Near and long term growth in copper

KAZ MINERALS

ANNUAL REPORT AND ACCOUNTS
2018

KAZ Minerals is a high growth copper company focused on large scale, low cost open pit mining in the CIS region, with a proven track record for the successful delivery of greenfield mining projects.

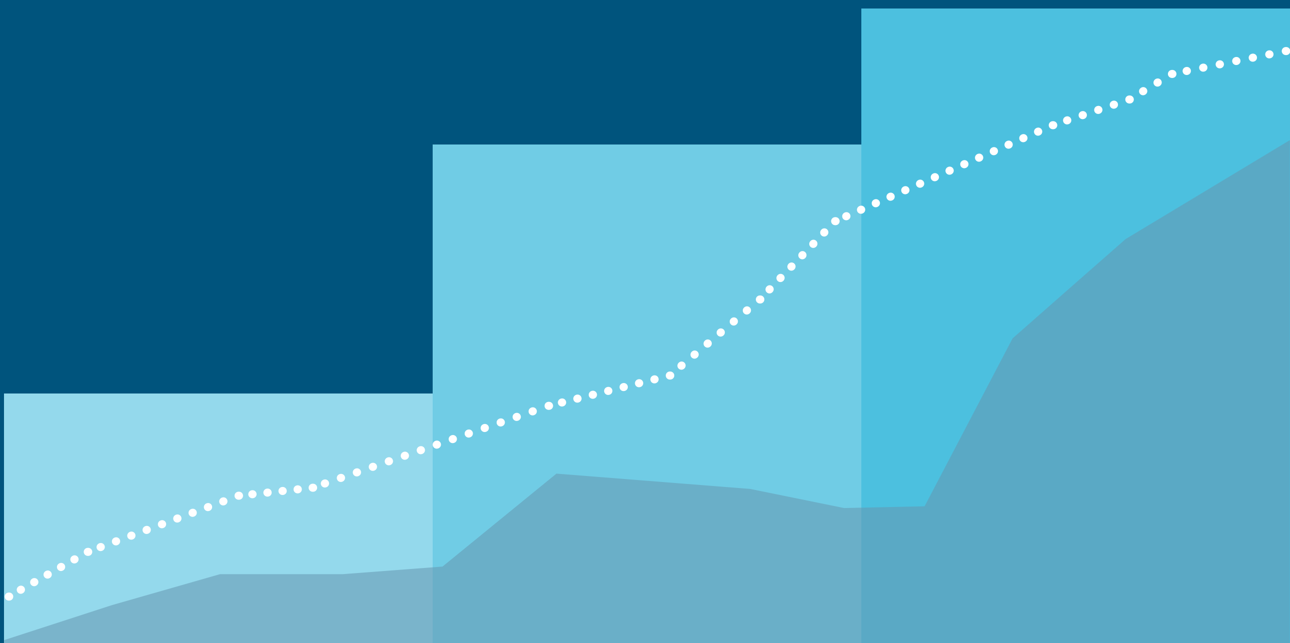
The Group has established a pipeline of value-accretive growth projects which will deliver near and long term growth and maintain its position in the first quartile of the global copper cost curve.

Contents

1 Definitions of Alternative Performance Measures used throughout this report are included in this section.

The copper market is forecast to enter a supply deficit in the medium term as output from existing mines declines and demand from traditional and new sources continues to grow.

Increased copper output is essential for the global transition to renewable energy generation and to support increased utilisation of low emission transportation technologies, such as electric vehicles.



PROVEN TRACK RECORD

>50%

Copper production CAGR 2015-18

- 2018 copper production of 295 kt
- Bozshakol and Aktogay mines ramped up successfully
- Achieved annual copper production guidance for 10 years
- Amongst the lowest operating costs globally

NEAR TERM GROWTH

+80 kt

Aktogay expansion project

- Adds 80 ktpa from 2022-27, 60 ktpa thereafter
- $1.2 billion project budget
- Low risk growth, identical to recently constructed facilities
- Low cash cost, 100-120 USc/lb 2022-27
- Low capital intensity of $15,000/t

LONG TERM GROWTH

500 kt

Group annual copper production from 2027

- Baimskaya acquired in January 2019, a rare opportunity for transformational growth in copper
- Potential greenfield development of a large scale, low cost open pit mine in Chukotka
- $5.5 billion capex, first copper production in 2026
- Significant NPV and attractive IRR

2015 2018 2021 2024 2027

A proven track record

KAZ Minerals operates the recently constructed Bozshakol and Aktogay open pit copper mines in Pavlodar and the East Region of Kazakhstan, three underground mines in the East Region of Kazakhstan and the Bozymchak copper-gold mine in Kyrgyzstan.

Bozshakol
- Large scale open pit mine
- 1,019 Mt of mineral resources with a copper grade of 0.37%
- Copper production of 102 kt in 2018
- Gold, silver and molybdenum by-products

Bozymchak
- Copper-gold open pit mine in Kyrgyzstan
- 15 Mt of mineral resources with a copper grade of 0.78% and gold grade of 1.3 g/t
- Produced 7 kt copper and 40 koz gold in 2018

Aktogay
- Large scale open pit mine
- 1,632 Mt of mineral resources with a copper grade of 0.33%
- Copper production of 131 kt in 2018
- Expansion underway to double processing capacity by 2021

East Region
- Underground operations
- Three mines and associated concentrators
- 36 Mt of mineral resources with a copper grade of 2.48%
- Copper production of 55 kt in 2018 with significant zinc, gold and silver by-products

2018 revenues by product (%)

Pipeline of growth

Aktogay expansion project

In December 2017, the Group approved a project to double sulphide processing capacity at Aktogay through the construction of a second concentrator.

Near term growth

Additional copper production expected in 2021

Low risk brownfield expansion

Identical design to two existing concentrators at Bozshakol and Aktogay

Low capital intensity, $15,000/t

$1.2 billion project for additional 80 ktpa copper production

Baimskaya copper project

In August 2018, the Group announced the acquisition of the Baimskaya copper project in the Chukotka region of Russia. Baimskaya is one of the world's most significant undeveloped copper assets with the potential to become a large scale, low cost, open pit copper mine.

Continues industry leading growth in copper

Expected output of 250 kt copper and 400 koz gold per annum over the first 10 years, with a mine life of 25 years

Value-accretive growth

Baimskaya will double the Group's copper production at a lower capital intensity than the Bozshakol and Aktogay projects and will operate with first quartile cash costs

Proven project delivery capability

Successfully delivered Bozshakol and Aktogay projects with similar geology, climate and operational challenges

Government support

Located in a region identified as strategically important for economic development. Power and road infrastructure to be funded by the Russian Government

Baimskaya is a world class copper asset

JORC resources 9.5 Mt of copper, average grade 0.43% and 16.5 Moz of gold, average grade 0.23 g/t. Low strip ratio of 0.8

Tax incentives

TASED tax incentive scheme significantly reduces MET and corporate income tax payable in first 10 years of profit

Value-accretive growth

	Low capital intensity ($/t[1])	Low operating costs (USc/lb[2])	Transformational volume growth (Copper equivalent production, ktpa[3])
Aktogay	17,700	100 – 120	110
Bozshakol	17,200	70 – 90	125
Aktogay II	15,000	100 – 120	80
Baimskaya	16,700	FIRST QUARTILE	330

1 Approximate capital expenditure per ktpa copper equivalent production calculated as capital expenditure divided by forecast annual copper equivalent production for the first 10 years after commissioning (2022-27 for Aktogay II).

2 Net cash cost guidance range in USc/lb for first 10 years of operations (2022-27 for Aktogay II), in 2016 terms. Baimskaya operating costs subject to bankable feasibility study.

3 Copper equivalent production guidance for first 10 years of operations (2022-27 for Aktogay II). Total copper equivalent production units consisting of copper production, plus gold production converted into copper units assuming analyst consensus long term price forecast of $6,700/t for copper and $1,300/oz for gold.

Continuing our high growth strategy

"The medium term fundamentals for copper are strong and support the Group's strategy of investing in large scale, low cost copper projects."

In 2018, KAZ Minerals has delivered a strong operational performance and progressed its high growth strategy, securing a new world class copper project through the acquisition of the Baimskaya licence area in Russia. In the near term we are focused on the expansion of Aktogay, where work has commenced on a $1.2 billion project to double processing capacity, adding 80 ktpa of additional copper production from 2022.

Health and safety

Providing our employees and contractors with a safe working environment is the Group's highest priority. While fatalities are on a long term downward trend, I am disappointed to report that there were four fatalities at our underground mining operations during 2018. The Board HSE Committee visited the Group's operations twice during the year to monitor progress on the initiatives we are implementing to improve safety culture and performance, in particular at our underground mines in the East Region.

The Group's open pit mines of Bozshakol, Aktogay and Bozymchak have operated without any fatal incidents for a total of 38 million man hours, reflecting the strong safety culture that we have established at these operations. The Group is committed to its goal of zero fatalities across all assets and we will continue to devote the necessary resources to achieve this.

Near and long term growth in copper

The Group has built a track record of delivering large scale, open pit copper projects in the CIS region through the successful execution of the Bozshakol and Aktogay projects. Copper production from these mines has ramped up to achieve an industry leading annual growth rate of over 50% from 2015 to 2018. 79% of our 295 kt copper production in 2018 was from our recently commissioned mines.

Looking forward, we believe the medium-term demand outlook for copper is robust. There is a global trend towards investment in highly copper intensive renewable energy generation, supported by new sources of demand such as the growing use of electric vehicles. Copper supply will be challenged as head grades at operating mines across the world are declining and resources depleting. We have reviewed a large number of potential copper projects and the results of this exercise reinforced our view of a growing copper supply deficit over the next decade. Large scale copper projects with attractive operating costs are scarce and many face significant execution challenges.

Through our commitment to the Aktogay expansion project and the acquisition of Baimskaya we have now established a pipeline of value-accretive projects which will enable the Group to continue to deliver transformational growth in copper into a strengthening market, whilst maintaining our position as a first quartile producer on the cost curve.

Aktogay expansion project

The Aktogay expansion was approved by the Board in December 2017 and is expected to double Aktogay's sulphide ore processing capacity by the end of 2021 through the construction of an additional concentrator and crusher. This is a relatively low risk brownfield project which will deliver near term material copper production growth, with first output from the new plant expected in 2021, contributing 80 ktpa from 2022-27, and 60 ktpa thereafter. The design of the new processing facility is identical to the original Bozshakol and Aktogay sulphide concentrators and this will be the third such plant constructed by the Group.

In 2018, the Group locked-in pricing on certain key long lead items from equipment suppliers and commenced preparatory earthworks ahead of the main structural construction phase beginning in 2019. Our recent experience in building facilities of this type will enable us to execute a greater proportion of the project using the Group's in-house management capabilities than we did with Bozshakol or Aktogay, working closely with proven local and international contractors and suppliers.

Baimskaya

Our review of potential growth projects identified the Peschanka deposit in the Baimskaya licence area as a rare opportunity to acquire a globally significant greenfield copper resource, which is located in a similar geographic region to our existing operations. Peschanka is a large scale, copper porphyry deposit with a low strip ratio and the project has certain construction and operating challenges in common with our recently commissioned open pit mines in Kazakhstan. The average copper and gold grades at Peschanka are higher, whilst capital intensity is lower than both Bozshakol and Aktogay, based on our expectation of copper equivalent output of 330 kt over the first 10 years.

After a due diligence process led by our experienced projects team with support from external consultants, the Board approved the acquisition of the Baimskaya licence area in August 2018 for a total consideration of $900 million, comprising an initial cash payment of $436 million and 22.3 million shares with the remaining consideration expected to be payable in KAZ Minerals shares. A share lock-up period and the deferred consideration structure aligns the interests of the Vendor with KAZ Minerals in commencing copper production from the asset as early as possible and allows the Vendor to participate in the upside from the successful delivery of the project, as shareholders of the Group. Initial Completion took place on 22 January 2019, following receipt of the required government approvals and the satisfaction of other conditions precedent.

We have appointed Fluor to conduct a bankable feasibility study of the Peschanka deposit and work on this is underway, with the results expected to be announced to the market in the first half of 2020. This will include guidance on the timing of capital expenditure, expected production volumes, operating costs and sustaining capital expenditure. In parallel with the feasibility study, the Group will have discussions with banks on financing the construction phase and evaluate the potential for partnering.

Delivering for all stakeholders

KAZ Minerals is a responsible developer and operator of copper mines and we seek to balance the interests of all stakeholders in our business. See page 50 for more details on our Corporate Values.

As a major investor in Kazakhstan, the Group has generated growth in industrial output, export earnings, GDP and employment through the delivery of the Bozshakol and Aktogay projects. The Group paid taxes of $368 million in 2018 in Kazakhstan and our total economic value distributed was over $1.4 billion (see pages 46 and 48 for more details).

KAZ Minerals supports a social investment programme focused on healthcare, education, infrastructure, culture and sport to help build on the strong relationships that exist with the communities in the regions of our operations and to support the development of Kazakhstan at a national level.

As we have increased output from our recently launched open pit mines, the energy and CO_2 intensity of our operations has reduced significantly. Energy intensity measured as TJ/kt of ore processed has reduced every year from 2015 to 2018, falling from 0.86 TJ to 0.22 TJ. In the future, the CO_2 intensity of our operations is expected to improve further, as we benefit from economies of scale at the expanded Aktogay facilities. Future production from Baimskaya will primarily be powered by energy from carbon-free sources.

KAZ Minerals continues to be a sector leader in gender equality, with a rate of female participation in the workforce of 23%, amongst the highest in the industry. The proportion of women employed is also reflected at senior management level and I am pleased to report that two of the Group's senior female professionals were recognised in this year's '100 Global Inspirational Women in Mining 2018' awards.

Dividends

The Group's dividend policy, established at the time of Listing, is for the Board to consider the cash generation and financing requirements of the business before recommending a suitable dividend. This maintains flexibility, which is appropriate given the underlying cyclicality of a commodity business and the Group's growth ambitions.

In Bozshakol and Aktogay, the Group has a portfolio of large scale, low cost operations which are highly cash generative and have performed strongly in the year. This has enabled the rapid de-gearing of the balance sheet, with the Group's net debt to EBITDA ratio at 1.5x at 31 December 2018. Accordingly, the Board has recommended a final dividend of 6.0 US cents per share. Combined with the interim dividend of 6.0 US cents per share, the dividend in respect of the 2018 financial year is 12.0 US cents per share.

An initial cash payment of $386 million for the Baimskaya acquisition has been paid from existing liquidity, with a further $50 million cash payment expected to be settled in 2019. The financing requirements of the Baimskaya project construction including the capital budget, phasing, sources of funding and partnering options will be assessed during the feasibility study, following which the Board will further review the Group's allocation of capital.

Outlook

In the second half of 2018, short term macroeconomic concerns and a lower than average level of supply disruption weighed on the copper price. However, the medium term fundamentals for the copper market remain strong and support the Group's strategy of investing in large scale copper projects that will deliver value-accretive growth. Together, the Aktogay expansion and Baimskaya projects offer an industry leading pipeline of near and long term growth, which will enable the Group to double copper production while maintaining its position in the first quartile of the global cost curve.

Oleg Novachuk
Chair

Low costs for the long term

"The Group is firmly established as a first quartile producer on the copper cash cost curve and we expect to continue to benefit from the structural factors which underpin this."

KAZ Minerals achieved high growth in production, earnings and free cash flow from its portfolio of low cost copper mines in 2018. Copper production increased by 14% to 295 kt (2017: 259 kt) and the Group maintained its position in the first quartile of the cost curve with a net cash cost of 85 USc/lb, amongst the lowest of any pure play copper producer globally. With the new Bozshakol and Aktogay mines fully ramped up, the Group is now focused on operating consistently at design capacity and identifying opportunities to improve efficiency and reduce costs in existing operations, while planning ahead for the future growth to be delivered from the Aktogay expansion and Baimskaya copper project in Russia.

Health and safety

The Group prioritises its health and safety performance and I am disappointed to report that four fatalities occurred as a result of three incidents in our underground mining operations in the East Region during 2018. No fatality is ever acceptable and we are focused on our goal of operating with zero fatalities.

The number of fatalities continues to be on a long term downward trend. Our open pit mines at Bozymchak, Bozshakol and Aktogay have all operated with zero fatalities since the commencement of mining operations. A strong safety culture and a high degree of compliance with safety procedures has been established and maintained at these mines and we strive to raise standards at our underground mines to the same level. In 2018, we conducted detailed health and safety audits at all our mines and held Group wide workshops, bringing together managers from different operations to share best practice. We have also invested in improving our emergency response and medical support capabilities. To address longer term occupational health issues, we have established new industrial hygiene guidance, medical support standards and rehabilitation and return to work procedures.

Our employees

The Group employs approximately 14,000 staff and 8,000 contractors. We are committed to providing fair remuneration, a safe working environment and ongoing professional development for all our people, as set out in our Corporate Values (see page 50 for more details). We recognise the crucial role of our employees in delivering the Group's success and I would like to thank our staff, whose contribution has enabled the Group to perform well in 2018.

Review of operations

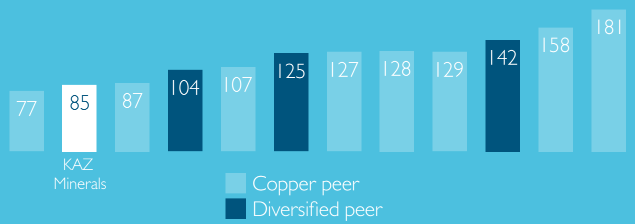
Copper production in 2018 was 295 kt, compared with guidance of 270-300 kt (2017: 259 kt). Achieving the upper end of the copper production range was largely due to output from Aktogay where a well-executed ramp up, consistent periods of operation at design capacity in both the sulphide and oxide plants and a strong copper grade delivered output of 131 kt (2017: 90 kt), which was above the top of the guided range of 110-130 kt. Bozshakol increased its ore processed to 28.5 Mt in 2018, including over 15 Mt processed in the second half of the year, approaching its design capacity of 30.0 Mtpa. Bozshakol achieved the upper half of the guided range for copper production of 95-105 kt, with full year output of 102 kt (2017: 101 kt). The East Region and Bozymchak produced 62 kt of copper (2017: 67 kt), slightly below guidance of c.65 kt.

Group gold production of 183 koz was 3% higher than 2017 as increased processing volumes at Bozshakol more than offset the decline in average gold grades across the Group to 0.31 g/t (2017: 0.33 g/t). Silver output of 3,511 koz was in line with the prior year (2017: 3,506 koz) as lower output from the East Region and Bozymchak mines was replaced by increased silver production from the ramp up of Aktogay. Zinc in concentrate production declined by 14% to 50 kt (2017: 58 kt), as mining moved through transitional areas at Artemyevsky with lower than anticipated zinc grades.

Production outlook

Ore processing volumes at Bozshakol and Aktogay are expected to be higher in 2019 compared with 2018 as both facilities operate at or close to design capacity for the full year, though at Aktogay this will be partially offset by a reduction in the average copper grade processed. Copper production guidance for Bozshakol is set at 105-115 kt for 2019 and 130-140 kt for Aktogay, including c.25 kt of oxide copper production. Combined with East Region and Bozymchak output of around 55 kt, Group copper guidance for 2019 is for production in the region of 300 kt. Gold production is expected to be 170-185 koz in 2019, as lower gold grades are offset by higher ore throughput at Bozshakol. Group silver output in 2019 is guided to be approximately 3,000 koz.

Low cost



In 2018 the Group continued to rank amongst the lowest cost copper producers globally, with a net cash cost of 85 USc/lb and an EBITDA margin of 61%[1]

Group net cash cost 2018

85

USc/lb

High growth

The Group has grown copper production from 85 kt in 2015 to 295 kt in 2018, as Bozshakol and Aktogay ramped up towards design throughput capacity

Copper production CAGR

>50%

FY 2015-18

1 The first quartile cut-offs according to Wood Mackenzie for 31 December 2016, 2017 and 2018 were 102 USc/lb, 105 USc/lb and 108 USc/lb, respectively.
Source for copper and diversified peers: Company data, most recently reported financial period.

Financial performance

The Group generated $2,162 million of revenues in 2018, an increase of 12% compared with $1,938 million in the prior year due to increased production volumes and higher copper prices. The average LME copper price in 2018 of $6,526/t was 6% higher than 2017, although prices were volatile, reaching a four year high of $7,263/t in June before declining to a low of $5,823/t in September.

The Group recorded EBITDA of $1,310 million, representing an increase of 6% compared with Gross EBITDA of $1,235 million in 2017, as higher production volumes and copper prices were offset by the increase in unit costs, mainly due to the ramp up of Aktogay. Operating profit increased by 19% to $851 million (2017: $715 million). Free Cash Flow increased by 29% to $585 million (2017: $452 million) and cash flow from operations reduced to $673 million (2017: $752 million) due to the receipt of $232 million of net non-current VAT refunds in 2017.

Unit costs

Supported by increased production volumes and a weaker tenge in the second half of the year, the Group continued to operate with one of the lowest net cash costs of any pure play copper producer globally, with all divisions in the first quartile of the industry cost curve in 2018. Group gross cash costs were 4% higher in 2018 at 144 USc/lb (2017: 138 USc/lb), mainly due to higher unit costs in the East Region. The Group's net cash cost position increased to 85 USc/lb from 66 USc/lb in 2017 as expected, due to the greater share of production from the Aktogay mine, where by-product output is minimal. Aktogay ramped up sulphide ore processing volumes to 20.8 Mt from 12.9 Mt in 2017 and produced 45% of the Group's copper output in 2018, at a gross cash cost of 106 USc/lb and a net cash cost of 103 USc/lb, compared with 2018 gross cash cost guidance of 110-130 USc/lb. Bozshakol delivered a gross cash cost of 129 USc/lb against 2018 guidance of 130-150 USc/lb and a full year net cash cost of 58 USc/lb (2017: 54 USc/lb), supported by strong gold output of 128 koz (2017: 119 koz). At 58 USc/lb in 2018, Bozshakol continues to operate below the ten year net cash cost guidance set in 2016 US dollar terms of 70-90 USc/lb over the first ten years of the life of the mine.

In the East Region and Bozymchak, gross cash costs increased by 17% to 244 USc/lb (2017: 208 USc/lb), compared with guidance of 230-250 USc/lb, as cost and wage inflation combined with a reduced copper output resulted in higher unit costs. The East Region and Bozymchak continued to operate within the first quartile of the cost curve with a net cash cost of 94 USc/lb (2017: 42 USc/lb), as by-product credits of 150 USc/lb were generated (2017: 166 USc/lb) from slightly lower gold, silver and zinc volumes compared with the prior year.

Balance sheet

Net debt reduced from $2,056 million at the 2017 year end to $1,986 million at 31 December 2018, as increased cash flow from operations was offset by the settlement of $281 million of deferred capital expenditure relating to the original Aktogay project and investment in the Aktogay expansion project amounting to $204 million in 2018. Gross borrowings reduced to $3,453 million at the year end (2017: $3,877 million) as the Group continued to pay down its debt facilities according to agreed schedules. Gearing, measured as a multiple of net debt to EBITDA, reduced to 1.5x from 1.7x at the end of 2017. Additional financing is required for the Aktogay expansion project, which the Board expects to obtain in the first half of 2019.

Financial guidance

Gross cash costs at Bozshakol are expected to benefit from improved throughput and stable copper grades in 2019 compared with 2018, with some upwards pressure from general mining cost inflation and increased maintenance costs. Gross cash cost guidance for Bozshakol is therefore held at the same level as guided in 2018, at 130-150 USc/lb.

The Aktogay sulphide concentrator operated at an average of 83% of design ore throughput capacity as it ramped up across 2018 and unit costs are expected to benefit from higher throughput in 2019, as the plant operates at or close to design capacity. This cost benefit will be offset by an expected reduction in the average copper grade processed from the elevated levels in 2018 and general mining inflation. Gross cash cost guidance for Aktogay is set at 105-125 USc/lb (in line with the 10 year guidance range of 100-120 USc/lb for the project over its first ten years of operation, in 2016 US dollar terms).

Gross cash costs in the East Region and Bozymchak are expected to be impacted by lower copper output, wage inflation and higher raw materials prices and 2019 guidance is set at 260-280 USc/lb, but will still benefit from significant by-product credits.

Sustaining capital expenditure in 2019 is expected to be in the region of $50 million in the East Region and Bozymchak. At Bozshakol and Aktogay, total sustaining capital expenditure in 2018 was $44 million compared with guidance of $65 million and approximately $20 million of spending has been carried forward into 2019. Sustaining capital expenditure guidance is therefore expected to be $50 million at Bozshakol and $50 million at Aktogay in 2019.

Excluding the Baimskaya copper project, expansionary capital expenditure in 2019 will comprise $400 million on the Aktogay expansion project, $70 million on the Artemyevsky II mine extension and approximately $20 million on continued technical studies at Koksay, funded by the $70 million investment into the Koksay entity by NFC which is expected to be completed in the first half of 2019. Final contractor retention payments of approximately $40 million at Bozshakol will be settled in early 2019 and approximately $70 million of expansionary capital expenditure will be incurred at Aktogay in 2019, largely to complete the second stage of heap leach cells.

In January 2019, the Group paid $386 million of cash consideration in respect of the acquisition of the Baimskaya licence area with a further $50 million payment expected to be made during 2019 following the release of a guarantee made by the acquired entity which is the legal owner of the Baimskaya licence. Expansionary capital expenditure on this project will mostly relate to the completion of a bankable feasibility study, with an estimated total spend of $70 million in 2019. Initial spend on site infrastructure may be considered later in the year. A capital expenditure profile for Baimskaya will be provided together with other project metrics following completion of the bankable feasibility study in the first half of 2020.

Outlook

With all of the Group's current mining operations now fully ramped up, we are focused on running our processing plants at their design capacity. The Group is firmly established as a first quartile producer on the copper cash cost curve and we expect to continue to benefit from the structural factors which underpin this, including low strip ratios, energy efficiency, favourable water and transport costs, automation and the use of modern, large scale mining and processing equipment.

The Group is entering an important phase in the construction of the Aktogay expansion project with the main structural works set to commence in 2019. This project will add 80 ktpa of copper production over the period 2022-27, at a low capital intensity of $15,000 per tonne of annual copper production. The additional cash flow generation from this low risk brownfield project will help to support our investment in the Peschanka deposit at Baimskaya, our longer term growth project, which is expected to start production in 2026.

Andrew Southam
Chief Executive Officer

Creating value for our stakeholders

KAZ Minerals is focused on the mining and processing of copper. The Group benefits from a number of strategic advantages which enable it to create value for its shareholders and other key stakeholders.

KEY INPUTS

Access to the key inputs required for the mining and processing of copper is the source of our competitive advantage and enables us to generate value for our stakeholders.

Natural resources

We have access to 3,289 Mt of measured and indicated mineral resources at our mining assets, with an average copper grade of 0.39%. The ore also contains by-products of gold, silver and zinc.

Power

Our operations in Kazakhstan benefit from competitive power tariffs and a domestic power surplus, enabling us to operate large scale facilities at low cost.

Water

We have access to readily available fresh water from groundwater and surface water sources. Our modern processing facilities recycle a high proportion of water consumed.

Transport

Our operations are connected to existing national rail networks which enable us to efficiently deliver our products to customers in China and Europe.

Labour

We employ approximately 14,000 people in our business. There is a skilled mining workforce in Kazakhstan.

Finance

$1.5 billion of gross liquid funds at 31 December 2018, supported by long term debt facilities.

Low cost operations

The Group's net cash cost in 2018 of 85 USc/lb was amongst the lowest of any pure-play listed copper miner.

EXPLORATION AND DEVELOPMENT

The Group seeks to develop natural resources, focusing on copper assets located in Kazakhstan and the CIS region.

0.39%
Average grade of copper in ore in mineral resources

3,289 Mt
Mineral resources (measured and indicated)

Development projects

MINING AND PROCESSING

The Group operates seven copper concentrators with a total sulphide ore processing capacity of c.60 Mtpa. 16 Mt of oxide ore was also processed via heap leaching in 2018.

Production

How we run our business

Health and safety

Safety is our highest priority.

Our target is zero fatalities and a reduction in the rate of injuries (TRIFR) at our operations.

Environment

We seek to minimise the impact of our activities on the environment. We report all material impacts in our Corporate responsibility report, see pages 47 to 64 for details.

Local communities

KAZ Minerals is a responsible operator and we seek to share the benefits of the development of natural resources with local communities.

For more information, see pages
17 Strategy
31 Operating review

SALE OF CONCENTRATE

77 Mt
Ore mined in 2018

0.63%
Copper grade of sulphide ore processed in 2018 (2017: 0.71%)

The majority of the Group's copper concentrate is supplied to smelter customers in China.

Zinc concentrate from the East Region is sold to customers in Kazakhstan, China and the CIS.

Treatment and refining

East Region and Bozymchak copper concentrate (and some material from Bozshakol and Aktogay) is toll processed into cathode in Kazakhstan at the Balkhash smelter.

Sale of finished metals

The Group sells finished metals from the Balkhash smelter and copper cathode produced from oxide ore at Aktogay.

Sales

Employees

The Group seeks to attract and retain skilled staff by offering safe working conditions and fair remuneration. We monitor our contractors and supply chain to prevent modern slavery.

Tax strategy

The Group takes a responsible and transparent approach to the management and control of its tax affairs.

Mine closure

KAZ Minerals is committed to rehabilitating mining sites after closure and periodically reviews and updates closure plans for each of its assets.

VALUE CREATION

Shareholders

We seek to deliver value for our shareholders, maximising value over the long term by investing in the construction of large scale, low cost copper mines with long mine lives that will generate value through the commodity cycle.

Customers

Our customers in China and Europe rely on our supplies of metal and concentrate. The copper we produce is used to construct power and transport infrastructure and housing, generate clean energy and in the manufacturing of consumer goods.

Suppliers

We prioritise local content where possible and require suppliers to meet our codes of conduct. Our Suppliers' Charter sets out the standards that we require of our suppliers. (see page 61 for further details).

Communities

We create jobs and business opportunities for local communities. We support local social projects. We engage with communities close to our operations and any proposed new development project to minimise harm and to share in the benefits of natural resource extraction (see page 62 for further details).

Our people

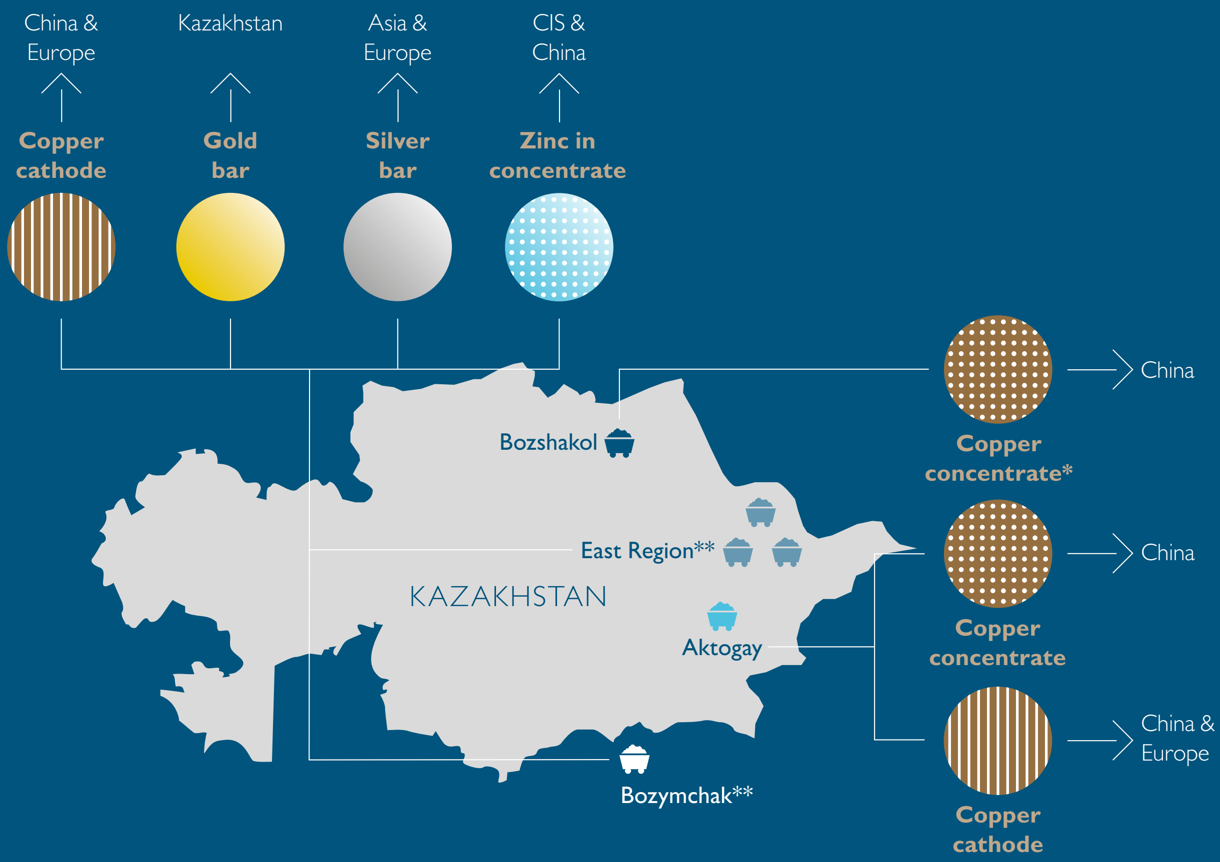
We invest in our people, helping them to further their careers. Professional development is one of our core corporate values (see page 60 for further details). We are committed to offering equality of opportunity to all, regardless of gender. 23% of our employees are female compared with an average of 15% for peers and we are working to increase this number.

Kazakhstan

We are a major economic contributor to Kazakhstan. Our tax contributions support the Government in providing public services and infrastructure. The Group funds social projects at local and national level.

Well positioned to benefit from growth in demand

Our asset base mainly consists of large scale, low cost copper mines. We are well positioned to benefit from the expected tightness in the copper market, as declining global supply coincides with continued growth in demand.



* Contains by-products of gold and silver in concentrate
** Copper cathode, gold bar and silver bar are produced under a tolling arrangement with the Balkhash smelter

Our products

The Group's revenues are primarily derived from the sale of copper with additional revenues from by-products of gold, silver and zinc. The Group's performance is therefore highly impacted by commodity prices, which reflect global supply and demand fundamentals, as well as market sentiment and the activities of financial investors. Commodity prices can be volatile and cyclical as a result of dependence upon geopolitical and macroeconomic factors. The outlook for the Chinese economy is of particular significance as it is the biggest consumer of copper and the main physical market for the Group.

Around 50% of the Group's revenues arise from the sale of copper concentrate, primarily to China, with some material sold to smelters in the CIS region. Copper concentrate is sold at a provisional LME copper price less TC/RCs, which is adjusted to a final price, typically the second month after delivery. A further 30% of Group revenue is derived from the sale of copper cathode, mainly to Chinese and European customers. Sales are made at a provisional LME price, which is adjusted to a final price, typically one month after delivery. Remaining revenues derive from by-products of gold, silver and zinc.

Growing demand for copper

Copper is essential for modern infrastructure, energy generation and transmission, transportation, communications, industrial machinery and electrical appliances.

+49%

Global copper consumption forecast to rise 49% by 2040

Source: Wood Mackenzie

Copper

2018 market performance

The average LME copper price during 2018 was $6,526/t, a 6% increase compared with $6,163/t in the prior year.

The positive momentum in copper markets at the end of 2017 continued into 2018, with copper trading above $7,000/t for the majority of the first quarter. A weaker dollar as well as market anticipation of possible supply disruption from labour disputes lent support to prices. A ban on low-grade scrap imports positively impacted demand for refined copper in China. The copper price achieved a four-year high of $7,300/t in June following the start of labour negotiations at Escondida and the suspension of the Tuticorin smelter in India. The average copper price during the first half of 2018 was $6,917/t.

Sentiment worsened significantly in the second half of 2018. The ongoing trade dispute between China and the USA contributed to increased global economic and political uncertainty. Anticipated disruptions to copper supply did not materialise, with copper prices falling sharply in August following a labour settlement at Escondida. A stronger dollar and an increase in US interest rates have also negatively impacted prices. The average copper price during the second half of 2018 was $6,143/t and copper finished the year at $5,965/t.

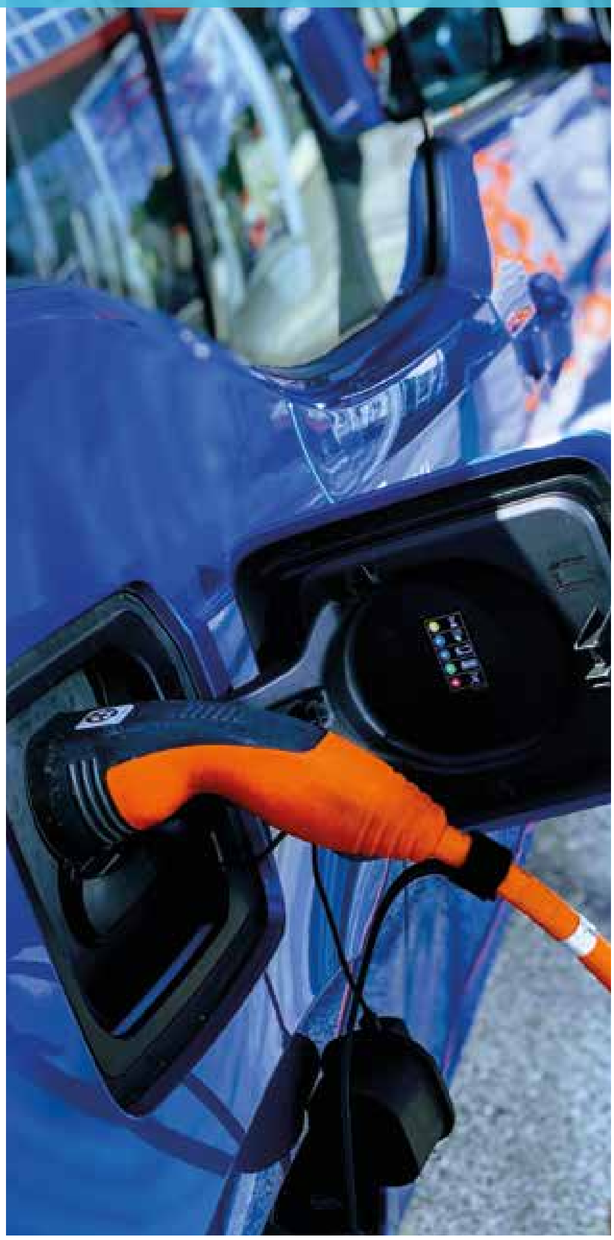
The physical copper market remained tight during 2018 and is expected to remain in a small deficit, with exchange stocks continuing to decline. However, market prices for copper have been heavily influenced by negative macroeconomic news flow rather than supply and demand fundamentals, finishing 2018 at prices below $6,000/t.

Average price movement compared to prior year

Copper	Gold	Silver	Zinc
+6%	+1%	-8%	+1%

Electric vehicles

The adoption of electric and hybrid vehicles and their associated charging infrastructure will need significantly more copper than the existing internal combustion fleet.



Market outlook

The long-term outlook for copper remains positive, despite the negative market sentiment at the end of 2018. There continues to be a broad consensus that the market for copper will enter a period of supply deficit over the medium term. Demand for copper will continue to grow, with sources of traditional consumption supported by new sectors such as renewable energy and electric vehicles. Copper supply is expected to be limited by declining ore grades, restricted investment and a lack of new major deposits. Large scale copper projects with the potential to fill the supply gap are scarce, with many projects facing significant economic, political and environmental challenges. With long lead times required to bring new production to market, this could result in a period of consistent supply-deficit and support higher copper prices.

In the short term the copper market is expected to remain tight as moderate demand increases are offset by new production. As a result, copper prices will continue to be volatile and susceptible to market sentiment.

By-products

2018 market performance

Gold prices were stable throughout 2018, generally trading in a range of $1,200 - $1,300 per ounce. The average price for the year of $1,268 per ounce was 1% above the prior year. Silver prices were weak, with an average price of $15.7 per ounce being 8% below the prior year. The silver market is expected to report a surplus in 2018 owing to weak demand factors from industrial usage.

Zinc was an underperformer amongst base metals in 2018 owing to increased market supply from new projects, which returned the concentrate market to balance after a period of deficit. The average LME zinc price was $2,922/t in 2018, 1% above the average price in 2017.

Market outlook

The outlook for gold and silver is highly dependent upon macroeconomic factors. Historically, silver and gold prices were correlated, but 2018 saw this relationship decouple, with silver becoming more dependent on demand from industrial usage. Gold prices could benefit from an increase in inflation or further global economic uncertainty as a source of portfolio insurance.

Forecast growth in the demand for zinc is expected to be met by increases in supply, with China being an important source. Environmental and regulatory scrutiny has curtailed production in China, but future consolidation in the mining sector could result in a resumption of supply growth from larger operations.

