,146)	42,146
Total cash movements	(48,249)	(221,188)
<i>Non-cash movements:</i>		
Amortisation of prepaid arrangement fees	–	4
Additions to lease liabilities	5,340	4,506
Others (incl. translation differences)	(892)	549
Total non-cash movements	4,448	5,059
Closing balance of interest-bearing loans and borrowings	6,548	50,349

The outstanding amount of the Group's syndicated revolving pre-export facility was fully repaid at the end of the comparative year ended 31 December 2021 and the facility was subsequently cancelled.

The interest elements of lease payments are included in the cash flows from operating activities and not in the cash flows used in financing activities.

Note 15: Commitments, contingencies and legal disputes

Commitments

Commitments as at 31 December 2022 consisted of the following:

US\$000	Year ended 31.12.22	Year ended 31.12.21
Total commitments for the lease of mining land (out of the scope of IFRS 16)	50,963	57,665
Total capital commitments on purchase of property, plant and equipment	134,842	191,412
Commitments for investment in a joint venture	6,064	6,064

Contingencies

As disclosed in the 2021 Annual Report & Accounts, the Board, acting through the Committee of Independent Directors (the "CID"), conducted during the financial year 2020 a review in connection with the Group's sponsorship arrangements with FC Vorskla and concluded its enquiry in March 2021. In accordance with arrangements put in place for the full repayment of a loan granted by FC Vorskla Cyprus Ltd. to a related party entity of the Group's controlling shareholder outside of the Group, the Group understands that the loan was repaid in full in August 2022.

Legal

In the ordinary course of business, the Group is subject to various legal actions and ongoing court proceedings. There is a risk that the independence of the judicial system and its immunity from economic and political influences in Ukraine is not upheld, consequently Ukrainian legislation might be inconsistently applied to resolve the same or similar disputes. See also the Principal Risks section on pages 36 to 38 for further information on the Ukraine country risk and Note 35 Events after the reporting period in terms of another court order received.

Critical judgements

The Group is exposed to the risks associated with operating in a developing economy, which may or may not be exacerbated by the war and/or the current circumstances facing the Group's controlling shareholder (see Ukraine country risk on pages 36 to 38). As a result, the Group is exposed to a number of risk areas that are heightened compared to those expected in a developed economy, such as an environment of political, fiscal and legal uncertainties, which require a significant portion of critical judgements to be made by the management.

Share dispute

On 23 November 2020, the Kyiv Commercial Court opened court proceedings in relation to an old shareholder litigation. In 2005, a former shareholder in PJSC Ferrexpo Poltava Mining ("FPM") brought proceedings in the Ukrainian courts seeking to invalidate the share sale and purchase agreement pursuant to which a 40.19% stake in FPM was sold to nominee companies that were previously ultimately controlled by Kostyantyn Zhevago, amongst other parties. After a long period of litigations, all old claims were fully dismissed in 2015 by the Higher Commercial Court of Ukraine. In January 2021, Ferrexpo AG ("FAG") received a claim from a former shareholder in FPM to invalidate the share sale and purchase agreement concluded in 2002.

In February 2021, FAG became aware that three new claims had been filed by three other former shareholders in FPM. Taken together, four claimants seek to invalidate the share sale and purchase agreement concluded in 2002 pursuant to which a 40.19% stake in FPM was sold, similar to the previous claims made back in 2005. The Kyiv Commercial Court ruled on 27 May 2021 in favour of FAG and the opposing parties filed their appeals in June 2021. The Northern Commercial Court of Appeal has opened the appeal proceedings and after several hearings the Group received in September 2022 a judgement from the appeal court in respect of the aforementioned claim, which states that the share purchase agreement concluded in 2002 is invalid and orders that 40.19% stake of the current share capital in FPM should be transferred to the claimants. The shares in FPM claimed by the claimants, which in 2002 amounted to 40.19% of FPM, now represents 8.5% of FPM's share capital as at 31 December 2022, taking into account the dilutive effect from the numerous share capital increases made by FAG since 2002.