Market fluctuations: how we respond

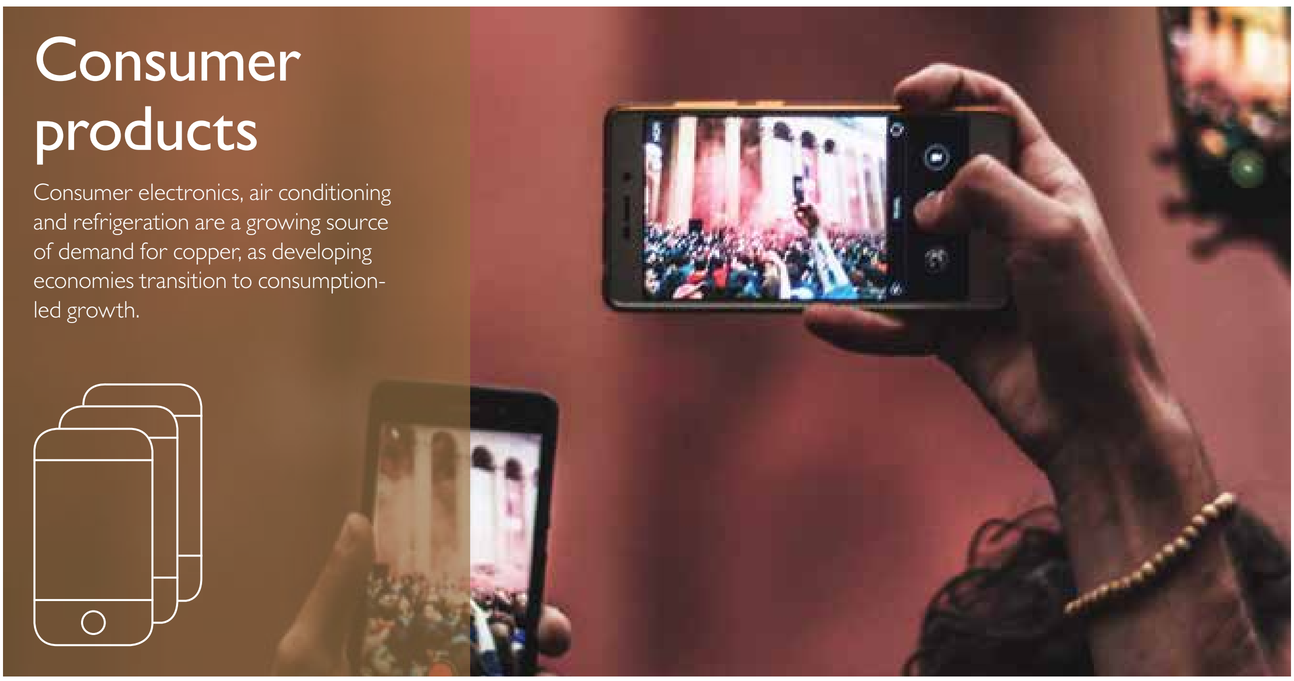
KAZ Minerals continually monitors commodity market and industry research. When performing business planning or assessing investment opportunities, the Group considers a range of commodity price cases and performs sensitivity analysis. The Group has cost competitive assets which can generate positive cash flow in a lower commodity price environment. The Group's operations are also located in close proximity to its key Chinese market.

The Group is not currently and does not normally hedge commodity prices but may enter into a hedge programme where the Board determines it is appropriate to provide greater certainty over future cash flows. In periods of lower prices, the Group has successfully reduced costs and been able to defer non critical expenditures.

Sensitivity analysis on prices

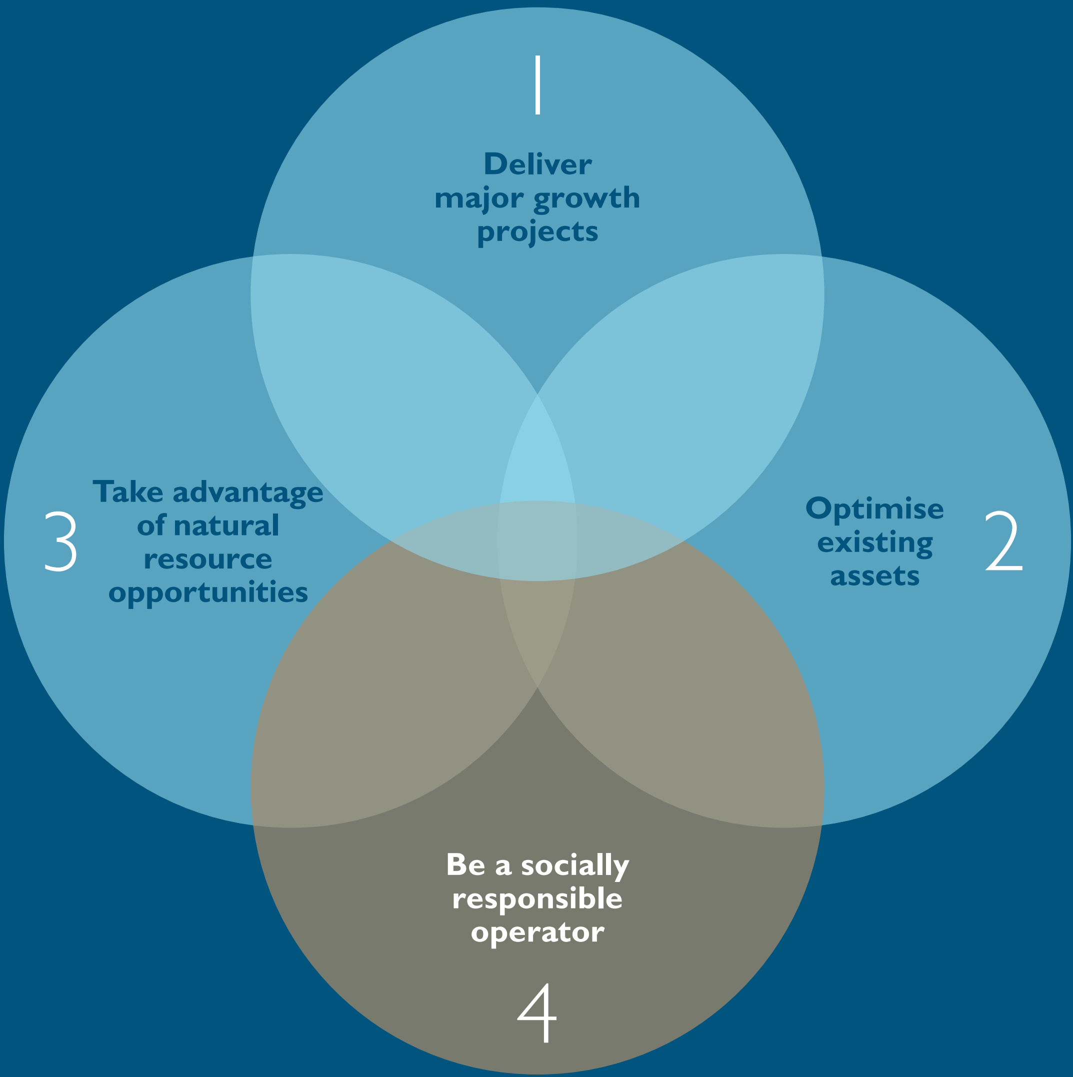
The approximate effect on EBITDA resulting from a 10% movement in the average realised commodity prices on the Group's results is shown below, assuming all other variables remain constant:

	Average realised price 2018	Impact of 10% price movement on EBITDA ($ million)
Copper sales ($/t)	6,002	178
Gold sales ($/oz)	1,260	21
Silver sales ($/oz)	16	6
Zinc sales ($/t)	2,015	10



Our strategy

The Group's strategy is reviewed and updated by the Board regularly. The success of the strategy is measured using relevant KPIs and risks are controlled through the risk management framework.



Vision

To be a leading developer and operator of large scale, low cost copper mines.

Objective

To deliver value for our shareholders whilst maintaining a strong social commitment to our employees, the environment and communities around us.

1

Deliver major growth projects

We seek to undertake growth projects which have the potential to deliver a high return on investment, including brownfield expansions of existing assets and new greenfield development projects

Relevant KPIs

- EBITDA
- Ore processed
- Net cash cost of copper sold
- Copper production
- Maintenance spend per tonne of copper produced
- Number of fatalities
- Total Recordable Injury Frequency Rate

Stated priorities for 2018

Bozshakol
- Sustained operation of main plant at design capacity
- Complete ramp up of clay plant

Aktogay
- Ramp up sulphide concentrator to design capacity during 2018

2018 performance

Bozshakol
- Processed 15,024 kt sulphide and clay ore in H2 2018, equivalent to 100% of annual design capacity across both plants

Aktogay
- Processed 20,766 kt sulphide ore over FY 2018, 83% of design capacity, including a sustained period at 100%
- 26 kt oxide production, maintained production at 100% of design capacity

Priorities for 2019

Aktogay expansion
- Keep construction of new $1.2 billion expansion project on budget and on schedule

2

Optimise existing assets

Improve health and safety, increase productivity and maintain low operating costs and sustaining capital expenditure

Relevant KPIs

- EBITDA
- Ore processed
- Net cash cost of copper sold
- Copper production
- Maintenance spend per tonne of copper produced
- Number of fatalities
- Total Recordable Injury Frequency Rate

Stated priorities for 2018

East Region
- Evaluate mine life extensions and nearby greenfield site potential
- Yubileyno-Snegirikhinsky mine site liquidation
- Seek operational efficiencies

Bozymchak
- Evaluate potential additional resources
- Seek operational efficiencies

Health and safety
- Zero fatalities, reduce injury rate

2018 performance

East Region
- Four fatalities
- Drilling carried out close to existing assets
- Yubileyno-Snegirikhinsky closure progressed

Bozymchak
- Zero fatalities
- Achieved or exceeded production and cost targets

Priorities for 2019

All assets
- Improve health and safety performance
- Seek operational and cost efficiencies
- Maintain competitive net cash cost position

Bozshakol
- Operate at design capacity

Aktogay
- Operate first sulphide concentrator at design capacity

East Region and Bozymchak
- Achieve production and cost targets

3

Take advantage of natural resource opportunities

Seek out natural resource opportunities, focusing on copper assets in Kazakhstan and the CIS region

Criteria for assessing new opportunities

- Focused on copper
- Large scale, >100 ktpa copper production
- Low cost
- Open pit
- Located in CIS region
- Attractive IRR and NPV generation

Stated priorities for 2018

- Commence Aktogay expansion project
- Evaluate any new opportunities identified

2018 performance

- Aktogay expansion commenced
- Acquisition of Baimskaya copper project approved

Priorities for 2019

Aktogay
- Progress Aktogay expansion project

Baimskaya
- Progress feasibility study
- Initial site infrastructure
- Discuss financing with potential lenders
- Assess partnering options

4

Be a socially responsible operator

KAZ Minerals is committed to maintaining high levels of corporate responsibility as we grow our business and share the benefits of natural resource extraction with our key stakeholders

Relevant KPIs

- Number of fatalities
- Total Recordable Injury Frequency Rate

Stated priorities for 2018

Health and safety
- Target zero fatalities
- Reduce injury rate

Environment
- Improve energy efficiency and CO_2 intensity

2018 performance

Health and safety
- 4 fatalities in underground operations
- Zero fatalities in open pit mines
- Zero fatalities from rock falls in underground operations
- Low injury rate (TRIFR) of 1.74

Environment
- Energy efficiency improved
- CO_2 intensity improved

Priorities for 2019

Health and safety
- Target zero fatalities
- Reduce injury rate

Environment
- Maintain energy efficiency
- Reduce water consumption at Bozshakol

Employees
- Improve professional development and communication

Communities
- Maintain community consultation initiatives
- Provide funding for social projects

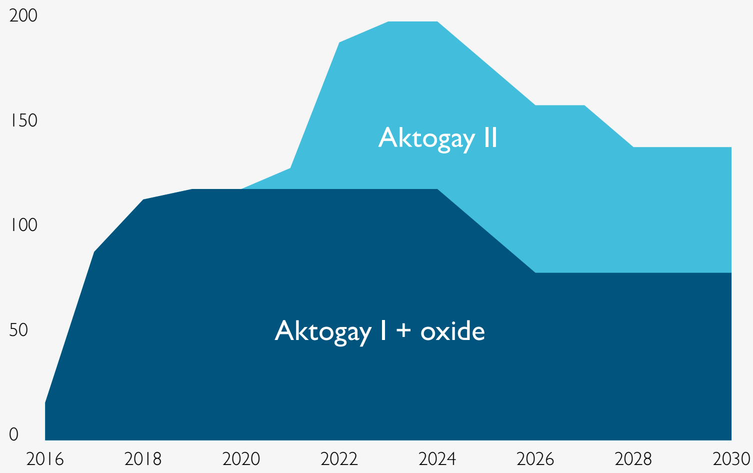
I

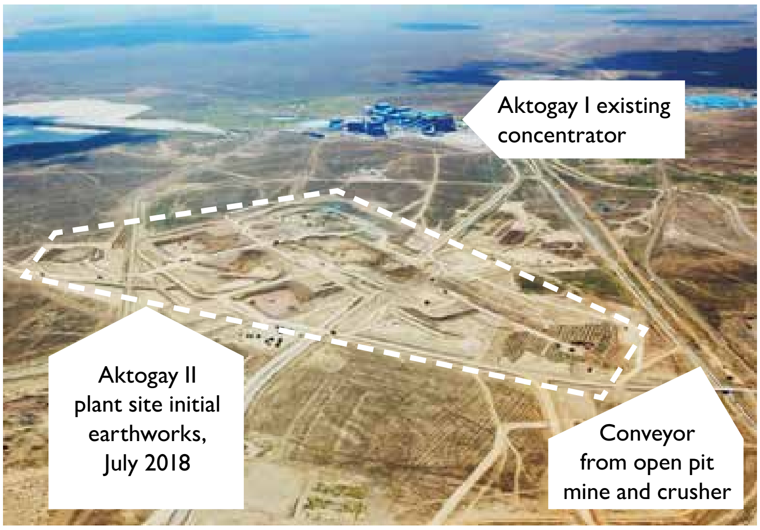
Aktogay expansion project

In December 2017 the Board approved a $1.2 billion expansion project to double the sulphide ore processing capacity of Aktogay from 25 million tonnes to 50 million tonnes, with first production expected in 2021.

The new sulphide concentrator will add c.80 kt of annual copper production from 2022-27 and c.60 kt from 2028 onwards. During 2018 initial excavations and earthworks were completed and long lead-time equipment orders were placed.

Indicative Copper Production Profile (kt)






$1.2bn
expansion project to double the sulphide ore processing capacity of Aktogay

2

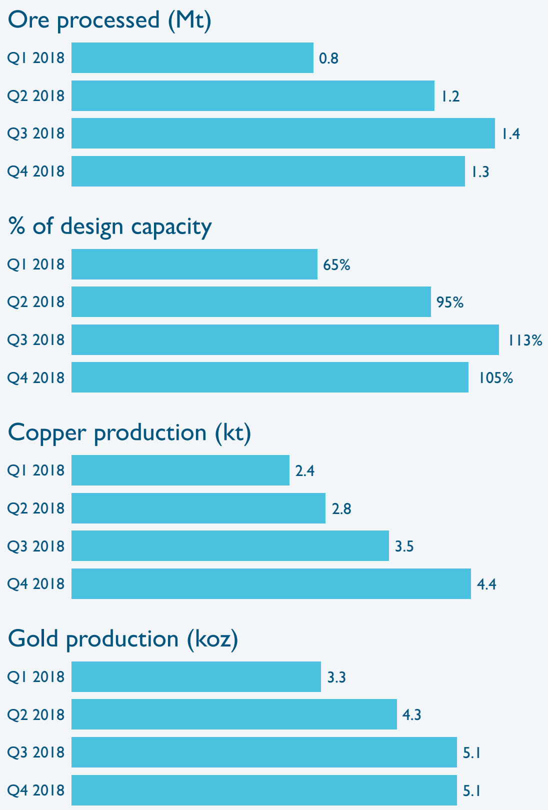
Bozshakol clay plant optimisation

The clay plant at Bozshakol has seen a significant improvement in ore throughput in 2018.

The plant was shut down for its first major maintenance in the first quarter of 2018. During the closure, optimisation works were undertaken on the crusher to install wear resistant crusher parts and backup equipment. After completion of the optimisation works, the plant operated at an average of 109% of design ore throughput capacity over the second half of 2018.

In 2018, the clay plant increased the quantity of ore processed by 38% to 4.7 Mt (2017: 3.4 Mt), producing 13 kt of copper and 18 koz of gold.

Production will be suspended for 2-3 months in the first half of 2019 to upgrade the water recycling system and reduce fresh water consumption.



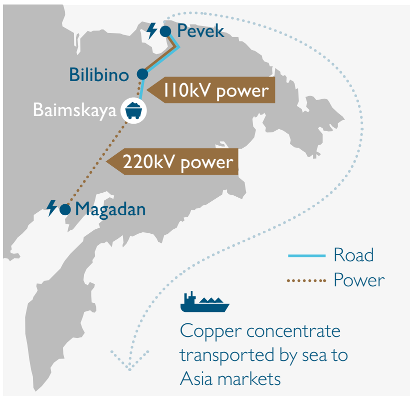

EUROCRANE
20/21
+38%
increase in quantity of clay ore processed in 2018

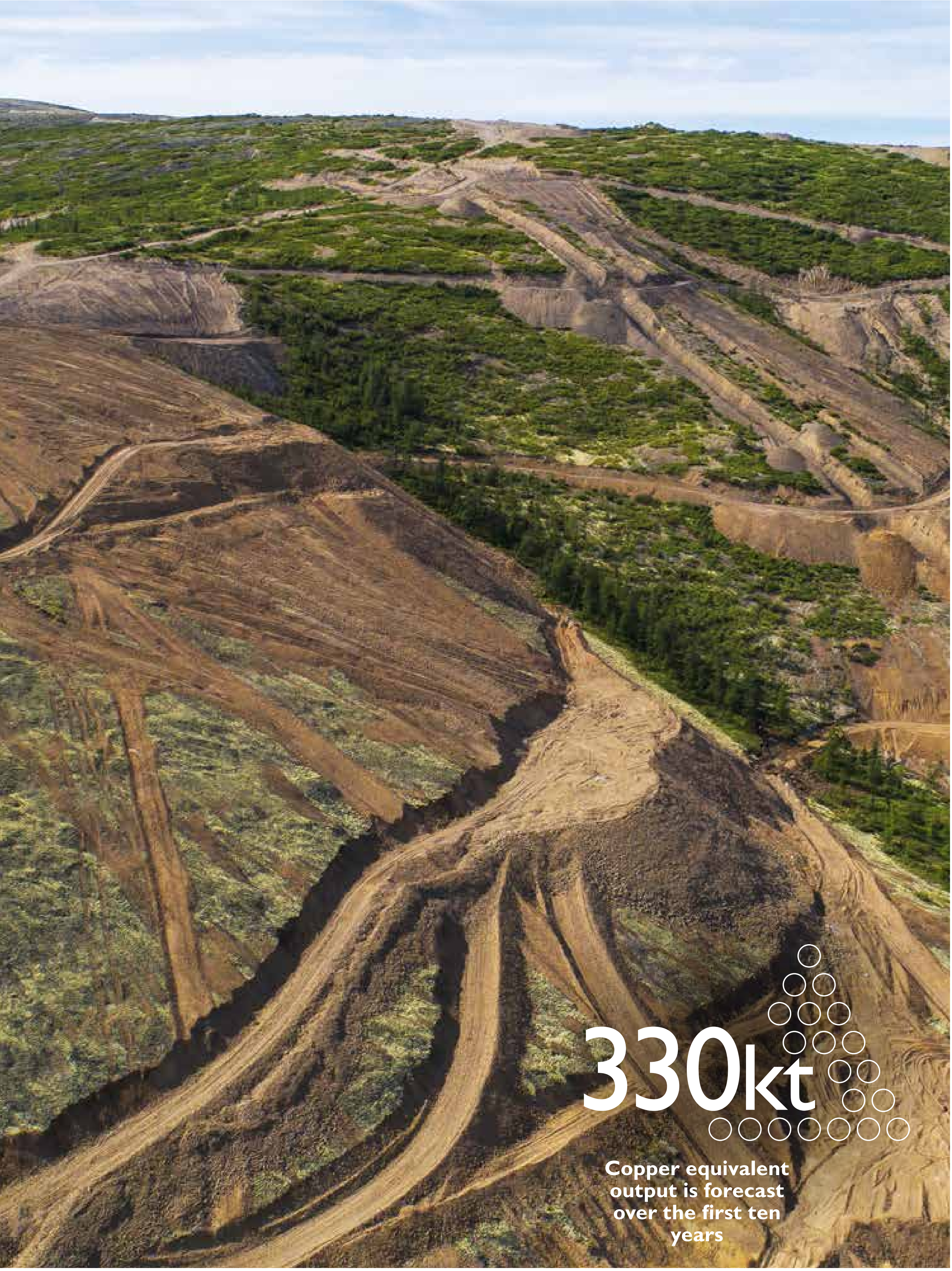
3

Baimskaya copper project

The Board approved the acquisition of the Baimskaya copper project in Russia in August 2018 for a total consideration of $900 million. The Peschanka deposit in the Baimskaya licence area is a large scale, copper porphyry with a low strip ratio of 0.8 and a strong gold by-product, making it a similar prospect to Bozshakol, the Group's first major growth project in Kazakhstan. Copper equivalent output is expected to be 330 ktpa over the first ten years.

		Measured	Indicated	Inferred	Total
Mineral resources	Mt	139	1,289	774	2,202
Copper grade	%	0.72	0.44	0.36	0.43
Contained copper	Mt	1.0	5.7	2.8	9.5
Gold grade	g/t	0.39	0.26	0.16	0.23
Contained gold	Moz	1.7	10.8	4.0	16.5
Silver grade	g/t	4.0	2.4	2.0	2.4
Molybdenum grade	ppm	140	120	90	110




330kt
Copper equivalent output is forecast over the first ten years

4

Investing in social projects

KAZ Minerals supports communities in Kazakhstan and Kyrgyzstan by investing in projects that benefit society close to its operations as well as national projects.

The Group seeks to support healthcare, education, infrastructure and sports projects. In the East Region of Kazakhstan the Group has provided funding for the purchase of medical equipment.

Measuring our progress

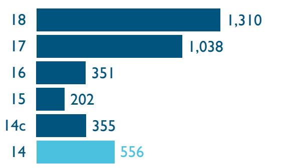
The Group's KPIs are regularly reviewed to ensure they remain relevant and are aligned with the Group's strategy and objective. The suitability and relevance of these KPIs will continue to be monitored in the future. The remuneration of the executive Directors is linked to the Group's performance as the annual bonus plan targets are aligned to the Group's KPIs and strategic priorities.

Objective deliver value for our shareholders

EBITDA[1]

($ million)

1,310



Relevance

This is a measure of the underlying profitability of the Group, widely used in the mining sector.

How we measure

EBITDA is earnings before interest, taxation, depreciation, depletion, amortisation, MET and royalties and special items.

2018 performance

EBITDA was $272 million above 2017 due to higher copper sales volumes from Bozshakol and Aktogay, supported by a higher average copper price. Prior year EBITDA was reduced by the capitalisation of Aktogay sulphide and Bozshakol clay plant EBITDA prior to achieving commercial production.

Aktogay EBITDA increased by $341 million to $530 million from $189 million in 2017 after the sulphide plant delivered a full year of commercial production. In 2017, EBITDA from sulphide operations of $185 million was capitalised prior to the plant achieving commercial production on 1 October 2017.

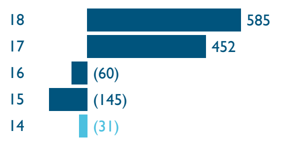
Bozshakol EBITDA of $520 million improved from $503 million in 2017 following a full year of commercial production from the clay plant. The prior year excluded $12 million of EBITDA from clay operations which was capitalised prior to the plant achieving commercial production on 1 July 2017.

East Region and Bozymchak EBITDA declined by 23% to $284 million (2017: $371 million) with sales impacted by lower processing volumes and reduced copper and zinc grades.

Free Cash Flow[1]

($ million)

585



Relevance

Monitors Group cash flows used to reduce debt, fund returns to shareholders and invest in the future growth and development of the business.

How we measure

Net cash flow from operating activities before capital expenditure and non-current VAT associated with expansionary and new projects less sustaining capital expenditure.

2018 performance

Group Free Cash Flow for the year improved by $133 million compared to the prior year with an inflow of $585 million (2017: $452 million) reflecting the inclusion of a full year of Aktogay sulphide and Bozshakol clay operations, after they were declared commercial during 2017.

Working capital increased by $115 million (2017: increase of $40 million) largely due to purchases of consumables to support the ramp up of Aktogay and Bozshakol and planned concentrator maintenance.

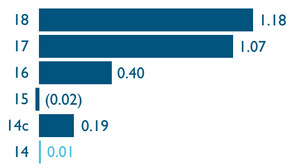
Sustaining capital expenditure increased to $85 million from $68 million in 2017 as maintenance activities at Bozshakol and Aktogay approach normalised levels following the ramp up of these operations.

MET payments increased from $151 million to $208 million, reflecting higher ore extraction volumes at Bozshakol and Aktogay and a higher average LME copper price in 2018.

EPS based on Underlying Profit/(Loss)[1]

($)

1.18



Relevance

EPS based on Underlying Profit/(Loss) can be used as an indication of profits available to shareholders for distribution or retention in the business.

How we measure

Profit/(loss) excluding special items and their resulting tax and non-controlling interest effects, divided by the weighted average number of ordinary shares in issue during the period.

2018 performance

EPS based on Underlying Profit/(Loss) increased to $1.18 per share from $1.07 per share in 2017.

Underlying Profit improved by $54 million to $530 million (2017: $476 million) largely due to increased operating profit from Aktogay of $224 million, reflecting the ramp up of sulphide operations in the year.

The increase in Group operating profit before special items of $137 million was partially offset by higher interest expenses on project borrowings, which were capitalised in 2017 prior to the Bozshakol clay and Aktogay sulphide plants achieving commercial production on 1 July 2017 and 1 October 2017 respectively.

1 Alternative Performance Measures (APMs) are used to assess the performance of the Group and are not defined or specified under IFRS. For further information on APMs, please refer to the APMs section on page 179.

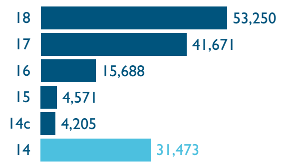
◆ 14c represents continuing operations only in 2014

The Group uses a set of Key Performance Indicators (KPIs) to monitor performance in the delivery of the strategic objective set out on page 17.

Strategic priorities optimise existing assets and deliver growth projects

Ore processed
(kt)

53,250



Relevance
Ore processed indicates the Group's ability to efficiently process ore that has been extracted, to maximise output.

How we measure
Kilotonnes of ore processed from our mining operations.

2018 performance
Ore processed of 53,250 kt was 28% higher than in the prior year (2017: 41,671 kt) driven by increased throughput at the Aktogay sulphide concentrator and additional volumes processed at Bozshakol as both plants reached design capacity.

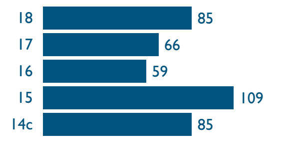
At Aktogay, 20,766 kt of sulphide ore was processed in 2018, a 60% increase versus 2017 (12,941 kt), reflecting the ramp up of operations at the sulphide plant.

At Bozshakol, ore processed increased by 16% to 28,454 kt (2017: 24,558 kt) due to the ramp up of the sulphide and clay concentrators in the year.

Ore processed at the East Region and Bozymchak mines was marginally lower than the prior year at 4,030 kt (2017: 4,172 kt), due to the processing of additional ore from the closed Yubileyno-Snegirikhinsky mine in the prior year.

Net cash cost of copper sold[1]
(USc/lb)

85



Relevance
This measures the performance of the Group in maintaining its low cost base while maximising revenues through the sale of by-products.

How we measure
Cash operating costs, including pre-commercial production costs, excluding purchased cathode, plus TC/RC on concentrate sales, less by-product Gross Revenues, divided by the volume of own copper sales.

2018 performance
Net cash cost of 85 USc/lb was above the prior year net cash cost of 66 USc/lb. Excluding the impact of by-product credits, the Group's gross cash cost in 2018 of 144 USc/lb increased compared to 138 USc/lb in 2017.

Bozshakol's gross cash cost of 129 USc/lb was above the 121 USc/lb in 2017 due to lower grades and normalisation of maintenance expenditure. After the deduction of gold and silver by-product revenues, net cash cost was 58 USc/lb (2017: 54 USc/lb).

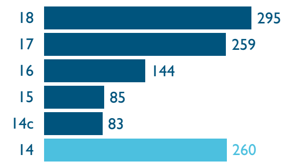
The net cash cost at Aktogay of 103 USc/lb was marginally higher than in the prior year (2017: 98 USc/lb) as the prior year benefited from higher grades and lower maintenance expenditure in the first year of sulphide operations.

East Region and Bozymchak reported a combined gross cash cost of 244 USc/lb, an increase compared to 208 USc/lb in 2017 following a reduction in revenue and inflationary pressure on operating costs. Net cash cost increased to 94 USc/lb (2017: 42 USc/lb) reflecting lower by-product sales.

KAZ Minerals has maintained its position as one of the lowest cost pure-play copper producers globally.

Copper production
(kt)

295



Relevance
Copper, the Group's principal product, represents 82% of revenue and its production is the main operational indicator.

How we measure
Payable copper metal in concentrate and copper cathode produced from oxide ore at Aktogay.

2018 performance
Copper production increased by 14% to 294.7 kt from 258.5 kt in 2017 due to a higher contribution from Aktogay sulphide operations which ramped up during 2018. Copper production was at the upper end of the Group's 2018 guidance of 270–300 kt.

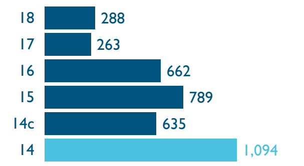
At Aktogay, total production rose to 131.4 kt (2017: 90.2 kt) benefiting from additional volumes from Aktogay sulphide which produced 105.7 kt (2017: 65.1 kt) with an average copper grade of 0.61% (2017: 0.66%). Production from the oxide operation remained consistent with the prior year at 25.7 kt.

At Bozshakol, copper production of 101.6 kt was in line with the prior year as increased throughput was offset by a reduction in the copper grade in sulphide ore processed from 0.52% in 2017 to 0.47% in 2018.

Copper production at East Region and Bozymchak of 61.7 kt was 8% below the 67.0 kt achieved in 2017 due to lower processing volumes and a decline in the copper grade in ore processed to 1.81% (2017: 1.89%).

Maintenance spend per tonne of copper produced[1]
($/t)

288



Relevance
Indicates how much cash is required to maintain current output and the efficiency of the Group's sustaining capital expenditure.

How we measure
Sustaining capital expenditure divided by copper production volumes.

From 2017 onwards, the KPI includes production and capital expenditure from all operations including Aktogay and Bozshakol as compared to 2016 and earlier years where the production and capital expenditure from Bozshakol and Aktogay were excluded.

2018 performance
Maintenance spend per tonne of copper produced increased by 10% to 288 $/t compared to 263 $/t in 2017 as maintenance costs associated with the Bozshakol and Aktogay operations normalise.

Bozshakol maintenance spend per tonne of copper produced has increased to 236 $/t in 2018 from 99 $/t in 2017 as sustaining capital expenditure rose by $14 million.

Aktogay maintenance spend per tonne of copper produced rose from 48 $/t in 2017 to 152 $/t in 2018 due to a $16 million increase in sustaining capital expenditure, partially offset by a 41 kt increase in copper production.

East Region and Bozymchak maintenance spend per tonne of copper produced reduced in 2018 to 648 $/t from 776 $/t in 2017 as lower capital expenditure was partially offset by lower production volumes.

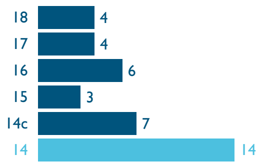
"Improving the Group's health and safety performance is our highest priority and we have seen material improvements in this critical area over the longer term. We will continue to invest and implement procedural and cultural changes in pursuit of our goal of operating with zero fatalities."

Andrew Southam
Chief Executive Officer

Health and safety targeting zero fatalities

Number of fatalities (employees and contractors)

4



Relevance
A key measure of the Group's operational health and safety performance

How we measure
The number of employee and contractor fatalities directly occurring from an occupational injury or disease at the Group's operations during the year. The definition of an occupational fatality is taken from the ICMM health and safety performance indicators published in January 2014, which the Group adopted in 2015.

2018 performance
Four employee fatalities occurred in 2018 in the Group's underground mines in the East Region (2017: 4). KAZ Minerals considers all fatalities to be avoidable and has a target of zero fatalities.

The number of fatal incidents is lower than five years ago and is on a long term downward trend.

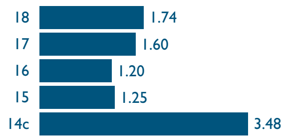
No fatalities have occurred in any of the operational teams at Bozshakol, Aktogay or Bozymchak from the commencement of production through to the end of 2018.

Following investment in improved ground control in the East Region mines, there were zero fatalities resulting from rock fall in 2018.

In 2019, the Group will focus on improving hazard identification and on strengthening the leadership and cultural foundations for safe and productive work.

Total Recordable Injury Frequency Rate (TRIFR)

1.74



Relevance
TRIFR measures the frequency of occupational injuries occurring at the Group's operations and is therefore a key indicator of our health and safety performance.

How we measure
The number of Total Recordable Injury (TRI) cases occurring for every million man-hours worked during the year. The definitions of TRI and TRIFR are taken from the ICMM health and safety performance indicators published in January 2014.

2018 performance
The average TRIFR for ICMM members in 2017 was 3.94, compared to the TRIFR for the Group in 2018 of 1.74.

The reporting of minor injuries and near misses are important management tools for improving health and safety performance, and a culture of open reporting has been successfully implemented in the new Bozshakol and Aktogay mines. The Group is working to encourage a similar reporting culture across all assets and therefore the reporting of minor injuries and near misses may increase in the short term.

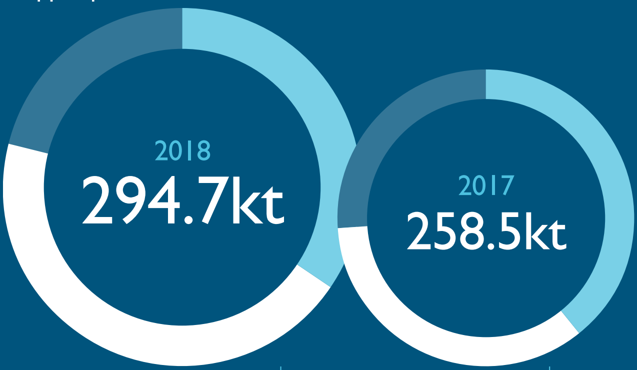
There were 61 TRI cases in 2018 (2017: 51) and TRIFR increased by 9% to 1.74, from 1.60 in the prior year. The main causes of injury across the Group were falls and rock falls.

Review of operations

The Group's operations in 2018 comprised the Bozshakol and Aktogay open pit copper mines in the Pavlodar and East regions of Kazakhstan, three underground mines in the East Region of Kazakhstan, the Bozymchak copper-gold mine in Kyrgyzstan and their associated concentrators.

Operating performance

Copper production



	2018	2017
Bozshakol	101.6	101.3
Aktogay	131.4	90.2
East Region and Bozymchak	61.7	67.0

	2018	2017
Production		
Copper (kt)	**295**	259
Zinc (kt)	**50**	58
Gold (koz)	**183**	179
Silver (koz)	**3,511**	3,506
Group sales volumes		
Copper (kt)	**296**	256
Zinc (kt)	**50**	57
Gold (koz)	**169**	169
Silver (koz)	**3,527**	3,759

Financial performance

		Gross EBITDA ($ million)	Gross cash costs (USc/lb)	Net cash costs (USc/lb)
Group	2018	1,310	144	85
	2017	1,235	138	66
Bozshakol	2018	520	129	58
	2017	515	121	54
Aktogay	2018	530	106	103
	2017	374	100	98
East Region and Bozymchak	2018	284	244	94
	2017	371	208	42

For more information, see pages
12 Market overview
38 Financial review

Bozshakol

The Bozshakol open pit mine is a first quartile asset on the global cost curve with a remaining mine life of 38 years at an average copper grade of 0.37%. The main sulphide concentrator, with a processing capacity of 25 million tonnes, commenced production in the first quarter of 2016 and was declared commercial in October 2016. The separate clay plant, which can process a further 5 million tonnes per annum, began commissioning in the fourth quarter of 2016 and achieved commercial production on 1 July 2017.

Production summary

kt (unless otherwise stated)	2018	2017
Ore extraction	30,722	34,612
Ore processed	28,454	24,558
Average copper grade processed (%)	0.48	0.53
Copper recovery rate (%)	79	81
Copper in concentrate	106.4	106.0
Copper production	101.6	101.3
Average gold grade processed (g/t)	0.26	0.28
Gold recovery rate (%)	59	58
Gold in concentrate (koz)	136.7	127.2
Gold production (koz)	127.8	119.0
Silver production (koz)	666	687

Processing volumes of 28,454 kt were 16% higher than the prior year (2017: 24,558 kt) reflecting the ramp up of both the sulphide and clay concentrators. In the second half of the year ore processed was 15,024 kt, consistent with full design capacity. The volume of clay ore mined in 2018 was 6,742 kt, down from 15,072 kt in 2017, as less clay material was stripped to provide access to future sulphide sections. As a result, total ore extraction was 11% lower than the prior year as the reduced clay extraction more than offset the increase in sulphide extraction to feed the main plant. As guided, the average copper grade in sulphide ore processed reduced in 2018, to 0.47% from 0.52% in 2017, but remained above the life of mine average grade of 0.37%. The overall copper recovery rate decreased to 79% from 81% in 2017, due to the increased proportion of clay material processed, which has a lower rate of recovery than sulphide material.

Copper production of 101.6 kt was marginally above the prior year as the increase in processing volumes was broadly offset by lower grades. Full year copper production was in the upper half of the guidance range of 95-105 kt. Gold production of 127.8 koz (2017: 119.0 koz) was ahead of guidance of 115-125 koz, supported by continued high grades. Silver production of 666 koz (2017: 687 koz) was 33% ahead of guidance of around 500 koz.

The majority of copper in concentrate production was dispatched as concentrate to customers in China, with 11.0 kt of material sent for toll processing into cathode at the Balkhash smelter in Kazakhstan, where spare capacity on attractive terms was available.

Copper production in 2019 is forecast to be between 105-115 kt with by-products from gold and silver of between 130-140 koz and around 700 koz respectively. The average copper grade in sulphide ore processed in 2019 is expected to be similar to the 0.47% grade reported in 2018. The clay plant demonstrated in 2018 that it can operate at ore throughput levels above its design capacity of 5 Mtpa however it is a major consumer of water and a programme of upgrades to the process water and reclaim systems is planned to increase recycling rates and significantly reduce its consumption of fresh water. Production from the clay plant has been suspended for a period of 2-3 months whilst the upgrade work is conducted, with minimal impact on overall production at Bozshakol in 2019.

Financial summary

$ million (unless otherwise stated)	2018	2017
Gross Revenues[1]	756	719
Copper	596	572
Gold	144	137
Silver	11	10
Others	5	–
Revenues	756	698
Sales volumes[1]		
Copper sales (kt)	102	99
Gold sales (koz)	115	107
Silver sales (koz)	724	617
Gross EBITDA[1]	520	515
Capitalised EBITDA	–	(12)
EBITDA	520	503
Operating profit	361	365
Gross cash costs (USc/lb)[1]	129	121
Net cash costs (USc/lb)[1]	58	54
Capital expenditure	29	74
Sustaining	24	10
Expansionary	5	64

1 The prior year includes the results of clay operations in the period before commercial production.

Gross Revenues

Prior to the achievement of commercial production, revenues and operating costs are capitalised and not recognised in the income statement. In 2017, the income statement therefore excludes the results of clay operations in the first half of the year as commercial production was achieved on 1 July 2017. Gross Revenues and Gross EBITDA include all revenues and operating costs, including periods prior to commercial production.

Gross Revenues increased by 5% to $756 million due to the increase in sales volumes across all products. There was a limited benefit of $3 million from a favourable market price for copper versus the prior year, as sales volumes were weighted to the second half of 2018 when copper prices were lower. Copper sales of 102 kt include 10 kt of copper cathode from material processed at the Balkhash smelter. Revenues recorded in the income statement in 2017 exclude $21 million of capitalised clay revenues from the first half of the year.

EBITDA

Bozshakol contributed Gross EBITDA of $520 million, broadly in line with the prior year, as an increase in Gross Revenues was offset by a small increase in operating costs. A strong EBITDA margin of 69% was maintained.

The gross cash cost is expressed on a unit of copper sales basis, after adjustment for the copper payable and TC/RC terms. As expected, the gross cash cost of 129 USc/lb has increased from 121 USc/lb in the prior year when operations benefited from a higher grade in ore processed, lower maintenance expenditure and lower volumes from the smaller clay operations. The gross cash cost was marginally below market guidance of 130-150 USc/lb. During the year there were some inflationary impacts on local costs, including salaries and certain consumables, however these were partially offset by efficiencies in consumption rates as well as the weakening of the tenge, which traded at an average 345 KZT/$ versus 326 KZT/$ in the prior year. In addition, there was a modest reduction in the annual benchmark TC/RC. After deducting by-product credits, the net cash cost for Bozshakol in 2018 was 58 USc/lb, similar to the 54 USc/lb reported for the prior year as the increase in gross cash costs was partially offset by higher gold and silver sales volumes.

The gross cash cost for 2019 is estimated to be 130-150 USc/lb. The net cash cost in 2019 is forecast to benefit from the sale of around 25 koz of gold bar inventory at the end of 2018, which is being shipped to the National Bank of Kazakhstan over the first half of 2019.

Operating profit

Operating profit of $361 million has reduced slightly from the prior year, as the increase in EBITDA was offset by an additional $17 million of MET charged to the income statement due to higher copper prices and greater clay volumes not capitalised following the achievement of commercial production on 1 July 2017.

Capital expenditure

Sustaining capital expenditure amounted to $24 million, which was higher than the prior year when maintenance requirements were limited, given the early nature of operations. Expenditure in the year mainly related to the overhaul of mining equipment. Maintenance programmes will continue to accelerate into 2019, with total sustaining capital of around $50 million, which includes around $10 million of projects deferred from 2018. In 2018, there was limited expansionary capital expenditure of $5 million, as construction activities are now complete. The final retention payments to contractors of approximately $40 million will be settled in early 2019.

For more information, see pages
12 Market overview
38 Financial review

Aktogay

Aktogay is a large scale, open pit mine similar to Bozshakol, with a remaining mine life of 27 years at an average copper grade of 0.37% (oxide) and 0.33% (sulphide). Aktogay commenced production of copper cathode from oxide ore in December 2015 and achieved commercial production in July 2016. The production of copper in concentrate from sulphide ore began in the first quarter of 2017 and achieved commercial production on 1 October 2017. The operating sulphide concentrator has an annual ore processing capacity of 25 million tonnes and the sulphide processing capacity will be doubled to 50 million tonnes with the addition of a second concentrator by the end of 2021.

Production summary

kt (unless otherwise stated)	2018	2017
Oxide		
Ore extraction	**16,104**	13,040
Copper grade (%)	**0.33**	0.36
Copper cathode production	**25.7**	25.1
Sulphide		
Ore extraction	**25,807**	13,208
Ore processed	**20,766**	12,941
Average copper grade processed (%)	**0.61**	0.66
Recovery rate (%)	**87**	80
Copper in concentrate	**110.6**	68.2
Copper production	**105.7**	65.1
Total copper production	**131.4**	90.2
Silver production (koz)	**489**	270

Copper cathode production from oxide material was 25.7 kt in 2018, above market guidance of 20-25 kt and the prior year output of 25.1 kt. Higher volumes of oxide ore were extracted and placed onto leach pads, to take advantage of available mining capacity. This more than offset a reduction in oxide grade, from 0.36% in the prior year to 0.33%.