Following the identification of numerous errors in the application of the Ukrainian law in the judgement of the Northern Commercial Court of Appeal by the Group's legal advisors, FAG filed a cassation appeal and requested the Supreme Court of Ukraine to review the ruling made by the Northern Commercial Court of Appeal. The hearing at the Supreme Court of Ukraine took place on 17 November 2022. After this first hearing and before the Supreme Court of Ukraine concluded on the legal merits of the parties involved in this dispute, the parties filed a motion requesting the case to be heard by the Grand Chamber of the Supreme Court. During the court hearing held on 1 December 2022, the Supreme Court decided to refer the case for consideration to the Grand Chamber of the Supreme Court. The first hearing by the Grand Chamber of the Supreme Court is scheduled for 15 March 2023.

Based on legal advice obtained, management remain of the view that FAG has compelling arguments to defend its position in the Grand Chamber of the Supreme Court. However, there is a risk that the independence of the judicial system and its immunity from economic and political influences in Ukraine is not upheld. A negative decision from the Grand Chamber of the Supreme Court of Ukraine would result in the loss of a significant proportion of the Group's main operating subsidiary in Ukraine and have a material adverse impact on the shareholders' equity attributable to the shareholders of Ferrexpo plc. Due to legal uncertainties, including the percentage of FPM's share capital at the year-end subject to the claims, it is currently impracticable to reasonably estimate the financial impact, but it could be material. A negative decision could also have an impact on potential future dividends from FPM to FAG and, as result, on the distributable reserves of Ferrexpo plc (see Note 9 Earnings per share and dividends paid and proposed for further details). No non-controlling interest has been recognised as of 31 December 2022 because the transfer of shares in FPM has not legally happened and FPM remains, as a consequence, wholly owned by FAG as at the date of the approval of these consolidated financial statements. It is management's view that such a decision will not cast significant doubt on the Group's ability to continue as a going concern. However, such a decision might complicate the daily business of the Group's major subsidiary in Ukraine, as the intentions of the opposing parties are not clear at this point of time.

Currency control measures imposed in Ukraine

With the start of the Russian invasion into Ukraine on 24 February 2022, the Ukrainian government introduced Martial Law affecting, among others, aspects relating to lending agreements, foreign exchange and currency controls and banking activities.

As a result of the introduced Martial Law, the National Bank of Ukraine ("NBU") has introduced significant currency and capital control restrictions in Ukraine. These measures are also affecting the Group in terms of its cross-border payments to be made, which are restricted and may be carried out only in exceptional cases. The maximum period for settlements of invoices under export and import contracts was decreased as of 1 April 2022 from previously 360 days to 180 days.

These measures put additional pressure on the Group's liquidity management as the Ukrainian subsidiaries are currently not in the position to make cash transfers outside of Ukraine. As it is essential to the Group that sufficient liquidity is held outside of Ukraine in order to ensure that the Group's liabilities can be settled when falling due, intercompany receivable balances due to the Ukrainian subsidiaries have historically been paid when falling due and after considering the local cash requirements for the operating activities and the capital expenditure programmes. The currently lower operating activities and the reduced capital expenditure programmes due to the ongoing war has reduced the local cash requirements and consequently increased the imbalance between payments to be made into Ukraine and local cash requirements. As a result of the imposed currency control measures, the Group has to carefully manage the payments to be made into Ukraine, as the local subsidiaries cannot transfer any surplus funds back to the Group entities outside of Ukraine, if required.

Failure to comply with the currency control regulations can result in financial fines. The offence against the currency control regulations would result in fines of 0.3% per day computed on the cumulative overdue receivable balances. The Group has implemented various measures to mitigate the impact of the currency control regulations and reduce the risk of material fines, but there exists legal uncertainty in the application of the currency control regulations during the Martial Law in Ukraine. The currency control regulations may also be subject to change in the future (including with retrospective effect). Therefore, there is a risk that the Group may become subject to challenges from regulatory authorities in connection with the application of the regulations. Considering the amount of outstanding receivable balances between Group companies, there is a risk of material fines becoming payable in the future. However, as a result of different interpretations of the currency control regulations during the Martial Law and the measures initiated by the Group to mitigate the risk of potential fines, it is currently not possible to reliably estimate the amount of a potential exposure.

Other ongoing legal proceedings and disputes

Royalty-related investigation and claim

On 3 February 2022, PJSC Ferrexpo Poltava Mining ("FPM") and Ferrexpo Yeristovo Mining LLC ("FYM") received letters from the Office of Prosecutor General notifying them about ongoing investigation on potential underpayment of iron ore royalty payments during the years 2018 to 2021. The amount of underpayment was not specified in the letters. As part of the investigation, the Office of Prosecutor General requested documents related to iron ore royalty payments and requested four representatives of the Group's subsidiaries to appear as witnesses for investigations.

On 8 February 2022, FPM received a tax audit report, which claims the underpayment of iron ore royalty payments during the period from April 2017 to June 2021 in the amount of approximately UAH1,042 million (approximately US\$28,424 thousand as at 31 December 2022). The Group provided its objections to the claims made in the tax audit report and it was expected that this case will ultimately be heard by the courts in Ukraine. However, due to the current situation in Ukraine, it is unknown if and when the tax office will provide the final tax audit report considering or refusing FPM's objections as well as if and when a first hearing will take place in respect of a final claim received and how the aforementioned investigation is going to further develop.

On 16 November 2022, the detectives from the Bureau of Economic Security of Ukraine conducted searches at FYM and FPM in connection with the royalty-related investigation. On 3 February 2023, a notice of suspicion was delivered to a senior manager of FPM, which claimed underpayment of royalty payments in the amount of approximately UAH2,000 million (approximately US\$54,557 thousand as at 31 December 2022) and a bail UAH20 million (US\$546 thousand as at 31 December 2022) was approved by the court on 9 February 2023. An appeal was subsequently filed by FPM on the amount of the bail. On 6 February 2023, the court arrested the bank accounts of FPM. Following a motion to change the scope of the arrest filed by FPM, the court on 8 February 2023 and on 16 February 2023 added exceptions to the original court order to arrest the bank account of FPM in order to allow FPM to make payments for salaries, local taxes, social security charges, payments for utilities as well as payments to state and municipal companies. Other motions to change the scope of the arrest and an appeal to cancel the arrest are expected to be considered by the courts in March 2023.

Based on legal advice obtained, it is management's view that each of FPM and FYM have compelling arguments to defend their positions in the court and, as a consequence, no associated liabilities have been recognised in relation to the claim in the consolidated statement of financial position as at 31 December 2022. However, as with other ongoing legal proceedings, there is a risk that the independence of the judicial system and its immunity from economic and political influences in Ukraine is not upheld and in that case there could be a material adverse impact on the Group.

Contested sureties claim

On 7 December 2022, FPM received a claim in the amount of UAH4,727 million (US\$128,945 thousand) in respect of contested sureties. These contested sureties relate to Bank F&C, a Ukrainian bank owned by the Group's controlling shareholder and which the Group previously used as its main transactional bank in Ukraine. Bank F&C is still going through the liquidation process after having been declared insolvent by the National Bank of Ukraine and put under temporary administration on 18 September 2015. Following the loss of funds held at Bank F&C of approximately US\$177,000 thousand, the Group, through its major subsidiaries in Ukraine, initiated various court proceedings with the aim to maximise the Group's recovery in the liquidation process of Bank F&C.

The counterparty in this claim alleges that it acquired rights under certain loan agreements originally concluded between the Bank F&C and various borrowers, some of which are associated entities of the Group's controlling shareholder, by entering into the assignment agreement with

the State Guarantee Fund on 6 November 2020. The counterparty further claims that Ferrexpo Poltava Mining ("FPM") provided sureties to Bank F&C to ensure the performance of obligations under these loan agreements. It is FPM's position that no such sureties have been signed. Based on a favourable court decision in respect of the afore-mentioned court proceedings to maximise its recovery, it is management's view that FPM has compelling arguments to defend its position in the court and, as a consequence, no associated liabilities have been recognised in relation to this claim in the consolidated statement of financial position as at 31 December 2022. The date of the court hearing is currently unknown.