Copper production from the sulphide plant increased by 62% to 105.7 kt due to an increase in processing volumes which was supported by higher recoveries. Ore processed increased by 60% to 20,766 kt (2017: 12,941 kt) due to the ramp up of operations. Ore processing in the second half of the year was 17% above the first half, despite scheduled shutdowns for maintenance in both the third and fourth quarters. Ore extraction exceeded the requirements of the concentrator as preparatory stripping works were undertaken to enable the expansion of mining volumes to feed the second concentrator from 2021. A total of 5.2 Mt of lower grade sulphide ore was stockpiled during the year.

The average copper grade in sulphide ore processed in 2018 reduced to 0.61% (2017: 0.66%), although it remains at elevated levels compared to the life of mine grade, due to the persistence of supergene enriched ore. Average copper grades are expected to reduce towards the sulphide resource grade of 0.33% over the first ten years of operations. The copper recovery rate from sulphide ore in 2018 improved to 87%, compared to 80% in 2017 when the plant was in the early stages of ramp up. The majority of copper in concentrate production was dispatched as concentrate to customers in China, whilst 8.1 kt of material was sent for toll processing into cathode at the Balkhash smelter in Kazakhstan where spare capacity on attractive terms was available.

Copper production from sulphide ore of 105.7 kt and copper cathode output from the heap leaching operations of 25.7 kt resulted in total copper production of 131.4 kt, slightly above the 2018 guidance range of 110-130 kt.

Copper production guidance for 2019 is 130-140 kt, consisting of 25 kt of copper cathode from oxide ore and 105-115 kt from sulphide material. Production from sulphide in 2019 is expected to benefit from a full year of processing at close to design capacity, which will be partially offset by an anticipated reduction in grades. Aktogay is also forecast to contribute around 500 koz of silver production, consistent with 2018.

Financial summary

$ million (unless otherwise stated)	2018	2017
Gross Revenues[1]	775	530
Revenues	775	276
Copper sales (kt)	130	87
Gross EBITDA[1]	530	374
Capitalised EBITDA	–	(185)
EBITDA	530	189
Operating profit	350	126
Gross cash costs (USc/lb)[1]	106	100
Net cash costs (USc/lb)[1]	103	98
Capital expenditure	514	(27)
Sustaining	20	4
Expansionary	494	(31)

1 The prior year includes the results of sulphide operations in the period before commercial production.

Gross Revenues

Prior to the achievement of commercial production all revenues and operating costs are capitalised and excluded from the income statement. Commercial production was achieved for sulphide operations on 1 October 2017, therefore the income statement for the prior year includes sulphide operations for the fourth quarter only. Gross Revenues and Gross EBITDA shown in the above table include the pre-commercial production period.

Gross Revenues increased substantially from the prior year to $775 million, reflecting the growth in copper sales volumes resulting from the successful ramp up of the sulphide concentrator. The average LME copper price increased by 6% versus the prior year, however owing to the timing of sales, the realised price impact of copper had a negative $15 million impact on Gross Revenues. In 2017 copper sales volumes were heavily weighted to the second half of the year, when copper prices were high, whilst during 2018 sales volumes were also weighted to the second half, when copper prices were lower. Copper sales included 32 kt of cathode material, primarily from oxide operations but also including a limited quantity of copper concentrate processed at the Balkhash smelter. Aktogay recorded by-product revenues of $11 million, mainly from commercially payable quantities of silver and gold. Revenues recorded in the income statement in 2017 exclude $254 million of capitalised revenues from sulphide operations.

EBITDA

The significant increase in Gross EBITDA to $530 million reflects the rise in revenues associated with the volume growth from the sulphide operations. Similar to Bozshakol, Aktogay has a competitive EBITDA margin of 68%.

Gross cash costs of 106 USc/lb were below market guidance of 110-130 USc/lb. As anticipated there was an increase in gross cash costs as costs began to normalise, following the benefits of higher grades and low maintenance costs in the first year of sulphide operations in 2017. In 2018, three planned shutdowns occurred at the sulphide plant for SAG mill and ball mill relines, with an associated increase in maintenance materials and service charges. In addition, local inflation resulted in higher salary costs and price increases for certain consumables, as well as an increase in the cost of reagents at the oxide operations. These factors more than offset the economies of scale benefit from higher production volumes. Net cash cost, after by-products from commercially payable silver, was 103 USc/lb.

The gross cash cost in 2019 is estimated at 105-125 USc/lb. Grades at the sulphide plant are expected to decrease and maintenance programmes are forecast to accelerate. These factors, as well as tariff and general inflation, will more than offset the economies of scale achieved from an increase in throughput to design capacity during 2019.

Operating profit

The $224 million increase in operating profit to $350 million in the current year is due to the additional contribution from the sulphide operations. This follows the $341 million rise in EBITDA, partially offset by higher MET resulting from a greater volume of ore mined at higher copper prices in addition to increased depreciation following the achievement of commercial production.

Capital expenditure

Sustaining capital was $20 million, mainly relating to the overhaul of mining equipment. Expenditure in the prior year was minimal due to the early stage of operations. Total sustaining capital is forecast to increase towards more normal levels in 2019 as maintenance activities across the mining and processing facilities continue to accelerate. Expenditure of around $50 million is expected in 2019, which includes around $10 million of expenditure deferred from 2018.

Total expansionary capital expenditure of $494 million during the year contains $290 million relating to the original Aktogay project. This includes $281 million paid to the lead contractor in respect of the $300 million deferred from 2016, the balance of which will be settled in early 2019. Other expenditure incurred on the original project relates to the acquisition of further mining fleet and reserve spares to support the ramp up of operations to full capacity. Expansionary capital also includes $204 million for the Aktogay expansion project, in line with market guidance. This includes approximately $100 million of procured equipment, with contracts signed for long lead items for the sulphide concentrator. The project is progressing as planned, with the lead contractor starting earthworks in the second quarter and construction activities in the third quarter.

Total expansionary capital of around $470 million is forecast in 2019. This includes $70 million in respect of the first Aktogay project, largely to expand the heap leach cells. Expenditure on the Aktogay expansion is expected to be around $400 million in 2019, subject to additional financing. First production from the new plant is expected in 2021. The total capital budget for the project is $1.2 billion, with approximately $400 million required in 2020 and $200 million in 2021.

For more information, see pages
12 Market overview
38 Financial review

East Region and Bozymchak

Production summary

Copper

kt (unless otherwise stated)	2018	2017
Ore extraction	3,892	3,919
Ore processed	4,030	4,172
Average copper grade processed (%)	1.81	1.89
Average recovery rate (%)	90	90
Copper in concentrate	65.3	71.0
Copper production	61.7	67.0

Copper production in the East Region and Bozymchak reduced by 8% versus the prior year to 61.7 kt, slightly below market guidance of approximately 65 kt. The volume of ore processed reduced by 3% from 4,172 kt to 4,030 kt due to the processing of stockpiled ore from the closed Yubileyno-Snegirikhinsky mine in 2017. The average grade of copper in ore processed decreased to 1.81% (2017: 1.89%), mainly due to lower grades at Orlovsky in 2018.

East Region and Bozymchak copper production in 2019 is expected to be around 55 kt, below 2018 due to a reduction in ore available for processing as the mines mature. Ore extraction at Orlovsky in 2019 will be impacted by difficult geological conditions, with a modest recovery forecast in 2020.

By-products

koz (unless otherwise stated)	2018	2017
Zinc bearing ore processed (kt)	3,028	3,163
Zinc grade processed (%)	2.42	2.65
Zinc in concentrate (kt)	49.7	57.6
Gold bearing ore processed (kt)	4,030	4,172
Gold grade processed (g/t)	0.73	0.76
Gold in concentrate	58.5	62.7
Gold production	55.0	58.9
Silver bearing ore processed (kt)	4,030	4,172
Silver grade processed (g/t)	33.4	33.6
Silver in concentrate	2,590	2,801
Silver production	2,356	2,549

Output of all by-products was lower than the prior year. Zinc in concentrate output of 49.7 kt was 17% below full year guidance of approximately 60 kt, as indicated in the Group's third quarter production report. Zinc production in 2018 has been impacted by lower than forecast grades at the Artemyevsky mine, where extraction was limited with development works ongoing to access a second ore body for the extension project.

Full year gold production of 55.0 koz was above the external guidance of 45-50 koz. The majority of outperformance was driven by the Bozymchak mine in Kyrgyzstan, where the average gold grade was 1.55 g/t (2017: 1.64 g/t), average recovery rates improved to 84.6% (2017: 82.4%) and ore processing was maintained at 1,002 kt (2017: 1,009 kt), delivering full year gold output of 39.7 koz (2017: 41.3 koz).

Silver production of 2,356 koz for the year represents a reduction of 8% compared to 2017, due to lower processing volumes as well as lower grades from the Bozymchak mine. Silver production was 18% ahead of market guidance of around 2,000 koz.

East Region and Bozymchak is forecast to produce 40-45 koz and around 1,800 koz of gold and silver production respectively in 2019. Zinc in concentrate production will be in the region of 50 kt.

Financial summary

$ million (unless otherwise stated)	2018	2017
Revenues	631	689
Copper	417	433
Zinc	101	115
Gold	68	79
Silver	37	51
Other	8	11
Sales volumes		
Copper sales (kt)	64	70
Zinc sales (kt)	50	57
Gold sales (koz)	54	62
Silver sales (koz)	2,362	2,979
EBITDA	284	371
Operating profit	165	266
Gross cash costs (USc/lb)	244	208
Net cash costs (USc/lb)	94	42
Capital expenditure	70	74
Sustaining	40	52
Expansionary	30	22

Revenues

Revenues generated by East Region and Bozymchak decreased by 8% to $631 million as a result of lower sales volumes across all products. Copper revenues fell by $16 million as a 9% reduction in sales volumes was partially offset by an 6% improvement in the average LME copper price. Revenues from by-products were $42 million below the prior year driven by lower volumes as well as a lower silver price.

EBITDA

EBITDA reduced by $87 million, reflecting a $58 million reduction in revenues as well as an increase in cash operating costs. Cash operating costs of $347 million increased by $29 million from the prior year, despite lower production and a weakening of the tenge, as inflationary pressures included a rise in salaries following a period of muted growth since the devaluation of the tenge in 2015. Market prices for raw materials, including fuel and railway tariffs, have also risen. At Bozymchak, operating costs have increased due to higher maintenance costs as the operation matures whilst mining costs have risen owing to longer haul distances. Operating costs in 2018 also include a $9 million impairment for VAT in the East Region.

As a result, the gross cash cost of copper for East Region and Bozymchak of 244 USc/lb was 17% above the prior year, but in line with market guidance of 230-250 USc/lb. Net cash costs increased from 42 USc/lb to 94 USc/lb due to the increase in gross cash cost combined with a reduction in by-product sales volumes and a lower market price for silver.

Gross cash costs for 2019 are estimated to increase to around 260-280 USc/lb, mainly due to a further reduction in copper sales volumes to circa 55 kt.

Operating profit

Operating profit of $165 million was $101 million lower than the prior year due to the reduction in EBITDA as well as a $20 million impairment to Bozymchak following adverse court rulings relating to the recovery of VAT incurred on construction costs. This was partially offset by lower depreciation and the absence of impairment charges recorded within special items in 2017.

Capital expenditure

Sustaining capital expenditure of $40 million was below market guidance of around $50 million and lower than the prior year, which included certain projects deferred from previous years. Expenditure in the year relates to mine development works across the underground mines, the purchase of mine equipment, expansion of tailings facilities and maintenance of support infrastructure. In 2019 sustaining capital requirements for the East Region and Bozymchak are forecast to be around $50 million, including some expenditure deferred from 2018.

Expansionary capital expenditure of $30 million predominantly relates to the extension of the Artemyevsky mine, including initial development works to develop a ventilation shaft. Expansionary capital in 2019 is expected to be around $70 million and will require around $60 million per annum from 2020 to 2022, with limited spend thereafter.

Other projects

On 22 January 2019 the Group announced the Initial Completion of the acquisition of the Baimskaya copper project. During 2019 the Group will progress a bankable feasibility study of the project with expected expenditure of around $70 million. Initial spend on site infrastructure may be considered later in the year. Fluor has been appointed as the lead contractor for the feasibility study and work has commenced. The results of the feasibility study, including guidance on the timing of capital expenditure, production volumes, operating costs and sustaining capital expenditure are expected to be announced in the first half of 2020. In parallel with the feasibility study, the Group will continue discussions with banks on financing the construction phase and evaluate the potential for partnering.

On 8 June 2018 the Group announced an investment of $70 million from NFC for a 19.4% holding in the Koksay project. $25 million was received in December 2018 as a prepayment to fund ongoing activities and the balance is expected to be settled in the first half of 2019. The $70 million is to be used for the development of Koksay including a feasibility study which will determine the detailed design for mining and processing operations and the associated capital budget. The Board will review the results of the feasibility study to assess how and when to proceed with the project. Approximately $20 million is expected to be spent on feasibility work in 2019.

Financial review

Basis of preparation

The financial information has been prepared in accordance with IFRSs, as adopted by the EU, using accounting policies consistent with those adopted in the consolidated financial statements for the year ended 31 December 2018, including the application of IFRS 15 '*Revenue from Contracts with Customers*' and IFRS 9 '*Financial Instruments*' which were applicable from 1 January 2018.

The Aktogay sulphide and Bozshakol clay plants were in pre-commercial production until 1 October 2017 and 1 July 2017 respectively. During the pre-commercial production phase, revenues and operating costs were capitalised within property, plant and equipment as part of the cost of construction and not included in the income statement. The Financial review and note 4(a)(i) to the consolidated financial statements include the non-IFRS measures Gross Revenues and Gross EBITDA, which incorporate the results of the Aktogay sulphide and Bozshakol clay plants during pre-commercial production, to provide measures of their performance over the full year 2017 and as a comparative for 2018.

Gross Revenues and Revenues

Gross Revenues for 2018 were $2,162 million, an increase of $224 million from the prior year, mainly due to higher copper volumes from the Aktogay sulphide and Bozshakol clay plants as they ramped up to design capacity and from an improved average LME copper price. The total copper sold in 2018 was 296 kt versus 256 kt in 2017, mainly due to higher throughput at the Aktogay sulphide plant. The LME copper price averaged $6,526 per tonne in 2018, up from $6,163 per tonne in the prior year. The average realised price of copper increased only marginally to $6,002 per tonne from $5,992 per tonne in 2017, despite the 6% higher LME copper price, due to a greater proportion of copper concentrate sales which amounted to 64% in the current year (2017: 56%) and are priced to include the deduction of treatment and refining charges.

Revenues recognised in the income statement increased by 30% to $2,162 million reflecting the inclusion of a full year of sales from the Aktogay sulphide and Bozshakol clay plants in 2018, which were capitalised in the prior year during pre-commercial production. Revenues capitalised during the pre-commercial production period in 2017 amounted to $254 million and $21 million for the Aktogay sulphide and Bozshakol clay plants respectively.

Gross Revenues from by-products were $385 million compared to $406 million in the prior year, impacted by lower zinc and silver revenues due to reduced output from the East Region operations. Gold revenues were $212 million, slightly below the $216 million recorded in 2017, due to lower output from the East Region and Bozymchak. By-products comprised 18% of Gross Revenues in 2018 versus 21% in the prior year, due to growth in Aktogay volumes which contain a smaller proportion of by-products.

Further information on Gross Revenues and revenues by operating segment can be found in the Operating review. Additional information on revenues and related credit risk management policies can be found in notes 4(b) and 31(f) to the consolidated financial statements.

Operating profit and EBITDA

The operating profit for 2018 was $851 million compared to $715 million in 2017, primarily due to the growth in sales volumes from the Aktogay sulphide plant. The Group's operating profit margin, measured as operating profit divided by revenues, reduced slightly to 39% in the current year from 43% in 2017. The reduction in margin was mainly due to an impairment of $20 million

Income statement

An analysis of the consolidated income statement is shown below:

$ million (unless otherwise stated)	2018	2017
Gross Revenues[1]	2,162	1,938
Gross EBITDA[1]	1,310	1,235
Revenues	2,162	1,663
Cash operating costs	(852)	(625)
EBITDA[1]	1,310	1,038
Less: MET and royalties	(200)	(132)
Less: depreciation, depletion and amortisation	(239)	(172)
Less: special items	(20)	(19)
Operating profit	851	715
Net finance costs	(209)	(135)
Profit before tax	642	580
Income tax expense	(132)	(133)
Profit for the year	510	447
Non-controlling interests	–	–
Profit attributable to equity holders of the Company	510	447
Earnings per share attributable to equity shareholders of the Company		
Ordinary EPS – basic and diluted ($)	1.14	1.00
EPS based on Underlying Profit – basic and diluted ($)[1]	1.18	1.07

1 Alternative Performance Measures (APMs) are used to assess the performance of the Group and are not defined or specified under IFRS. For further information on APMs, including justification for their use, please refer to the APMs section on page 179.

recognised against Bozymchak, combined with lower production and a $9 million impairment of VAT at the East Region. Within operating profit, the Group's cost of sales and selling and distribution expenses rose mainly due to additional volumes from the Aktogay sulphide and Bozshakol clay plants, for which the associated costs were capitalised ahead of commercial production in 2017, and a higher depreciation charge following a full year of commercial operations at Aktogay sulphide.

Gross EBITDA for the Group rose by 6% to $1,310 million due to the rise in Gross Revenues attributed mainly to the increased volumes from the Aktogay sulphide plant partly offset by the impact of lower volumes from the East Region and Bozymchak operations. The Gross EBITDA margin for the Group decreased from 64% in 2017 to 61% in 2018 due to the impact of higher unit costs at East Region and Bozymchak including the $9 million impairment of VAT.

The increase in EBITDA from $1,038 million in the prior year to $1,310 million was mainly attributed to higher Aktogay sales volumes from the sulphide plant.

Please refer to the Operating review for a detailed analysis of EBITDA by operating segment.

Items excluded from EBITDA

MET and royalties

The MET and royalties charge in the income statement rose from $132 million in 2017 to $200 million in 2018. This reflects the increased metal in ore mined to support the ramp up of Aktogay sulphide operations and higher average LME copper prices, partly offset by lower grade ore and reduced ore volumes mined at Bozshakol. In 2017, $26 million of MET relating to the Aktogay sulphide and Bozshakol clay plants was incurred during pre-commercial production and capitalised to property, plant and equipment.

The total MET and royalties incurred was $207 million compared to $196 million in the prior year with the rise attributable to the increased ore mined at the Aktogay sulphide operations and the impact of higher LME copper prices. The difference between the MET and royalties charge in the income statement and incurred reflects MET included in unsold inventories on the balance sheet, mostly within current assets.

Depreciation, depletion and amortisation

Depreciation, depletion and amortisation in 2018 of $239 million is higher than the $172 million incurred in 2017, as depreciation of the Aktogay sulphide and Bozshakol clay assets only commenced in the second half of 2017, upon achievement of commercial production.

Special items

Special items are non-recurring or variable in nature and do not impact the underlying trading performance of the Group.

The Bozymchak CGU was subject to an impairment review following the identification of an impairment indicator, being adverse court rulings relating to the recovery of VAT incurred on the construction of the plant. A total impairment of $20 million was recognised, with $16 million recorded against property, plant and equipment and $4 million against mining assets. The impairment charge reduced the carrying value of the Bozymchak operation to its estimated recoverable amount of $84 million, which was determined as its fair value less cost to sell on a discounted cash flow basis at 31 December 2018.

In the prior year the Group determined that it would not progress a project to construct a copper smelter in Kazakhstan and the associated feasibility study costs totalling $16 million were expensed as a special item. An impairment charge of $4 million at the East Region and Bozymchak in respect of property, plant and equipment was also recognised in 2017 within special items.

Net finance costs

Net finance costs include:

$ million	2018	2017
Interest income	33	17
Total interest incurred	(240)	(246)
Interest capitalised	4	88
Interest expense	(236)	(158)
Interest on employee obligations and unwinding of discounts	(6)	(7)
Fair value (losses)/gains on debt related derivative financial instruments	(3)	13
Net interest expense	(245)	(152)
Net foreign exchange gains	3	–
Net finance costs	(209)	(135)

Net finance costs were $209 million compared to $135 million in 2017.

The total interest incurred amounted to $240 million and was $6 million lower than the $246 million incurred in the prior year. In 2017, the total interest incurred included $10 million of PXF fees related to the refinancing of that facility and a $15 million discount unwind on the NFC deferral (see note 27) which decreased to $1 million in 2018, after $281 million of the $300 million deferred was settled in the year. Interest on borrowings included within total interest incurred increased to $239 million compared to $221 million in the prior year, mainly due to higher US dollar LIBOR rates in 2018, partly offset by the repayment of debt facilities.

Interest expense recognised in the income statement of $236 million is higher than the $158 million reported in 2017, as interest on the borrowings to finance the Aktogay sulphide and Bozshakol clay plants was capitalised to the cost of the project in the prior year until the achievement of commercial production. Capitalised interest of $4 million in 2018 reflects financing costs incurred on the Group's general borrowings used to fund the Aktogay expansion project.

Taxation

The table below shows the Group's effective tax rate as well as the all-in effective tax rate which takes into account the impact of MET and removes the effect of special items on the Group's tax charge.

$ million (unless otherwise stated)	2018	2017
Profit before tax	642	580
Add: MET and royalties	200	132
Add: special items	20	29
Adjusted profit before tax	862	741
Income tax expense	132	133
Add: MET and royalties	200	132
Less: recognition of deferred tax liability on special items	–	–
Adjusted tax expense	332	265
Effective tax rate (%)	21	23
All-in effective tax rate[1] (%)	39	36

1 The all-in effective tax rate is calculated as the income tax expense plus MET and royalties less the tax effect of special items and other non-recurring items, divided by profit before taxation which is adjusted for MET and royalties and special items. The all-in effective tax rate is considered to be a more representative tax rate on the recurring profits of the Group.

Effective tax rate

The effective tax rate in 2018 was 21%, which was lower than the prior year rate of 23%, mainly due to a reduction in non-deductible expenses at the Group's Kazakhstan operations and 2017 including income tax adjustments in respect of the prior years.

All-in effective tax rate

The increase in the all-in effective tax rate to 39% from 36% in the prior year is mainly due to a higher MET and royalties charge, as a greater proportion of MET was expensed in the current year, whereas in 2017 MET associated with extraction during the pre-commercial production periods of the Aktogay sulphide and Bozshakol clay plants was capitalised.

Net profit attributable to the equity holders of the Company and Underlying Profit

A reconciliation of Underlying Profit from profit attributable to equity holders of the Company is set out below:

$ million (unless otherwise stated)	2018	2017
Net profit attributable to equity holders of the Company	510	447
Special items within operating profit, net of tax – note 7	20	19
Special items within profit before taxation, net of tax – PXF fees	–	10
Underlying Profit[1]	530	476
Weighted average number of shares in issue (million)	447	447
Ordinary EPS – basic and diluted ($)	1.14	1.00
EPS based on Underlying Profit – basic and diluted ($)[1]	1.18	1.07

1 Alternative Performance Measures (APMs) are used to assess the performance of the Group and are not defined or specified under IFRS. For further information on APMs, including justification for their use, please refer to the APMs section on page 179.

The Group's net profit attributable to equity holders of the Company was $510 million in 2018 compared to $447 million in the prior year. This was mainly due to increased operating profit, partly offset by interest costs on project borrowings which were expensed in the current year but capitalised in 2017, prior to the achievement of commercial production.

Underlying Profit rose to $530 million in 2018 versus $476 million recorded in the prior year, following the increase in net profit.

EPS and EPS based on Underlying Profit

Basic earnings per share of $1.14 increased from $1.00 in 2017, whilst earnings per share based on Underlying Profit rose to $1.18 from $1.07.

Dividends

KAZ Minerals PLC, the parent company of the Group, is a non-trading investment holding company and derives its profits from dividends paid by subsidiary companies.

The Group's dividend policy, established at the time of Listing, is for the Board to consider the cash generation and financing requirements of the business before recommending a suitable dividend. This maintains flexibility, which is appropriate given the underlying cyclicality of a commodity business and the Group's growth ambitions.

In October 2018 the Company paid an interim dividend of 6.0 US cents per share equating to an interim payment of $27 million, marking the successful delivery of the cash generative Aktogay and Bozshakol operations. As a result of the Group's strong performance in the year, the Board has recommended a final dividend for 2018 of 6.0 US cents per share, equivalent to a payment of $28 million. Combined with the interim dividend of 6.0 US cents per share, the dividend in respect of the 2018 financial year is 12.0 US cents per share.

On 22 January 2019, the Group announced the Initial Completion of the acquisition of the Baimskaya copper project. The financing requirements of the project construction including capital budget, phasing, sources of funding and partnering options will be assessed during the feasibility study expected to be completed in the first half of 2020, following which the Board will further review the Group's allocation of capital.

The distributable reserves of KAZ Minerals PLC at 31 December 2018 were $1,385 million. See pages 168 to 175 for the financial statements of the Company.

Cash flows

The summary of cash flows below is prepared on a basis consistent with internal management reporting.

$ million	2018	2017
EBITDA[1]	**1,310**	1,038
Change in inventories[2]	**(138)**	(37)
Change in prepayments and other current assets[2]	**(30)**	(41)
Change in trade and other receivables[2]	**4**	27
Change in trade and other payables and provisions[2]	**49**	11
Interest paid	**(229)**	(222)
MET and royalties paid[2]	**(208)**	(151)
Income tax paid	**(95)**	(110)
Foreign exchange and other movements	**7**	5
Net cash flows from operating activities before capital expenditure and non-current VAT associated with major projects[3]	**670**	520
Sustaining capital expenditure	**(85)**	(68)
Free Cash Flow[1]	**585**	452
Expansionary and new project capital expenditure[4]	**(530)**	(69)
Net non-current VAT received associated with major projects	**3**	232
Proceeds from disposal of property, plant and equipment	**–**	1
Interest received	**32**	16
Dividends paid	**(27)**	–
Other investments	**10**	–
Other movements	**(3)**	(1)
Cash flow movement in net debt	**70**	631

1 Alternative Performance Measures (APMs) are used to assess the performance of the Group and are not defined or specified under IFRS. For further information on APMs, including justification for their use, please refer to the APMs section on page 179.

2 Excludes working capital and MET movements arising from pre-commercial production activities at the Bozshakol and Aktogay operations in 2017.

3 The difference between 'net cash flow from operating activities before capital expenditure and non-current VAT associated with major projects' and 'net cash from operating activities' as reflected on the Group cash flow statement, is the VAT received on the construction of the major projects.

4 Expansionary and new project capital expenditure includes operating cash flows relating to pre-commercial production activities in 2017, as explained further below.

Summary of the year

Net cash flows from operating activities before capital expenditure and non-current VAT associated with major projects improved to $670 million due to increased profits, partly offset by additional working capital requirements and higher MET payments due to the rise in commodity prices and a greater volume of sulphide ore mined at Aktogay. The MET paid in the prior year excludes $38 million capitalised to property, plant and equipment ahead of commercial production at the Aktogay sulphide and Bozshakol clay plants.

Working capital

- Inventory levels rose by $138 million primarily related to the acquisition of consumables and spare parts to support the ramp up of Bozshakol and Aktogay. A conservative approach has been taken to support sustained output as an operating history is established. However it is expected that over time inventory requirements will reduce as the Group develops better data on consumption and wear rates, works with suppliers to shorten lead times and as the Group's shared spares strategy develops further. In addition there was a larger finished goods inventory at Bozshakol and East Region and Bozymchak due to the timing of sales. The $158 million increase in inventory shown in the IFRS based cash flow statement (see note 29) includes MET and depreciation, which are excluded from the cash flow above, as MET is reflected separately and EBITDA is stated before depreciation and amortisation;
- Prepayments and other current assets increased by $30 million primarily due to an increase in operating VAT receivable at the Aktogay operations following its ramp up to design capacity and advances paid for goods and services. During the year, $91 million of VAT was refunded to the East Region, Bozshakol and Aktogay operations;
- Trade and other receivables decreased by $4 million mostly due to the impact of lower copper prices in the second half of the year. Further details relating to the nature of the Group's customers are given in note 4(b) to the consolidated financial statements; and
- Trade and other payables and provisions increased by $49 million due to increased credit purchases of raw materials to support the ramp up to design capacity at the new operations and $32 million of additional customer receipts in advance of product deliveries. The difference to trade and other payables shown in the IFRS based cash flow statement (see note 29) reflects the change in MET and royalties payable over the year, if any. The cash flow above contains MET and royalties payments as a separate line item.

In 2017, inventory levels rose by $37 million due to higher consumables needed to support the operational ramp up of Aktogay and Bozshakol and from an increase in finished goods in transit to customers. Trade and other receivables decreased by $27 million due to lower volumes at Bozshakol in December following repairs in November, while prepayments and other current assets increased by $41 million due to a higher operating VAT receivable at Aktogay and Bozshakol operations. Trade and other payables increased by $11 million due to higher operational spend at Aktogay and Bozshakol and from lower customer advances received ahead of product delivery.

The working capital movements in 2017 exclude the period of pre-commercial production at the Aktogay sulphide and Bozshakol clay plants, which were capitalised as part of the cost of construction and were included within expansionary and new project capital expenditure. These included outflows of $29 million for consumables and inventory at Aktogay and $35 million for clay ore stockpiled at Bozshakol, in addition to a $52 million increase in trade and other receivables and prepayments at both operations, partly offset by increased accounts payable of $6 million and MET payable of $12 million. There were no pre-commercial production working capital cash flows included within expansionary capital expenditure in 2018.

Interest cash flows

Interest paid during the year was $229 million compared with $222 million in 2017 which included PXF fees of $10 million. Interest paid is broadly consistent with the higher borrowing costs incurred during the year of $239 million and above the prior year mainly due to increased LIBOR interest rates. Interest payments are made semi-annually under the CDB Bozshakol/Bozymchak, CDB Aktogay and DBK US dollar facilities, quarterly under the CDB Aktogay RMB facility and monthly under the PXF facility.

Income taxes and MET

Income tax payments of $95 million (2017: $110 million) include $41 million (2017: $48 million) of withholding tax on interest accrued in previous years for financing the major projects. Excluding withholding tax payments, taxes paid were below the income statement charge of $132 million (2017: $133 million) due to capital allowances and utilisation of available tax losses at Aktogay and Bozshakol. At 31 December 2018, the Group's net income tax receivable was $7 million, compared to a $2 million income tax payable in 2017.

MET and royalties payments increased to $208 million (2017: $151 million) as a result of the higher charge at the Aktogay and Bozshakol operations. In 2017, prior to commercial production at the Aktogay sulphide and Bozshakol clay plants, $38 million of MET and royalties paid was reflected within expansionary capital expenditure. Once adjusted for the impact of capitalised MET paid in 2017, the increased MET in the current year is attributable to a greater volume of ore mined and higher copper prices. At 31 December 2018, MET and royalties payable was $48 million compared to $55 million at 31 December 2017.

Free Cash Flow

The Group's Free Cash Flow before interest payments on borrowings was $814 million compared to $674 million in 2017 following the higher profits recorded by the Group. After interest payments, Free Cash Flow was $585 million compared to $452 million in the prior year.

Capital expenditure

Sustaining capital expenditure increased to $85 million in 2018 from $68 million in the prior year, as maintenance spend at Bozshakol and Aktogay was $30 million higher following the ramp up of operations, partly offset by lower expenditure at the East Region and Bozymchak.

Expansionary and new project expenditure of $530 million in 2018 includes $281 million paid in 2018 in respect of the $300 million Aktogay NFC deferral, $213 million invested at Aktogay, mainly on the expansion project and $28 million incurred on the Artemyevsky mine extension in the East Region. This compares to $69 million of expansionary capital expenditure recorded in 2017, which was net of $127 million in operating cash inflows capitalised ahead of commercial production at the Aktogay sulphide and Bozshakol clay plants. In 2017, a total of $196 million was spent mainly on construction of the Group's major growth projects and the East Region, of which $64 million related to investments in consumables, inventory and the stockpiling of ore at the Aktogay sulphide and Bozshakol clay plants ahead of commercial production. Please refer to the Operating review for an analysis of the Group's capital expenditure by operating segment.

Non-current VAT

The net non-current VAT received of $3 million (2017: $232 million) relates to VAT previously incurred during the construction of Aktogay and Bozshakol.

Other investments

In 2018, other investing cash flows include the receipt of $25 million advance consideration in respect of NFC's equity investment in Koksay (see Investments below) and $15 million of advances paid to fund studies on the Baimskaya copper project.

Balance sheet

Equity attributable to owners of the Company at 31 December 2018 was $1,050 million (2017: $995 million), an increase of $55 million as the Group's attributable profit for the year of $510 million (2017: $447 million) was offset by a decrease in the US dollar value of the Group's foreign currency operations of $428 million (2017: increase of $8 million) and dividends of $27 million paid in October (2017: $nil). There was a 16% decrease in the value of the tenge from 31 December 2017 to 31 December 2018. The Group's mining assets are largely held within Kazakhstan-based entities which maintain tenge as their functional currency. At period ends, these non-monetary assets are consolidated and reported in US dollars at the closing exchange rate with the change in value arising from movements in the tenge exchange rate reflected in equity and not through the income statement. The weaker tenge should have a positive effect on their underlying economic value as it reduces local operating costs, whilst revenues are largely US dollar based. The Group's external liabilities, principally bank debt, are mainly US dollar denominated and not affected by movements in the KZT/$ exchange rate.

Net debt

A summary of the Group's net debt position is shown below:

$ million	2018	2017
Cash and cash equivalents and current investments	1,469	1,821
Less: restricted cash[1]	(2)	–
Borrowings	(3,453)	(3,877)
Net debt[2]	(1,986)	(2,056)

1 Cash at bank at 31 December 2018 of $2 million (2017: $nil) was restricted by legal or contractual arrangements. These amounts are excluded from the Group's measure of net debt.

2 Alternative Performance Measures (APMs) are used to assess the performance of the Group and are not defined or specified under IFRS. For further information on APMs, including justification for their use, please refer to the APMs section on page 179.

Cash and cash equivalents and current investments at 31 December 2018 totalled $1,469 million, which was below the $1,821 million at 31 December 2017 mainly due to the settlement of $281 million of the $300 million NFC deferral, expansionary spend on the Aktogay expansion project of $204 million and repayment of the Group's debt of $424 million. This was partly offset by a Free Cash Flow of $585 million.

To manage counterparty and liquidity risk, surplus funds within the Group are held predominantly in the UK, with funds held in Kazakhstan utilised mainly for working capital purposes. The funds within the UK are held primarily with major European and US financial institutions and triple-'A' rated liquidity funds. At 31 December 2018, $1,439 million of cash and cash equivalents and current investments were held in the UK and Europe and $30 million in Kazakhstan and Kyrgyzstan.

At 31 December 2018, borrowings (net of unamortised fees) were $3,453 million, a decrease of $424 million from 31 December 2017 reflecting $183 million in principal repayments of the CDB Bozshakol/Bozymchak finance facility, $12 million paid under the CDB Aktogay RMB facility, $108 million paid under the CDB Aktogay USD facility, $21 million paid in respect of the DBK Aktogay loan and $100 million paid in respect of the PXF loan. The borrowings (net of unamortised fees) consisted of $1,345 million under the CDB Bozshakol/Bozymchak facilities, $1,331 million under the CDB Aktogay finance facilities, $277 million under the DBK facility and $500 million under the PXF debt facility.

Further details of the terms of the Group's borrowings are included in note 24 of the consolidated financial statements.

Investments

On 22 January 2019, the Group announced the Initial Completion of the acquisition of the Baimskaya copper project in the Chukotka region of Russia. The consideration due at Initial Completion was $436 million in cash and 22.3 million new KAZ Minerals shares, which were allotted to the Vendor. $50 million of the $436 million cash consideration has been withheld pending the release of a guarantee agreement made by the acquired entity which is the legal owner of the Baimskaya licence. The final cash payment of $50 million is expected to be settled in 2019. The 22.3 million shares are subject to a three-year lock-up period ending on the third anniversary of Initial Completion. Deferred Consideration of $225 million for the remaining interest is payable in 21.0 million shares, subject to the achievement of certain Project Delivery Conditions, including a pre-determined level of throughput and development of infrastructure by the Russian state. To the extent these conditions are not met or waived by the Group and therefore not settled in shares, the Deferred Consideration will become payable in cash on 31 March 2029. The purchase will be accounted for in 2019 as an asset acquisition, with the principal value attributed to the mining licence, shown within mining assets.

On 8 June 2018, the Group completed an agreement for NFC to invest $70 million for a 19.4% equity stake in Koksay B.V., the parent company of the entity which holds the mining licence in Kazakhstan. The Group received $25 million of consideration in advance in December 2018. The remaining investment of $45 million will be settled, on completion of the transaction, in the first half of 2019. The $70 million to be invested by NFC will be solely used for the development of Koksay, including a feasibility study, which will determine the detailed design for mining and processing operations and the associated capital budget. The Board will then review the results of the feasibility study to assess how and when to proceed with the project.

Hong Kong listing

On 1 August 2018, the Group delisted from the Hong Kong Stock Exchange. The Group retains its primary listings on the London and Kazakhstan Stock Exchanges.

Going concern

The Group manages liquidity risk by maintaining adequate committed borrowing facilities and working capital funds. The Board monitors the net debt level and liquidity position of the Group taking into consideration the expected outlook of the Group's financial position, cash flows, future capital expenditure and debt service requirements.

The Group's funding strategy is to obtain a new financing facility which the Group's forecasts show is required to finance the construction of the Aktogay expansion. The Board is confident of raising additional liquidity through a combination of new sources of finance and/ or a refinance of debt facilities given the quality of the Group's long-term low cost assets, the low risk nature of the Aktogay expansion and the level of amortisation of existing debt facilities during the period. The Board expects a new facility, in the region of $600 million, to be completed during the first half of 2019 to support the Aktogay expansion. Assuming additional liquidity is committed as expected, the Board is satisfied that the Group's forecasts, taking into account reasonably possible downside scenarios, show that the Group has adequate liquidity to continue in operational existence for the foreseeable future. There can however be no guarantee that the new liquidity can be secured as expected. In the unlikely event that no new additional financing can be secured, mitigating actions will be taken to defer planned capital expenditure, to ensure the Group has adequate liquidity throughout the going concern period. In the severe downside scenarios of sustained lower than expected commodity prices with lower production; and sustained lower prices, lower production and higher operating costs, the Group's forecasts indicate that mitigating actions, including a deferral of construction of the Aktogay expansion, would be required by the end of the first half of 2019 if new financing is not obtained. Whilst these scenarios are considered unlikely, the Board considers taking such mitigating steps to be feasible. Accordingly, the Board is satisfied that it is appropriate to adopt the going concern basis of accounting in the preparation of these consolidated financial statements.

Taxation

Tax strategy and risk management

The Group is subject to taxation in the UK, Kazakhstan and the various foreign countries in which it operates. Tax legislation of the jurisdictions in which the Group operates differs and is subject to interpretation by management and the government authorities, and as such, creates a risk of non-compliance with specific tax requirements. Whilst the Directors believe that the Group is in substantial compliance with tax legislation and contractual terms entered into that relate to tax, the absence of established case history and the complexity and judgemental nature of tax legislation in certain jurisdictions result in additional risk for the Group. Specific areas of interpretation include the applicability of stabilisation under the Group's operating licences, including subsoil use contracts and the structuring of cross border transactions, particularly in respect of the application of transfer pricing policies.

Our Vision for Tax

The Group takes a responsible and transparent approach to the management and control of its tax affairs and related risks and has adopted a tax strategy that supports the delivery of its long-term business strategy. The tax strategy has been reviewed by the Audit Committee and approved by the Board. It is owned by the Group's Chief Financial Officer ('CFO'), who is supported by appropriately qualified employees in both the UK and Kazakhstan. In line with our transparent approach, we have historically disclosed our total tax contribution voluntarily, which together with the Report on Payments to Governments, can also be found on our website.

The Group's overall vision for tax is to ensure compliance with the applicable rules and regulations in the jurisdictions in which it operates maximising shareholder value.

1. Tax governance and risk appetite:

The Group follows a risk based approach in the management of its taxes. This involves the regular review and update of its tax risk profile, including the identification of key risks that could affect the business. The Group's approach to risk management ensures that we have in place the appropriate processes and controls to identify, manage and monitor such risks.

The Group's risk management framework, which is reviewed by the Board, includes stated levels of acceptable risk given financial, social, reputational and other impacts. The key risks are identified as strategic, financial, compliance or operational, and in a tax context, the Group has a low risk appetite. The CFO regularly reviews the Group's key tax risks including those arising in the UK together with a review of the Senior Accounting Officer process, compliance and controls. The Group's material tax issues are reported periodically to the Audit Committee. With the assistance of external tax advisors, the Group monitors developing tax legislation and presents these developments with any significant tax-related issues to the Audit Committee at least twice a year.

Attitude towards tax planning:

The Group's attitude towards tax planning is consistent with the Group's overall aim of compliance with laws and regulations and maximising shareholder value. Any business transaction undertaken will be in accordance with the Group's strategy and underpinned by commercial objectives. We do not engage in aggressive tax planning that lacks commercial substance or may harm the Group's business operations, reputation or stakeholders and we seek external advice as required. The Group's approach to intercompany transactions requires that these are conducted on an arm's length basis and comply with the transfer pricing rules in the jurisdictions in which the Group operates and are in line with the OECD principles. We seek to benefit from government sponsored reliefs and incentives, where appropriate.

The Group may engage with external tax advisors where tax legislation is not clear or open to interpretation and to assist with tax compliance obligations in the jurisdictions in which we operate.

2. Relationship with tax authorities:

We seek to build an equitable relationship with the tax authorities in the jurisdictions in which we operate. Where any disputes arise with regard to the interpretation and application of tax legislation, the Group is committed to addressing and resolving the matters promptly with the relevant tax authorities in an open and constructive manner. We may seek external support from our advisors to confirm the appropriateness of tax positions and interpretations to minimise potential areas of disagreement with the tax authorities.