Ecological claims

In September 2021, the State Ecological Inspection carried out an inspection of Ferrexpo Yeristovo Mining LLC ("FYM") and on 1 October 2021 issued an order to remove a number of alleged violations of environmental rules. On 19 October 2021, FYM received two ecological claims from the State Ecological Inspection. One of the claims was related to an allegation of violation of rules regarding removal of soil on a particular land plot and the State Ecological Inspection requested payment for damages of approximately UAH768 million (US\$21,000 thousand as at 31 December 2022). The other claim was related to an allegation of absence of documents for disposal of waste on a particular land plot and the State Ecological Inspection requested payment for damages in the amount of approximately UAH18 million (US\$492 thousand as at 31 December 2022). Each claim states that if FYM does not voluntarily pay the damages, the State Ecological Inspection will start court proceedings. In November 2021, FYM sent written objections to these claims to the State Ecological Inspection. The State Ecological Inspection has neither responded to FYM's objections nor filed the claims to the court within a reasonable period by February 2022. In February 2022, FYM has therefore filed a lawsuit to the court to challenge the claims of the State Ecological Inspection. The Kremenchuk District Prosecutor's Office is conducting the investigation in connection with alleged violations of environmental rules. The hearing on 19 July 2022 ruled in favour of FYM. On 17 January 2023, the court of appeal returned the appeal claim to the State Ecological Inspection due to procedural mistakes when filing the claim and there have been no further legal actions since then.

Based on legal advice obtained, it is management's view that FYM has compelling arguments to defend its position in the court and, as a consequence, no associated liabilities have been recognised in relation to these matters in the consolidated statement of financial position as at 31 December 2022, similar to the position as at 31 December 2021.

Cancellation of licence for Galeschynske deposit

On 24 June 2021, an Order of the President of Ukraine was published on the official website of the President (the "Order"), which enacted the Decision of the National Security and Defence Council of Ukraine on the application of personal special economic and other restrictive measures and sanctions (the "Decision"). Ferrexpo Belanovo Mining ("FBM") is included in the list of legal entities which are subject to sanctions pursuant to the Decision. The Order and the Decision do not provide any legal ground for the application of sanctions. The sanction imposed on FBM is the cancellation of the mining licence for the Galeschynske deposit, which is one of two licences held by FBM.

The Galeschynske deposit is a project in the exploration phase that is situated to the north of the Group's active mining operations. Following the cancellation of this license and considering the fact that the outcome of the proceedings is currently uncertain, all capitalised costs associated with this licence totalling US\$3,439 thousand were written off in the comparative year ended 31 December 2021. See Note 5 Operating expenses for further information. The next court hearing is scheduled for 3 April 2023.

Taxation

Tax legislation

As disclosed in Note 8 Taxation, the Group is involved in ongoing tax audits in respect of its cross-border transactions and an unfavourable outcome would have an adverse impact on the Group's cash flow generation, profitability and liquidity. These tax audits are currently on hold due to the ongoing war in Ukraine and it is unknown when these will resume again. See Note 8 Taxation and also the update on the Group's Principal Risks on pages 36 to 38 in terms of the Ukraine country risk.

Note 16: Related party disclosures

During the years presented, the Group entered into arm's length transactions with entities under the common control of Kostyantyn Zhevago, a controlling shareholder of Ferrexpo plc, with associated companies and with other related parties. Management considers that the Group has appropriate procedures in place to identify, control, properly disclose and obtain independent confirmation, when relevant, for transactions with the related parties.

Entities under common control are those under the control of Kostyantyn Zhevago. Associated companies refer to TIS Ruda LLC, in which the Group holds an interest of 49.9% (2021: 49.9%). This is the only associated company of the Group.

Related party transactions entered into by the Group during the years presented are summarised in the following tables:

Revenue, expenses, finance income and expense

	Year ended 31.12.22			Year ended 31.12.21		
US\$000	Entities under common control	Associated companies	Other related parties	Entities under common control	Associated companies	Other related parties
Other sales ^a	560	—	2	657	—	9
Total related party transactions within revenue	560	—	2	657	—	9
Materials and services ^b	6,784	—	—	8,334	—	—
Spare parts and consumables ^c	7,056	—	—	6,350	—	—
Other expenses ^d	1,948	—	—	2,172	—	—
Total related party transactions within cost of sales	15,788	—	—	16,856	—	—
Selling and distribution expenses ^e	6,542	3,819	—	4,876	18,139	—
General and administration expenses ^f	398	—	567	371	—	524
Other operating expenses ^g	2,019	—	—	1,391	—	—
Finance expense	8	—	—	20	—	—
Total related party transactions within expenses	24,755	3,819	567	23,514	18,139	524
Other income	—	—	—	2	—	—
Total related party transactions	25,315	3,819	569	24,173	18,139	533

A description of the most material transactions, which are in aggregate over US\$200 thousand in the current or comparative year, is given below.

Entities under common control

The Group entered into various related party transactions with entities under common control. All transactions were carried out on an arm's length basis in the normal course of business.

- a Sales of scrap metal to OJSC Uzhgorodsky Turbogaz totalling US\$361 thousand (2021: US\$437 thousand); and
- a Sales of electricity to Kislod PCC for US\$194 thousand (2021: US\$209 thousand).
- b Purchases of oxygen, scrap metal and services from Kislod PCC for US\$1,437 thousand (2021: US\$1,533 thousand);
- b Purchases of cast iron balls from OJSC Uzhgorodsky Turbogaz for US\$4,258 thousand (2021: US\$5,700 thousand); and
- b Purchase of maintenance and construction services from FZ Solutions LLC (formerly OJSC Berdichev Machine-Building Plant Progress) for US\$997 thousand (2021: US\$1,024).
- c Purchases of spare parts from OJSC AvtoKraz Holding in the amount of US\$1,799 thousand (2021: US\$1,983 thousand);
- c Purchases of spare parts from CJSC Kyiv Shipbuilding and Ship Repair Plant ("KSRSSZ") in the amount of US\$902 thousand (2021: US\$837 thousand);
- c Purchases of spare parts from OJSC Uzhgorodsky Turbogaz in the amount of US\$1,460 thousand (2021: US\$1,032 thousand);
- c Purchases of spare parts from FZ Solutions LLC (formerly OJSC Berdichev Machine-Building Plant Progress) of US\$1,125 thousand (2021: US\$719 thousand);
- c Purchases of spare parts from Kislod PCC in the amount of US\$410 thousand (2021: nil); and
- c Purchases of spare parts from Valsa GTV of US\$1,231 thousand (2021: US\$1,735 thousand).
- d Insurance premiums of US\$1,948 thousand (2021: US\$2,172 thousand) paid to ASK Omega for insurance cover in respect of mining equipment and machinery.
- e Purchases of advertisement, marketing and general public relations services from FC Vorskla of US\$6,541 thousand (2021: US\$4,875 thousand). See page 69 in respect of a loan relationship between FC Vorskla and another related party.
- g Insurance premiums of US\$1,085 thousand (2021: US\$1,341 thousand) paid to ASK Omega for workmen's insurance and other insurances;
- g Purchase of marketing services from TV & Radio Company of US\$212 thousand (2021: US\$243 thousand); and
- g Purchase of food under the Ferrexpo Humanitarian Fund from JSC Kremenchukmyaso of US\$798 thousand (2021: nil). See page 30 for further information on the Ferrexpo Humanitarian Fund.

Associated companies

The Group entered into related party transactions with its associated company, TIS Ruda LLC, which were carried out on an arm's length basis in the normal course of business for the members of the Group.

- e Purchases of logistics services in the amount of US\$3,819 thousand (2021: US\$18,139 thousand) relating to port operations, including port charges, handling costs, agent commissions and storage costs. The scope of the services procured from TIS Ruda is heavily affected by the ongoing war in Ukraine as the Group's seaborne sales through the port of Pivdennyi have been suspended as a result of the closure of the port.

Other related parties

The Group entered into various transactions with related parties other than those under the control of a controlling shareholder of Ferrexpo plc. All transactions were carried out on an arm's length basis in the normal course of business.

- f Legal and administrative services in the amount of US\$387 thousand (2021: US\$506 thousand) provided by Kuoni Attorneys at Law Ltd., which is controlled by a member of the Board of Directors of one of the subsidiaries of the Group. The Directors' fees paid totalled US\$100 thousand for the financial year 2022 (2021: US\$100 thousand).

Purchases of property, plant and equipment

The table below details the transactions of a capital nature, which were undertaken between Group companies and entities under common control, associated companies and other related parties during the years presented.