3. Tax integrated into the business:

Given the organisational structure and collaborative working culture within the Group, the tax team has built close relationships with the wider business such that tax is appropriately considered as an integral part of a relevant transaction or business decision. Members of the tax and finance teams are appropriately qualified and provided with relevant training opportunities to fulfil their role effectively and the relationship with external advisors ensures real time support is available on specialist technical issues that may arise.

Total tax contribution

The Group has prepared its total tax contribution in line with the requirements of 'The Reports on Payments to Government Regulations 2014' (the 'Regulation'). The Regulation's definition of Payments to Government includes fewer payment types, compared to the total tax contributions disclosed by the Company in prior years. As such, the Group has also disclosed other taxes paid such as property taxes, employer and employee payroll taxes, environmental taxes and customs and duties. The total tax contribution of the Group amounted to $392 million compared to $381 million in the prior year, with the increase attributed to the ramp up of the Bozshakol and Aktogay operations.

Payments to Governments

The table includes the information in the format required to be disclosed under the Regulation. The report shows payments made in excess of £86,000 ($114,000) for activities related to the exploration, prospecting, discovery, development and extraction of minerals by project and by government type and by country, rounded to the nearest million. Where a payment relates to activities that are reportable under the Regulation, as well as to activities which are not reportable, the payment has been included in its entirety if it is not possible to disaggregate it. In addition to the disclosures required under the Regulation, the Group has presented payments made for other types of taxes in the same format to show its total contributions in the countries and regions in which it operates. Comparative information under the Regulation is not required and has not been presented.

For the year ended 31 December 2018, total payments to governments under the Regulation amounted to $314 million, while total tax contributions which includes tax payments not covered by the Regulation, amounted to $392 million and are contained in the table below.

Social payments represent payments made to bodies, associations, trusts, state-owned enterprises and other public interest groups located in the regions in which the Group operates and are shown by mining license, where applicable. These payments include the transfer of assets at their book value, which the Group regards as social payments because they benefit the local communities.

Social payments of $9 million were made during 2018. Key projects supported included the construction of sports facilities in Pavlodar, healthcare projects in the East Region of Kazakhstan and the development of a botanical garden in Astana.

Payments to governments

$ million	Corporate income taxes	MET and royalties[1]	Withholding tax	Signature bonus and licence fee[2]	Social payments	SUBTOTAL Total payments to governments per Regulation	Employer's payroll taxes	Property taxes	Environmental taxes	Employees' payroll taxes	Customs and duties	Total
KAZAKHSTAN												
Artemyevsky – licence	–	13	–	–	–	**13**	1	1	–	1	–	**16**
Irtyshsky – licence	–	8	–	1	–	**9**	1	–	–	1	–	**11**
Orlovsky – licence	–	25	–	–	–	**25**	1	–	–	2	–	**28**
Yubileyno-Snegirikhinsky – licence	–	–	–	–	–	**–**	–	–	–	–	–	**–**
Legal entity	37	–	–	–	3	**40**	3	1	–	5	–	**49**
Total East Region	37	46	–	1	3	**87**	6	2	–	9	–	**104**
Aktogay licence and legal entity	12	69	16	1	2	**100**	3	6	3	5	4	**121**
Bozshakol licence and legal entity	2	84	25	–	4	**115**	3	6	4	4	3	**135**
Koksay licence and legal entity	–	–	–	–	–	**–**	–	–	–	–	–	**–**
Other legal entities	–	–	–	–	–	**–**	3	–	–	5	–	**8**
TOTAL	**51**	**199**	**41**	**2**	**9**	**302**	**15**	**14**	**7**	**23**	**7**	**368**
RECIPIENT												
State Revenue Committee	51	199	41	1	–	**292**	–	–	–	–	7	**299**
Local government[3]	–	–	–	1	9	**10**	15	14	7	23	–	**69**
TOTAL	**51**	**199**	**41**	**2**	**9**	**302**	**15**	**14**	**7**	**23**	**7**	**368**
KYRGYZSTAN												
Bozymchak licence and legal entity	–	9	–	–	–	**9**	2	–	–	2	–	**13**
RECIPIENT												
State Tax Administration (central government)	–	6	–	–	–	**6**	–	–	–	–	–	**6**
Local government	–	3	–	–	–	**3**	2	–	–	2	–	**7**
TOTAL	**–**	**9**	**–**	**–**	**–**	**9**	**2**	**–**	**–**	**2**	**–**	**13**
UNITED KINGDOM												
Legal entity paid to HMRC	3	–	–	–	–	**3**	2	–	–	6	–	**11**
Total Payments to Governments	**54**	**208**	**41**	**2**	**9**	**314**	**19**	**14**	**7**	**31**	**7**	**392**

1 MET is payable on the value of the mineral resources extracted based on average price of the minerals on the LME or LBMA.

2 Payments made as required under subsoil use licence.

3 Local government in Kazakhstan includes bodies, associations, trusts, state-owned enterprises and other public interest groups.

Sustainable growth

KAZ Minerals is a responsible developer and operator of mining assets in Kazakhstan and Kyrgyzstan. Corporate responsibility is at the core of our strategy and licence to operate.

"Our employees, investors, local communities, governments and other stakeholders expect us to develop mineral wealth for the benefit of wider society in Kazakhstan and Kyrgyzstan."

Our approach to corporate responsibility

KAZ Minerals is a responsible developer and operator of mining assets in Kazakhstan, Kyrgyzstan and Russia. We are committed to maintaining high levels of corporate responsibility as we grow our business and share the benefits of natural resource extraction with our key stakeholders.

Our stakeholders, including employees, investors, local communities and governments, expect us to develop mineral wealth for the benefit of wider society, to ensure that employees and contractors are provided with a safe working environment and to minimise the impact of our activities on the surrounding environment and local communities.

We are carefully managing the environmental and social impacts of our activities as we increase production from our new facilities at Bozshakol and Aktogay and as we prepare for the next phase of growth for the Group.

Oleg Novachuk
Chair

National context and economic contribution

KAZ Minerals is a copper miner based in Kazakhstan and Kyrgyzstan. The Group has recently acquired Baimskaya, a major greenfield asset in Russia which it intends to develop into a large scale, open pit copper mine by 2026.

In Kazakhstan the Group operates the Bozshakol and Aktogay mines and concentrators, as well as three underground mines and associated concentrators in the East Region, employing approximately 14,000 staff. In 2018 the Group exported 106 kt of copper cathode from Kazakhstan to customers in both Asia and Europe (2017: 112 kt) and 190 kt of copper in concentrate mainly to China (2017: 144 kt). As a result of its economic activities, the Group generated revenues of $2,162 million in 2018 and made a total tax contribution of $368 million in Kazakhstan, including $199 million of MET and $92 million of corporate income and withholding taxes.

The Group employs approximately 1,000 staff in Kyrgyzstan where it operates the Bozymchak copper-gold mine, contributing $13 million in taxes paid in 2018.

From 2011 to date the Group has invested a total of approximately $4.2 billion in the construction of mining facilities at Bozshakol and Aktogay. In addition to their financial contribution, these new mines created employment for over 3,000 operational staff who received extensive training in the use of modern equipment and production techniques. In 2018 the Group commenced work on the construction of a second concentrator at Aktogay which will double sulphide ore processing capacity for a total investment of $1.2 billion, of which $204 million was spent in 2018.

Economic value generated and distributed

$ million	2018	2017
Direct economic value generated		
Gross Revenues	2,162	1,938
Economic value distributed		
Operating cash costs[1]	659	523
Employee wages and benefits[2]	184	170
Payments to providers of capital[3]	256	222
Taxes paid[4]		
Kazakhstan	321	317
Kyrgyzstan	9	7
United Kingdom	3	–
Community investments[5]	9	10
Economic value retained	721	689

1 Operating cash costs as disclosed in the Financial review (see page 38), being the difference between revenues and EBITDA adjusted to exclude total employee costs (see note 8 to the financial statements) and social spend, as reflected in the table above.
2 Employee wages and benefits represents cost incurred by the Group of the total labour cost and associated social taxes (see note 8 to the financial statements).
3 Payments to providers of capital represents interest paid on borrowing facilities and dividends during the period (see consolidated statement of cash flows on page 124).
4 Taxes paid for each region is reflected in the payments to governments table on page 46 (see Financial review) and is the total taxes paid adjusted to remove employee and employers' payroll taxes, which are reflected within employee wages and benefits for each region and excludes social spend, reflected as community investments.
5 Community investments represents the social payments as reflected in the payments to government table on page 46.

Health and safety

Fatalities

We are disappointed to report that there were four fatalities at our underground operations in the East Region of Kazakhstan in 2018. One fatality occurred at the Artemyevsky mine and three at Orlovsky. Following all fatal incidents, operations in the affected area are suspended and senior management attend the site within a short period of the incident occurring as part of a preliminary investigation. All fatalities are investigated by state authorities and following this the Group conducts its own detailed investigation to establish the root causes and identify key learnings.

Fatalities

Fatality frequency rate

KAZ Minerals considers all fatalities to be avoidable and has a target of zero fatalities. There have been no operational fatalities in any of the Group's open pit mining assets at Bozshakol, Aktogay and Bozymchak since the mines commenced production, covering a total of 38 million man hours. Open pit mining is inherently safer than underground mining and significant efforts have been made at the new open pit mines to establish and maintain a strong safety culture from the outset.

The number of fatalities is on a long-term downward trend. Rock fall in underground mines has been a cause of fatalities in previous years and in 2018 a ground control improvement plan was implemented to directly address this risk, an initiative which continues into 2019. Work in this area has already shown improvements and none of the fatal incidents in 2018 resulted from rock falls.

Additional initiatives in 2018 included detailed health and safety audits of all mines and Group-wide workshops to implement best practice. Investments have also been made in improvements to emergency response capabilities and general medical support.

Injuries

The Group reports its health and safety performance according to the occupational injury and disease classification definitions published in January 2014 by the ICMM.

The average TRIFR for ICMM members in 2017 was 3.94 (2016: 4.26). The reporting of minor injuries and near misses are important management tools for improving health and safety performance. Under ICMM definitions, all injuries including minor injuries requiring treatment beyond first aid or resulting in the worker's inability to perform his or her routine work function on the next calendar day, are recordable injuries. To improve the ability of management to take pre-emptive action, a culture of open reporting of minor injuries and near misses has been successfully implemented at Bozshakol and Aktogay. The Group is working to encourage a similar reporting culture across all of its assets and therefore the reporting of recordable injuries and near misses may increase in the short term.

There were 61 TRI cases in 2018, an increase of 20% compared with the 51 injuries recorded in 2017. Man-hours worked increased in 2018 to 35.0 million (2017: 32.0 million), resulting in a 9% increase in TRIFR to 1.74 (2017: 1.60). The main causes of injury were falls (16) and rock falls (12).

There were 18 serious injuries out of a total of 61 recordable injuries, compared with 13 serious injuries in 2017. The main causes of serious injury were slips and falls (six), rock falls (four) and vehicle related incidents (two).

The SLAM system for hazard observation

The Group employs the 'SLAM' system ('Stop – Look – Assess – Manage') as one of several initiatives aimed at encouraging identification of hazards prior to commencing a task, so that risks can be eliminated or controlled. Employees are provided with SLAM forms and encouraged to complete them regularly as well as recording all safety interactions between staff to demonstrate that risk assessments are taking place.

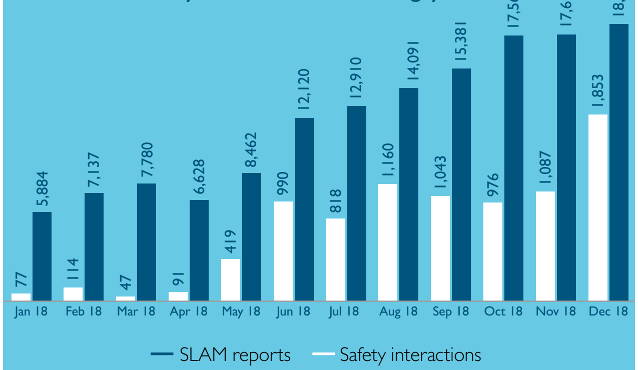
At Aktogay in 2018, targets of 700 safety interactions and 14,000 SLAM reports per month were set and achieved. There are 1,500 staff employed at Aktogay, with approximately 800 on site at any given time. After accounting for shift patterns, this represents a target of at least one SLAM report per person per day. The quality of SLAM reporting is also monitored and has improved significantly during 2018.

"The goal is to get people interacting and talking about safety on a regular basis. When I see that there have been 100 safety interactions on one day, each interaction involves at least two people so that is a minimum of 200 people who have been talking about safety on that shift, and that can only be a good thing.

We also need to encourage a culture where everyone feels empowered to stop someone else if they notice dangerous behaviours or working conditions, and the SLAM system and monitoring of safety interactions encourages this."

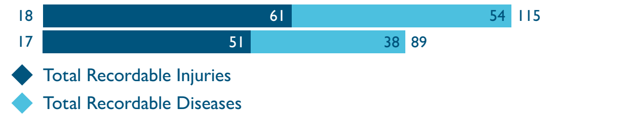
Aktogay Manager

SLAM and safety interactions at Aktogay, 2018



Total Recordable Injury Frequency Rate

Total Recordable Cases



Total Recordable Cases Frequency Rate

Occupational health

There were 54 new cases of occupational diseases recorded in 2018 (2017: 38). The majority of new cases in 2018 resulted from musculoskeletal disorders, neuropathic pain, silicosis and dust bronchitis.

Occupational health problems are usually the result of long-term exposure to risks such as poor ergonomics, vibration, dust or noise. The Group has measures in place to remove or reduce these risk factors where possible, for example by limiting the time that employees spend in roles which expose them to occupational health risk factors. Annual on-site medical checks have been established to ensure timely identification of emerging occupational health conditions. During 2018, the Group established new industrial hygiene guidance, medical support standards and rehabilitation and return to work procedures.

The new open pit mines at Bozshakol, Aktogay and Bozymchak reported no occupational health issues during 2018.

Improving our performance

In 2017, the Group approved a new three-year health and safety strategic plan to improve performance. The plan aims to strengthen the leadership and cultural foundations for safe and productive work, as well as addressing specific priority risk areas for workplace safety and occupational health.

A key health and safety priority in 2019 is to improve knowledge and skills through training and development to identify hazards. Once identified, hazards can be illuminated or a call for help made prior to the commencement of the task.

At Aktogay, we will be supervising approximately 2,000 contractors commencing work on the expansion project to construct a new sulphide concentrator. Our knowledge of the health and safety risks gained from previous similar construction projects and the close involvement of the KAZ Minerals supervisory team is expected to reduce the health and safety risks associated with the expansion project.

Environmental impacts

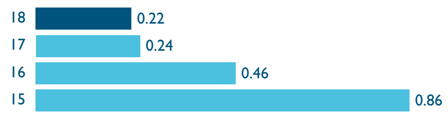
KAZ Minerals seeks to reduce the impact of its activities on the environment and to increase environmental awareness amongst its employees, contractors and suppliers. The Group has an environmental policy which sets out its commitment to environmental protection, reduction of emissions and waste and efficient consumption of resources such as energy and water. The policy can be downloaded from the Group's website, www.kazminerals.com.

The Group conducts detailed environmental due diligence prior to the development of new mining projects and continually monitors the impact of its activities on the environment, publishing key performance indicators annually. Where possible, the Group aligns its environmental reporting with the GRI4 framework which is a set of sustainability reporting standards published by the Global Reporting Initiative ('GRI'). GRI is an independent organisation established in 1997 to create common standards for sustainability reporting by companies and governments.

The Health, Safety and Environment ('HSE') Committee is a Board Committee which is responsible for oversight of the Group's environmental policies, reporting, standards and compliance. Senior management are responsible for the Group's overall environmental performance. For more details on the HSE Committee, please see the HSE Committee section in the Governance framework on page 91 of this report.

Energy use

TJ/kt sulphide ore processed (energy consumption)



The Group's energy efficiency, measured as energy use per tonne of ore processed, has continued to improve in 2018 as the Bozshakol and Aktogay open pit mines have ramped up production. The main drivers of the energy efficiency of the new assets are the efficiencies gained from the use of large scale processing facilities, the modern grinding and flotation technology employed in the concentrators and the low strip ratios of the Bozshakol and Aktogay deposits, where low quantities of waste rock are required to be removed per tonne of copper ore extracted.

Energy use by type (PJ)	2018	2017
Electricity	**8.63**	6.91
Diesel	**1.74**	1.66
Heat	**1.27**	1.27
Coal	**0.00**	0.02
Petrol	**0.06**	0.07
Total	**11.70**	9.93
Energy intensity [1]	**0.22**	0.24

Energy use by asset (PJ)	2018	2017
Bozshakol	**4.09**	3.71
Aktogay	**3.98**	2.53
East Region	**3.28**	3.33
Bozymchak	**0.35**	0.36
Total	**11.70**	9.93
Energy intensity [1]	**0.22**	0.24

1 TJ/kt sulphide ore processed

Total energy use increased by 18% in 2018 compared with the prior year, mainly reflecting the increase ore processing volumes which grew by 28% as Bozshakol and Aktogay ramped up towards their design ore throughput capacities. Energy use in the East Region and Bozymchak reduced to 3.63 PJ (2017: 3.69 PJ) due to a reduction in the quantity of ore processed. Whilst overall energy consumption increased, the energy intensity of the Group's activities reduced to 0.22 TJ per kt of ore processed (2017: 0.24).

Corporate Values

KAZ Minerals established its five key corporate values in 2015. These are the principles by which we seek to conduct our business. They guide our decision making and how we monitor our performance. By upholding these values we will build a strong internal culture, improve relationships with our external stakeholders and deliver value to our shareholders:

Safety
Protect the health and wellbeing of all of our employees and contractors and protect the safety of the environment

Long Term Efficiency
Anticipate the long-term consequences of today's actions

Teamwork
Take responsibility for personal and team goals, accept compromise, encourage colleagues and appreciate different perspectives

Professional development
Improve competency and skills, encourage education and training, share experience and knowledge with colleagues

Integrity
Uphold honesty in everything that we do. Keep promises and admit mistakes

Pre-split drilling and blasting at Aktogay

Pit wall stability is a key health and safety risk in any open pit mining operation. Pre-split drilling and blasting techniques have been employed at Aktogay since April 2018, utilising a D65 drill rig from Atlas Copco. The rig is capable of drilling angled pre-split holes for the optimum placement of explosives as well as regular production drill holes. Pre-split blasting preserves the stability of the highwalls in the pit by preventing blast damage.

Electricity Consumption (PJ)	2018	2017
Bozshakol	3.34	2.95
Aktogay	3.47	2.11
East Region	1.64	1.68
Bozymchak	0.17	0.17
Total	**8.62**	6.91
Energy intensity[1]	**0.16**	0.17

1 TJ/kt sulphide ore processed

Electricity consumption at Bozshakol and Aktogay increased by 34% in 2018 to 6.81 PJ (2017: 5.06 PJ), reflecting the ramp up of sulphide and clay ore processing volumes, which increased by 28% from 41,671 kt in 2017 to 53,250 kt in 2018. In the East Region and Bozymchak, electricity consumption reduced to 1.81 PJ (2017: 1.85 PJ) in line with the reduced processing volumes.

Diesel Consumption (PJ)	2018	2017
Bozshakol	0.75	0.75
Aktogay	0.52	0.42
East Region	0.32	0.33
Bozymchak	0.15	0.16
Total	**1.74**	1.66
Diesel intensity[2]	**0.023**	0.026

2 TJ/kt ore mined

Diesel consumption increased by 5% to 1.74 PJ (2017: 1.66 PJ) as ore extraction at Aktogay ramped up during the year. Diesel consumption at Bozshakol and Bozymchak was in line with the prior year period. The Group constantly seeks to improve the efficiency of its haul truck fleet, the main source of diesel consumption. Fleet movements at Bozshakol and Aktogay are monitored in real time using an automated remote dispatch system enabling constant adjustments to minimise diesel consumption. Bozshakol and Aktogay benefit from close proximity to pre-existing rail infrastructure that is used to transport copper concentrate to customers, eliminating the need to transport concentrate using diesel powered trucks.

CO_2 emissions

CO_2 emissions by type (kt)	2018	2017
Scope 1	431	410
Scope 2	2,170	1,733
Group	2,601	2,143
Copper production	294.7	258.5
CO_2 per unit of copper	8.8	8.3
Ore processed	53,250	41,671
CO_2 per unit of ore processed	**0.049**	0.051

CO_2 per unit of ore processed in 2018 was 4% lower at 0.049, from 0.051 in the prior year. CO_2 emissions per tonne of copper produced increased slightly to 8.8 tonnes (2017: 8.3 tonnes), due to the expected reduction in average copper grades in ore processed during the year.

As operating activities have increased with Aktogay and Bozshakol ramping up, total CO_2 emissions increased by 21% to 2,601,060 tonnes (2017: 2,142,914 tonnes). The increase was largely due to higher ore volumes at Aktogay, where sulphide processing increased by 61% to 20.8 Mt (2017: 12.9 Mt), leading to a 62% increase in CO_2 emissions at the site.

Scope 1 emissions mainly relate to mining activities at Bozshakol and Aktogay and heat energy consumption in the East Region. Scope 1 emissions increased slightly in 2018 as planned lower ore and waste rock extraction at Bozshakol and Bozymchak was offset by a 60% increase in extraction at Aktogay. Scope 2 emissions increased by 25% and mainly relate to electricity consumption at the Bozshakol and Aktogay concentrators, where combined processing volumes were 31% higher in 2018.

Trial of light weight haul truck bodies

During 2018, a trial of lightweight trays on four haul trucks at Aktogay was successfully completed. Using lightweight trays allows more ore to be transported per truck journey whilst remaining within maximum truck weight limits. Fewer journeys are required to transport a given quantity of ore, so diesel consumption, costs, carbon emissions and fleet size are all reduced.

The lightweight trays are a direct replacement for the original Caterpillar 785C trays and are supplied by DT HiLoad Australia. The maximum ore payload for a 785C truck is increased by 16%, from 125 t to 145 t. Total truck hours can be reduced by approximately 15%.

CO_2 intensity	2018	2017	2016
Revenue ($ million)	2,162	1,663	766
Total CO_2 emissions (Scope 1, Scope 2, kt)	2,601	2,143	1,473
CO_2 emissions, t per $ million revenue	**1,203**	1,289	1,923

The Group's CO_2 intensity by revenue, as measured by the Carbon Disclosure Project (tonnes of CO_2 per $1 million of revenue), has improved as the major growth projects have ramped up and commodity prices averaged higher in 2018, from 1,289 tonnes in 2017 to 1,203 tonnes in 2018.

Further reducing CO_2 emissions intensity

The Group is committed to minimising the CO_2 intensity of its operations as stated in its Environmental Policy. The Group HSE Committee is responsible for the monitoring of CO_2 intensity.

The operations' General Directors are responsible for implementing efficiency initiatives to minimise energy consumption at site level.

Reductions in CO_2 intensity have been achieved through the transition to modern open pit mining. In the longer term the Group will seek to increase the use of renewable energy sources where possible. The 0.17 PJ of electricity consumed at the Bozymchak mine comes exclusively from renewable energy sources (hydropower).

In August 2018, the Group agreed to acquire the Baimskaya copper project in the Chukotka region of Russia, where it intends to construct a new open pit copper mine with on-site concentrators capable of processing 60 Mt of ore per year, with first copper production expected in 2026. Electrical power for the construction phase of the Baimskaya project will be drawn from local nuclear facilities and the power for production activities after 2026 is expected to be largely drawn from hydropower sources in the Magadan region. The Baimskaya copper mine is therefore expected to draw the majority of its energy consumption from carbon-free energy sources, with the only significant CO_2 emissions arising from the use of diesel fuel in mining activities and the transportation of copper concentrate to customers. The ramp up of production at Baimskaya from 2026 onwards is expected to significantly reduce the CO_2 intensity of the Group's activities, further reducing both CO_2 emissions per tonne of ore processed and per tonne of copper produced.

The Government of Kazakhstan, where the majority of the Group's assets are currently located, is committed to increasing electricity generation from renewable sources as part of its national development strategy, with a target of 30% of power generation by 2030 and 50% by 2050.

Waste

The Group is committed to the responsible management of mineral waste and other waste products, as set out in its Environmental Policy. The Group HSE Committee is responsible for monitoring waste management. The operations' General Directors are responsible for waste management at site level.

Waste rock by asset (Mt)	2018	2017
Bozshakol	6.4	6.4
Aktogay	0.5	1.1
East Region	0.1	0.1
Bozymchak	7.8	6.7
Total	14.8	14.3
Waste intensity[1]	50.2	55.3

1 kt waste rock/kt copper production

The largest volume of waste generated by the Group is waste rock from the mining of overburden, mainly at Bozshakol and Bozymchak. Generation of waste rock at Bozshakol and Aktogay is not considered to be a significant stakeholder issue due to the remote locations of the mines and their separation distances from local communities. Waste rock mining increased by 3% to 14.8 million tonnes in 2018 (2017: 14.3 million tonnes) due to increased stripping activity at Bozymchak in preparation for the next stage of the mine plan.

Aktogay generated 0.5 million tonnes of waste rock in 2018 (2017: 1.1 Mt), compared with 6.4 million tonnes at Bozshakol (2017: 6.4 Mt). Aktogay will continue to generate less waste per unit of ore mined over the life of the mine due to its lower strip ratio of 0.2 compared with 0.7 at Bozshakol. The strip ratios at both Bozshakol and Aktogay are low compared with industry averages.

Tailings by asset (Mt)	2018	2017
Bozshakol	28.0	24.1
Aktogay	20.2	12.6
East Region	2.6	2.5
Bozymchak	1.0	1.0
Total	51.8	40.2
Tailings intensity[2]	176	156

2 kt tailings/kt copper production

The safe and effective management of tailings waste is a high priority for the Group. Operating procedures are in place for the monitoring and maintenance of tailings storage facilities, including regular inspection and testing of nearby groundwater to detect and to maintain structural integrity. The Group periodically arranges for inspections by independent external experts, with all active tailings storage facilities inspected during 2018. The Group is required to comply with the laws of the Government of Kazakhstan and the Government of Kyrgyzstan in relation to the licensing, upkeep and maintenance of tailings storage facilities. State authorities regularly inspect the Group's tailings facilities to ensure compliance with regulations. There are no significant deficiencies identified in the stability of the Group's tailings storage facilities. Ongoing work programmes, supported by appropriate external consultants, are in place to develop the tailings dams in line with future production plans and to address any issues identified.

At Bozshakol and Aktogay, a central thickened discharge method is in use, which is most appropriate for the terrain and conditions at these sites. The flat terrain surrounding Bozshakol and Aktogay and their remote locations would reduce the environmental impact in the event of an issue with tailings storage.

In the East Region, active tailings storage facilities are located at Orlovsky, Nikolayevsky and Belousovsky and there is a closed facility at Berezovsky. At Bozymchak, the Group employs a dry tailings facility where material is filtered before storage to reduce moisture content to approximately 14%, before waste is deposited in plastic lined cells by conveyor. Use of this type of facility is employed at Bozymchak due to the relatively high altitude location of the mine in mountainous terrain and the possibility of seismic activity.

Tailings waste production is directly linked to ore processing volumes and increased from 40.2 million tonnes in 2017 to 51.8 million tonnes in 2018. The main cause for the increase was due to the ramp up of the Bozshakol clay and Aktogay sulphide concentrators.

Water

The Group is committed to reducing water consumption where possible, as set out in its Environmental Policy. The Group HSE Committee is responsible for monitoring water use. The operations' General Directors are responsible for implementing efficiency initiatives to minimise water consumption at site level.

Sources of water for use in new mining projects are considered in detail prior to commencement of construction and this analysis forms an integral part of any scoping or feasibility study. The KAZ Minerals projects division, together with senior management and the Board, will always consider the availability of fresh water for copper processing and any likely adverse effect on local communities or the surrounding environment before approving a new development project.

The Group is currently conducting a feasibility study for the Baimskaya copper project in the Chukotka region of Russia, which includes a detailed assessment of the availability of sufficient supplies of water. The pre-feasibility study work which was conducted prior to the Group's ownership of Baimskaya, and a site visit by KAZ Minerals indicates that sufficient fresh water is available for the proposed operations and there will be no adverse effects on local communities, or other material impacts on the environment resulting from the extraction of fresh water for copper processing.

All of KAZ Minerals' existing mining and processing sites benefit from access to sufficient fresh water and none of the Group's operations are located in water stressed areas. The Group seeks to conserve and recycle as much water as possible, with the main sources of reusable water being from tailings and mine water inflow. The Bozshakol, Aktogay and Baimskaya sulphide concentrators are expected to recycle over 75% of water withdrawn and annual water consumption at Bozshakol has started to reduce in 2018 as more water is recovered from its tailings storage facility. Each operational site uses a combination of surface water and groundwater sources and seeks to access different water sources to those used by local communities. Water withdrawal rates are monitored and reported regularly to management, the HSE Committee and local authorities.

Water withdrawal by asset (megalitres)	2018	2017
Bozshakol	22,659	29,034
Aktogay	12,075	8,552
East Region	7,866	11,356
Bozymchak	304	278
Total	42,904	49,220

Water withdrawal across the Group decreased for the first time in 2018 since the Group's Restructuring in 2014, reducing by 13% to 42,904 megalitres (2017: 49,220 megalitres).

The main driver of the reduction in consumption was Bozshakol, despite an increase in processing volumes, where greater quantities of process water are being recycled from the tailings storage area, reducing the requirement to draw fresh water from other local sources. Water consumption at Aktogay increased in line with the ramp up of the sulphide concentrator during 2018, to 12,075 megalitres (2017: 8,552). Water consumption in the East Region reduced by 31% to 7,866 megalitres, reflecting the lower quantity of ore processed.

Water intensity by asset (m^3 per t ore processed)	2018	2017
Bozshakol	0.80	1.18
Aktogay	0.33	0.33
East Region	2.60	3.59
Bozymchak	0.30	0.28
Total	0.62	0.90

The water intensity of the Group's operations measured as cubic metres per tonne of ore processed decreased significantly in 2018, to 0.62 m^3/t (2017: 0.90 m^3/t). The main driver of the reduction in intensity was increased recycling of water at the Bozshakol concentrator, as expected following the ramp up to design capacity and commencement of recovery of material quantities of water from the tailings storage area. In the first half of 2019, upgrade works are being carried out to increase the water recycling rate at the Bozshakol clay plant.

Water withdrawal by source (megalitres)	2018	2017
Surface water	25,993	32,775
Groundwater	16,911	16,445
Total	42,904	49,220

Total water extraction of 42,904 megalitres consisted of 25,993 megalitres extracted from surface water sources including rivers or municipal water supplies and 16,911 megalitres extracted from groundwater wells. The increase in water extracted from groundwater wells was due to the ramp up of output at Aktogay during 2018, where water is drawn primarily from groundwater sources. The decrease in surface water consumption is due to the increased water recycling rate at Bozshakol, where surface water is sourced from the Satpayev canal system.

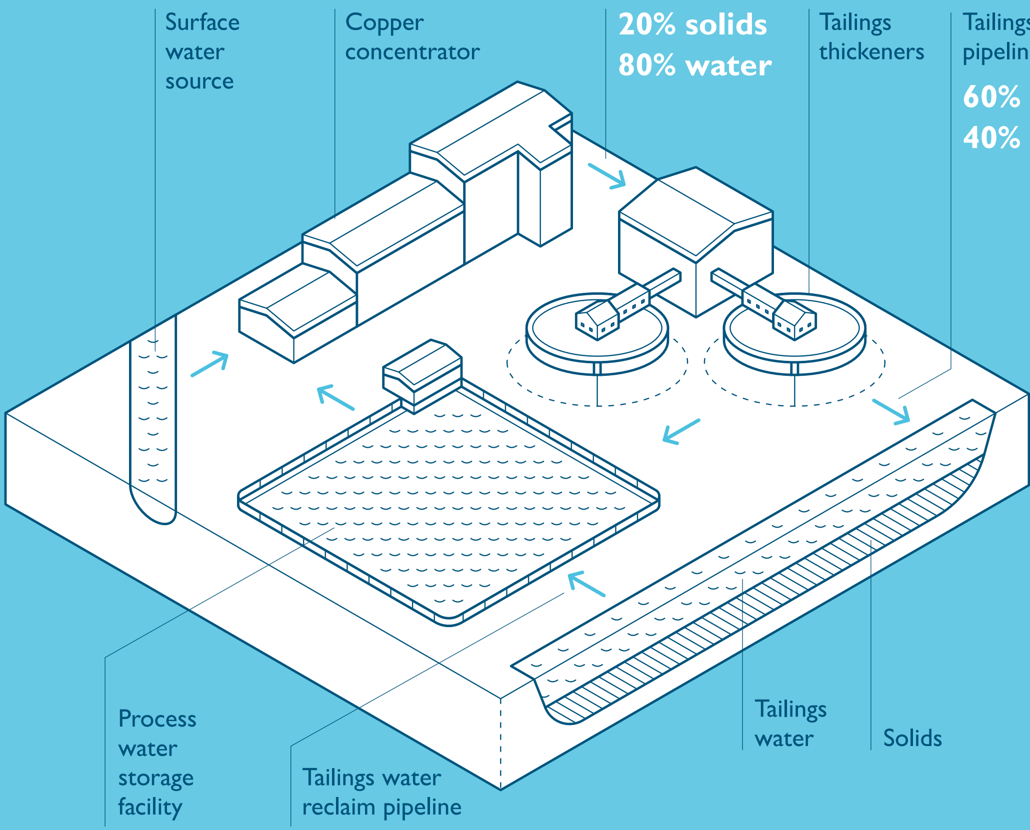
The total discharge of water back into the environment in 2018 reduced to 1,031 megalitres (2017: 1,745 megalitres). Discharge of water took place at three locations in the East Region. Two of these locations are at underground mining operations which are situated large distances from the processing plants, making it uneconomic to pump the water back for reuse. The third discharge occurs at waste rock dumps adjacent to a retired open pit mine, where acidic drainage water is collected. At each of these locations the water is treated prior to release to the environment and the quality of discharged water is monitored.

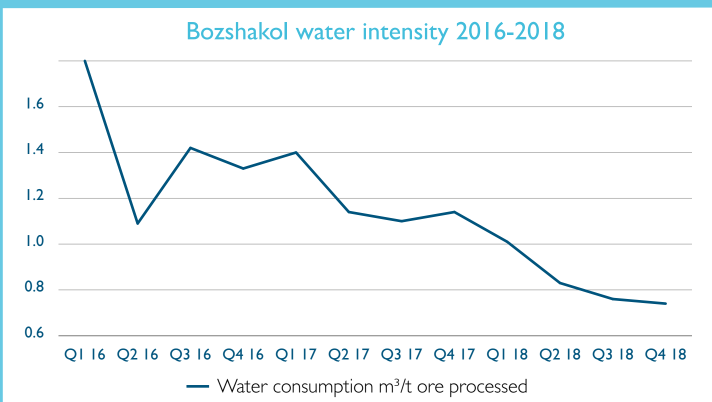
Aktogay tailings storage facility

Water recycling process

The Bozshakol and Aktogay sulphide concentrators are designed to recycle more than 75% of water withdrawn from local sources. Slurry and waste water from the concentrator is piped to the tailings storage facility where water in the tailings material is reduced to 40%, the minimum level for maintaining a pumpable viscosity. The tailings are then transferred to the tailings storage facility from where water is reclaimed and recycled for use in the concentrator. The only significant water loss in the system is due to evaporation in the tailings storage facility.

At Bozshakol the sulphide concentrator and clay plant commenced operations in 2016. The quantity of water drawn from the nearby Satpayev canal increased during the initial draw phase, as the concentrators ramped up to design capacity. During 2018, significant quantities of water have begun to be reclaimed from tailings and the rate of water withdrawal has reduced. Water intensity, measured as m^3 of water drawn from external sources per tonne of ore processed, has fallen by 48% from 1.42 in Q3 2016 to 0.74 in Q4 2018. In the first half of 2019 a programme of upgrades to the Bozshakol clay plant water system is planned to increase recycling rates and significantly reduce the consumption of fresh water.





The Bozshakol and Aktogay copper concentrators are designed to recycle

>75%

of water withdrawn from local sources

Mine closure

The Group is committed to rehabilitating mining sites after closure, as it is required by law in Kazakhstan and Kyrgyzstan. The operations' General Directors are responsible for the Group's compliance with closure and rehabilitation obligations.

The Group periodically reviews and updates closure plans for each of its sites, including calculating the likely costs associated with closure. Provision is made to cover the costs of closure and rehabilitation and amounted to $59 million at 31 December 2018. More information can be found in note 26 to the financial statements on page 149 of this document. The provision represents the discounted values of the estimated costs to decommission and reclaim the mines based on the current estimated life of mine of each deposit.

In December 2016, mining operations at Yubileyno-Snegirikhinsky ceased as mineral resources at the mine were fully exploited. A closure plan is currently being executed by the Group, which includes the sealing of all mine access points, the contouring of waste heaps, removal of buildings and infrastructure, and management of water run-off. The site will be returned as closely as possible to its pre-development state as required by legislation. No significant adverse impacts on the local environment are anticipated following completion of the required reclamation work.

Environmental permitting and compliance

Environmental permits are granted for the Group's operations, setting annual limits for emissions, water use and water discharge. If levels exceed these limits, charges are applied in proportion to the amount of emissions or usage in excess of the limits. The Group reports the total charges paid and any material environmental incidents (with materiality determined by their nature or resulting in a fine in excess of $100,000) in this report and in the Corporate Responsibility section of its website.

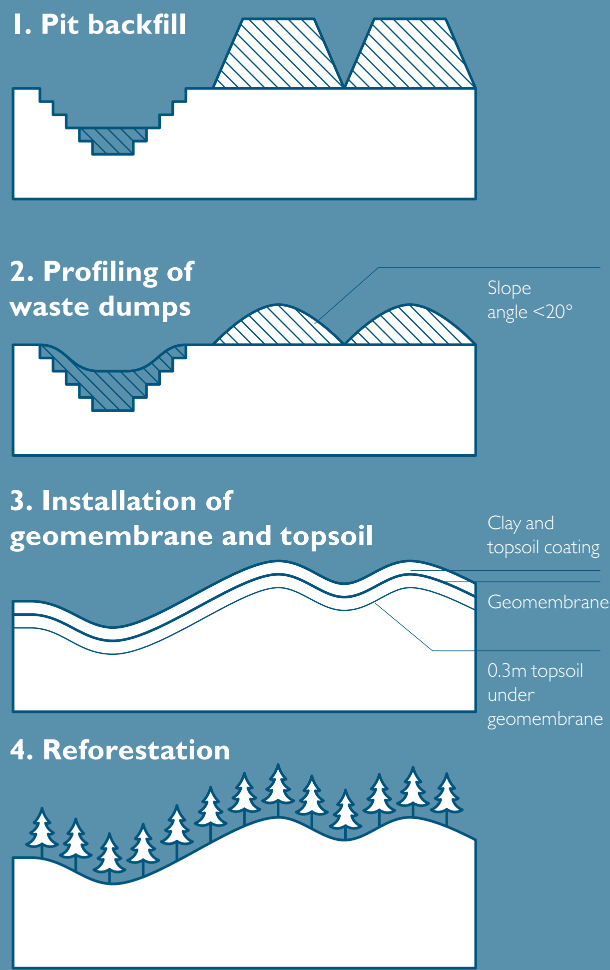
The Group paid negligible excess emissions charges of less than $1,000 in 2018 (2017: $80,000). Such payments are administrative in nature and are not considered to be fines for breaches of regulations. Excess emissions charges are not related to any potential risk to the environment or the safe operation of our tailings facilities or other environmental management systems.

Other environmental fines amounted to a total of approximately $300,000 (2017: $180,000) for the Group, spread across 12 separate instances none of which are considered material and with no single payment exceeding the Group's quantitative materiality threshold of $100,000.

Yubileyno-Snegirikhinsky mine closure

The Group ceased operations at the Yubileyno-Snegirikhinsky mine in the East Region at the end of 2016 as mineral resources were fully depleted. A closure plan was designed and agreed with the local authorities.

Under the rehabilitation programme, it was agreed that the majority of the surface buildings such as accommodation blocks, offices, and associated utilities will not be decommissioned but will instead be transferred to the local government authorities to be re-purposed for use by small and medium sized businesses. Structures specific to mining activities such as containers, underground equipment, the explosives warehouse and ore stockpile will be demolished and removed from the site. The underground mine will be sealed and allowed to flood, which is a natural process due to groundwater inflow.



The overall strategy for the rest of the site is forestry reclamation, to restore the landscape as far as possible to its original condition. To achieve the reforestation, the original open pit will be backfilled with material from the waste dumps. The waste dumps will be profiled to fit into the surrounding topography, with slopes at an angle of no greater than 20 degrees. The surface of the waste dumps will then be covered with an impermeable geomembrane and layers of clay and topsoil to allow the planting of new vegetation. The reforestation will help to prevent future soil erosion from water runoff from the former waste dumps.

The decommissioning and reclamation of the mining area is due to be completed in 2019 and the reforestation plan is expected to take up to four years.

Yubileyno-Snegirikhinsky mine site area

Yubileyno-Snegirikhinsky rehabilitation works

Employees

The Group seeks to attract and retain skilled staff by offering safe working conditions, fair remuneration in line with market rates of pay and social benefits packages for its employees and their families.

Policies and due diligence

The Group has in place a number of policies governing its relationship with employees, including the Code of Fair Employment, and the Diversity and Equality policy. The Group periodically reviews the terms and conditions of employment in its own operations to confirm that the Code of Fair Employment is being fully applied within the Group. Due diligence is conducted on newly hired employees prior to their employment in the Group.

Consultation and communication

Several communication channels are open to employees to make their views known to senior management and to the Board. The first point of contact is with an employee's line manager and in most cases this is sufficient for addressing employee concerns. There is also a 'Direct Line' event held every year in which the Chair of the Group answers questions from employees on a live video feed. The Board has nominated the Deputy Chair and Senior Independent Director, Michael Lynch-Bell, as Designated Non-Executive Director for the workforce, responsible for liaising with employees, and meetings with employee representatives are to be held twice a year. Each of the Group's operational divisions has a Head of Employee Relations whose role is to act as a liaison between employees and management. General Directors hold quarterly 'town hall' meetings. Outside of operational or human resources related enquiries, all employees have access to a confidential telephone reporting line ("Speak-Up") which can be used to raise ethical concerns, for example any concerns related to bribery or corruption. The Audit Committee receives a regular update on issues raised using the Speak-Up service and conducts further investigation, where deemed necessary.