	Year ended 31.12.22			Year ended 31.12.21		
US\$000	Entities under common control	Associated companies	Other related parties	Entities under common control	Associated companies	Other related parties
Purchases in the ordinary course of business	11,634	—	—	552	—	—
Total purchases of property, plant and equipment	11,634	—	—	552	—	—

During the year ended 31 December 2022, the Group purchased major spare parts and equipment from FZ Solutions LLC (formerly OJSC Berdichev Machine-Building Plant Progress) totalling US\$ 11,598 thousand (2021: US\$283 thousand) in respect of the Wave 1 expansion project of its processing plant. During the comparative year ended 31 December 2021, the Group procured equipment and materials from CJSC Kyiv Shipbuilding and Ship Repair Plant ("KSRSSZ") totalling US\$235 thousand for maintenance and repairs of its processing plant.

The FPM Charity Fund owns 75% of the Sport & Recreation Centre ("SRC") in Horishni Plavni and made contributions totalling US\$154 thousand during the year ended 31 December 2022 (2021: US\$120 thousand) for the construction and maintenance of the building, including costs related to electricity, gas and water consumption. The remaining stake of 25% is owned by JSC F&C Realty, which is under the control of Kostyantyn Zhevago.

Balances with related parties

The outstanding balances, as a result of transactions with related parties, for the years presented are shown in the table below:

	As at 31.12.22			As at 31.12.21		
	Entities under common control	Associated companies	Other related parties	Entities under common control	Associated companies	Other related parties
US\$000						
Prepayments for property, plant and equipment ^g	3,847	—	—	8,463	—	—
Total non-current assets	3,847	—	—	8,463	—	—
Trade and other receivables ^h	38	3,245	1	101	4,181	1
Prepayments and other current assets ⁱ	745	120	—	2,076	—	—
Total current assets	783	3,365	1	2,177	4,181	1
Trade and other payables ^j	2,057	244	—	732	489	—
Accrued and contract liabilities	—	—	—	—	—	—
Total current liabilities	2,057	244	—	732	489	—

A description of the balances over US\$200 thousand in the current or comparative year is given below.

Entities under common control

- g Prepayments for property, plant and equipment totalling US\$3,787 thousand (31 December 2021: US\$8,422 thousand) were made to FZ Solutions LLC (formerly OJSC Berdichev Machine-Building Plant Progress) mainly in relation to the Wave 1 expansion project of the processing plant.
- i Prepayments and other current assets totalling US\$233 thousand to ASK Omega for insurance premiums (31 December 2021: US\$1,123 thousand),
- j Trade and other payables of US\$107 thousand (31 December 2021: US\$221 thousand) related to the purchase of oxygen, metal scrap and services from Kislod PCC, and
- j Trade and other payables of US\$1,603 thousand (31 December 2021: US\$295 thousand) related to the purchase of spare parts and services from FZ Solutions LLC (formerly OJSC Berdichev Machine-Building Plant Progress), and

Associated companies

- h Trade and other receivables included US\$3,245 thousand (2021: US\$4,181 thousand) related to dividends declared by TIS Ruda LLC.
- i Prepayments and other current assets included US\$120 thousand (2021: nil) related to cargo storage services from TIS Ruda LLC.
- j Trade and other payables included US\$244 thousand (2021: US\$489 thousand) related to purchases of logistics services from TIS Ruda LLC.

The Ferrexpo Humanitarian Fund

Following the Russian invasion into Ukraine in February 2022, the Group has established the Ferrexpo Humanitarian Fund with total approved funding of US\$15,000 thousand in order to support local communities in Ukraine. As at 31 December 2022, the Group procured medicine totalling US\$404 thousand from Arterium LLC and food totalling US\$798 thousand from JSC Kremenchukmyaso, both under common control of Kostyantyn Zhevago, a controlling shareholder of Ferrexpo plc. Whilst the procurements from Arterium LLC have been made directly by the fund, the procurements from JSC Kremenchukmyaso have been made through one of the Group's subsidiaries in Ukraine. See page 30 for further information on the Ferrexpo Humanitarian Fund.

Note 17: Events after the reporting period

As announced on 7 March 2023 on the Regulatory News Service of the London Stock Exchange, the Group became aware of a press release by the Ukrainian Deposit Guarantee Fund suggesting that a restriction has been placed on shares held by Ferrexpo AG (FAG), the Group's Swiss subsidiary, in three main operating subsidiaries of the Group in Ukraine, covering 50.3% of the shares held in each subsidiary. Based on the subsequently published court order in the Ukrainian official register of court decisions, the Kyiv Commercial Court ordered the arrest (freeze) of 50.3% of FAG's shareholding in each of Ferrexpo Poltava Mining (FPM), Ferrexpo Yeristovo Mining (FYM) and Ferrexpo Belanovo Mining (FBM). The court order also prohibits each of FPM, FYM and FBM from making changes to the amount of its authorised capital. The court order does not affect ownership of the shares in these three subsidiaries of the Group in Ukraine, but prohibits the disposal by FAG of 50.3% of its shareholding in each named subsidiary.

This court order was issued by the Kyiv Commercial Court during a hearing in the commercial litigation between the Deposit Guarantee Fund and Mr. Zhevago, the Group's controlling shareholder, in relation to the liquidation of Bank Finance and Credit in 2015.

As disclosed in detail in Note 30 Commitments, contingencies and legal disputes in the Group's 2020 Annual Report & Accounts, similar orders to freeze 50.3% of FAG's shareholding in FPM were received by the Group in November 2019 and in June 2020, which were subsequently successfully appealed and cancelled by FAG in the Ukrainian courts.

In addition to the restriction covering 50.3% of FAG's shareholding in each of FPM, FYM and FBM, the court order also contains a prohibition on Ferrexpo plc disposing of any of its shares in FAG. Based on legal advice received by the Group, such prohibition on Ferrexpo plc disposing of its shares in FAG is not enforceable in the UK and in Switzerland within a short period of time.

The court order also prohibits the disposal by Fevamotinico S.a.r.l. of its shares in Ferrexpo plc.

The Group has no intention, and never has had any intention, of transferring the shares in FPM, FYM, FBM or FAG. In addition, no impact on the operations of the Group is expected as a result of this court order.

The Group intends to take actions in Ukraine to appeal the court order.

Taking into account that the Group has previously successfully appealed similar court orders, it is management's view that the Group will be again successful in cancelling such restrictions. However, as with other ongoing legal proceedings in Ukraine, there is a risk that the independence of the judicial system and its immunity from economic and political influences in Ukraine is not upheld and in that case there could be a material adverse impact on the Group and its shareholders. The next court hearing is scheduled for 20 March 2023.

As announced on 10 March 2023 on the Regulatory News Service of the London Stock Exchange, the Group transferred 9,513,000 shares from the treasury share reserves to the Group's employee benefit trust reserve. The shares were transferred on 9 March 2023, at a price of 140.3 pence per share, being the closing share price of the Company's ordinary shares on the London Stock Exchange on 8 March 2023. Please see the announcement for further information.

Following the transfer of the shares, the issued share capital of Ferrexpo plc consists of 613,967,956 ordinary shares of 10 pence each, of which 15,830,814 ordinary shares are held in treasury. As a result of this transfer, the interest of the Group's largest shareholder, Fevamotínico S.a.r.l (see Note 1 Corporate information for further information), in the voting rights of Ferrexpo plc is now 49.5%.

Other than the events disclosed above, there are no material adjusting or non-adjusting events that have occurred subsequent to the year end.

ALTERNATIVE PERFORMANCE MEASURES

When assessing and discussing the Group's reported financial performance, financial position and cash flows, management may make reference to Alternative Performance Measures ("APMs") that are not defined or specified under International Financial Reporting Standards ("IFRSs").

APMs are not uniformly defined by all companies, including those in the Group's industry. Accordingly, the APMs used by the Group may not be comparable with similarly titled measures and disclosures made by other companies. APMs should be considered in addition to, and not as a substitute for or as superior to, measures of financial performance, financial position or cash flows reported in accordance with IFRSs.

Ferrexpo makes reference to the following APMs in this statement.

C1 cash cost of production

Definition: Non-financial measure, which represents the cash cost of production of iron pellets from own ore divided by production volume of own production ore. Non-C1 cost components include non-cash costs such as depreciation, inventory movements and costs of purchased ore and concentrate. The Group presents the C1 cash cost of production because it believes it is a useful operational measure of its cost competitiveness compared to its peer group.