KAZ Minerals respects the right to freedom of association and we consult with our employees and trade unions about changes to our business and employment conditions. All employees are entitled to join a union of their choice. At the year end, 77% of the Group's employees belonged to one of the three trade unions active in the mining industry, a decrease compared with 83% in 2017 following the recruitment of new staff with a lower proportion of union membership.

Pay and benefits

We aim to provide fair remuneration to our employees and to incentivise safety and productivity. Operational employee and divisional manager remuneration comprises base pay plus a discretionary award linked to health and safety performance and production targets. Divisional manager remuneration also typically includes an element of discretionary bonus linked to production efficiency and cost control. The Group takes measures to align wage increases with living cost inflation, in particular for lower paid employees. All employees are paid above both the minimum wage and the living wage as defined by the Government of Kazakhstan.

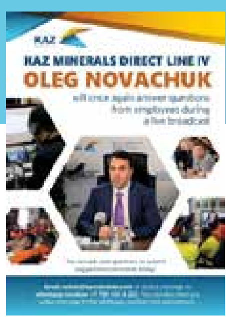
In accordance with regulations in Kazakhstan and our employee agreements, we make payments to employees and former employees for illness and disability sustained at our operations. The financial impact of our ongoing illness and disability obligations are covered in the consolidated financial statements in note 25 on page 148.

Employee communications

KAZ Minerals maintains strong communications links between management and employees, using a number of different channels.

Employee "Direct Line"

Q&A with Oleg Novachuk, Chair. Each year a Direct Line event is held giving employees the opportunity to put questions to senior management via a video link. The 2018 event was the fourth Direct Line, connecting all of the production, project and administration divisions of the Group and was streamed live to all internal participants.



Internal website

'Kaz Minerals info' is a Russian language site used by the Group to share news and information with employees, their families and other audiences in Kazakhstan such as communities close to the Group's operations. The site is also used to conduct surveys.

Attracting and retaining skilled employees

Employee turnover is actively managed at each of the Group's operations and by the Human Resources team. Retention of skilled staff is a key factor in the successful development of the Group's new assets at Bozshakol and Aktogay. When employees leave the Group, exit interviews are conducted to collect feedback.

A Leadership Development Programme is in place to identify potential future leaders so that full support in the form of training and mentoring can be offered. Potential successors are identified for key positions and individual development plans are created for those identified as potential successors. There are more than 60 such key positions at each of Bozshakol and Aktogay. Part of the annual assessment process for expatriate employees is how well they have been mentoring, coaching and training the local successors. Progress towards promotion or continued development is reviewed quarterly, and annually in year end reviews.

Training and development

Professional development is one of the Group's five corporate values. We are committed to ensuring that employees continue their professional development, with the aim of increasing productivity, efficiency and safety. The Group takes a long-term view of building capabilities and leadership qualities amongst its staff which are viewed as critical to our growth strategy.

In 2018, employees each received an average of 62 hours of training (2017: 60 hours) typically consisting of 34 hours of safety training, 24 hours of professional education and four hours of additional education. Operational training includes a significant health and safety component that is not recorded separately as health and safety training. Topics include safe operation of machinery and vehicles, electrical and fire safety, labour protection training, physical fitness and professional development.

At Bozshakol and Aktogay, training and succession programmes aim to transfer skills from senior and experienced team members to a new generation of operators and managers. In 2019, the Group intends to establish a technical training centre at Aktogay.

WhatsApp employee group

In 2019, the Group launched a corporate WhatsApp group chat to keep employees informed of the latest news and initiatives and to help drive traffic to the kazminerals.info website. Sign-up for the group is voluntary and over 1,000 employees have registered to date.

Corporate newspaper

A hard copy corporate newspaper is published regularly. This is an important communication channel for any employees, friends or family who may not have access to the internet.

TV news and YouTube channel

The Group produces regular news updates and general information videos for internal audiences which are shown at operational sites and online on the corporate YouTube channel. The most watched videos have more than 20,000 views.

Professional development

Apprenticeships and technical college partnership, Aktogay

KAZ Minerals is committed to the professional development of its employees and to supporting the training of the next generation of mining professionals in Kazakhstan.

At Aktogay the Group has established an apprenticeship programme to give students practical work experience on its mine sites to coincide with their technical education at the local Ayagoz college, with 40 apprentices commencing training in July 2018. Apprentices benefit from skills transfer and real-world experiences, whilst the Group benefits from establishing a pipeline of future employees with relevant qualifications and an existing relationship with KAZ Minerals.

KAZ Minerals also offers grants to promising students, has funded the renovation of two classrooms at a college for welding and electrical training and provides a health and safety trainer every month to train students in modern safety systems and procedures. Feedback from the local community on the apprenticeship scheme has been very positive as the Group is opening up valuable employment and training opportunities for the local population.

Diversity and Equality

Our goal is to employ a skilled workforce that reflects the demographic of the regions in which we operate and to create a positive, supportive and inclusive culture. The Group has established procedures to ensure that there are no instances of discrimination on the basis of age, gender, race, nationality, ethnic origin, family situation, religion, language, political beliefs, sexual orientation, pregnancy, maternity, paternity or disability. Any reports of discrimination or harassment are investigated and managed.

In line with the Group's corporate values we seek to select, recruit and promote employees based on merit. We give equal access to training and career development opportunities appropriate for every employee's experience level.

We aim to develop the expertise required for our operations from our existing workforce, recruiting locally where possible. The Group has a leadership programme in place focused on the training and development of national employees to fill key positions in the future. Our operations are located in Kazakhstan and Kyrgyzstan and in 2018, 98% of the Group's permanent employees were nationals of these countries.

In circumstances where specialist skills are required, we draw on international expertise with a view to transferring knowledge and best practice in the medium to long term. The number of expatriates at KAZ Minerals is limited and they are largely employed at Bozshakol and Aktogay working alongside local teams who will ultimately take over the full management of operations. At Bozshakol, following the initial commissioning and establishment of working practices, operational management has been transferred from expatriates on fixed-term contracts to permanent employees, with international expertise retained to provide support on specific technical matters.

Gender equality

KAZ Minerals is committed to offering equality of opportunity to all current and potential future employees, regardless of gender. The Group has a relatively high female representation in its workforce benchmarked against major mining companies, at 23% of total employees. This is reflected at senior management level, where 23% are female and 25% of the members of the Board are female. The Group is working to increase the proportion of female employees at all levels.

The average age of the Group's 3,100 female employees is 36. Those working in production roles account for 59% of the total, 55% are married and 57% have children. The Group offers up to three years of maternity or paternity leave and re-induction training for employees returning from leave. A total of 33% of employees on maternity leave have opted to take three years of leave.

The Group regularly reviews salaries to check for equality of pay for equivalent roles, to ensure that a gender pay gap does not emerge.

In 2018, the Group Director of Human Resources and the Deputy Chair conducted workshops with female employees of varying levels of seniority to assess the career development opportunities and working environment that the Group currently offers to its female staff. Feedback from the workshops will be applied in 2019 to continue to build on the successes already achieved. Other initiatives in 2019 will include working with regional colleges to encourage female students to study for technical mining qualifications and working with schools to build awareness of the mining sector and career opportunities within it. The Group is also lobbying for a change in regulations in Kazakhstan which restrict certain operational roles to male employees only. A change in these regulations could lead to a higher proportion of female employees in the Group's workforce in the future. The proportion of female employees employed by the Group in roles which are not prohibited by law is 42%.

Female employees (% of total)

Women in mining

Two senior female employees from KAZ Minerals were recognised in the 2018 "100 Inspirational Women in Mining" awards.

"I think diversity in the copper industry is developing in a positive direction. Today, as an example of our company and our country, we see no restrictions at any level in the mining industry for anyone, whether it is gender, age, nationality or colour. In a mine or a factory, one must work in unity; all have the same opportunities."

Madina Kaparova was born in a mining town to a mining family. A job in resources was the obvious choice, but over 20 years, Madina has built a career that is all her own – and made an outsized impact not just on her company, but on Kazakhstan's mining industry.

Starting in procurement, Madina advanced her career through high performance and a hunger for learning: She earned an MBA and an MSc in Economics while working, and authored 15 scientific publications along the way. Known for her open-minded and empathetic approach, Madina is a celebrated manager, mentor and corporate ambassador for KAZ Minerals.

"I believe there's no difference between men and women when we consider intellectual ability and potential. I am a worthy and equally professional employee, who complies with the qualification requirements and performance required – regardless of whether I was a woman or a man."

Bayan Alzhanova fell in love with geology as a child, exploring her small village with her seven siblings and becoming the de-facto chief identifier of interesting rocks and minerals found along the way.

Graduate and post-graduate qualifications in geology opened up the field to Bayan and introduced her to the subsoil language – her lifelong favourite occupation. Almost 40 years ago, Bayan joined the Zhezkazgan mining and metallurgical plant as a young specialist. Today, as a multi-award winning Chief Geologist and widely regarded expert, she is engaged in the evaluation of resources and reserves of deposits and proposes potentially productive deposits for both exploration and production.

Ethics, compliance, anti-bribery and corruption

Integrity is one of the Group's five core corporate values. The Board is responsible for overseeing the Group's approach to ethics and compliance and is committed to maintaining the highest standards. The Group's Anti-Bribery and Corruption Compliance Programme has been developed in line with the requirements of the UK Bribery Act 2010 across all operations, with relevant clauses included as part of the Group's standard terms and conditions with suppliers since 2011. See page 83 for a description of the Group's policies and due diligence procedures undertaken in relation to anti-bribery and corruption.

The Group maintains an anonymous reporting facility (Speak-Up) to encourage employees to report any concerns regarding breaches of ethics. A risk assessment is used to identify the categories of employees which require training in anti-bribery and corruption. This includes employees working in procurement, sales, finance and general management and individuals who interact with governments or regulatory bodies.

Suppliers

The Group's supply chain includes contractors and suppliers providing labour, energy, transport, smelting, equipment, consumables and raw materials required for the production and sale of copper. In 2018, a total of 59 contracting firms worked at the Group's underground mines in the East Region and a further 128 firms were employed at the open pit mines at Bozshakol and Aktogay, together employing around 8,000 contractor employees at our sites.

Suppliers' Charter

KAZ Minerals is committed to high standards of corporate social responsibility. To ensure that our suppliers understand what standards we require of them, we established the KAZ Minerals Suppliers' Charter in 2016. A copy of the charter can be viewed on the Group's website.

The Suppliers' Charter sets out the Group's expectations in the areas of anti-bribery and corruption, employee wellbeing, environmental responsibility, community relations and human rights. Suppliers are encouraged to report all suspected or actual breaches of the principles set out in the Suppliers' Charter either to KAZ Minerals management or by using the anonymous Speak-Up system.

All suppliers are required to make a commitment to upholding the standards set out in the Suppliers' Charter as a condition of starting or continuing to work with KAZ Minerals. The Group also conducts a separate due diligence exercise on new suppliers to ensure that we only work with suppliers who meet our standards.

Green procurement
The Group's Environmental Policy includes a commitment to reduce waste, prevent pollution and minimise the overall impact of the Group's activities on the environment. The Suppliers' Charter includes commitments from our suppliers to (i) comply with local environmental protection regulations and implement the necessary actions to limit the impact of their activities on the environment; (ii) promote greater environmental responsibility and the use of goods and services which help to mitigate our environmental impact, as well as better managing and utilising resources such as energy, paper, water and waste; and (iii) promote the development and distribution of environmentally friendly technologies.

Code of Fair Employment
The Group established a Code of Fair Employment in 2016 which sets out the standards it expects to be upheld in relation to its own employees as well as the employees of suppliers or contractors to the Group. As part of the Suppliers' Charter, suppliers are also required to agree to the terms of the Code of Fair Employment.

The Code of Fair Employment can be viewed on the Group's website and contains commitments to prevent forced labour, child labour, human trafficking and inhumane treatment. The retention of passports or identification documents, taking of deposits, restrictions on freedom of movement and the charging of recruitment fees to workers are forbidden. All employees must have contracts of employment, be paid above the legal minimum wage, be treated equally and have access to adequate grievance procedures.

The Group is committed to the prevention of modern slavery and human trafficking in its supply chain and publishes an annual statement, approved by the Board, in accordance with the UK Modern Slavery Act.

Supply chain monitoring
A training programme was carried out for approximately 1,400 individuals from procurement teams and managers involved in the supervision of contractors in 2018. The aim of the training was to raise awareness of the standards contained within the Suppliers' Charter, in particular those relating to modern slavery and human trafficking. Staff are expected to monitor suppliers and contractors to prevent instances of modern slavery in the Group's supply chain and to report any suspected breaches of the Group's policies through the appropriate channels.

Human rights
KAZ Minerals has a formal Human Rights policy, approved by the Board and available to view on the Group's website. See page 84 for a description of the policy.

KAZ Minerals recognises all human rights as defined in the Universal Declaration of Human Rights. We are committed to ensuring our operations do not infringe these rights, for instance by providing fair, safe and secure working conditions in line with the International Labour Organization's Declaration on Fundamental Principles and Rights at Work. We respect the right to freedom of association and consult our employees and trade unions about proposed changes to our business and employment conditions. Due diligence undertaken in pursuance of the Group's Human Rights policy includes consultation with local communities during project development or any major operational changes that may affect them and monitoring of working conditions for our own employees and the employees of contractors and suppliers, as described above. We respect and protect local heritage and culture.

Communities
Consultation and communication
KAZ Minerals is committed to promoting community development and maintaining lines of communication with communities near its operations and potential new projects. The operations' General Directors have overall responsibility for community relations in their respective areas.

Indigenous peoples and resettlement
The Group's commitment to respecting the rights of indigenous peoples and its approach to resettlement are contained in its Human Rights Policy, described on page 84. The areas in which the Group has operated or developed new mining projects historically have been sparsely populated and resettlement of indigenous populations has not been necessary. It is unlikely that future projects will require resettlement, but the Group will always seek to avoid involuntary resettlement. KAZ Minerals is committed to the protection of culturally sensitive areas.

Under the terms of subsoil use law in Kazakhstan, the Group is required to give preference to Kazakhstan nationals during the performance of subsoil use operations and to invest in the training of local workers.

Social projects

In 2018, the Group participated in the construction of a new olympic swimming pool complex in Pavlodar, close to Bozshakol.

"I can proudly say that we now have a facility that meets olympic standards and the highest profile athletes can train here. I am so grateful for this excellent facility, it is certain to show results in national and international competitions."

Director of Water Sports Federation, Pavlodar region


Damir Meschanov, swimmer

Social projects and local procurement

KAZ Minerals supports communities in Kazakhstan and Kyrgyzstan by investing in projects that benefit society close to its operations as well as national projects. Social investment payments of $9 million were made during 2018, including support for the refurbishment of the Irtysh river embankment in Pavlodar, the construction of botanical gardens in Astana and the purchase of medical equipment in the East Region (see page 26 for further details).

The Group has a social investment policy and monitors projects that are funded to ensure they meet the aims and objectives of the Group. The types of projects the Group seeks to support are: (i) projects local to the Group's operations in the areas of healthcare, education, infrastructure and sport; (ii) national projects in the Group's countries of operation also in the areas of healthcare, education, infrastructure, culture and sport; and (iii) projects to promote the culture and economic profile of the Group's countries of operation.

As required by subsoil use law, the Group also prioritises local procurement to assist diverse economic growth within Kazakhstan. During 2018, the level of procurement from outside Kazakhstan has been higher than in the past mainly due to the requirements of the major growth projects at Bozshakol and Aktogay, which employ modern technology that is only possible to source internationally. In the East Region local procurement was 65% of total spending (2017: 77%).

Biodiversity

The Group is committed to the protection of biodiversity in the areas which may be affected by its operations and avoids operating in areas with high biodiversity value.

The Group's priority for biodiversity management has been to mitigate any adverse effect that the development of the major growth projects at Bozshakol and Aktogay could have.

These issues are carefully considered in the feasibility stages of planning a new project and in consultation with local communities.

Materiality assessment

Following a review of external stakeholders priorities, social investment and biodiversity have been promoted to 'high' priority.

External stakeholder priorities \ Internal business priorities	Moderate	High
High	Biodiversity Emissions to air GHG emissions Human rights Licence to operate Safety training Social investment	Anti-bribery and corruption Contractor safety Energy use Equality and diversity Fatalities Labour relations (includes collective bargaining and freedom of association) Tailings management Training and development Waste management Water use and management Workplace injuries and incidents
Moderate	Anti-competitive behaviour Business integrity and compliance Contractual integrity Economic development Employees' wellbeing Rehabilitation/closure Resettlement Revenue and tax transparency Supplier conduct	Occupational health Pay and benefits Resource use efficiency

Non-financial information statement

In accordance with the Non-Financial Reporting Directive, the table below shows the location of reporting on key non-financial matters:

Reporting requirement	Policies and governing documents	Associated information, including principal risks	Pages
Environmental matters	Environmental Policy[1]	Environmental impacts	50
		Green procurement	62
		Environmental risks	70
Employees	Health and Safety Policy[2]	Health and safety	48
	Code of Fair Employment[1]	Employees	58
	Diversity and Equality Policy[2]	Diversity and Equality	60
	Speak Up Policy[1]	Code of Fair Employment	62
		Employees risks	69
		Health and safety risks	69
		Diversity	84-85
Human rights	Suppliers' Charter[1]	Suppliers	61
	Modern Slavery Act Statement[1]	Modern Slavery Act 2015	84
	Human Rights Policy[1]	Human Rights	84
Social matters	Social Investment Policy[2]	Communities	62
		Community and labour relations risks	69
Anti-bribery and corruption	Anti-Bribery and Corruption Code[1]	Anti-Bribery and Corruption (ABC)	83
	Gifts and Hospitality Policy[1]	Ethics, compliance, anti-bribery and corruption	61
		Legal and regulatory compliance risks	71
Description of business model		Business model	10-11
Non-financial key performance indicators		Our strategy	17
		Key performance indicators, including health and safety	28-30

1 Available on our website www.kazminerals.com.
2 Available to employees internally. Not published externally.

Effective risk management

The Group has an effective risk management process to mitigate exposure to risk, guide its strategy, improve operations and protect its stakeholders.

Risk management framework

The objective of the Group's risk management framework is to manage risk appropriately to support the strategic objectives of the Group. It is designed to manage rather than eliminate the risk of failure to achieve business objectives and to provide reasonable, not absolute assurance.

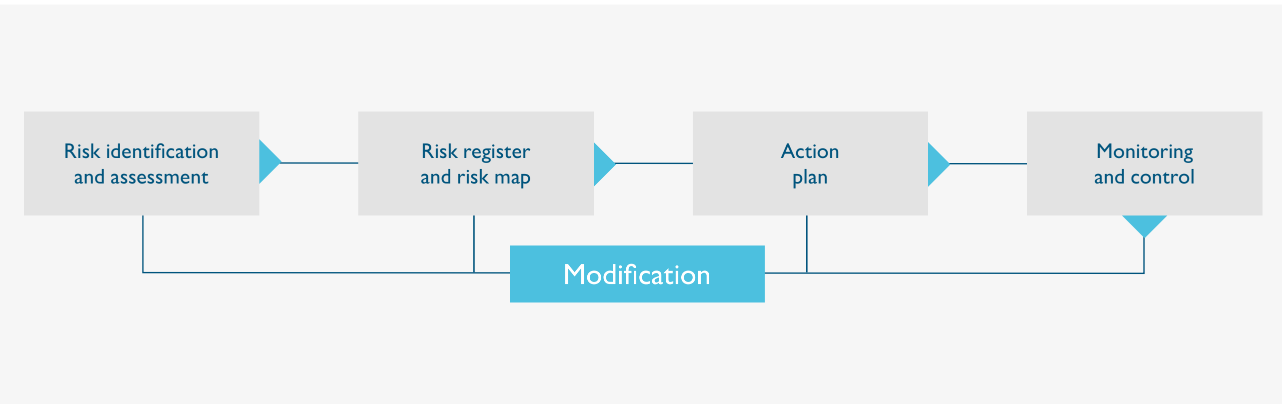
The Board has overall responsibility for risk management and determines the Group's risk strategy, assesses and approves risk appetite and monitors risk exposure consistent with strategic priorities. The Board has ultimate responsibility for the effectiveness of internal control systems. The Board is supported by other committees which monitor risks specific to certain areas:

- The Audit Committee oversees the Group's risk management framework;
- The Health, Safety and Environment Committee reviews health, safety and environmental risk management across the Group;
- The Remuneration Committee ensures that the remuneration structure does not encourage excessive risk taking by management;
- The Nomination Committee ensures that the composition of the Board and its Committees is appropriate to oversee risk management;
- The Projects Assurance Committee and Operations Ramp Up Assurance Committee monitor risks relating to the delivery of the Group's major assets; and
- The Chief Executive Officer and Executive Committee implement the risk strategy determined by the Board.

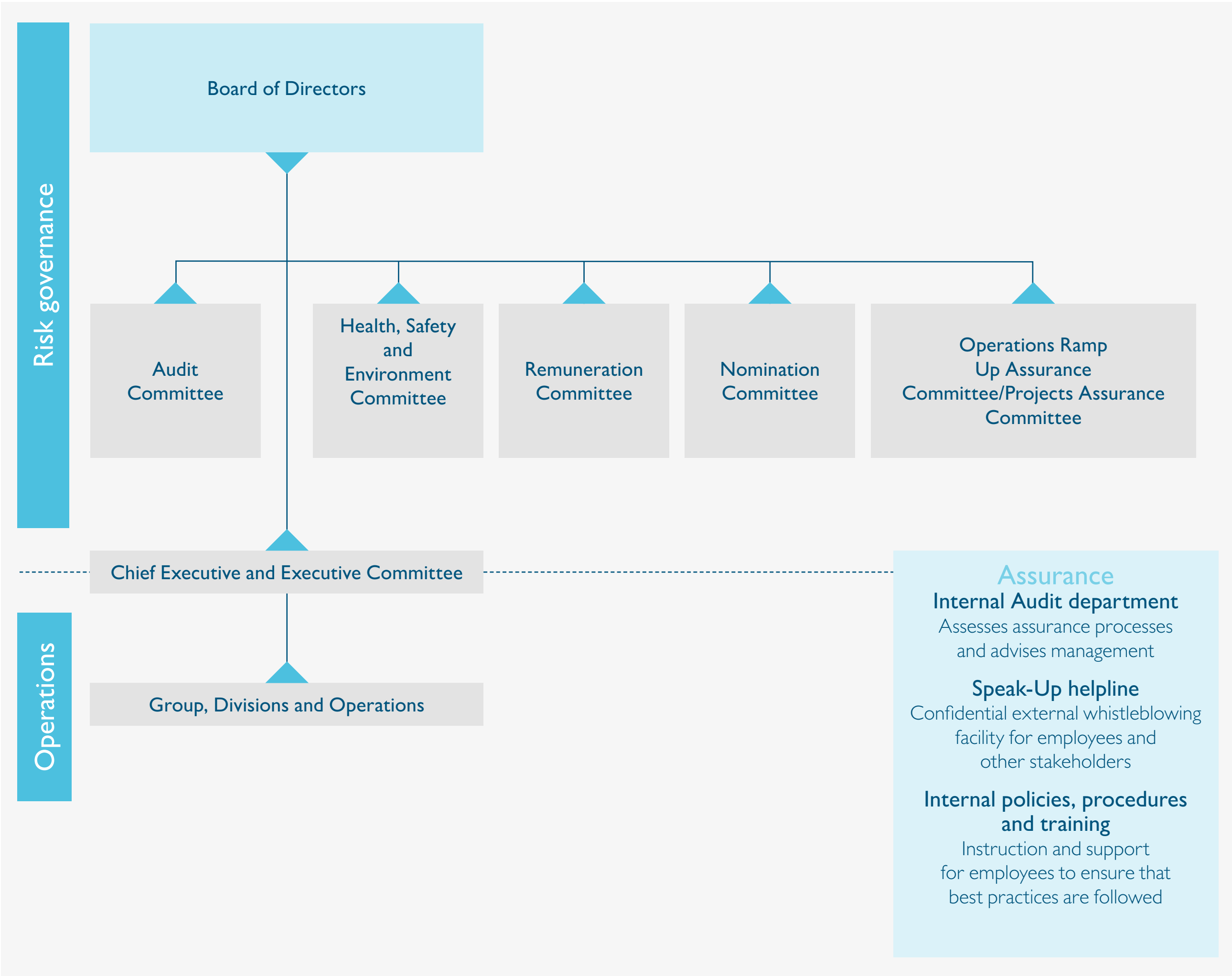
The General Directors of each operation and functional leadership teams have overall responsibility for the identification and management of risk within their respective areas. The Executive Committee, led by the Chief Executive Officer, monitors the risks related to achieving strategic objectives and oversees operating plans and the implementation of controls.

The Board has completed a robust assessment of the Group's principal risks. The Group Risk function provides guidelines, infrastructure and best practice to support risk identification, risk assessment and risk monitoring across the Group and helps to promote an appropriate risk culture. Management is also supported by the Group's Internal Audit function, which reviews the design and operating effectiveness of controls. Further details of the Group's approach to internal control are set out in the Governance framework report on pages 88 and 89.

Risk management framework



Risk governance structure



Identification of principal risks

The Board has completed a robust assessment of the Group's principal risks. The Group's Risk function is responsible for the Group risk map through which principal risks are identified and assessed. Risks from across the Group's individual risk registers are aggregated, evaluated and prioritised according to the potential severity and likelihood of occurrence. The Board and Audit Committee review the Group's principal risks including updates on developments, their outlook and mitigating actions and controls. A description of our principal risks, including impact and mitigating actions, can be found on pages 69 to 73.

Viability statement

In accordance with the UK Corporate Governance Code, the Board has assessed the Group's prospects and longer-term viability and has selected a period of three years, to 31 December 2021, for this assessment. This period is considered appropriate as:

- The Group's results are heavily dependent on the commodity price for copper which can fluctuate significantly and can be impacted by global macroeconomic developments. Copper prices are therefore difficult to forecast for an extended period;
- Exchange rates and inflation rates in Kazakhstan, important drivers of the Group's operating costs, are difficult to forecast beyond three years;
- The Group's existing debt facilities are amortising during the viability period, with scheduled repayments of $1.5 billion; and
- The Group is currently assessing the capital development, partnering and financing options for the construction of Baimskaya, the outcome of which will significantly impact the Group's capital expenditure and financing.

This viability statement should be read in conjunction with the going concern disclosure as set out on page 126.

Assessment of prospects

In assessing the Group's prospects, the Board has considered the current position of the Group including: gross liquid funds of $1,467 million at 31 December 2018, the cost competitiveness of its operations, the performance to date of Bozshakol and Aktogay, future capital requirements including the Aktogay expansion, the acquisition and feasibility study of the Baimskaya project. The future development of the Baimskaya project is conditional upon the raising of separate new financing facilities.

The Group's operations are located in the CIS and its sales are made to customers outside of the UK and EU, therefore Brexit is not expected to have a material impact on the Group's viability.

The Board has considered all the principal risks set out on pages 69 to 73 but has focused on those principal risks which alone or in conjunction could have a material impact on production, profitability, cash flows and liquidity over the assessment period:

Commodity prices: the Group's financial outlook is sensitive to commodity prices. A sustained low commodity price environment below market consensus would negatively impact the Group's profitability and cash flow.

Commissioning and new projects and **business interruption:** the Group's operations and growth projects may fail to ramp up or maintain operating parameters as planned.

Foreign exchange and inflation risk: a significant appreciation of the KZT/$ exchange rate from its current level or increased inflation in Kazakhstan could have a material impact on operating costs.

Liquidity risk: for borrowing facilities to remain committed, the Group is required to comply with various obligations, including compliance with financial covenants. A faster than expected increase in US interest rates would impact the Group's financial outlook. The Group will also need to enter into new financing arrangements to develop the Baimskaya copper project, as planned.

The Board has a reasonable expectation that there would not be an unforeseen event, outside of the Group's control, during the viability assessment period which would significantly restrict production or export of material from the Group's operations for a sustained period. Such events could include a natural phenomenon, a significant political or legislative change or regulatory challenge or significant civil disorder.

Process to assess the Group's prospects

The Board has performed its viability assessment based on the Group's Treasury forecast, which it reviews regularly. The forecast is prepared with input from the annual budgeting process, individual project plans and life of mine (LOM) plans, which reflect the expected production profile and cost of operations over their economic lives.

The Board has considered the key assumptions made in the viability statement and is satisfied that they are appropriate. These include assumptions based on externally sourced views on commodity pricing, exchange rate and inflation and interest rates, as well as an internal assessment of future production levels and project commissioning dates. Commodity price assumptions have been set with reference to market consensus estimates.

To reflect the principal risks which could have a material impact on the Group's viability over the three-year period, the base case model has been subjected to stress testing and sensitivity analysis. This considered severe scenarios, but not those the Board considered to be implausible, and included:

- A sustained low commodity price environment below market consensus throughout the viability period;
- A sustained low commodity price environment with lower than expected production from the Bozshakol and Aktogay operations, including a delay to the expected commissioning of the Aktogay expansion; and
- A sustained low commodity price environment and lower than expected production combined with an increase in Group operating costs due to adverse exchange rates and higher cost inflation.

In addition, reverse stress testing was performed, in particular in respect of the sensitivity of the forecasts to downward movements in the copper price. This indicated that no reasonably possible negative movement in the copper price would lead to non-compliance with financial covenants.

The Board has considered the Group's current existing debt facilities, which are fully drawn, the significant level of debt amortisation during the viability period of $1.5 billion, and the likely changes to debt and financing facilities required to deliver the Group's strategy, in particular the Aktogay expansion and study of Baimskaya. A new Aktogay financing facility, in the region of $600 million, is expected to be completed in the first half of 2019 and has been included in the Board's assessment of various scenarios below.

Confirmation of longer-term viability

In the base case, including the expected new Aktogay facility, the Board considers there to be adequate liquidity over the viability period.

In the base case, excluding the expected new Aktogay facility, the Board would have the option to defer planned capital expenditure, including the Aktogay expansion, to ensure the Group has adequate liquidity throughout the viability period. However, in a sustained downside scenario of lower than expected commodity prices with lower production; or sustained lower commodity prices, lower production and higher operating costs, assuming the new Aktogay facility is obtained the Group would need to take mitigating actions to ensure adequate liquidity throughout the viability period. The Board is confident this could be achieved from an amendment to existing finance facilities, or from new sources of finance. This is supported by the significant reduction in gross debt levels over the viability period; the quality of the Group's large scale, low cost and long life assets; and that any estimated shortfall is considered manageable in the context of the Group's forecast level of earnings and gearing. For example, the Group's $600 million PXF facility, which would be fully amortised by the end of the viability period, would be expected to be refinanced.

The combination of a sustained downside scenario and the Group being unable to obtain any new financing throughout the viability period is not considered a reasonably possible scenario.

Therefore, following an assessment of the principal risks, the Board believes there is a reasonable expectation that the Group will be able to continue in operation and will continue to meet its liabilities as they fall due throughout the period to 31 December 2021.

Managing our risks

The Group's principal risks are set out below, along with mitigating actions. There may be other risks, unknown or currently considered immaterial, which might become material. The risks set out below are not in order of likelihood of occurrence or materiality and should be viewed, as with any forward-looking statements in this document, with regard to the cautionary statement.

Sustainability risks

Health and safety

Impact	Mitigation	Link to strategy
Mining is a hazardous industry. Health and safety incidents could result in harm to people, as well as production disruption, financial loss and reputational damage. The Group is entering a period of more intense construction activity, increasing potential health and safety exposures.	The Group's goal is for zero fatalities and to seek to minimise health and safety incidents. Policies and procedures are designed to identify and monitor risks and provide a clear framework for conducting business. This is supported by regular training and awareness campaigns for employees and contractors. Additional measures are being taken to mitigate identified health and safety risks associated with major construction works such as at Aktogay and Artemyevsky, in particular the supervision of activities performed by on site contractors. The HSE Committee reviews and monitors associated risks across the Group. Further details of the HSE function are set out in the Corporate responsibility report.	1 Deliver major growth projects 2 Optimise existing assets 4 Be a socially responsible operator **Risk change** ⇔ The Group has seen a long-term reduction in fatalities but the goal of zero fatalities has not been achieved. No change.

Community and labour relations

Impact	Mitigation	Link to strategy
The Group operates in areas where it is a major employer, where employees are represented by labour unions and where it may provide support to the local community. This may impose restrictions on the Group's flexibility in taking certain operating decisions. Failure to identify and manage the concerns and expectations of local communities and the labour force could affect the Group's reputation and social licence to operate, and could result in production disruptions and increases in operating costs. Wage negotiations could be impacted by higher commodity prices, higher domestic inflation or the continued weakness of the tenge.	The Group engages with community representatives, unions and employees and aims to address concerns raised by different stakeholders. Through responsible behaviour, acting transparently, promoting dialogue and complying with commitments the Group minimises potentially negative impacts. Bozshakol and Aktogay are in remote locations where the community relations risk is reduced. As part of the due diligence process for the Baimskaya acquisition the Group met with community representatives in the Chukotka region to understand local issues and commence a dialogue. Further details of the Group's social programme are set out in the Corporate responsibility report.	1 Deliver major growth projects 2 Optimise existing assets 4 Be a socially responsible operator **Risk change** ⇔ No change.

Employees

Impact	Mitigation	Link to strategy
The Group is dependent on its ability to attract and retain highly skilled personnel. Failure to do so could have a negative impact on operations or the successful implementation of growth projects and result in higher operating costs to recruit required staff. The remote location of some operations increases this challenge.	The Group actively monitors the labour market to remain competitive in the hiring of staff and provides remuneration structures and development opportunities to attract and retain key employees. Key positions are identified at all locations, and training and succession plans developed. A leadership development programme is in place to provide a talent pipeline of national workers for key positions and aid retention. The Group is investing in training resources to support the workforce requirement for the Aktogay expansion. International workers with appropriate expertise assist during the initial phase of operations.	1 Deliver major growth projects 2 Optimise existing assets 4 Be a socially responsible operator **Risk change** ⇔ No change.

Sustainability risks continued

Environmental

Impact	Mitigation	Link to strategy
Mining operations involve the use of toxic substances and require the storage of large volumes of waste materials in tailings dams, which could result in spillages, loss of life and significant environmental damage. The Group is subject to environmental laws and regulations which are continually developing, including those to tackle climate change. Failure to comply with applicable laws could lead to the suspension of operating licences, the imposition of financial penalties or costly compliance costs and reputational damage.	Policies and procedures are in place to set out required operating standards and to monitor environmental impacts. The Group liaises with relevant governmental bodies on environmental matters, including legislation changes. Further details are set out in the Corporate responsibility report.	1 Deliver major growth projects 2 Optimise existing assets 4 Be a socially responsible operator Risk change ⟺ No change.

Operational risks

Business interruption*

Impact	Mitigation	Link to strategy
Operations are subject to a number of risks not wholly within the Group's control, including: geological and technological challenges; weather and other natural phenomena; damage to or failure of equipment and infrastructure; information technology and cyber risks; loss or interruption to key inputs such as electricity and water; and the availability of key supplies and services, including the Balkhash smelter. Any disruption could impact production, may require the Group to incur unplanned expenditure and negatively impact cash flows.	In-house and third-party specialists are utilised to identify and manage operational risks and to recommend improvements. Equipment and facilities are maintained appropriately and regularly inspected. Property damage and business interruption insurance programmes provide some protection from major incidents. Should an outage occur at the Balkhash smelter the Group believes it could sell concentrate directly to customers.	1 Deliver major growth projects 2 Optimise existing assets Risk change ⟺ No change.

New projects and commissioning*

Impact	Mitigation	Link to strategy
Projects may fail to achieve the desired economic returns due to an inability to recover mineral resources, design or construction deficiencies, a failure to achieve expected operating parameters or because of capital or operating costs being higher than expected. Failure to effectively manage new projects or a lack of available financing may prevent or delay completion of projects. There are various project risks associated with the successful development of the recently acquired Baimskaya copper project, including its remote location, the delivery of government support for infrastructure, obtaining certain tax incentives and local weather conditions.	New projects are subject to rigorous assessment prior to approval including feasibility or technical studies and capital appraisal. Specialists are utilised throughout the life cycle of projects. Project management and capital expenditure planning and monitoring procedures are in place to review performance against milestones and budgets. This includes the Projects Assurance Committee which reports to the Board. The Group performed a detailed due diligence exercise, led by its experienced projects team and supported by external consultants, prior to the acquisition of Baimskaya. An international standard pre-feasibility study has been performed by Fluor and the mine plan is based on a JORC resource. The acquisition was structured with Deferred Consideration to incentivise the Vendor, as a local partner, to assist in the delivery of the project. Further details of the major growth projects are included in the Operating review.	1 Deliver major growth projects Risk change ↑ This risk is assessed to have increased following the acquisition of Baimskaya and the increase in construction activity at Aktogay. During 2018 Bozshakol and Aktogay operated at design capacity for a sustained period.

* Represents those principal risks considered as specific downside cases as part of the viability assessment on page 67.

Reserves and resources

Impact	Mitigation	Link to strategy
The Group's ore reserves are in part based on an estimation method established by the former Soviet Union. There are numerous uncertainties inherent in estimating ore reserves, which if changed, could require the need to restate ore reserves and impact the economic viability of affected operations and development projects.	The Group's ore reserves and mineral resources are published annually in accordance with the criteria of the JORC Code and reviewed by an independent technical expert. This includes mine site visits where considered appropriate and the conversion from the former Soviet Union estimation to that prescribed by the JORC Code. Drilling and exploration programmes are conducted to enhance the understanding of geological information.	1 Deliver major growth projects 2 Optimise existing assets 3 Take advantage of natural resource opportunities **Risk change** No change.

Political

Impact	Mitigation	Link to strategy
The Group could be affected by political instability or social and economic changes in the countries in which it operates. This could include a change in government, the granting and renewal of permits and changes to foreign trade or legislation that could affect the business environment and negatively impact the Group's business, financial performance and licence to operate. Following the acquisition of Baimskaya the Group is now exposed to political risks associated with operating in Russia, a new jurisdiction for the Group. Further international sanctions on Russia could impact the development of Baimskaya, as well as the supply of certain goods and services to the Group's existing operations.	A proactive dialogue is maintained with KAZ Minerals' host governments across a range of issues. Developments are monitored closely and lobbying is conducted where appropriate. Kazakhstan is one of the most politically stable and economically developed countries in Central Asia and the Board continues to view the political, social and economic environment within Kazakhstan favourably and remains optimistic about the conditions for business in the region. In Russia, the Baimskaya acquisition was structured with Deferred Consideration to incentivise the Vendor, as a local partner, to assist in the delivery of the project. Prior to the acquisition, the Group engaged with the Russian government at different levels and has subsequently maintained an ongoing dialogue.	1 Deliver major growth projects 2 Optimise existing assets 3 Take advantage of natural resource opportunities **Risk change** The risk is assessed to have increased as a result of risk exposures associated with the acquisition of Baimskaya in Russia.

Legal and regulatory compliance

Impact	Mitigation	Link to strategy
The Group is subject to various legal and regulatory requirements across all of its jurisdictions including subsoil usage rights in Kazakhstan, Kyrgyzstan, Russia and UK governance rules including related party transactions and anti-bribery and corruption. Legislation and taxation may be subject to change and uncertainty of interpretation, application and enforcement. In a number of jurisdictions around the world governments have been increasing taxation on resource companies. Non-compliance with legislation could result in regulatory challenges, fines, litigation and ultimately the loss of operating licences. Substantial payments of tax could arise for the Group, or tax receivable balances may not be recovered as expected.	Management engages with the relevant regulatory authorities and seeks appropriate advice to ensure compliance with all relevant legislation and subsoil use contracts. A specialist department is tasked with monitoring compliance with the terms of subsoil use contracts in Kazakhstan. Management works closely with the tax authorities in the review of proposed amendments to legislation. Further details of the Group's tax strategy and risk management are set out in the Financial review. Appropriate monitoring and disclosure procedures are in place for related party transactions. The Group's corporate policies are being applied in Russia where a dedicated team is managing legal and regulatory compliance.	1 Deliver major growth projects 2 Optimise existing assets 3 Take advantage of natural resource opportunities **Risk change** The risk is assessed to have increased now that the Group is exposed to additional legal and regulatory requirements in Russia.

Financial risks

Commodity price*

Impact	Mitigation	Link to strategy
The Group's results are heavily dependent on the commodity price for copper and to a lesser extent, the prices of gold, silver and zinc. Commodity prices can fluctuate significantly and are dependent on several factors, including world supply and demand and investor sentiment. The imposition of trade tariffs between the US and China in 2018 have negatively impacted the Chinese economy and its outlook. China is the largest market for copper and the trade tariffs have had a negative impact on copper prices and their near-term outlook.	The Group regularly reviews its sensitivity to fluctuations in commodity prices. The Group is not currently and does not normally hedge commodity prices, but may enter into a hedge programme where the Board determines it is appropriate to provide greater certainty over future cash flows. Sensitivity analysis to movements in commodity prices is included in the Market overview.	1 Deliver major growth projects 2 Optimise existing assets 3 Take advantage of natural resource opportunities **Risk change** Given continued volatility and uncertainty, commodity prices continue to be a principal risk driver.

Foreign exchange and inflation*

Impact	Mitigation	Link to strategy
Fluctuations in rates of exchange or inflation in the jurisdictions to which the Group is exposed could result in future increased costs. The Group will be exposed to fluctuations in the Russian rouble, which may affect the capital cost associated with the development of Baimskaya. As the functional currency of the Group's operating entities is their local currency, fluctuations in exchange rates can give rise to exchange gains and losses in the income statement and volatility in the level of net assets recorded on the Group's balance sheet.	Where possible the Group conducts its business and maintains its financial assets and liabilities in US dollars. The Group generally does not hedge its exposure to foreign currency risk in respect of operating expenses. Further details are set out in note 31 to the financial statements.	2 Optimise existing assets **Risk change** No change.

Exposure to China

Impact	Mitigation	Link to strategy
Sales are made to a limited number of customers in China, particularly in respect of copper concentrate output. Treatment and refining charges are dependent upon Chinese smelting capacity and the level of copper concentrate supply in the region. China is an important source of financing to the Group with long-term debt facilities of $2.7 billion at 31 December 2018. In addition, the Group uses contractors, services and materials from China. The imposition of trade tariffs between the US and China in 2018 have negatively impacted the Chinese economy and its outlook. A slowdown in the Chinese economy could impact the availability of Chinese credit and its demand for commodities, both important to the Group.	Bozshakol and Aktogay produce a copper concentrate that is attractive to Chinese smelters, being 'clean' and high in sulphur content. The Group has established good relationships with strategic customers in China. The Group maintains relationships with a number of international lending banks, having the PXF and DBK facilities in place and has the flexibility to consider other sources of capital if required.	1 Deliver major growth projects 2 Optimise existing assets 3 Take advantage of natural resource opportunities **Risk change** No change.

* Represents those principal risks considered as specific downside cases as part of the viability assessment on page 67.

Acquisitions and divestments

Impact	Mitigation	Link to strategy
The Group may acquire or dispose of assets and businesses which fail to achieve the expected benefit or value to the Group. Changing market conditions, incorrect assumptions or deficiencies in due diligence could result in the wrong decisions being made and in acquisitions or disposals failing to deliver expected benefits. The $900 million acquisition of the Baimskaya copper project represents a material acquisition for the Group. The Restructuring was effected under the laws and regulations of Kazakhstan which are subject to change and open to interpretation, including the legal and tax aspects of the Restructuring, which could give rise to liabilities for KAZ Minerals.	A rigorous assessment process is undertaken to assess all potential acquisitions and divestments by specialist staff, supported by external advisers where appropriate. Due diligence processes are undertaken, and material transactions are subject to Board review and approval, including ensuring the transaction is aligned with the Group's strategy, consideration of the key assumptions being applied and the risks identified. The due diligence on the Baimskaya acquisition was led by the Group's experienced project team, supported by external consultants, the results of which were reported on an on-going basis to the Board.	2 Optimise existing assets 3 Take advantage of natural resource opportunities **Risk change** ↑ The acquisition of Baimskaya represents a material transaction to the Group.

Liquidity*

Impact	Mitigation	Link to strategy
The Group is exposed to liquidity risk if it is unable to meet payment obligations as they fall due or is unable to access acceptable sources of finance. Non-compliance with financial covenants could result in borrowing facilities becoming uncommitted and repayable. Baimskaya is a large-scale project and its development will require additional financing which will increase the debt levels of the Group. Failure to manage liquidity risk could have a material impact on the Group's cash flows, earnings and financial position.	Forecast cash flows are closely monitored and the financing strategy is set by the Board. Adequate levels of committed funds are maintained with $1,469 million cash and cash equivalents and current investments at 31 December 2018. The Group's existing operations are highly cash generative. The Group has a successful track record of raising finance for major projects. In respect of Baimskaya, in parallel with the feasibility study, the Group will continue discussions with banks on financing the construction phase and evaluate the potential for partnering. Further details regarding going concern and viability are included in note 2 to the financial statements and page 67, respectively.	1 Deliver major growth projects 2 Optimise existing assets 3 Take advantage of natural resource opportunities **Risk change** ↑ Liquidity risk is considered to have increased given the requirement to finance the Group's growth strategy including the acquisition and subsequent development of the Baimskaya project. Increased uncertainty in the near-term outlook for commodity prices has also negatively impacted liquidity risk.

* Represents those principal risks considered as specific downside cases as part of the viability assessment on page 67.

Governance for all stakeholders

"The execution of our growth strategy is underpinned by solid governance structures and processes, to ensure transparency and to manage the Group's exposure to risk."

Michael Lynch-Bell
Deputy Chair and
Senior Independent Director

Dear shareholder,

I am pleased to introduce this report on the Company's corporate governance procedures following the completion of my first year in the role of Deputy Chair and Senior Independent Director of the Company. As explained in our annual report last year, the Deputy Chair role expands on the authority and responsibilities of my previous role as Senior Independent Director. Since the start of 2018, I have led on Board governance matters, including the annual review of Board effectiveness, chaired the Nomination Committee and acted as an intermediary between non-executive Directors and the Chair. The Deputy Chair role also provides a point of contact between the Company and independent shareholders, and I have held several meetings with such shareholders during the year.

The Board has conducted a review of the scope of the roles and responsibilities of the Directors a year after the Board changes took effect, to ensure that they remain appropriate, with the conclusion that the roles continue to be well-defined with a clear division of responsibilities between the Chair, Chief Executive Officer and Deputy Chair.

It is clear to me that we are a Board that is committed to maintaining good governance for the benefit of our stakeholders.

During the year, one of the most important decisions made by the Board was on the Baimskaya acquisition. The independent non-executive Directors considered the results of the due diligence process as it progressed and evaluated the risks and opportunities of this acquisition. We were mindful of this transaction being a material investment in a new jurisdiction and a major construction project over a number of years, which would require additional financing. We are fortunate to have a Board with extensive experience in the mining sector and the extractives industry across the globe, including Russia, and we ultimately concluded that the acquisition of Baimskaya was for the long-term benefit of our shareholders. We are delighted to have completed this acquisition early in 2019 and look forward to the future development of a world-class copper mine.

Following the Financial Reporting Council's ("FRC's") review of the UK Corporate Governance Code and ensuing consultations, the FRC published a revised UK Corporate Governance Code and accompanying Guidance on Board Effectiveness in July 2018 ("the New Code") which applies to companies with a premium listing on the London Stock Exchange with accounting periods commencing on or after 1 January 2019. For the Company, the New Code is applicable to the financial year ending 31 December 2019. We have begun our review of the New Code and are putting in place processes where necessary, to ensure that we are in compliance during the 2019 financial year. This 2018 Directors' Report has been prepared in accordance with the April 2016 edition of the UK Corporate Governance Code (the "Code") which applied throughout the 2018 financial year. During the 2018 financial year, the Company complied fully with the provisions of the Code, other than provision A.3.1 of the Code which applies to the appointment of a chief executive as chair of the same company, more detail on which can be found in the Nomination Committee report. The Governance framework report on pages 78 to 96 sets out the ways in which the Company has applied the principles and complied with the provisions of the Code and describes the activities of the Board and its Committees and the matters which they have considered during the financial year.

Committee framework

KAZ Minerals' corporate governance framework is in place to support the Board in delivering long-term, sustainable growth for shareholders in a transparent and ethical manner. The five Board committees are (Audit; Health, Safety and Environment; Remuneration; Nomination and Operations Ramp Up Assurance or Projects Assurance Committee as applicable). Each deals with specific aspects of the Group's affairs and has an important role in internal control and risk management within the Group. The interim Operations Ramp Up Assurance Committee met for a period of nearly two years until October 2018 but now that the Group's two major operations, Bozshakol and Aktogay are fully ramped up, it has fulfilled its role. The Board has re-formed the Projects Assurance Committee, which will oversee the construction of the Aktogay expansion and the development of Baimskaya. Further information on the Group's Board Committees, including the roles and remit of each Committee and the activities they have undertaken during the year, is set out in their respective sections of the Governance Framework report which follows.

Diversity and Equality

Diversity and equality of opportunity is something that I champion and KAZ Minerals is committed to diversity and equality in the workplace, priding itself not only on diversity of social background and ethnicity but also on the strong female representation throughout the Group's workforce at all levels of seniority, relative to its mining peers. We continue to build on the successes that we have achieved with a number of positive initiatives on diversity this year and more detail can be found in the Corporate responsibility report on page 60 and on page 84 of the Governance framework report.

Stakeholder engagement

As a Board, we engage with our stakeholders throughout the year, so that in running the business, we remain informed of their interests and mindful of our duties towards them under section 172 of the Companies Act 2006. As part of our preparations for the New Code, we conducted a review during the year of our key stakeholders and how the Board engages with them to ensure we had appropriate methods of engagement with them in place, which included my appointment as the first Designated Non-Executive Director for the workforce, a role which I am looking forward to undertaking during 2019. Further information is set out in the pages that follow and in the Corporate responsibility report on pages 47 to 64.

We are holding our Annual General Meeting on Thursday 2 May 2019 in London and I hope that many of our shareholders will attend. My fellow Directors and I will be available to discuss any questions that shareholders may have about the Company.

I look forward to overseeing Board governance as we develop our near and long-term growth opportunities over the coming year as set out in more detail in the pages that follow this overview.

Michael Lynch-Bell
Deputy Chair and
Senior Independent Director

Board committee membership

The current membership of the Board's committees is shown in the table below:

	Audit Committee	Health, Safety and Environment Committee	Nomination Committee	Remuneration Committee	Project Assurance Committee*
Oleg Novachuk	–	–	–	–	–
Andrew Southam	–	–	–	–	–
Lynda Armstrong	–	Member	Member	Chair	Member
Alison Baker	Chair	–	Member	–	–
Vladimir Kim	–	–	–	–	–
Michael Lynch-Bell	Member	Member	Chair	Member	–
John MacKenzie	Member	Member	–	–	Chair
Charles Watson	Member	Chair	–	Member	Member

Chair of committee Member of committee

* The Operations Ramp Up Assurance Committee was replaced in October 2018 with a re-formed Projects Assurance Committee.

Board of directors

Oleg Novachuk
Chair

Appointed to the Board: 2005

Skills and experience:

Oleg joined the Group in 2001 and was appointed Chair on 1 January 2018, with responsibility for strategy, government relations and business development. Oleg was Finance Director from 2005 to 2007 overseeing the Group's Listing on the London Stock Exchange before serving as Chief Executive Officer from 2007 to 2017, during which time he led the delivery of the major growth projects, Bozshakol and Aktogay, and the Restructuring that created KAZ Minerals. Before joining the Group, Oleg was chairman of Kazprombank JSC.

Andrew Southam
Chief Executive Officer

Appointed to the Board: 2014

Skills and experience:

Andrew joined the Company in 2006 and has held a number of senior positions including Chief Financial Officer from 2013 to 2017 and was appointed Chief Executive Officer at the start of 2018. He brings significant strategic and operational oversight and was, together with Oleg Novachuk, one of the architects of the Restructuring which created KAZ Minerals. Andrew is a chartered accountant who began his career at Deloitte in London, where he provided audit and transaction services to many UK listed companies. Prior to joining the Company, Andrew worked in corporate development at GlaxoSmithKline plc.

N A R H

Michael Lynch-Bell
Deputy Chair and Senior Independent Director

Appointed to the Board: 2013

Skills and experience:

Michael gained extensive experience working with companies in the mining, oil and gas industries during his 38 year career with Ernst & Young. He played a key role in establishing Ernst & Young's practice in Kazakhstan and advised a number of major CIS companies on transactions. He retired as senior partner of Ernst & Young's transaction advisory practice for mining and metals and as an elected member of its global advisory council in 2012. He was previously trustee and treasurer of ActionAid International. In his role as Deputy Chair and Senior Independent Director, Michael is responsible for leading on Board governance matters and he provides a point of contact between the Company and independent shareholders.

Other appointments:

Chair of Seven Energy International Limited and non-executive director of Lenta Ltd, Barloworld Limited and Gem Diamonds Limited. He is also a trustee of 21st Century Legacy and The Orchid Children's Trust and a member of the United Nations Expert Group on Resource Management.

R N H P

Lynda Armstrong OBE
Independent Non-executive Director

Appointed to the Board: 2013

Skills and experience:

A geophysicist by training, Lynda had more than 30 years' natural resources experience with Shell. During this time, she held a number of senior exploration and operational roles, including director of UK Exploration and New Business Development, exploration director of Petroleum Development Oman and technical vice president for Shell International. Lynda's technical and operational experience of the extractives industry and her clear commitment to health and safety provide valuable insight and guidance to the Group. She was previously chair of the trustees of the British Safety Council.

Other appointments:

Non-executive director of Ørsted A/S (formerly DONG Energy A/S), a director of Calyx Consulting Ltd, chair of the Engineering Construction Industry Training Board and president of Shell Pension Association.

P A H

John MacKenzie
Independent
Non-executive Director

Appointed to the Board: 2015

Skills and experience:
John is a senior mining executive with around 30 years' experience in the metals and mining sector mostly acquired with the Anglo American group where he was CEO of Zinc from 2006 to 2009 and CEO of Copper from 2009 to 2013. John brings extensive international operating experience and a wealth of health and safety knowledge to the Group gained in Africa, South America, North America and Europe.

Other appointments:
Executive chairman of Mantos Copper and chief executive officer of mining at Audley Capital Advisors LLP.

H A R P

Charles Watson
Independent
Non-executive Director

Appointed to the Board: 2011

Skills and experience:
During his 29 years at Shell, Charles gained extensive experience in both operational management and major project delivery. At Shell he held a number of senior global executive positions, culminating in his appointment as executive vice president responsible for Russia and the CIS, including oversight of Shell's activities in Kazakhstan, chairman of Shell Russia and chairman of the board of directors for the Sakhalin Energy Investment Company. He was previously non-executive director of JSOC Bashneft. Charles' expertise in major project delivery and passion in the continued improvement in health and safety performance is of significant importance to the Group.

A N

Alison Baker
Independent
Non-executive Director

Appointed to the Board: 2017

Skills and experience:
Having nearly 25 years' experience in the provision of audit, capital markets and advisory services, Alison previously led the UK and EMEA Oil & Gas practice at PricewaterhouseCoopers and prior to that the UK Energy, Utilities and Mining Assurance practice at Ernst & Young. She has extensive emerging markets experience, including in the energy and mining sectors in Kazakhstan.

Other appointments:
Non-executive director Centamin plc and Rockhopper Exploration plc.

Vladimir Kim
Non-executive Director

Appointed to the Board: 2004

Skills and experience:
Vladimir joined the Group in 1995, when he was appointed managing director and chief executive officer of Zhezkazgantsvetmet JSC and was elected chairman of that company in 2000. He was appointed Chairman of KAZ Minerals in 2005 prior to its listing on the London Stock Exchange. Vladimir stepped down as Chairman in 2013 but remains on the Board as a non-executive Director. With extensive knowledge of the mining industry, a thorough working knowledge of the CIS and an exemplary understanding of the political and regulatory environment in Kazakhstan, Vladimir brings valuable Kazakh mining experience and continues to perform a vital role in assisting and supporting the Company in its dealings with the Government and local authorities in Kazakhstan.

Other appointments:

- A Audit Committee
- R Remuneration Committee
- N Nomination Committee
- H Health, Safety and Environment Committee
- P Projects Assurance Committee
- ● Chair

Governance framework

Code compliance

This section has been prepared in accordance with the April 2016 edition of the Code, which applies to the Company's Annual Report and Accounts for the year ended 31 December 2018 and is available to view at www.frc.org.uk. It is the Board's view that for the year ended 31 December 2018, the Company complied with all the principles set out in the Code apart from provision A.3.1 of the Code which applies to the appointment of a former chief executive as chair of the same company, which is explained in more detail in the Nomination Committee section on page 93.

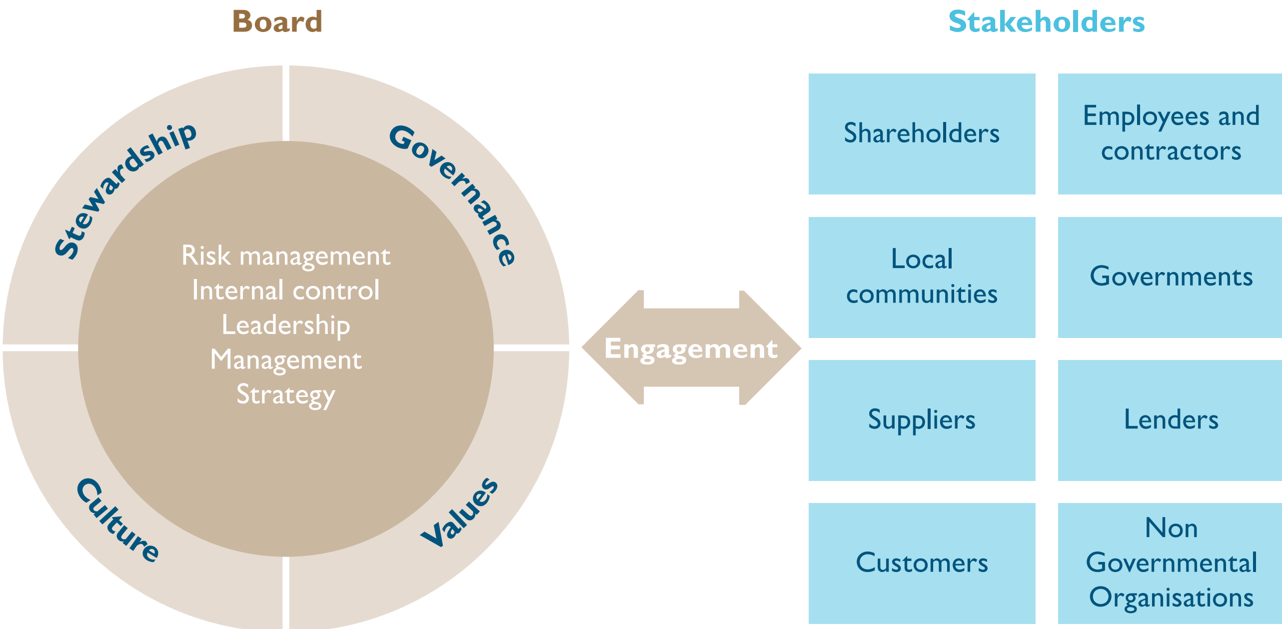
Leadership

The role of the Board

The Board is accountable to shareholders for managing the Company in a way which promotes its success. It ensures that there is a complementary balance in strategy between promoting long-term growth and delivering short-term objectives, with due regard to risk.

The Board is primarily responsible for strategic direction and leadership, evaluating and managing risk and ensuring internal controls are in place. Its overriding duties are to run the Company as stewards for the Company's stakeholders, with good governance, strong values and a safety-driven and ethical culture.

There is a formal schedule of matters specifically reserved for the Board's decision which is reviewed regularly, a summary of which is set out below. These are matters that are significant to the Group as a whole because of their potential strategic, financial and reputational implications and impact on stakeholders. The Board currently has five Committees to deal with specific aspects of the Group's affairs. The Chair of each Committee provides reports to the Board on the matters discussed at each Committee meeting to ensure that all Directors have visibility of and the opportunity to discuss the matters being considered by each Committee.



Matters reserved for the Board

Key matters reserved for the Board include the approval of:

- the Group's strategy and business plans;
- material restructurings or reorganisations, including major acquisitions, mergers and disposals and changes to the Group's capital structure;
- major Group financing, major capital expenditure and projects;
- the annual production plan and financial budget;
- the Company's dividend and Health, Safety and Environmental policies, Anti-Bribery and Corruption Code and Share Dealing Rules;
- the framework for the management of the Group's principal risks;
- the appointment and removal of Directors or the Company Secretary;
- the annual performance evaluation of the Board, its Committees and individual Directors;
- annual and half-yearly reports, circulars and other shareholder documents and the principal regulatory filings with stock exchanges; and
- the appointment or removal of the Company's external auditors and key corporate advisers.

The full schedule of matters reserved for the Board is available on the Company's website (www.kazminerals.com).

Roles and Responsibilities

Division of responsibilities

There is a clear division of responsibilities between the Chair, Chief Executive Officer and Deputy Chair. These roles and those of the other Directors are clearly defined so that no single individual has unrestricted powers of decision.

A summary is set out below:

Chair **Oleg Novachuk**	**The key roles and responsibilities include:** • leadership of the Board; • developing appropriate Group objectives, plans, policies and strategies with delegated authority from the Board and ensuring that these are implemented by the Chief Executive Officer, to build a sustainable business for the long term; • ensuring effective communication with shareholders, major customers, strategic and commercial partners, regulators, host governments and other relevant stakeholders to maintain stakeholder confidence in the management of the Company; • leadership and oversight on all health, safety and environmental matters in the countries in which the Group operates; and • ensuring the Board determines the nature and extent of the principal risks the Group is willing to take to achieve its strategic objectives.
Chief Executive Officer **Andrew Southam**	**The key roles and responsibilities include:** • responsibility for the executive management of the Group and leading the senior management team in the day-to-day running of the Group's business; • timely implementation of agreed strategy; • planning human resourcing, staff development and management succession; • together with the Chair, overseeing compliance of the Group's operations with all relevant health and safety standards with special regard to environmental and social concerns; • ensuring the Group's risk profile is managed in line with limits which are deemed acceptable by the Board and that an effective framework of internal controls and risk management is maintained; and • recommending to the Board appropriate annual budgets and medium-term financial and production plans and ensuring they are achieved.
Deputy Chair and Senior Independent Director **Michael Lynch-Bell**	**The key roles and responsibilities include:** • leading on Board governance matters including the annual review of Board effectiveness; • chairing the Nomination Committee; • promoting effective and constructive relationships and communication between non-executive Directors and executive Directors and senior management; • acting as a sounding board for the Chair and ensuring that the other Directors have an intermediary through him when necessary; • being the point of contact for shareholders and other stakeholders to discuss matters of concern which would not be appropriate through the normal channels of communication with the Chair, Chief Executive Officer and Chief Financial Officer. No such matters of concern were raised during 2018; and • meeting with a range of major shareholders when required on governance matters, reporting the outcome of such meetings at subsequent Board meetings.
Independent non-executive Directors	• providing an independent external perspective to the deliberations of the Board, drawing on their experiences from their careers in other businesses; • constructively challenging the strategies proposed by the executive Directors and scrutinising the performance of management in achieving agreed goals and objectives; • monitoring the Group's risk profile; • playing a key role in the functioning of the Board and its Committees; and • providing between them an appropriate balance of skills, experience, knowledge and independent judgement.

Corporate governance framework

Shareholders

Approving formal matters and providing ongoing communication

Board of Directors

Managing the Company on behalf of its shareholders. Setting the strategy and risk appetite and overseeing risk management, internal control and corporate governance processes

Nomination Committee

Reviewing the composition of the Board and its Committees, including succession planning and leading the process for appointments

Remuneration Committee

Setting and implementing the remuneration policy and determining the remuneration of executive Directors and certain members of senior management

Health, Safety and Environment Committee

Developing and overseeing a framework of HSE policies and standards to manage risk

Audit Committee

Reviewing the integrity of financial reporting, internal controls and assurance processes and the work of the external auditors

Projects Assurance Committee

Overseeing the Aktogay expansion and the Baimskaya project and continuing to monitor systems and processes at Bozshakol and Aktogay

Chief Executive Officer

Implementing the strategy determined by the Board

Executive Committee

Supporting the Chief Executive Officer in the day-to-day running of the Group and operation of the risk management framework

Effectiveness

Composition of the Board

The Board is currently comprised of the Chair, Chief Executive Officer, and six non-executive Directors. The balance of Directors on the Board ensures that no individual or small group of Directors can dominate the decision-making process and that the interests of minority shareholders are protected. Biographies of all Directors are set out on pages 76 and 77.

It is the Company's policy that at least half the Board, excluding the Chair, should be independent non-executive Directors. Other than Vladimir Kim, the Board considers each of its current non-executive Directors to be independent in character and judgement.

In reaching its determination of independence, the Board has concluded that each of Lynda Armstrong, Alison Baker, Michael Lynch-Bell, John MacKenzie and Charles Watson provides objective challenge to management and is willing to defend his or her own beliefs and viewpoints in order to support the interests of the Company and its stakeholders. None of them has any business or other interests which are likely to, or could appear to, affect their judgement in their capacity as Director of the Company. The Board carries out a review of the independence of its non-executive Directors on an annual basis and is satisfied that all of its non-executive Directors remain independent with the exception of Vladimir Kim, due to his significant shareholding in the Company.

Commitment

Directors are expected to attend every Board meeting and every meeting of any Committee of which they are a member, unless there are exceptional circumstances preventing their attendance. Scheduled Board and Committee meetings are arranged at least a year in advance to allow Directors to manage other commitments.

Directors are provided with the relevant Board or Committee papers for consideration around seven days in advance of each meeting via an electronic board portal. Regular agenda items this year included: reports on health, safety and environmental matters; cash forecasts; updates on operations; requests for capital expenditure approval; reports on operational and financial performance; updates on the Group's principal risks and risk management processes; updates on business development projects and strategic matters; corporate communications; changes in corporate governance; and reports received from Board Committees. If a Director is unable to attend a meeting due to exceptional circumstances, he or she still receives the papers in advance of the meeting and has the opportunity to discuss with the relevant Chair or the Company Secretary any matters he or she wishes to raise and to follow up on the decisions taken at the meeting. The Chair, Chief Executive Officer, Deputy Chair and Company Secretary are always available to discuss issues relating to meetings or other matters with the Directors. Reasons for non-attendance are generally prior business or personal commitments that cannot be re-arranged or illness.

The number of scheduled Board meetings which each Director was eligible to attend and the number of meetings attended during 2018 is shown below:

Directors during 2018	Attendance at scheduled meetings during 2018
Oleg Novachuk[1]	5/6
Andrew Southam	6/6
Lynda Armstrong	6/6
Alison Baker	6/6
Vladimir Kim[1]	5/6
Michael Lynch-Bell	6/6
John MacKenzie	6/6
Charles Watson	6/6

1 Mr Novachuk missed one Board meeting due to personal circumstances and Mr Kim missed one Board meeting due to a conflict in schedules arising from his commitments with the Government of Kazakhstan. They provided any comments to the Deputy Chair or Company Secretary on matters to be discussed in advance of the meetings they missed.

In addition to the six scheduled meetings of the Board during the year, three further meetings were held which focused on the review of the Group's strategy and associated principal risks and the acquisition of Baimskaya.

Development

On appointment, all new Directors receive a comprehensive and structured induction, tailored to their individual requirements. The induction programme, which is arranged by the Company Secretary, includes visits to the Group's businesses and meetings with senior managers and external advisers as appropriate. The programme is designed to facilitate their understanding of the Group, the key drivers of business performance, the role of the Board and its Committees and the Company's corporate governance practices and procedures. It also provides them with appropriate training and guidance as to their duties, responsibilities and liabilities as a director of a public limited company listed on the London and Kazakhstan Stock Exchanges.

To assist Directors in the performance of their duties, there are procedures in place to provide them with appropriate and timely information, including receiving information on Group business development and financial performance between meetings. This enables the Directors to discharge their duties effectively on strategic, financial, operational, compliance and governance issues.

All Directors are provided with the opportunity for, and encouraged to attend, training to ensure they are kept up to date on relevant legal, financial and industry developments or changes in best practice. Typical training for Directors includes internal briefings, attendance at seminars, forums, conferences and working groups as well as the receipt of written and verbal updates from relevant bodies or external advisers on legal, regulatory and governance matters.

Where appropriate, additional training and updates on particular issues are provided. During the year, the Board was briefed on the proposed changes to the Code and on the New Code following its publication. This was followed by discussion on the ways in which the Board planned to incorporate the principles of the New Code into the business and governance systems. The Board received training on anti-bribery and corruption and an update on the EU General Data Protection Regulation with a presentation of the new processes to be put in place within the Group under this regulation.

The Board receives regular reports on shareholder views and sentiment from the Head of Investor Relations to ensure that members of the Board remain apprised of the current views of shareholders. Non-executive Directors can attend meetings with shareholders and analyst presentations and all shareholders have the opportunity to meet informally with the Directors at the Annual General Meeting.

Information and support

The Company Secretary, through the Deputy Chair, is responsible for advising the Board on all governance matters and for ensuring that Board procedures are followed, applicable rules and regulations are complied with and that due account is taken of relevant codes of best practice. The Company Secretary is also responsible for ensuring communication flows between the Board and its Committees, and between senior management and non-executive Directors. All Directors have access to the advice of the Company Secretary and in appropriate circumstances, may also obtain independent professional advice at the Company's expense. The appointment and removal of the Company Secretary is a matter reserved for the Board. The Company Secretary is Susanna Freeman who joined the Group in 2014. She is admitted as a solicitor in England and Wales.

Performance evaluation

In compliance with the provisions of the Code, an externally facilitated annual performance evaluation of the Board and its Committees is carried out every three years, with internal annual performance evaluations carried out for the intervening years. During 2018, an externally facilitated performance evaluation of the Board and its Committees was carried out by an independent external consultant, Prism Boardroom, which has no other connection with the Company. The next external evaluation will be carried out in 2021.

The scope of the 2018 evaluation was determined following a review by Prism Boardroom of Board and Committee papers, minutes, previous evaluations of the Board and its terms of reference and was discussed in advance with the Deputy Chair and the Company Secretary. The process agreed on was to use one-to-one interviews with each of the Directors, the Chief Financial Officer and the Company Secretary. Once completed, the report was circulated to members of the Board and its recommendations discussed at the following Board meeting, with the external facilitator present so that the report could be discussed. The main focus of the evaluation amongst other things was on:

- assessment of strategy and risk;
- the impact of the Board changes made at the beginning of 2018;
- Board composition and succession planning;
- effectiveness of Board and Committee meetings and communication; and
- implementation of the requirements of the New Code.

The overall conclusion of the evaluation was that the Board and its Committees were operating effectively, the changes made to the Board at the start of the year having been well implemented with the right checks and balances in place. The Chair, Chief Executive Officer and Deputy Chair were found to be accessible, with communication good and the independent non-executive Directors were stated to be prepared to provide challenge when required to, whilst being supportive of their executive colleagues. Certain potential improvement areas were identified, including enhancing further stakeholder reporting into the Board, in particular in light of the New Code, consideration of the future Board composition given the strategic direction of the Group following the Baimskaya acquisition, a continued focus on Board and senior management succession planning and keeping under review the roles and responsibilities of the Board, to ensure it remains relevant going into 2019. These recommendations are being incorporated into the Board and Committee processes for 2019.

During the year, the Deputy Chair held a number of meetings with non-executive Directors without executive Directors being present. He led the non-executive Directors in evaluating the performance of the Chair as part of the Board evaluation process, following which the Board was satisfied that Oleg Novachuk continued to be able to fulfil all of the commitments required of the role to its satisfaction.

Re-election

Directors newly appointed by the Board, are required to submit themselves for election by shareholders at the Annual General Meeting following their appointment. In accordance with best practice and the New Code, all current Directors will be submitted for re-election at the forthcoming Annual General Meeting.

Vladimir Kim (non-executive Director) and Eduard Ogay (former executive Director of the Company), are deemed to be acting in concert with each other by the Panel on Takeovers and Mergers and to constitute a Concert Party for the purposes of the City Code on Takeovers and Mergers. Under the Listing Rules, a Concert Party is classed as a 'controlling shareholder' of the Company. This means that the independent non-executive Directors of the Company, must be elected or re-elected by a majority of votes cast by independent shareholders. Therefore, at the forthcoming Annual General Meeting, the resolutions for the re-election of the independent non-executive Directors will be taken on a poll and passed only if a majority of votes cast by independent shareholders (which excludes Vladimir Kim and Eduard Ogay), in addition to a majority of the votes cast by all shareholders, are in favour.

Conflicts of interest

Directors have a statutory duty to avoid situations in which they have or could have a direct or indirect interest that conflicts or may conflict with the interests of the Company. The Company's Articles of Association give the Directors authority to approve such situations and there is no breach of duty by a Director, if the relevant situation has been authorised in advance. In addition, a Director has a duty to disclose to the Board any transaction or arrangement under consideration by the Company, in which he or she has a personal interest.

Directors are required to declare all directorships or other appointments outside the Group which could give rise to an actual or potential conflict of interest. Only the independent Directors are able to authorise such conflict situations and, where appropriate, this authorisation may be subject to certain conditions. Directors are also required to declare if there are any changes in circumstances that may affect an existing authorisation and they need to seek permission from the Board before accepting any external appointments. The Company Secretary minutes the consideration of any actual or potential conflict of interest and any authorisation granted and maintains a register of this information.

The Company's Articles of Association also include provisions relating to the treatment of third-party confidential information received by a Director and the circumstances in which a Director should absent himself or herself from a Board meeting and refrain from reviewing Board papers in relation to a matter in which he or she has an actual or potential conflict. These provisions will only apply where the circumstance giving rise to the potential conflict of interest has previously been authorised by the Directors.

Anti-Bribery and Corruption ("ABC")

The Group has in place an ABC Compliance Programme (the "Programme") to assist in the prevention of unlawful activities by individuals or Group entities and to comply with the requirements of the UK Bribery Act 2010. The Board has a firm stance on bribery and corruption and attaches the utmost importance to the Programme in clarifying the standards expected of all employees of the Group, wherever it conducts business.

The foundation of the Programme is the ABC Code, below which there is a subset of policies which provide a process for operating in accordance with the Programme in specific situations. These policies include the process for dealing with public officials, the giving and receipt of gifts and hospitality, due diligence processes to be carried out on third party business partners and policies on conflicts of interest, lobbying, social investment and Speak-Up. Regular training in ABC and awareness campaigns are carried out across the Group and monitoring and assurance of processes is carried out by the Internal Audit team and by external advisers. Anti-bribery and corruption clauses are included in contracts with the Group's business partners.

The Group undertakes due diligence on potential suppliers, customers, consultants, agents, distributors and other business partners to check they are suitable to do business with, are reputable and ethical and do not commit or engage in any form of bribery or corruption. New business partners complete an ABC questionnaire in which they need to include two business referees amongst other information. If the Group has a continued relationship with a business partner, the questionnaire is updated periodically.

During 2018, new employees were trained on ABC, existing employees received refresher training and online testing was carried out, to ensure there was a good understanding of the Programme in the Group. The Group's ABC Policies were reviewed and updated during the year and a number of these policies can be viewed on the Group's website at www.kazminerals.com.

Related party transactions

The Group has in place a policy for the identification of related parties and a process for the approval of any transactions with these parties. Under this policy, all Kazakhmys Group entities are deemed to be related parties due to Vladimir Kim's substantial shareholdings in both the Group and Kazakhmys Group. The list of related parties is regularly reviewed and updated throughout the year and, prior to entering into any related party transactions, an assessment is undertaken to ensure that the proposed transaction is on an arm's length basis and on normal commercial terms. Specific consideration is given to the requirements under the Listing Rules.

Competition policy

A competition policy is in place to govern any dealings between the KAZ Minerals Group and the Kazakhmys group and their employees. This policy recognises that the two groups are competitors and its aim is to prevent anti-competitive behaviour. Prior approval is required internally within the KAZ Minerals Group before any Group company enters into any arrangement with a Kazakhmys group company. No competitively sensitive information can be exchanged between the parties except in relation to a specific business purpose and where suitable controls are in place.

Accountability

The Board considers the Annual Report and Accounts, taken as a whole, to be fair, balanced and understandable and that it provides the necessary information required for shareholders to assess the Company's position and performance, business model and strategy, and that the business continues to operate as a going concern.

Risk management and internal control

The Board has overall responsibility for risk management and determines the Group's risk strategy, assesses and approves risk appetite and monitors risk exposure consistent with strategic priorities. The Board has established a Group-wide system of risk management and internal control which identifies and enables management and the Board to evaluate and manage the Group's principal risks. Due to the limitations inherent in any system of internal control, this system provides robust, but not absolute, assurance against material misstatement or loss and is designed to manage rather than eliminate risk. The effectiveness of the Group's system of internal control is regularly reviewed by the Board as is the Group's risk management framework, with specific consideration given to material financial, operational and sustainability risks and controls, with appropriate steps taken to address any issues identified. During 2018, no significant internal control failings were identified.

The Board has authorised the Audit Committee to oversee the risk management framework and the effectiveness of the Group's financial reporting, internal control and assurance systems. Each Board Committee provides updates on any risks considered within its remit when providing regular updates to the Board.

The Board confirms that throughout 2018 and up to the date of approval of this Annual Report and Accounts, there have been rigorous processes in place to identify, evaluate and manage the principal risks faced by the Group, including those that would threaten its business model, future performance, solvency or liquidity in accordance with Principle C.2 of the Code and the Guidance on Risk Management, Internal Control and Related Financial and Business Reporting published by the Financial Reporting Council. The Group's approach to risk management, the risks identified and how it profiles these risks is set out in the Risk management overview and Principal risks section on pages 65 to 73.

Internal Audit

Internal Audit provides independent, objective assurance to the Group designed to improve the Group's operations and safeguard the Group's assets and integrity. It advises management on the extent to which systems of internal control and governance processes are appropriate and effective to manage business risk, safeguard the Group's resources and maintain compliance with the Group's policies and legal and regulatory requirements. It advises on ways in which areas of risk can be addressed and provides objective assurance on risk and controls to senior management, the Audit Committee and the Board. Internal Audit's work is focused on the Group's principal risks; the Head of Internal Audit and the Group Risk function work together when considering the appropriate scope and focus of internal audits. The three-year programme of work of the Internal Audit department is considered and approved by the Audit Committee on a rolling annual basis, subject to any additional suggestions from the Committee. The audit plan has space for ad hoc audits as required by the Committee or management.

Under the Internal Audit plan, a number of audits take place across the Group's operations and functions to identify areas for improvement of the Group's internal controls. Findings are reported to relevant operational management who put in place processes for strengthening controls. Internal Audit follows up on the implementation of recommendations and reports on progress to senior management and to the Audit Committee.

The Head of Internal Audit reports regularly to the Chair of the Audit Committee and attends Audit Committee meetings four times a year to present the findings from internal audits.

Modern Slavery Act 2015

The Board recognises the importance of the provisions of the Modern Slavery Act 2015 and the Directors aim to ensure that slavery and human trafficking have no part in the Group's supply chain. The Group has always been vigilant about employee welfare and aims to be transparent in its practices. The Group has established a Code of Fair Employment which sets out its stance in relation to forced labour, slavery, human trafficking and child labour and this can be found on the Group's website at www.kazminerals.com. The Human Resources department periodically conducts a Group-wide review to check internal compliance with the Code of Fair Employment and no instances of any breach have been identified.

Risk assessments of the Group's major contractors and suppliers are carried out to identify those with a higher potential risk of modern slavery. General Directors at each of the Group's operations are required to confirm that they have reported any conditions which could indicate modern slavery amongst contractors' staff working at KAZ Minerals' sites or confirm that no such conditions were observed. Relevant staff were trained during the year to raise awareness of modern slavery issues, with a particular focus on management and contractors working on our construction sites. Employees are encouraged to report any instance or suspected occurrence of modern slavery or human trafficking in the supply chain to management or through the Group's Speak-Up helpline facility.

The Group has a Suppliers' Charter which sets out our expectations of our suppliers in relation to their treatment of their workers to ensure they are committed to employment practices which are acceptable to the Group. Under our standard terms of business our customers and suppliers agree to comply with the principles of the Code of Fair Employment and the Suppliers' Charter and to ensure there is no modern slavery within their operations.

The Group published its second Modern Slavery Act statement in May 2018 which can be found on our website at www.kazminerals.com.

Human Rights

The Company acknowledges that human rights are basic rights that form the foundation for freedom, justice and peace, which apply equally and universally in all countries. We are guided by our Human Rights Policy which has been approved by the Board and which can be found on our website at www.kazminerals.com. KAZ Minerals supports human rights that are defined, recognised and identified in international conventions. We follow the international human rights principles encompassed in the Universal Declaration of Human Rights, and adopt the UN Guiding Principles on Business and Human Rights. As set out in our Code of Fair Employment, we commit to our employees working in an environment and under conditions that respect their rights and require the same standards from our business partners. Through due diligence we aim to prevent and mitigate any infringement of human rights both internally and amongst our business partners.

Diversity

KAZ Minerals endeavours to create a positive, supportive and inclusive culture amongst its workforce. We promote our corporate values of teamwork, integrity, long-term efficiency, professional development and safety and we strongly believe in the importance of diversity and equality. Diversity and equality in our workforce enable the business to draw from a wide range of thought, experience and expertise. The KAZ Minerals workforce represents all sectors of society and reflects the communities local to its operations. We do not discriminate between our employees on the basis of age, gender, race, nationality or ethnic origin, family situation, religion, language, political beliefs, sexual orientation, pregnancy, maternity or paternity or disability ("protected characteristics") except as may be required to comply with applicable laws and regulations, including those relating to employment and health and safety, in the countries in which we operate. We endeavour to ensure a fair and consistent approach in the recruitment and employment of our people regardless of their differences and we do not tolerate any form of unlawful or unfair discrimination, victimisation or harassment based on protected characteristics, whether direct or indirect.

Our approach is set out in the Company's Diversity and Equality Policy which applies to all our staff. It is particularly relevant to Directors, line managers and other employees and contractors concerned with the recruitment, training and promotion of staff and with any employment matters which relate to others. The Group Director of Human Resources is responsible for ensuring that the policy is applied and the Group Human Resources team has been trained and ensures awareness amongst managers of the provisions of the policy and of their obligation to comply with them.

During 2018, a series of meetings with female employees was held and these were attended by the Group Director of Human Resources and the Deputy Chair. Presentations were given and discussions took place to understand better any challenges that female employees may face in the workplace and especially at our remote operations, with the aim of identifying ways of reducing or eliminating any such challenges and improving gender diversity in our workplace.

This year, we are delighted to report that two of our senior female employees, the Head of Procurement and Group Chief Geologist won awards at the "100 Inspirational Women in Mining Awards" which signals to our female workforce that gender is no bar to a successful career with the Company. 23 per cent of our staff are female and the proportion of females on the Board and in senior management (25 per cent and 23 per cent respectively) is representative of females in the workforce as a whole. We believe these statistics position KAZ Minerals amongst the most gender diverse of our mining peer group.

Succession planning

The Group has in place a detailed leadership development programme under which key positions are determined and potential successors for these roles are identified. The potential successors are given individual development plans, mentoring and training. The progress of their development is monitored regularly by the Group Director of Human Resources, quarterly by other senior management and half yearly by the Chief Executive Officer. The Group Director of Human Resources will report into the Nomination Committee on succession planning during 2019, (during 2018 he reported to the Board on succession planning) and consideration is given under this process to the Diversity and Equality Policy and the Board Diversity Policy.

We have appointed a Designated Non-Executive Director in order to engage with our workforce and Michael Lynch-Bell, our Deputy Chair, will be the first Director to take on this role. He will make two site visits to our operations in Kazakhstan during 2019 in order to meet employee representatives to fully understand the views of our workforce in relation to the Company's strategy and purpose so that we can consider these views in Board discussions and decision making. The role will rotate amongst our non-executive Directors so that there is an opportunity to widen engagement across different members of the Board. For more information on how we engage with our employees please see page 58 of the Corporate Responsibility section.

Relations with shareholders

The Board endeavours to ensure good communication with its shareholders and maintains an active dialogue with its key financial audiences including institutional shareholders, sell-side analysts, private individuals and potential new shareholders. The Head of Investor Relations is in communication with shareholders on a day-to-day basis and the Chief Executive Officer and Chief Financial Officer are closely involved in investor relations activities at key times throughout the year. The Board is provided with shareholder and broader market feedback from the Head of Investor Relations at each Board meeting.