US\$000	Notes	Year ended 31.12.22	Year ended 31.12.21
C1 cash costs		503,975	626,561
Non-C1 cost components		36,035	71,339
Inventories recognised as an expense upon sale of goods	5	540,010	697,900
Own ore produced (tonnes)		6,053,397	11,220,260
C1 cash cost per tonne (US\$)		83.3	55.8

Underlying EBITDA

Definition: The Group calculates the underlying EBITDA as profit before tax and finance plus depreciation and amortisation, net gains and losses from disposal of investments and property, plant and equipment, share-based payments and write-offs and impairment losses. The underlying EBITDA is presented because it is a useful measure for evaluating the Group's ability to generate cash and its operating performance. See Note 3 Segment information to the consolidated financial statements for further details.

Closest equivalent IFRSs measure: Profit before tax and finance.

Rationale for adjustment: The Group presents the underlying EBITDA as it is a useful measure for evaluating its ability to generate cash and its operating performance. Also it aids comparability across peer groups as it is a measurement that is often used.

Reconciliation to closest IFRSs equivalent:

US\$000	Notes	Year ended 31.12.22	Year ended 31.12.21
Underlying EBITDA		765,113	1,438,759
Losses on disposal and liquidation of property, plant and equipment	5	(1,665)	(4,695)
Share-based payments		(490)	(856)
Write-offs and impairments	5	(260,308)	(235,618)
Depreciation and amortisation		(96,977)	(115,112)
Profit before tax and finance		405,673	1,082,478

Diluted earnings per share

Definition: Earnings per share calculated using the diluted number of Ordinary Shares outstanding.

Closest equivalent IFRSs measure: Diluted earnings per share.

Rationale for adjustment: Excludes the impact of special items that can mask underlying changes in performance.

Reconciliation to closest IFRSs equivalent:

	Year ended 31.12.22	Year ended 31.12.21
Earnings for the year attributable to equity shareholders – per share in US cents		
Basic	37.41	148.2
Diluted	37.35	147.9

Net cash/(debt)

Definition: Cash and cash equivalents net of interest-bearing loans and borrowings.

Closest equivalent IFRSs measure: Cash and cash equivalents.

Rationale for adjustment: Net cash/(debt) is a measurement of the strength of the Group's balance sheet. It is presented as it is a useful measure to evaluate the Group's financial liquidity.

Reconciliation to closest IFRS equivalent:

US\$000	Notes	As at 31.12.22	As at 31.12.21
Cash and cash equivalents	13	112,945	167,291
Interest-bearing loans and borrowings – current	14	(5,194)	(48,206)
Interest-bearing loans and borrowings – non-current	14	(1,354)	(2,143)
Net cash		106,397	116,942

Capital investment

Definition: Capital expenditure for the purchase of property, plant and equipment and intangible assets.

Closest equivalent IFRSs measure: Purchase of property, plant and equipment and intangible assets (net cash flows used in investing activities).

Rationale for adjustment: The Group presents the capital investment as it is a useful measure for evaluating the degree of capital invested in its business operations.

Reconciliation to closest IFRSs equivalent:

US\$000	As at 31.12.22	As at 31.12.21
Purchase of property, plant and equipment and intangible assets (net cash flows used in investing activities)	161,010	360,869

Total liquidity

Definition: Sum of cash and cash equivalents, available committed facilities and undrawn uncommitted facilities. No committed facilities outstanding as at 31 December 2022 and the end of the comparative year ended 31 December 2021. Uncommitted facilities include trade finance facilities secured against receivable balances related to these specific trades. See Note 14 Interest-bearing loans and borrowings for further information.

Closest equivalent IFRSs measure: Cash and cash equivalents.

Rationale for adjustment: The Group presents total liquidity as it is a useful measure for evaluating its ability to meet short-term business requirements.

Reconciliation to closest IFRSs equivalent:

US\$000	Notes	As at 31.12.22	As at 31.12.21
Cash and cash equivalents	13	112,945	167,291
Undrawn uncommitted facilities		–	97,854
Total liquidity		112,945	265,145