The executive Directors are available, through the Head of Investor Relations, to discuss the concerns of major shareholders at any time and the Deputy Chair is available to discuss governance with them. Non-executive Directors make themselves available to attend meetings with shareholders when requested in order to develop an understanding of their views. The Company responds as necessary to requests it receives from individual shareholders on a wide range of issues.

Senior management has regular contact with key institutional shareholders, external financing providers and sell-side analysts to discuss the strategy, financial performance and investment activities of the Group. Meetings with management are also supplemented by visits to the Group's operations. During 2018, executive Directors and senior management held meetings with institutional investors in the United Kingdom, continental Europe, Russia and the United States of America and attended conferences in these locations, providing a comprehensive dialogue with shareholders and potential new investors.

During 2018, the Company issued quarterly production updates in January, April, July and October. These, together with copies of analyst presentations each half year, the Group's preliminary and half-yearly results and all announcements issued to the London Stock Exchange, are available on the Company's website (www.kazminerals.com). In addition, users of the Company's website can register to hear live webcasts of the results presentations.

Annual General Meetings

The Notice of Annual General Meeting is circulated to all shareholders at least 20 working days prior to such meeting and it is Company policy not to combine resolutions. All shareholders are invited to attend the Annual General Meeting where there is an opportunity for individual shareholders to question the Chair, Deputy Chair and, through them, the chairs of the principal Board Committees. After the Annual General Meeting, shareholders can meet informally with the Directors.

At the Annual General Meeting, the Chair provides a brief summary of the Company's activities for the previous year to shareholders. All resolutions at the 2018 Annual General Meeting were voted on by way of a poll. The procedure for voting on a poll follows best practice and allows the Company to count all votes rather than just those of the shareholders attending the meeting.

As recommended by the Code, all resolutions proposed at the 2018 Annual General Meeting were voted separately and the voting results, which included all votes cast for, against and those withheld, together with all proxies lodged prior to the meeting, were announced to the London Stock Exchange and made available on www.kazminerals.com as soon as practicable after the meeting. As in previous years, the Form of Proxy clearly advised that a 'vote withheld' is not a vote in law and is not used in calculating the votes for or against a resolution.

Board Committees

The five Committees of the Board are the Audit; Health, Safety and Environment; Nomination; Remuneration and Projects Assurance Committee, the latter re-established in 2018. Board Committee members are appointed by the Board upon the recommendation of the Nomination Committee, which reviews the composition of each Committee regularly. In accordance with their specific skills and experience, independent non-executive Directors are appointed to different Board Committees.

Committee members are expected to attend each Committee meeting, unless there are exceptional circumstances which prevent them from doing so. Only members of the Committees are entitled to attend Committee meetings, but others may be invited to attend.

The terms of reference of each Committee are reviewed annually and are available to view on the Company's website (www.kazminerals.com). They can be obtained on request from the Company Secretary at the Company's registered office.

Board Committee membership

The current membership of the Board's Committees is shown on page 75.

Audit Committee

Dear shareholder,

I would firstly like to thank Michael Lynch-Bell, for his contribution as chair of the Committee over the last five years. Michael stepped down as chair of the Committee at the Annual General Meeting in May 2018 but he remains a member of the Committee and I value his continued counsel. I would also like to thank my other fellow Committee members, John MacKenzie and Charles Watson, whose insightful contributions have enabled the Committee to perform its duties effectively.

The Audit Committee reports to the Board on its assessment of effective governance in financial reporting, internal control and assurance processes and on the procedures in place for the identification and management of risk. During 2018, the Committee continued to focus on its core role of reviewing the Group's financial results, including significant financial reporting estimates and judgements, as well as the financial disclosures in the interim management statements, monitoring the Group's systems of internal control and risk management and overseeing the relationship with the external auditors and with the internal audit function.

In this report, there is a summary of the significant issues that the Committee considered over the course of the year and the activities that it undertook in the performance of its duties.

Over the next 12 months, the Committee, in addition to its usual duties will assess the integration of Baimskaya copper project into the Group and will monitor tax developments arising in Kazakhstan, Russia and the United Kingdom.

Alison Baker
Chair, Audit Committee

Composition

The current members of the Committee are:

Alison Baker, Chair;
Michael Lynch-Bell;
John MacKenzie; and
Charles Watson

Alison Baker has recent and relevant financial experience, having spent nearly 25 years in the provision of audit, capital markets and advisory services in the extractives sector. She previously led the UK and EMEA Oil & Gas practice at PricewaterhouseCoopers and prior to that the UK Energy, Utilities and Mining Assurance practice at Ernst & Young. Michael Lynch-Bell, who chaired the Committee until June 2018, also has recent and relevant financial experience, having spent 38 years with Ernst & Young developing and later leading, its global mining and energy practices. John Mackenzie, former CEO of copper at Anglo American between 2009 and 2013, has around 30 years' experience in the metals and mining industry and Charles Watson has over 30 years' experience in the extractives industry. Accordingly, the Board considers that the Committee as a whole has competence relevant to the mining sector.

The Chair of the Board, Chief Executive Officer, Chief Financial Officer, Company Secretary, Head of Internal Audit and the lead partner and audit director of the external auditors are usually invited to attend Committee meetings. At the end of each meeting the Committee meets separately with representatives of the external auditors and the Head of Internal Audit, without management being present, to discuss any matters arising from their audits or in relation to any other matter.

Role and responsibilities

The primary responsibilities of the Committee are set out on the pages that follow. Whilst the Committee has very specific duties which are set out in its terms of reference, its overarching purpose is to reassure shareholders that their interests are properly protected in respect of the Company's financial management and reporting. The Committee regularly updates the Board on matters discussed at its meetings. The Board has delegated responsibility to the Committee for monitoring the Company's procedures and system of internal control in relation to risk management and the Committee oversees the internal and external audit processes which report into it.

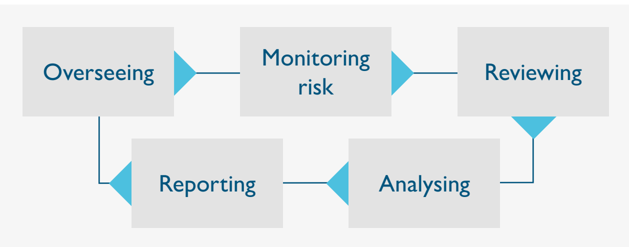
Key roles and responsibilities of the Audit Committee include:

- monitoring and challenging, where necessary, the integrity of the financial and narrative statements, the annual and half-yearly results, and any other formal announcement relating to the Group's financial performance, including a review of significant financial reporting judgements which they contain;
- reviewing and challenging, where necessary, the actions and judgements of management taking into account the views of the external auditors in relation to the Company's financial statements, strategic report, financial review, governance statement (insofar as it relates to audit and risk management), half-yearly reports, preliminary announcements and related formal statements, including the going concern assumption and the viability statement;

- reviewing the Company's internal controls, including financial controls and risk management systems;
- approving the annual and three-year internal audit plans and monitoring the role and effectiveness of the internal audit function;
- overseeing the Company's relationship with the external auditors, including the monitoring of their independence and expertise, the terms of their engagement and fees, and assessing the effectiveness of the audit process with due regard to relevant UK professional and regulatory requirements;
- agreeing the scope of the external auditors' annual audit plan and reviewing the output;
- reviewing and approving any changes to the policy on the provision of non-audit services by the external auditors;
- assessing annually the Committee's own performance, constitution and terms of reference; and
- reporting to the Board on how the Committee has discharged its responsibilities.

A copy of the Committee's terms of reference is available to view on the Company's website (www.kazminerals.com).

Audit Committee responsibilities



Attendance at Audit Committee meetings

During 2018, there were seven scheduled meetings of the Audit Committee, including two meetings which were convened to discuss one item of business only, the financial disclosures in the Group's production reports, with each member attending as shown below:

Members during 2018	Committee member since	Attendance at scheduled meetings during 2018
Alison Baker	9 October 2017	7/7
Michael Lynch-Bell	27 February 2013	7/7
John MacKenzie	1 January 2016	7/7
Charles Watson	24 August 2011	7/7

External auditors

KPMG were appointed as external auditors of the Group in 2012 following a formal competitive tender process and continue to be the Company's external auditors.

The appointment of KPMG is reviewed annually and the Committee undertook an assessment of the effectiveness of the external audit process during the year. Consideration was given to performance, objectivity, independence, resource and relevant experience of the external auditors and following the identification and discussion of improvements that could be implemented, the Committee recommended to the Board the re-appointment of KPMG. The Committee believes that the Group continues to benefit from the insight and knowledge that the external auditors have of its business processes and controls and following the Committee's recommendation, the Board has approved resolutions to be proposed at the forthcoming Annual General Meeting, to re-appoint KPMG as the Company's external auditors and to authorise the Directors to set KPMG's remuneration.

In accordance with regulations on tendering audit contracts at least every 10 years, it continues to be the intention of the Committee that the external audit will be put out to tender by 2022 at the latest, subject to any further regulatory change.

Policy on the provision of non-audit services

The Committee reviews annually the Group's policy on the use of the external auditors for non-audit services. The policy identifies those non-audit services which may, and those which may not, be provided and sets out the process through which non-audit services must be approved. Under the policy, the external auditors can only be used for non-audit services where there are benefits to the Group and the provision of such services will not threaten the external auditors' independence and objectivity.

Under the policy, any new engagement for non-audit services in excess of £100,000 must be approved by either the Chief Financial Officer and the Committee Chair or a sub-committee of any two Committee members and certain engagements must additionally be subject to a competitive tender process. KPMG has informed the Audit Committee that with effect from 1 January 2019 they will not undertake any non-audit services with the exception of services closely related to the audit.

Full information on engagements and total annual fees paid for non-audit services are reported to the Committee. There were no fees paid to KPMG for non-audit services in 2018. Details of all fees paid to the external auditors for the year ended 31 December 2018 and information on the nature of non-audit fees appear in note 10 to the consolidated financial statements on page 139.

Financial Reporting Council Corporate Reporting Review ("FRC")

The 2017 KAZ Minerals Annual Report and Accounts was reviewed by the FRC's Corporate Reporting Review team during 2018.

The review was conducted by FRC staff who have an understanding of the relevant legal and accounting framework. It was subject to inherent limitations, as it was based on a review of the Annual Report and Accounts and therefore did not benefit from detailed knowledge of the Group's business or an understanding of the underlying transactions entered into. The FRC's review provides no assurance that the 2017 Annual Report and Accounts was correct in all material aspects and the FRC accepts no liability for reliance placed on its work.

In performing its work, the FRC requested information on the Group's disclosures in respect of the cash flow statement, cash and cash equivalent balances and significant judgements and sources of estimation uncertainty. The Chair of the Audit Committee and the Group's external auditors were consulted by management in preparing correspondence with the FRC.

The FRC questioned the appropriateness of the Group's accounting policy for cash and cash equivalents, specifically the classification of the Group's deposits with original maturity of greater than three months within cash and cash equivalents. Following a change in the Group's conditions, management has prospectively classified the Group's deposits with original maturity of greater than three months as current investments, which was welcomed by the FRC. Further details are set out in note 36(h) to the Financial Statements on pages 163 and 164. Following comments from the FRC, management has also clarified its disclosures relating to significant judgements and sources of estimation uncertainty in the 2018 Annual Report and Accounts.

The FRC also provided recommendations on other areas of disclosure which were incorporated into the 2018 Annual Report and Accounts, where applicable.

Brexit

The Committee, in conjunction with management, considered the effect of Brexit on the Group and its operations.

The Group's operations are located in Kazakhstan and Kyrgyzstan, with the majority of sales made into China and non-EU countries. The principal business carried out by the Group in the UK relates to its listing on the London Stock Exchange and it maintains a small office in London where corporate functions such as Company Secretarial, Investor Relations and Treasury are located. The Board of Directors and Committee meetings are mostly held at the London office. From a tax perspective, the Group's arrangements are largely subject to bi-lateral agreements between the UK and Kazakhstan; the UK and the Netherlands; and the Netherlands and Kazakhstan, which are generally expected to remain in place post-Brexit.

Taking into account the circumstances of the Group, the Committee does not expect Brexit to have a significant impact on the Group.

Activities in 2018

At its meetings in 2018, the Committee:

Financial reporting

- reviewed the annual and half-yearly results including the quality and acceptability of accounting policies, significant financial reporting estimates and judgements applied in preparing them, the transparency and clarity of the disclosures within them and compliance with financial reporting standards and governance;
- considered the process followed by management, including its interaction with the Chair of the Committee and the Group's external auditors, in responding to the queries raised by the FRC as detailed above;
- considered whether the Annual Report and Accounts, taken as a whole, was fair, balanced and understandable and provided the necessary information for shareholders to assess the Company's position and performance, business model and strategy;
- received reports from management and the external auditors on accounting, financial reporting, regulatory and taxation matters including adoption of new accounting standards;
- considered impairment indicator reviews performed by management;
- reviewed the methodology for producing the disclosure of ore reserves and mineral resources and other relevant disclosures in the Annual Report and Accounts;
- reviewed the accounting treatment for the Baimskaya copper project acquisition;
- reviewed the basis for preparing the Group accounts on a going concern basis; and
- considered the viability statement to be made by the Company.

Internal control

- reviewed the structure and effectiveness of the Group's system of internal control as set out on pages 83 and 84 and the disclosures made in the Annual Report and Accounts on this matter;
- reviewed and recommended to the Board amendments to the Group Treasury Policy;
- reviewed and recommended to the Board the Group Tax Strategy; and
- reviewed the Group's processes for disclosing information to the external auditors and the statement concerning such disclosure in the Annual Report and Accounts.

Risk management

- received an overview of the Group's risk environment and risk management activities together with analysis of the key risks to achieving the Group's strategic priorities;
- reviewed and challenged the Group's top 20 risks identified by management in the Group risk map and movements of those risks over the course of the year;
- reviewed the effectiveness of the Group risk management framework as described on pages 65 and 66;
- reviewed reports from internal audit on issues identified and confirmed that there was an appropriate response from management;
- reviewed reports from external auditors on any issues identified in the course of their work including the internal controls report; and
- monitored the Group's catastrophic risk insurance arrangements.

Internal audit

- approved the annual and rolling three-year operational plans; and
- regularly reviewed reports from the internal audit department, received presentations from the Head of Internal Audit on internal control and followed up on the manner in which recommendations made in these audits had been addressed.

External auditors

- approved the terms of engagement of the external auditors, the fees paid and scope of work;
- received reports on the findings of the external auditors during the half-yearly review and annual audit and reviewed the recommendations made to management by the external auditors and management's responses;
- reviewed the performance and effectiveness of the external auditors in respect of the previous financial year and recommended their re-appointment;
- performed an annual review of the policies on the independence and objectivity of the external auditors, the use of the external auditors for non-audit services, and the employment of former employees of the external auditors;
- assessed the continued independence and objectivity of the external auditors;
- reviewed the quality assurance processes of the external auditors and letters of representation to them; and
- discussed the procedures performed and findings related to anti-bribery and corruption and revenue.

Other matters

- reviewed reports on changes to UK, Kazakhstan and Kyrgyzstan tax legislation;
- received the report on payments to governments;
- reviewed the Speak-Up policy;
- received reports on matters raised via the Speak-Up facilities, the process for the investigation of those matters raised, the outcome of any investigation and any related actions taken;
- reviewed status updates on the Group's Anti-Bribery and Corruption Compliance Programme;
- received updates from management on the latest technical accounting, taxation and regulatory issues;
- received a report on revenue processes;
- received a report on IT security;
- received a presentation on the structure and composition of the Group's finance function;
- received updates on the implementation of a new Oracle Enterprise Resource Planning system;
- reviewed the terms of reference and the results of the performance evaluation of the Committee; and
- reviewed the training requirements of the Committee members.

Significant judgements considered by the Audit Committee

The Committee considered, amongst other matters, a number of significant judgements in relation to the financial reporting of the Group, including:

Significant issues	Committee action
Going concern and viability statement	
It is appropriate to continue to adopt the going concern basis of accounting in preparing the financial statements for the year ended 31 December 2018. In reaching this conclusion, management took into account the financial position of the Group and its forecast cash flows and made certain assumptions and judgements as set out in the basis of preparation note to the financial statements on pages 126 to 128 and in the Strategic Report on page 44. This Annual Report and Accounts also includes the long-term viability statement in compliance with the UK Corporate Governance Code. Management considered the Group's long-term viability statement, in addition to and together with the going concern statement, which is set out on page 67.	The Committee considered and approved the underlying assumptions used in the preparation of the long-term viability statement, together with the going concern assumption. After reviewing papers prepared by management and also taking into account the external auditor's review of the papers and their assumptions, the Committee concluded that it was appropriate to prepare the accounts on a going concern basis. The Committee considered the long-term viability statement and going concern statement and approved management's disclosures.
Impairments – Group	
At 30 June 2018, an assessment of impairment indicators or reversals across the Group's cash generating units (CGUs) was performed and this did not identify indicators which would require an impairment or reversal review. Accordingly, impairment reviews were not undertaken. At 31 December 2018, an assessment of impairment indicators across the Group's CGUs was performed and an impairment indicator was identified at Bozymchak. An impairment review was undertaken which identified that an impairment charge was required to reduce the carrying value of the Bozymchak operation. See page of 137 of the Group's consolidated financial statements.	The Committee considered management's assessment as at 30 June 2018 and as at 31 December 2018. The Committee evaluated the appropriateness of management's assumptions and estimates, including those used in the Bozymchak impairment review, and related disclosures. Having received input from the external auditor, the Committee agreed with management's assessment and disclosures.
Impairments – KAZ Minerals PLC	
An assessment of impairment indicators in respect of the investments of KAZ Minerals PLC was performed, given the fall in its share price in the second half of 2018. The reduction in the share price was not found to be driven by fundamental changes to the long-term value of the Company's business operations. This conclusion was also supported by the use of consistent methodology used for impairment indicator reviews across the Group's CGUs. An impairment review was therefore not undertaken.	The Committee considered papers setting out management's impairment indicator review together with the latest internal valuation of KAZ Minerals PLC's investments. Having received input from the external auditor and challenged the appropriateness of key assumptions used by management in their value estimates, the Committee agreed with management's assessment and disclosures.
Consideration and assessment of tax matters of the Group	
Due to the evolving nature of tax legislation and its application in Kazakhstan and Kyrgyzstan, management is required to make judgements and estimates in relation to tax risks, the outcomes of which can be less predictable than in other jurisdictions. Management has determined its best estimates for taxes payable and the likelihood and timing of taxes receivable, including VAT, and accounted for them accordingly.	The Committee considered papers prepared by management and after receiving input from the external auditor, concluded that the Group's tax position has been appropriately accounted for and disclosed.
Joint arrangement accounting – Industrial Construction Group ("ICG")	
The Group has established a joint arrangement, ICG, for the construction of the additional sulphide processing facility at Aktogay. The Group has a 49 per cent interest in ICG and is deemed to have joint control, as decisions about the relevant activities of the joint arrangement require unanimous consent of the parties. This arrangment was judged to be a joint operation for accounting purposes.	The Committee considered papers prepared by management and taking into account the external auditor's review of the papers and their assumptions, concluded that management's judgement relating to the accounting of ICG was appropriate.
Acquisition accounting – Baimskaya copper deposit	
The Group announced the completion of the acquisition of the Baimskaya copper project in January 2019. In determining the appropriate accounting for the purchase, consideration was given as to whether the deposit represented a business, as defined under the accounting standards, or an asset. Management considered the progress and stage of exploration at the site; the quantitative and qualitative nature of its assets and liabilities; and whether a viable process was in place to generate outputs. Management determined that the site did not meet the requirements of a business combination as there was no viable process in place which, together with the inputs (the copper bearing ore) could result in outputs. As such, it was judged that the acquisition of the Baimskaya copper project should be accounted for as an asset purchase, not a business combination. The impact of this judgement will apply to the 2019 financial statements.	The Committee considered papers prepared by management and taking into account the external auditor's review of the papers and their assumptions, concluded that management's judgement in respect of the acquisition accounting for the Baimskaya copper project was appropriate.

Health, Safety and Environment Committee

Dear shareholder,

Over the course of the year, the Committee has continued to support management in its aim of reducing health, safety and environmental ("HSE") related risks, whilst providing essential challenge.

Our key priority is to achieve the Group's goal of zero fatalities which I am disappointed to report was not achieved in 2018 and we will continue to focus strongly on this.

In early 2018, the Committee reviewed management's new health and safety initiatives which included the roll out of the SLAM system (Stop, Look, Assess, Manage) and putting in place processes to increase site management safety interactions and the sharing of learnings from incidents across sites. Improvements have been made to systems and training, across all levels, from workers to General Directors. This includes the commitment of more visible presence on site by senior line management focused on safety issues. The Committee also reviewed and was involved in updating with management, the Group's leading safety indicators, to ensure that focus is directed in the most important areas for the prevention of harm.

During the year, the Committee received reports on occupational diseases and on the ways in which management is working on reducing incidences of such health issues. We also received a further update on the three year underground mine safety improvement project which we approved in 2017, and we were pleased to see progress in many areas.

During the year a further audit of storage facilities was completed, on which the Committee received an update.

The Committee received the findings of internal and external reviews of HSE at a number of our sites which were conducted during the year. These reviews assess compliance with the Group's HSE policies, make recommendations for further improvements and give focus to specific priorities of HSE. In 2018, one such area of focus was awareness of safety rules, hazards and user procedures amongst employees. The Committee considered the outcomes of these audits and requested improvements to be made in various areas identified. We also reviewed the three year strategic plan focused on strenthening the long-term foundations for safe, productive work. The Committee also received and discussed an environmental report containing metrics on the Group's performance during 2018 and on the improvements that were being put in place by management.

We made two trips to Kazakhstan in 2018, one in June and one in October, to visit four of our operations including the two new mines, Bozshakol and Aktogay, as well as Irtyshsky and Artemyevsky, two established underground mines in the East Region. During our visits to the operations we met with locally based staff and managers to gain a first-hand view of the risks and challenges they face and to visit the locations where incidents had taken place. We had the opportunity to see the Group's HSE initiatives in practice, to interact with workers to discuss safety and to understand areas where improvements could be made.

We will continue our drive to improve all areas of HSE over the next few years and will report on our progress during 2019 at the end of the year.

Charles Watson
Chair, Health, Safety and Environment Committee

Composition

The current members of the Committee are:

Charles Watson, Chair;
Lynda Armstrong;
Michael Lynch-Bell; and
John MacKenzie

Role and responsibilities

The Committee is primarily responsible for keeping under review the development and maintenance of a framework of policies and standards which are used to assess, manage and where possible prevent health, safety and environmental risks. Reports on the Committee's reviews are then provided to the Board.

Two of the three meetings of the Committee during the year were held in Kazakhstan and involved meeting with management responsible for health and safety at the mine sites, with each visit lasting for two or three days.

Key responsibilities of the Committee include:

- assessing the impact of health, safety and environmental issues on the Group's stakeholders and ensuring remedial action is taken in respect of any such issues where appropriate;
- reviewing compliance by the Group with relevant health, safety and environmental legislation;
- monitoring and assessing the commitment and behaviour of management towards health, safety and environmental related risks;
- reviewing significant safety incidents, considering the key causes thereof and ensuring actions are taken to prevent similar incidents occurring including reporting of these incidents and any 'near misses';
- facilitating the promotion by management of a culture of care and sensitivity towards the environment and the communities in which the Group operates;

- making proposals to the Remuneration Committee regarding appropriate health, safety and environmental performance objectives for executive directors and certain senior managers and providing its assessment as to performance against such objectives; and
- reviewing the findings of any internal or external reports on the Group's health, safety and environmental systems.

The Committee's terms of reference are available to view on the Company's website (www.kazminerals.com).

Attendance at Health, Safety and Environment Committee meetings

There were three scheduled meetings of the Health, Safety and Environment Committee during 2018, with each member attending as shown below:

Members during 2018	Committee member since	Attendance at scheduled meetings during 2018
Charles Watson	16 November 2011	3/3
Lynda Armstrong	21 October 2013	3/3
John MacKenzie	1 March 2015	3/3
Michael Lynch-Bell	1 January 2018	3/3

Activities in 2018

At its meetings in 2018, the Committee, amongst other matters:

- visited the mine and the concentrator at Aktogay, with particular focus on sites of HSE incidents to better understand the reasons why they took place and learned about the local social programmes including funding for scholarships and for local schools and health checks for local residents;
- visited the mine, concentrator, clay plant and clay dump, the new training centre and sites of HSE incidents at Bozshakol;
- reviewed the new roof bolting system at the underground mine at Irtyshsky and other safety initiatives;
- visited the underground mine at Artemyevsky and reviewed the new underground support systems;
- received presentations on the approach to health and safety from the Project Directors at each of the Aktogay and Artmeyevksy expansion sites where substantial construction works are ongoing;
- evaluated the Committee's effectiveness for 2018, including identifying training needs and reviewed its terms of reference and future role and direction;
- reviewed reports received through the Speak-Up system where HSE concerns were raised;
- received a status update on corporate responsibility reporting, including key performance indicators; and
- reviewed and evaluated fatal and serious incident reports and visited locations of some of the fatalities and serious incidents at the mines.

Plans for 2019

In 2019, the Committee will seek assurance that health, safety and environmental systems, procedures and behaviours are well established throughout the Group. Over the course of the year it plans to visit an East Region mine, as well as Bozshakol and Aktogay.

Nomination Committee

Dear shareholder,

During 2018, the Board has been unchanged following the new structure put in place at the beginning of the year, when after consultation with our major institutional shareholders, the Board appointed Oleg Novachuk, previously Chief Executive Officer, as Chair of the Company. The Board considered him to be uniquely qualified for the role due to his operational knowledge, project development expertise and relationships with industrial, financial and political leaders in Kazakhstan, China and the region. Andrew Southam, previously Chief Financial Officer, was appointed our new Chief Executive Officer and I was appointed Deputy Chair, in addition to my role as Senior Independent Director, with responsibility for board governance. We have had this structure in place for over a year and I consider it to be working well, a conclusion shared by the independent board evaluation we performed at the end of 2018.

There has been one minor change to our Committee structure as mentioned in my Governance Overview. In October 2018, the Chair of the Operations Ramp Up Assurance Committee ("ORAC") informed the Board that the members of the ORAC had reviewed the current status of Aktogay and Bozshakol now that these operations were close to achieving design capacity. It was their view that the ORAC's role of monitoring key technical and operational matters at Aktogay and Bozshakol during the ramp up phase was now complete and a decision was made to close the ORAC. The Board decided to re-establish the Projects Assurance Committee ("PAC"), to oversee the construction of the Aktogay expansion and Baimskaya projects. The Nomination Committee selected John MacKenzie to chair the PAC due to his extensive projects experience in the copper mining industry and he is joined on that Committee by Lynda Armstrong and Charles Watson who have many years of experience in the extractives industry. The PAC held its first meeting in October 2018. See page 96 for more information on the PAC.

Following the publication of the New Code, the Committee met to consider its additional responsibilities under this code. In light of the principles of the New Code, the Nomination Committee is now working with Group Human Resources to oversee appointments and succession planning for the senior management pipeline as well as the Board, taking into account the need for diversity of age, disability, education, gender, ethnicity and social background. We are delighted to embrace these new duties and began our work in this area during 2018.

As part of our ongoing review of the structure of the Board and Committees and following a skills audit, it has been agreed by the Nomination Committee that during 2019 we will keep under review the composition of the Board in light of the developments of the business.

In February 2019, the Committee considered and discussed a paper setting out the regulations and guidelines regarding the retirement of Directors at the Annual General Meeting and having reviewed the performance of all Directors, concluded that it was appropriate to recommend that all the Directors be proposed to retire and stand for re-election by shareholders at the Annual General Meeting of the Company to be held on 2 May 2019.

Michael Lynch-Bell
Chair, Nomination Committee

Composition

The current members of the Committee are:

Michael Lynch-Bell, Chair;
Lynda Armstrong; and
Alison Baker

Role and responsibilities

The Committee is primarily responsible for leading the process for Board and Committee appointments and for keeping under review the balance of skills, experience, independence, knowledge and general diversity on the Board to ensure the composition of the Board and its Committees remains appropriate.

The Committee, which provides a rigorous, formal and transparent procedure for the appointment of new Directors to the Board, generally consults with external search consultants and advisers on prospective Board appointments. The Committee keeps under review the planned and progressive refreshing of the Board and its Committees. It assesses the performance of current Directors and makes recommendations to the Board for their re-appointment where appropriate, as well as advising the Board on the terms of any re-appointment. It supervises and puts in place succession planning for non-executive Directors and for certain senior managers and, where applicable, makes recommendations to the Board on Directors' conflicts of interest for authorisation.

Key roles and responsibilities of the Nomination Committee include:

- regularly reviewing the structure, size and composition (including skills, experience, independence, knowledge and general diversity) of the Board and making recommendations to the Board with regard to any changes;
- overseeing succession planning for Directors and senior management with appointments and succession plans based on merit and objective criteria as well as the skills and expertise that will be needed in these roles in the future whilst promoting diversity;
- selecting and appointing external search consultants to identify potential candidates for the Board and senior management positions when required;
- responsibility for identifying and nominating, for the approval of the Board, candidates to fill Board vacancies as and when they arise in light of the role and capabilities required for a particular appointment;
- keeping under review Directors' existing and any new conflicts of interest and making recommendations as to whether a conflict should be authorised;
- reviewing the results of the Board performance evaluation process in relation to the composition of the Board and reviewing annually the time commitment required from the non-executive Directors to fulfil their duties;
- reviewing annually the Committee's own performance, constitution and terms of reference;
- recommending to the Board suitable candidates for the membership of Board Committees;
- recommending the re-appointment of non-executive Directors as appropriate at the conclusion of their specified term of office; and
- recommending the re-election by shareholders of Directors in accordance with the provisions of the Code.

The Committee's terms of reference are available to view on the Company's website (www.kazminerals.com).

Attendance at Nomination Committee meetings

There were two scheduled meetings of the Nomination Committee during 2018, each member attending as shown below:

Members during 2018	Committee member since	Attendance at scheduled meetings during 2018
Michael Lynch-Bell	1 September 2013	2/2
Lynda Armstrong	7 May 2015	2/2
Alison Baker	1 January 2018	2/2

Governance

The Committee is chaired by the Deputy Chair and all members of the Committee are independent non-executive Directors in accordance with the provisions of the Code that a majority of members should be independent. If a matter concerns the Deputy Chair personally, then he leaves the meeting and Lynda Armstrong takes the chair.

Diversity

The Board is comprised of men and women with a wide range of skills and business experience drawn from a number of industries, which enables different perspectives to be brought to Board discussions. Furthermore, the Board is made up of a variety of nationalities, which brings cultural and ethnic diversity as well as different geographical experiences and viewpoints. The combination of these factors enables the Board to benefit from a variety of skills, perspectives and thoughts, which provides a dynamic environment for decision making. When recruiting, the Board seeks to maintain or improve its diversity and we have recently adopted a Board Diversity Policy under which we set out our aspiration to reach a composition of 33% women on the Board by the end of 2020. The Policy can be viewed at www.kazminerals.com.

The Board recognises the need to create conditions which foster talent and we encourage all employees to achieve their full career potential at the Group. As part of the Group's approach to human resource management, it encourages employee diversity and aims to ensure that KAZ Minerals' future senior leadership team reflects the demographics and ethnic diversity of the countries in which it operates and the general employee base.

Activities in 2018

At its meetings in 2018, the Committee amongst other matters and in addition to those already stated in this Nomination Committee section:

- conducted a thorough review of and recommended the appointment of Charles Watson for a further term of one year following the end of his eighth year of appointment to the Board;
- in accordance with the Company's Articles of Association, recommended to the Board the re-election of all Directors by shareholders at the 2019 Annual General Meeting having due regard to the performance and ability of each Director to continue to contribute to the Board and its Committees;
- reviewed the time commitment required by non-executive Directors to fulfil their duties; and
- amended its terms of reference and conducted a review of the results of the performance evaluation of the Committee.

Recruitment process

For the recruitment of new candidates to fill appointments to the Board we generally use executive search consultants who specialise in the recruitment of high calibre executive and non-executive candidates and have no other connection with the Company. This ensures that we have access to a wide and high calibre pool of candidates from which to choose. A formal, rigorous and transparent search process is put in place with a candidate profile and position specification prepared, including time commitment expected and experience required. Interviews are then conducted by the Chair of the Nomination Committee, the other members of the Committee and the executive Directors. Sometimes other non-executive Directors are also invited to meet candidates during the interview process.

Operations Ramp Up Assurance Committee

Dear shareholder,

The Operations Ramp Up Assurance Committee was established in February 2017, with a planned 18 month life, to monitor key technical and operational matters at Bozshakol and Aktogay during the ramp up phase in their development, with the objective of assuring that these operations implemented systems and processes capable of delivering sustainable performance in line with their design parameters.

During 2018, the Committee received reports and presentations from the members of management responsible for directly overseeing Bozshakol and Aktogay and was supported by an external adviser who performed periodic site visits providing the Committee with an independent assessment of the ramp up. Drawing on his senior operational experience in the copper mining industry, the external adviser also provided recommendations to management and to the Committee on potential improvements.

The Committee met four times over the course of the year and it was decided in October 2018 that, due to the operations at Bozshakol and Aktogay being close to achieving design capacity and the ramp up phase being complete, the Committee would be succeeded by a re-established Projects Assurance Committee with the remit of overseeing project development at the Aktogay expansion and the Baimskaya copper project and to continue monitoring the systems and processes at Bozshakol and Aktogay.

Details of the Projects Assurance Committee are set out in the Projects Assurance Committee section that follows.

John MacKenzie
Chair, Operations Ramp Up Assurance Committee

Composition

The current members of the Committee are:

John MacKenzie, Chair;
Lynda Armstrong; and
Charles Watson

Role and responsibilities

Until October 2018, the Committee was primarily responsible for reviewing and providing assurance to the Board on the ramp up of operations at Bozshakol and Aktogay.

Key responsibilities of the Committee conducted in relation to Bozshakol and Aktogay:

- undertook regular reviews of the operations´ performance against approved plans and metrics, identified any material risks and issues that may impact successful delivery of the Company's business plan and ensured that operational reporting was clear and consistent with transparent performance metrics;
- reviewed the results of technical and operational audits of the operations conducted by management and external advisers;
- reviewed specified technical and operational matters regarding the operations; and
- reviewed the scope of potential risks in the areas of focus of the Committee and the adequacy of the systems in place to manage those risks.

Attendance at Operations Ramp Up Assurance Committee meetings

There were four scheduled meetings of the Committee during 2018, with each member attending as shown below:

Members during 2018	Committee member since	Attendance at scheduled meetings during 2018
Charles Watson	17 February 2017	4/4
Lynda Armstrong	17 February 2017	4/4
John MacKenzie	17 February 2017	4/4

Projects Assurance Committee

Dear shareholder,

In October 2018, on its re-establishment, the Committee assumed primary responsibility for overseeing the Aktogay expansion and the Baimskaya project and for continuing to monitor systems and processes at Bozshakol and Aktogay.

We have appointed two independent advisers to the Committee, both of whom have many years of project experience in the extractives industry.

We look forward to reporting on our activities during 2019 at the end of the year.

John MacKenzie
Chair, Projects Assurance Committee

Composition

The current members of the Committee are:

John MacKenzie, Chair;
Lynda Armstrong; and
Charles Watson

Role and responsibilities

Key responsibilities of the Committee include:

- undertaking regular reviews of the Group's major capital expenditure projects at the Aktogay expansion project and Baimskaya against approved plans to determine any material variances to the plans and forecasts and to identify any material risks and issues that may impact the successful delivery of the projects;
- reviewing any findings and recommendations arising from the assessments and monitoring progress in implementing any such findings and recommendations;
- monitoring the composition and performance of the projects owners' teams, including regularly reviewing the processes, systems, staffing and organisation of the projects, and benchmarking against international best practice; and
- continuing to monitor the ongoing implementation of systems and processes at Bozshakol and Aktogay and ensuring that these are in line with good industry practice.

Attendance at Projects Assurance Committee meetings

There was one scheduled meeting of the Committee during 2018, with each member attending as shown below:

Members during 2018	Committee member since	Attendance at scheduled meetings during 2018
Lynda Armstrong	18 October 2018	1/1
John MacKenzie	18 October 2018	1/1
Charles Watson	18 October 2018	1/1

Plans for 2019

The Committee is scheduled to meet four times during 2019 and will regularly review the Group's major capital expenditure projects. At the Aktogay expansion project it will monitor the construction processes and at Baimskaya, the focus will be on the feasibility study.

Remuneration report

> Copper production increased by 14% and revenues increased by 12% year on year, whilst the Group maintained its position in the first quartile of the cost curve.

Lynda Armstrong OBE
Chair of the Remuneration Committee

Dear shareholder,

On behalf of the Board, I am delighted to present the Directors' Remuneration report for 2018.

This report includes an Annual report on remuneration (pages 99 to 107) which describes how our remuneration policy was implemented over the course of the year ended 31 December 2018 and how we intend to apply it in respect of remuneration in 2019. Our current remuneration policy was approved at the 2017 Annual General Meeting and it will therefore be renewed next year at the 2020 Annual General Meeting.

The Company's remuneration structure for senior executives remains straightforward and closely linked to performance. The package comprises three elements:

- Fixed pay – salary and benefits;
- Annual bonus; and
- Long-term performance-based share awards.

We also have in place a number of best practice features such as malus and clawback provisions and holding periods on long-term share awards, under which awards are released after five years.

While we have made some updates in response to the New Code which applies from 1 January 2019, we are not proposing any major changes to our remuneration arrangements this year.

Performance highlights in 2018

In 2018, the Group continued to deliver high growth in production, earnings and operating cash flows, from its portfolio of low cost copper mines. Copper production increased by 14% and revenues increased by 12% year on year, whilst the Group maintained its position in the first quartile of the cost curve. Its net cash cost of copper remains amongst the lowest of any pure play copper company globally.

The new Bozshakol and Aktogay mines are now fully ramped up and the Group is focused on consistently operating at design capacity, identifying opportunities for improving efficiency and reducing costs in existing operations. We are also planning for, and looking forward to delivering, future growth from the Aktogay expansion and our newly acquired Baimskaya copper project in Russia.

The Group is entering an important phase in the construction of the Aktogay expansion project, with the main structural works set to commence in 2019. This project will add 80 kt per annum of copper production between 2022 and 2027 which will generate additional cashflow to help finance our future growth.

In August 2018, the Group agreed to acquire the Baimskaya copper project in Russia, with Initial Completion taking place in January 2019. Baimskaya is a large scale, copper porphyry deposit with a low strip ratio of 0.8 and a strong gold by-product, making it similar to Bozshakol but with higher average copper and gold grades with projected lower capital intensity. Through this acquisition and the Aktogay expansion project, we have established a pipeline of value-accretive major projects, to enable the Group to continue delivering high growth in copper production.

Our position as a highly profitable low cost producer was maintained, with EBITDA excluding special items of $1,310 million at a margin of 61% and a net cash cost of 85 USc/lb. This demonstrates the successful delivery of the growth strategy we embarked on in 2010.

Remuneration in 2019

As noted above, the Committee does not intend to make any significant changes to the remuneration policy this year.

The key points to note in respect of executive Director remuneration in 2019 are as follows:

- Oleg Novachuk's salary remains unchanged;
- Andrew Southam's salary was increased by 2% in line with the UK workforce;
- Andrew Southam's pension arrangement will remain at 10% of salary in line with other UK employees, whilst Oleg Novachuk will continue not to receive any pension benefits;
- The maximum bonus opportunity for both Executive Directors will be the same as for 2018, at 150% of salary (the remuneration policy limit is 200%), with 70% of the award based on operational and financial targets and 30% based on strategic development goals; and
- LTIP awards will also be unchanged from last year, with a primary focus on relative TSR. Awards to Andrew Southam will again have 25% based on a balanced scorecard of key strategic priorities linked to safety, strategic management of the Group's asset portfolio and culture.

During the year the Committee reviewed practices against the New Code and the potential impact on remuneration. Although the Company was already well-placed to meet many of the expanded requirements, the Committee has made certain changes in response to the New Code as follows:

- The Committee's remit under the terms of reference has been broadened, which formalises many of the Committee's existing practices.
- Documentation for future incentive rewards has been reviewed to ensure that there is sufficient scope for the Committee to exercise discretion and judgement.
- Malus and clawback provisions have been expanded for incentive awards from 2019 onwards, so that they can be applied in instances of serious reputational damage to the Group and of serious corporate failure.

As the Remuneration Policy is being renewed at the 2020 Annual General Meeting, a full review of remuneration arrangements will be undertaken in the coming year. This review will include further consideration of how we align our approach to other aspects of the New Code.

Shareholder engagement

The Committee communicates openly and transparently with shareholders on executive remuneration and we engaged with our largest institutional investors on the proposed remuneration for 2018 on the implementation of the Board changes, both prior to the publication of our 2017 Remuneration Report, as well as around the time of the 2018 Annual General Meeting. We have maintained a dialogue with proxy voting bodies and major institutional investors to ensure they understand the basis of key decisions.

At the 2018 Annual General Meeting, the clear majority of our shareholders were supportive of the Company's approach to remuneration. This year remuneration has remained broadly unchanged and we have increased our disclosure in a number of areas to ensure that Committee decisions are transparent.

We have a long track record of linking pay and performance, and we remain committed to ensuring executives are rewarded for delivery of the Group's strategic and business objectives in the context of appropriate risk and safety management and for creation of long-term value for our shareholders. Remuneration levels for Oleg Novachuk and Andrew Southam continue to reflect their executive roles and the value they bring to the Group s business.

The Annual Report on Remuneration and this annual statement will be subject to an advisory vote at the forthcoming Annual General Meeting. The members of the Committee welcome any questions on remuneration matters at the 2019 Annual General Meeting and we are available at any other time to discuss our approach to remuneration.

Lynda Armstrong OBE
Chair of the Remuneration Committee

Summary of Executive Director remuneration structure

Fixed remuneration

Base Salary	Pension	Benefits

Variable remuneration

Short term – annual	Long term – five years
Annual bonus plan – linked to Group performance	LTIP linked to longer-term shareholder priorities with combined five year vesting and holding period

Total remuneration

Annual report on remuneration

This report has been prepared in accordance with the Companies Act 2006 and Schedule 8 to the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended in 2013). It also meets the relevant requirements of the Financial Conduct Authority's Listing Rules and describes how the Board has applied the principles of good governance as set out in the Code.

Implementation of the policy for 2019

The following section sets out how we intend to apply our remuneration policy (as approved by shareholders in 2017) in 2019.

Salary, pension and benefits

For 2019, Oleg Novachuk's annual base salary as full time Chair will remain unchanged at £856,000; his salary has been unchanged since 2012. The Committee is satisfied that this salary level continues to reflect the scope and breadth of his full-time role as well as his highly marketable experience, industry knowledge and business relationships.

The Company does not provide any pension benefits on behalf of Oleg Novachuk.

Andrew Southam will receive an increase of 2% in 2019, in line with the UK workforce resulting in a salary of £637,500. He has performed strongly in his new role as Chief Executive Officer, and the Committee has determined that a salary adjustment, in line with UK employees, is fully warranted.

Andrew Southam is entitled to receive Company pension contributions and/or a cash allowance with a total value of up to 10% of base salary, which is in line with the broader UK workforce.

Benefits include health insurance and where appropriate, relocation assistance, in line with entitlements provided for executives in similar positions in comparable companies.

Annual bonus

The maximum annual bonus opportunity for 2019 remains at 150% of salary for both Oleg Novachuk and Andrew Southam. The target bonus is generally set at 50% of maximum, (75% of salary) for both Directors.

For 2019, the annual bonus plan structure is unchanged. A summary is provided in the table below:

Measure	Weighting
EBITDA	25%
Free Cash Flow	5%
Copper production	20%
Gross cash cost of copper	20%
Strategic objectives	30%
Total	100%

For each element, 0% is payable at threshold rising to 50% payable at target and 100% payable at stretch. The bonus may be scaled back in the event that the Committee considers that there has been insufficient improvement in safety over the prior year.

Specific targets will not be disclosed in advance, as they would give a clear indication of the Group's business objectives, which are commercially sensitive. However, retrospective disclosure of performance against specific targets will be made when they cease to be commercially sensitive.

Andrew Southam is required to defer one third of any bonus earned into the Company's shares for a period of two years. Given his current substantial shareholding in the Company, the Committee does not consider it necessary to impose this requirement on Oleg Novachuk at this time.

Long-term incentives

Oleg Novachuk's LTIP award for 2019 will remain at 150% of salary.

Consistent with prior years, 100% of Oleg Novachuk's LTIP award will be subject to relative TSR performance, measured against a comparator group of UK and international mining companies. In response to shareholder feedback, the level of vesting for performance in line with the median ranking, has been reduced from 30% of maximum to 25% of maximum for awards granted from 2018 onwards.

TSR ranking of KAZ Minerals	Vesting percentage
Upper quartile ranking	100%
Between median and upper-quartile	Straight-line vesting for performance between 25% and 100%
Median ranking	25%
Below median ranking	0%

As in prior years, awards are split into two sub-awards, each with three year vesting periods. This approach is intended to mitigate the impact that the cyclical nature of the copper industry has on KAZ Minerals' share price. For awards to be granted in 2019 the performance period for the sub-awards will be:

- sub-award 1: 1 January 2019 to 31 December 2021.
- sub-award 2: 1 June 2019 to 31 May 2022.

2019 LTIP award - comparator group for relative TSR

Anglo American plc	Antofagasta plc
BHP Billiton plc	Boliden AB
First Quantum Minerals Ltd	Freeport-McMoran Copper & Gold Inc
Fresnillo plc	Glencore plc
KGHM Polska Miedz S.A.	Lundin Mining Corporation
Rio Tinto plc	Southern Copper Corporation
South 32 Limited	Teck Resources Ltd

As disclosed in last year's Remuneration Report, the Committee will grant LTIP awards to Andrew Southam at a maximum of 200% of salary in 2019, to increase his alignment with our shareholders and to ensure that the Chief Executive Officer's reward is clearly linked to delivery of the Group's key strategic priorities over the medium to long term.

Shareholders will note that in recent three-year periods, the Company has significantly outperformed peers in terms of TSR. This outperformance inherently increases the stretch of targets for future awards, as performance will now be assessed from a higher base point.

For Andrew Southam, as in 2018, tailored performance criteria will apply. 75% of his award will remain subject to the same relative TSR performance conditions as Oleg Novachuk and the remaining 25% of the award will be subject to a balanced scorecard of key strategic priorities linked to safety, shareholder value creation and culture.

The focus will be on areas which are vital for the next phase of development of the Group. Vesting under this element will also be subject to an operating performance underpin. This safeguard mechanism will enable the Committee to review the underlying financial and operating performance of the Group, to ensure that vesting outcomes are justified. The Committee will retain scope to reduce vesting (including to nil) where appropriate.

The main areas for assessment are summarised in the table that follows. The scorecard includes a number of granular objectives which are closely aligned with Group strategy and are therefore commercially sensitive. The Committee intends to provide further detail on these objectives and on its assessment of them following the end of the performance period, once the detail ceases to be commercially sensitive.

Safety	Objectives have been set with the aim of establishing significantly improved safety practices across the business including the goal of zero fatalities. This is an area which remains imperative for the business and where the Board has targeted a step-change in performance over the next three to five years.
Creating shareholder value for the long term	Following the completion of the expansion projects at the Bozshakol and Aktogay sites, the Board has set asset portfolio management objectives focused on maximising value for shareholders during the next phase of the Group's development.
Culture and people	The Chief Executive Officer has been tasked with a number of initiatives which are intended to change the culture of the organisation, to better position the Group for future success. This includes measures on development of people, succession planning including consideration of diversity and due regard to social and environmental matters.

Both executive Directors are required to hold any vested shares for a period of two years from the vesting date. LTIP awards are also subject to malus and clawback provisions.

The Committee carefully considered the proposed 2019 award levels in the context of the share price volatility over the past year. After due consideration and having reflected on the share prices used to grant LTIP awards over recent years, the Committee determined that the proposed award levels remained appropriate in order to ensure that the participants were fully motivated towards the long-term performance of the Company.

As noted above, the Committee will review the approach to future LTIP award levels and performance criteria prior to the renewal of the policy in 2020, in order to ensure that the approach remains appropriate and that any awards are aligned with the performance of the business and its strategic priorities over future years.

Ensuring fair incentive outcomes

In response to the New Code, the Committee has taken the opportunity to refresh award documentation for future awards to enable:

- Scope to vary outcomes from incentive awards where formulaic outcomes are inappropriate (e.g. unreflective of underlying performance). Where this provision is utilised, the Committee will seek to explain clearly the basis for this decision.
- Annual bonus and LTIP awards will remain subject to malus and clawback provisions.
- For 2019 awards, the scenarios in which malus and/or clawback may be enforced will be expanded to include instances of serious reputational damage and serious corporate failure, in addition to the circumstances currently outlined in the remuneration policy.

The Committee has determined that these changes will improve the operation of the existing incentive plans, while ensuring that rewards received by participants are clearly justified based on performance.

Service contracts

Oleg Novachuk has a service contract dated 12 April 2017 with KAZ Minerals PLC and an employment agreement dated 12 April 2017 with KAZ Minerals Holding BV which are terminable by the Company or by the executive Director on three months' notice and Andrew Southam has a service contract with KAZ Minerals PLC dated 18 May 2013, which is terminable by the Company on 12 months' notice or by the executive Director on six months' notice.

Non-executive Directors' remuneration

The fee structure per annum from 1 January 2019 is as follows:

Non-executive Deputy Chair:	£225,000
Non-executive Director base fee:	£84,000
Chairs of the Audit and HSE Committees:	£15,000
Chair of the Projects Assurance Committee:	£12,000
Chair of the Remuneration Committee:	£12,000*
Member of the HSE Committee:	£9,000
Member of the Audit Committee:	£7,500
Member of the Projects Assurance Committee:	£6,000
Member of the Remuneration Committee:	£4,000

* The fee for the Chair of the Remuneration Committee was increased from £8,000 to £12,000 to reflect the expanded remit of the Committee under the New Code. Apart from this change (and the fee of the Deputy Chair which was set in 2018), the non-executive Director fee structure remains unchanged since 2013.

In addition to the fee of £84,000 he receives as a non-executive Director, Vladimir Kim receives an advisory fee of £370,000 per annum for assisting and supporting the Company in its dealings with the Government and regional authorities in Kazakhstan.

For each non-executive Director who served during 2018, the date of their current letter of appointment is shown in the table below:

Name	Letter of appointment
Lynda Armstrong	5 May 2016
Vladimir Kim	17 May 2016
Michael Lynch-Bell	21 December 2017
John MacKenzie	7 March 2018
Charles Watson	30 October 2018
Alison Baker	8 September 2017

Directors' remuneration for 2018

The Group's external auditors, KPMG LLP, have audited the information contained in the tables headed Executive Directors' remuneration, Executive Directors' interests in the Long Term Incentive Plan - Awards granted during 2018 and All outstanding awards, Non-executive Directors' fees and expenses and Directors' interests in ordinary shares.

Executive Directors' remuneration

	Oleg Novachuk		Andrew Southam	
£'000	**2018**	2017	**2018**	2017
Salary	856	856	625[1]	482[1]
Benefits[2]	3	3	2	2
Pension or cash in lieu	–	–	56	44
Sub-total – fixed remuneration	**859**	**859**	**683**	**528**
Annual performance bonus[3]	860	989	628	557
Long Term Incentive Plan[4]	4,660	3,980	1,859	1,449
Sub-total – variable remuneration	**5,520**	**4,969**	**2,487**	**2,006**
Other[5]	–	–	1	1
Total	**6,379**	**5,828**	**3,171**	**2,535**

1 Andrew Southam's role changed from Chief Financial Officer to Deputy Chief Executive Officer with effect from 1 July 2017 and to Chief Executive Officer with effect from 1 January 2018 and this is reflected in the salary paid for 2018.

2 Benefits for Oleg Novachuk and Andrew Southam relate to the provision of private medical insurance.

3 Annual performance bonus relates to bonus amounts paid in 2019 and 2018 in respect of the prior year performance period.

4 As noted elsewhere in this report, each LTIP award has been performance measured over two three year performance periods (ending on 31 December and 31 May respectively). For the purposes of disclosure in the single figure table above, the LTIP value for 2017 represents (a) shares vesting under the 2014 LTIP award based on performance to 31 May 2017 and (b) shares vesting under the 2015 LTIP award based on performance to 31 December 2017. The value of the latter has been restated based on the share price at vesting of 983 pence. The LTIP value for 2018 comprises (a) 2015 LTIP award – shares vesting based on performance over the three year period to 31 May 2018 and (b) 2016 LTIP – shares expected to vest later in 2019 based on the first tranche measured over the three year period to 31 December 2018. In relation to the latter, the value shown is based on an average share price in the final quarter of 2018 of 523 pence. Further details are provided below.

5 Includes the value of all employee share incentives.

Executive Directors' annual bonus awards

For 2018, the annual bonus plan sought to incentivise the achievement of: improvement in safety performance through various initiatives; improvement in operational performance through volume and cost of production measures; financial profitability through EBITDA and Free Cash Flow; and strategic developments.

The structure of the bonus was weighted such that 70% was based on operational and financial measures and 30% based on strategic developments. Strategic developments included progressing the acquisition of Baimskaya and the Aktogay expansion and putting in place operational improvements at Bozshakol and Aktogay including the achievement of sustained design throughput.

The maximum bonus potential for Oleg Novachuk and Andrew Southam for 2018 was 150% of salary.

The Committee assessed each discrete element of the annual bonus plan separately. Within each element, the Committee considered a number of sub-elements and formed a rounded assessment of the performance of the executive Directors at the end of the year.

Awards were also subject to a safety override enabling them to be scaled back to reflect the Group's safety performance. Metrics included improvements in the Fatality Frequency Rate and progress against safety improvement initiatives.

Performance assessment for 2018 annual bonus

During 2018, after completion of a due diligence process led by our experienced projects team, the Group signed the sale and purchase agreement for the acquisition of Baimskaya, with Initial Completion taking place on 22 January 2019, following receipt of the required government approvals and the satisfaction of other conditions precedent. Work is underway by our appointed contractor, Fluor, to conduct the feasibility study with the results expected to be received in the first half of 2020.

The Aktogay expansion project, which was approved by the Board in December 2017, has progressed well during 2018 and is on track for commissioning in 2021. During 2018 the Group locked-in pricing on key long lead items from equipment suppliers and commenced preparatory earthworks ahead of the main structural construction phase beginning in 2019.

Operational improvements at Bozshakol and Aktogay during the course of 2018 were such that Bozshakol throughput over the second half of 2018 exceeded 15 Mt, the combined design capacity of the sulphide and clay plants. At Aktogay, the sulphide plant achieved more than 100% of design throughput capacity for a three month period and the site's copper output reached 131 kt in 2018, an increase of 46% from the prior year.

Accordingly the Committee decided the strategic developments under the bonus had been satisfied in full and awarded 30% in respect of strategic developments.

Under the operational and financial elements of the bonus metrics the Group achieved EBITDA of $1,310 million, Free Cash Flow of $585 million, copper production of 295 kt and maintained its position in the first quartile of the cost curve with a gross cash cost of copper of 144 USc/lb.

As noted elsewhere in this Annual Report and Accounts, the business continues to make good progress in driving through positive changes to safety, including the safety culture, however the Committee determined that a safety scaleback should be applied to the bonus award primarily due to the fatalities which took place during the year. This resulted in a scaleback of 12% of the bonus award.

Performance measure	Weighting (as a % of total bonus)	Year-end outcome	Performance v. targets range: Threshold	Performance v. targets range: Target	Performance v. targets range: Maximum	Pay out (% max)
EBITDA	25%	$1,310 million	$1,131 million	$1,257 million	$1,383 million	18%
Free Cash Flow	5%	$585 million	$554 million	$616 million	$678 million	1%
Copper production	20%	295 kt	273 kt	303 kt	333 kt	7%
Gross cash cost of copper	20%	144 USc/lb	175 USc/lb	159 USc/lb	143 USc/lb	20%
Sub-total	**70%**					**46%**
Strategic developments	30%	Commencing the Aktogay expansion project and progressing it over the course of the year to remain on track for commissioning in 2021. Identifying opportunities to create long term value including the assessment, and if appropriate, acquisition of the Baimskaya project. Driving operational improvements at Aktogay and Bozshakol to achieve sustained throughput at design capacity.				30%
Safety scale-back						12% of the award
Total bonus (as % of maximum)	**100%**					**67%**

Taking into account overall performance during the year, the Committee was satisfied that the bonus outcome was a fair reflection of achievements during the year.

Executive Directors' Long Term Incentive Plan awards

Awards granted to executive Directors under the LTIP in 2015 and 2016 were subject to a relative TSR performance condition, with TSR measured against a bespoke group of global mining companies over two different performance periods consistent with the approach and vesting schedule from prior years described on pages 99 and 100. The vesting outcome for the 2015 and 2016 awards is summarised in the table below:

2015 LTIP award	Weighting (as a % of total award)	Performance period	Performance	Vesting
Sub-award 1	50%	3 years to 31 December 2017	Above upper-quartile (performance disclosed in 2017 Remuneration Report)	100%
Sub-award 2	50%	3 years to 31 May 2018	Above upper-quartile	100%
Total vesting				**100%**
2016 LTIP award				
Sub-award 1	50%	3 years to 31 December 2018	Above upper-quartile	100%
Sub-award 2	50%	3 years to 31 May 2019	N/A	*
Total vesting				*

* Final vesting will be determined following the end of the performance period for the second sub-award.

For the 2016 LTIP award, the first sub-award is subject to TSR performance measured over the period from 1 January 2016 to 31 December 2018. Over this period the Company has significantly outperformed peers in terms of total shareholder return, a period over which copper production grew from 85 kt in 2015 to 295 kt in 2018. The Company was positioned in second place against the comparator group and this is reflected in the values achieved from the plan.

The vesting outcome for the second sub-award of the 2016 LTIP award is based on TSR performance measured over the period from 1 June 2016 to 31 May 2019 and will therefore be assessed at a later date. The 2016 award (including any vesting of the first sub-award) will be eligible for vesting during 2019, after the assessment of performance over both periods.

Circa 75% of the value shown for the LTIP in the 2018 single figure table, is attributable to share price growth and dividends. There is a strong alignment between the LTIP outcomes and the shareholder experience.

Executive Directors' interests in the Long Term Incentive Plan

Awards granted during 2018

In 2018, awards equivalent to 150% of salary were granted to Oleg Novachuk and Andrew Southam subject to a TSR performance condition which requires the Company to deliver a median ranking (threshold vesting) rising on a straight-line basis to an upper quartile TSR ranking (full vesting) relative to a peer group of mining companies. The awards were split into two sub-awards measured over two separate performance periods, 1 January 2018 to 31 December 2020 and 1 June 2018 to 31 May 2021. The averaging period for calculating TSR, will be three months leading up to the start and the end of the performance period of each sub-award.

As disclosed in last year's Remuneration Report, Andrew Southam received an additional award of 50% of salary in view of his appointment to the role of Chief Executive Officer, to increase alignment with our shareholders and to ensure that his reward was clearly linked to delivery of key strategic priorities over the medium to long-term.

Executive Director	Type of award	Basis of award granted	Number of shares awarded	Face value of award £000[1]	% of face value which vests at threshold
Oleg Novachuk	Nil-cost option	150% of salary	150,112	1,283	25
Andrew Southam	Nil-cost option	200% of salary	146,137	1,249	25

1 The face value of the awards granted in March 2018 was based on a five-day average share price commencing immediately after the announcement of the Group's preliminary results of 855 pence which was used to determine grant levels. The awards were made on 2 March 2018 when the share price was 840 pence.

All outstanding awards

Executive Director	Date of award	Date of vesting	Number of shares conditionally awarded as at 1 January 2018	Market value used to determine grant level	Awards made during the year	Awards vested during the year	Awards lapsed during the year	Awards exercised during the year	Number of shares under award as at 31 December 2018[1]
Oleg Novachuk	7 March 2014	1 June 2017	536,677	293p	–	–	–	536,677	–
	6 March 2015	1 June 2018	526,272	226p	–	526,272	–	526,272	–
	4 March 2016	1 June 2019	786,042	163p	–	–	–	–	786,042
	3 March 2017	1 June 2020	239,596	536p	–	–	–	–	239,596
	2 March 2018	1 June 2021	–	855p	150,112	–	–	–	150,112
Andrew Southam	7 March 2014	1 June 2017	160,658	293p	–	–	–	–	160,658[2]
	6 March 2015	1 June 2018	210,058	226p	–	210,058	–	–	210,058[2]
	4 March 2016	1 June 2019	313,743	163p	–	–	–	–	313,743
	3 March 2017	1 June 2020	95,633	536p	–	–	–	–	95,633
	30 June 2017	1 June 2020	62,373	493p	–	–	–	–	62,373
	2 March 2018	1 June 2021	–	855p	146,137	–	–	–	146,137

1 The table shows the maximum number of shares that could be released if awards were to vest in full. Participants do not receive dividends on unvested shares but a dividend equivalent will be paid to participants after the transfer to them of vested shares.

2 These awards have vested but have not been exercised.

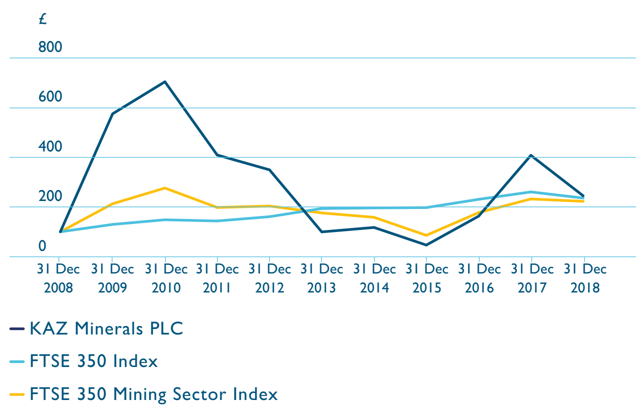
External appointments

No executive Director held a non-executive directorship of another company during 2018.

Performance graph

The following graph shows the value, at 31 December 2018, of £100 invested in KAZ Minerals PLC shares on 31 December 2008 compared with an equivalent investment in the FTSE 350 Index and FTSE 350 Mining Sector Index. These indices were chosen as they are broad-based indices and are widely recognised performance comparisons for large UK mining companies.

Total Shareholder Return



Remuneration of highest paid executive Director

The table below shows the total remuneration figure for the highest paid executive Director (i.e. the Executive Chair for 2008 to 2012, the Chief Executive Officer for 2013 to 2017 and the Chair in 2018). The total remuneration figure includes the annual bonus and LTIP awards which vested based on performance in those years. The annual bonus and LTIP percentages show the pay out for each year as a percentage of the maximum.

	Total remuneration (£000)	Annual bonus (%)	LTIP vesting (%)
2008[1]	1,423	29	–
2009[1]	1,801	71	–
2010[1]	1,736	58	–
2011[1]	1,768	50	–
2012[1]	1,676	40	–
2013[2]	1,458	35	–
2014[2]	1,587	57	–
2015[2]	1,715	67	–
2016[2]	2,538	67	44
2017[2]	5,828	77	100
2018[3]	**6,379**	**67**	**100[4]**

1 Relates to the remuneration of Vladimir Kim, Executive Chair at that time.
2 Relates to the remuneration of Oleg Novachuk, Chief Executive Officer at that time.
3 Relates to the remuneration of Oleg Novachuk, Chair at that time.
4 This represents half of the LTIP award granted in 2015 which has vested and the expected vesting later in 2019 of the first tranche of the LTIP award granted in 2016 measured over the three year period to 31 December 2018.

Percentage change in remuneration levels and comparison to wider employee pay levels

The following table shows the movement in the salary, benefits and annual bonus for the Chief Executive Officer between the current and previous financial year compared to that for the average UK employee. The change in the Chief Executive Officer's salary reflects his appointment to the role in January 2018. The Committee has chosen this comparator as it feels that it provides a more appropriate reflection of the earnings of the average worker than the movement in the Group's total wage bill, which is distorted by movements in the number of employees, variations in wage practices in Kazakhstan and exchange rates. For the benefits and bonus per employee, this is based on those employees eligible to participate in such schemes.

Chief Executive Officer	% change
Salary	23
Benefits	3
Bonus[1]	35
Average per employee	
Salary	2
Benefits[2]	4
Bonus[1]	15

1 Bonus relates to percentage change in bonus amounts paid in 2017 and 2018 in respect of the prior year performance period.
2 Average benefits per employee were less than £1,000 per person in both 2018 and the prior year.

The Committee considers the pay structures across the wider Group workforce when setting the remuneration policy for executive Directors.

The Group's principal operations are currently in Kazakhstan and it employs fewer than 30 staff in the UK head office, therefore the Company is not subject to the UK disclosure requirements relating to gender pay or new disclosure requirements relating to the ratio between the CEO pay and wider employee pay levels. Differing pay practices across jurisdictions makes cross-border comparisons inappropriate however, the Committee is mindful of the rationale for the external focus on these metrics, and the underlying societal issues continue to form part of the debate in Committee meetings. It intends to continue tracking these metrics internally and will keep the approach to disclosure in future reports under review.

Relative importance of spend on pay

The table below shows the movement in the total cost of remuneration in the Group, the total cost of remuneration for Directors as well as dividend distributions to shareholders and capital expenditure.

Spend on pay (£ million)	**2018**	2017	% change
Overall expenditure on Group employees' pay	**138**	128	8%
Overall expenditure on pay for executive Directors	**10**	8	19%
Distribution by way of dividends	**20**	–	N/A
Capital expenditure	**465**	105	342%

Capital expenditure is shown in the table above as Directors have a choice of whether to distribute profits and cash flows by way of dividend, or reinvest these in the asset base to maintain or improve the Group's operations.

Dilution of share capital

During the year the Company's share based plans have operated using some market purchase shares that are held in an Employee Benefit Trust and the Company has also used 1,396,856 shares held in treasury to satisfy vesting under the schemes and such shares count towards the limits on the number of new shares which may be issued under the rules of the schemes.

Employee Benefit Trust ("EBT")

The EBT was established to acquire ordinary shares in the Company, by subscription or purchase, from funds provided by the Group to satisfy rights to shares arising on the exercise of awards under the Group's share-based incentive plans. The trustees of the EBT have informed the Company that their intention is to abstain from voting in respect of the KAZ Minerals shares held in the trust. As at 31 December 2018, 5,162 shares were held by the EBT. No shares were purchased by the EBT during the year. In total the trust holds less than 0.2% of outstanding LTIP and DSBP awards. The Company plans to satisfy the majority of vested share awards with treasury shares going forward. The maximum number of shares held by the EBT during the year was 19,727 at 1 January 2018 which was 0.004% of the issued capital carrying voting rights. The total number of KAZ Minerals shares disposed of by the EBT in the year was 14,565 shares, constituting 0.003% of the issued share capital carrying voting rights.

All-employee share schemes

From January 2017 the Share Incentive Plan was closed for further contributions and no further Sharesave invitations are intended to be issued.

Non-executive Directors' fees and expenses

Fees and expenses paid to non-executive Directors during the year ended 31 December 2018 are set out below:

	2018			2017		
Directors	Fees £000	Expenses £000	Total £000	Fees £000	Expenses £000	Total £000
Lynda Armstrong	107	4	111	107	3	110
Vladimir Kim[1]	454	–	454	454	–	454
Michael Lynch-Bell[2]	225	–	225	115	–	115
John MacKenzie	113	–	113	113	–	113
Charles Watson	117	–	117	117	–	117
Alison Baker[3]	97	2	99	21	1	22

1 In 2017 and 2018, in addition to his fee of £84,000 as a non-executive Director, Vladimir Kim received an advisory fee of £370,000 for assisting and supporting the Company in its dealings with the Government and regional authorities in Kazakhstan.

2 Michael Lynch-Bell was appointed Deputy Chair of the Company on 1 January 2018.

3 Alison Baker was appointed to the Board on 9 October 2017 and became Chair of the Audit Committee in May 2018.

Directors' interests in ordinary shares

Executive Directors are expected to hold shares equivalent in value to a minimum of 200% of their base salary.

In addition, the Committee recognises that interests in share awards following departure can enable departing directors to remain aligned with the interest of shareholders for an extended period after leaving the company. For good leavers, share awards will normally vest after the normal performance period except in certain circumstances (e.g. on death). Deferred bonuses and LTIP awards subject to a holding period will normally vest (and be released from their holding periods) at the normal time. This means that Directors may retain a significant interest in shares for an extended period following departure from the Company.

The beneficial interests of the Directors and their closely associated persons ("CAPs") who held office at 31 December 2018 in the Company's ordinary shares as at that date and 1 January 2018 are shown in the table below:

Directors[1]	Ordinary shares beneficially owned at 1 January 2018 or date of appointment[2]	Ordinary shares beneficially owned at 31 December 2018	Vested LTIP awards	Vested DSBP awards	Outstanding LTIP awards	Outstanding DSBP awards	Vested UK Sharesave Plan options	Position against guideline as at 31 December 2018[3]
Lynda Armstrong	4,000	6,500	–	–	–	–	–	–
Vladimir Kim[4]	149,306,795	149,306,795	–	–	–	–	–	–
Michael Lynch-Bell	7,000	12,000	–	–	–	–	–	–
John MacKenzie	5,000	5,000	–	–	–	–	–	–
Oleg Novachuk[5]	34,923,423	35,986,372	–	–	1,175,750	–	–	exceeds guideline
Andrew Southam	204,026	220,481	370,716	143,870	617,886	21,475	13,432	exceeds guideline
Charles Watson	5,156	10,544	–	–	–	–	–	–
Alison Baker	–	3,500	–	–	–	–	–	–

1 No changes in Directors' interests occurred in the period 1 January 2019 to 21 February 2019.

2 The closing market price of the Company's shares at 31 December 2018 was 532 pence and the range for the year was 436.7 pence to 1,076 pence.

3 Executive Directors are required to build up a holding of ordinary shares in the Company worth at least 200% of salary within a five year period from their date of appointment. As set out in the table above, both Oleg Novachuk and Andrew Southam meet the shareholding requirement.

4 Since 2012, 90,805,063 of his ordinary shares in the Company have been pledged to support loans.

5 Since 2011, 34,923,423 of his ordinary shares in the Company have been pledged to support loans.

Composition of the Remuneration Committee

The members of the Committee during 2018 were Lynda Armstrong, Michael Lynch-Bell and Charles Watson. Lynda Armstrong is Chair of the Committee. Where appropriate, executive Directors are invited to attend meetings to provide information and advice to the Committee to enable it to make informed decisions. Individuals are however, specifically excluded from any matter concerning their own remuneration. Representatives of Deloitte, the Committee's retained adviser, also attend meetings by invitation. The Company Secretary attends meetings as secretary to the Committee.

Attendance at Remuneration Committee meetings

The Committee had three scheduled meetings in 2018, with each member attending as follows:

Member	Committee member since	Attendance at scheduled meetings during 2018
Lynda Armstrong	21 October 2013	3/3
Michael Lynch-Bell	7 May 2015	3/3
Charles Watson	17 May 2013	3/3

There were two additional meetings to discuss the vesting of the 2015 LTIP and senior manager remuneration and all Committee members were in attendance.

Role of the Remuneration Committee

The Committee is primarily responsible for determining and recommending to the Board the framework for executive remuneration and for determining, on behalf of the Board, the remuneration of executive Directors and the next tier of management below the Board.

The Committee's updated terms of reference are available to view on the Company's website (www.kazminerals.com). The Committee's principal responsibilities are summarised below:

- determining and agreeing with the Board the framework for executive remuneration that ensures executive Directors and a wider remit of senior managers are provided with appropriate incentives to encourage enhanced performance and are rewarded in a fair and responsible manner for their individual contribution towards the success of the Company;
- ensuring that the remuneration policy is appropriate and consistent with effective risk management and where appropriate, taking into account the views of the Group's stakeholders;
- reviewing workforce remuneration and related policies and taking these into account when setting policy for executive remuneration;
- within the agreed framework, setting and determining the total individual remuneration arrangements for executive Directors and certain senior managers, giving due regard to individual and Company performance, and remuneration trends across the Group;

- approving the design of, and determining the targets for, any performance-related plans and the total annual payments made under such plans to executive Directors and senior managers;
- determining any share incentive plan performance targets; and
- determining the terms of employment and remuneration of each executive Director and senior managers, including recruitment and termination arrangements.

Committee activities in 2018

At its meetings during the year the Committee amongst other matters:

- reviewed current trends in remuneration practice and institutional investors' current guidelines on executive compensation;
- set, reviewed, engaged with shareholders about and agreed to approve, individual remuneration arrangements for executive Directors and certain senior managers;
- reviewed CEO and gender pay ratios in the UK workforce;
- assessed the level of achievement against objectives under the annual bonus plan and LTIP;
- considered performance measures and targets to be used under the annual bonus plan and LTIP for 2019;
- reviewed and approved the Directors' Remuneration Report;
- reviewed the Committee's performance; and
- reviewed the impact of the New Code and reviewed and amended the Committee's terms of reference.

Priorities for 2019

For the coming year, it is anticipated that the Committee will focus on the following areas:

- ensuring that remuneration arrangements continue to promote the long-term success of the Company, with a focus on the link between performance and reward, whilst maintaining a prudent approach to cost and the risk to the business;
- reviewing and assessing the ongoing appropriateness of current executive remuneration plan designs and targets;
- reviewing the Directors' Remuneration Policy ahead of the 2020 Annual General Meeting, including any changes to procedures and policies required under the New Code, and any new regulatory requirements;
- ongoing training of Committee members; and
- reviewing the competitiveness and effectiveness of the external adviser.

Management of risk in remuneration arrangements

The Committee periodically commissions a detailed assessment of the risk environment surrounding the Company's current remuneration arrangements for executive Directors and certain senior managers. The latest assessment determined that whilst remuneration arrangements were broadly compatible with the Company's risk policies and systems, it would be more aligned with current market practice to ensure documentation for future incentive rewards allows sufficient scope for the Committee to exercise discretion and judgement. In addition, malus and clawback provisions have been expanded for incentive awards from 2019 onwards, so that they can be applied in instances of serious reputational damage to the Group and of serious corporate failure.

Overall, the Committee remains satisfied that the remuneration policy is aligned with the long-term needs of the business and that incentive quantum, structure and objectives do not encourage short-term measures or excessive risk-taking.

The Committee draws upon the relevant experience and knowledge of its members to ensure that it benefits from the positions they hold at the Company. The Committee includes Michael Lynch-Bell, Deputy Chair and Senior Independent Director and Charles Watson, Chair of the Health, Safety and Environment Committee. The Chair, Chief Executive Officer and when appropriate Group Director of Human Resources, attend Committee meetings by invitation, and provide a link to the Executive Committee. The leveraging of such experience and knowledge enables the Committee to have an oversight of risk factors that may be relevant to remuneration arrangements and target setting specifically.

External adviser

The Committee has authority to obtain the advice of external independent remuneration consultants. It is solely responsible for their appointment, retention and termination and for approval of the basis of their fees and other terms. During 2018, Deloitte's fees for supporting the Committee were £50,000. Deloitte also provides advice to the Company on tax compliance and advisory services. It is a signatory to the Remuneration Consultants' Group Code of Conduct. The Committee regularly reviews the external adviser relationship and is comfortable that Deloitte's advice remains objective and independent.

Statement of shareholder voting

At the Annual General Meeting held on 3 May 2018, the advisory vote on the Annual Report on Remuneration received the following votes from shareholders:

Annual Report on Remuneration 2017

Votes for	306,557,995	84.56%
Votes against	55,976,300	15.44%
Total votes cast	362,534,295	100.00%
Votes withheld	1,724,033	

Remuneration Policy 2017

The remuneration policy was approved by shareholders at the 2017 Annual General Meeting and received the following votes from shareholders:

Votes for	252,646,978	99.47%
Votes against	1,354,344	0.53%
Total votes cast	254,001,322	100.00%
Votes withheld	14,761	

Remuneration policy summary

The Remuneration Policy was approved by shareholders on 27 April 2017 at the 2017 Annual General Meeting and took effect from that date. There are no proposed changes to the policy for 2019. For ease of reference the policy tables in respect of the executive Directors have been summarised below. The full policy is available in the 2016 Annual Report and Accounts on the Company's website (www.kazminerals.com).

Salary	
Purpose and link to strategy	To attract and maintain high calibre executives taking account of market levels at the date of appointment and on subsequent review.
Operation	Normally review annually, with increases typically effective from 1 January. Any increases take account of: • Company and individual performance • Skill set and experience of the executive • External indicators such as inflation and market conditions • Remuneration levels of Group employees, particularly in the UK Where no pension provision is provided, an adjustment may be made to salary.
Maximum	Salary reviews take account of Company and individual performance. There is no prescribed maximum annual increase, however the Committee is guided by the general increase for the broader employee population, particularly in the UK. On occasion there may be a need for any increase to recognise, for example, development in role, change in responsibility and/or specific retention issues as well as the market context. The Committee has the flexibility to set the salary of a new hire at a discount to the market level initially, with a series of planned increases implemented over the following few years to bring the salary to the desired positioning, subject to individual performance.
Benefits	
Purpose and link to strategy	Provide market competitive benefits to help recruit and retain high calibre executives.
Operation	Provision of benefits such as: • Private medical insurance • Relocation assistance • Travel and related expenses • Retirement benefits • Life insurance Additional benefits may be provided from time to time. The Committee will consider whether the payment of any additional benefits is appropriate and in line with market practice when determining whether and at what level they are paid. Executive Directors are also entitled to participate in any 'all-employee' share plans or benefit arrangements on the same basis as other employees.
Maximum	The cost of benefits is not pre-determined given that the costs of a benefit may change based on the individual's circumstances, therefore no overall monetary maximum has been set. The Committee will consider whether the payment of any additional benefits is appropriate and/or in line with market practice when determining whether and at what level they are paid. Executive Directors may be provided with retirement benefits (either via participation in a pension plan, cash in lieu, or economic equivalent) of up to 20% of salary per annum. For UK tax-advantaged share plans, the maximum participation level (for UK-based employees) is as set out by the relevant HMRC limits.

Annual bonus	
Purpose and link to strategy	Incentivise the delivery of annual objectives consistent with the Group's strategy, without encouraging short-term measures or excessive risk-taking.
Operation	Not pensionable. Payments determined on the basis of: • Operational performance • Financial performance • Strategic developments The Committee will determine the appropriate weightings of the performance metrics on an annual basis with targets set by reference to the financial and operating plans. Payments scaled back in the absence of an improvement in the Group's safety performance. The Committee may adjust the formulaic outcome based on the performance targets to reflect the underlying performance of the Company. Bonus starts to earn at threshold level (where 0% of salary is normally payable). For performance between the threshold and maximum hurdles, award levels are appropriately scaled. In order to facilitate share ownership, the Committee may determine that a portion of any bonus received will be deferred into shares for two years (or such other period as the Committee may determine). The Committee retains discretion to determine the level of bonus deferral required, mindful of an executive Director's shareholding. Malus and clawback applies under circumstances as set out in the remuneration policy which can be found in the 2016 Annual Report on our website at www.kazminerals.com.
Maximum	Maximum bonus potential of 200% of salary for the achievement of stretching performance objectives with a target bonus of 100% of salary. For 2019, the maximum bonus potential for the Chair and Chief Executive Officer will be up to 150% of salary, with a target bonus of up to 75% of salary.
LTIP	
Purpose and link to strategy	Incentivise long-term value creation and alignment with longer-term returns to shareholders.
Operation	Normally granted annually, awards under the LTIP are rights to receive nil-cost shares (or economic equivalent), subject to continued employment and performance metrics set by the Remuneration Committee at the time of grant, measured over a period of at least three years. At least 50% of any award will be based on performance metrics linked to targets based on shareholder returns. For 2019 awards have been based (100% in respect of Oleg Novachuk and 75% in respect of Andrew Southam), on relative TSR performance measured against sector peers. For 2019, up to 25% (previously 30%), vests at threshold, rising to 100% at stretch performance. Shares arising from an LTIP award must normally be held for a period of two years from the vesting date of the award. Malus and clawback applies under circumstances as set out in the remuneration policy which can be found in the 2016 Annual Report on our website at www.kazminerals.com.
Maximum	Maximum of 200% of salary per annum. For 2019 the maximum LTIP award will be set at 150% of salary for Oleg Novachuk and 200% of salary for Andrew Southam.
Share ownership	
Guidelines	All executive Directors are expected to hold shares equivalent in value to a minimum of 200% of their base salary within a five year period from their date of appointment. Executive Directors are normally required (where permitted from a technical perspective) to hold shares arising from an LTIP award for a period of five years from the date of grant, with only those shares required to cover a tax liability on exercise of an LTIP award, permitted to be sold.

Other statutory information

UK Listing Rule disclosures

Information required to be disclosed pursuant to Listing Rule 9.8.4R may be found on the following pages:

Information	Annual report section	Page
Shareholder waivers of future dividends	Other statutory information	110
Details of long-term incentive schemes	Director's report	99-100
Information required by LR 9.2.2AR (2)(a) – Relationship agreements	Other statutory information	110-111
Statement of capitalised interest	Financial statements	139
Contract for the provision of services by major shareholder	Financial statements	159

Directors

In accordance with the UK Corporate Governance Code, all Directors will retire and submit themselves for re-election at the Company's forthcoming Annual General Meeting. Details of Directors' contracts or letters of appointment are included in the Directors' Remuneration Report on pages 100 to 101.

During the year, no Director had any interest in any shares or debentures in the Company's subsidiaries, or any material interests in any contract with the Company or a subsidiary being a contract of significance in relation to the Company's business.

Directors' indemnity and insurance

KAZ Minerals maintains liability insurance for its Directors and Officers. The Company has also granted indemnities to each of the Directors, the Chief Financial Officer and the Company Secretary to the extent permitted by law.

Dividends

The Board recommends the payment of a final dividend for the year ended 31 December 2018 of 6 US cents per ordinary share (2017: nil). If approved, the dividend will be paid on 17 May 2019 to shareholders on the UK register of members at the close of business in the UK on 23 April 2019. An interim dividend of 6 US cents per ordinary share was paid on 3 October 2018, bringing the total dividend for 2018 to 12 US cents per ordinary share.

The Employee Benefit Trust (EBT) waived the right to receive dividends due or to become due at any time in the future on shares held by it on behalf of share plan participants employed by the Group.

Annual General Meeting

The Company's Annual General Meeting will be held at 12.15pm on Thursday 2 May 2019 at the offices of Linklaters LLP, One Silk Street, London EC2Y 8HQ, United Kingdom. Details of the meeting venue and the resolutions to be proposed, together with explanatory notes, are set out in a separate Notice of Annual General Meeting which accompanies this Annual Report and Accounts. A summary of the business carried out at the Annual General Meeting will be published on the Company's website (www.kazminerals.com).

Share capital

As at 31 December 2018, the Company's issued share capital was 458,379,033 ordinary shares of 20 pence each, credited as fully paid. As at the date of this Directors' Report, the Company's issued share capital is 480,723,977, following the issue of 22,344,944 new ordinary shares to the Vendor on 22 January 2019 as part of the Initial Consideration on the acquisition of the Baimskaya copper project. The Company holds 10,130,458 ordinary shares in treasury and the issued share capital of the Company which carries voting rights of one vote per share comprises 470,593,519 ordinary shares (excluding treasury shares). Further details of the Company's issued share capital are shown in note 23 on page 146.

On 1 August 2018, the Group delisted from the Hong Kong Stock Exchange. The Group retains its primary listings on the London and Kazakhstan Stock Exchanges.

A list of the Group's subsidiary undertakings and their principal activities is given in note 37(k) beginning on page 173.

Purchase of own shares

The Company was authorised by shareholders at the 2018 Annual General Meeting to purchase its own shares on the market within certain limits. In the period since the 2018 Annual General Meeting, the Company has not purchased any shares under this authority. The Board will seek shareholders' approval to renew the authority to make market purchases of the Company's shares at the forthcoming Annual General Meeting.

Major shareholdings

As at 20 February 2019, the Company had been notified under Rule 5.1.2 of the FCA's Disclosure and Transparency Rules of the following interests in its total voting rights:

Name of holder	Number of ordinary shares of 20 pence each held	Percentage of total voting rights held as at 20 February 2019
Vladimir Kim	149,306,795	31.73%
Oleg Novachuk	35,986,372	7.65%
Vladislav Kim	32,115,920	6.82%
Aristus Holdings Limited	22,344,944	4.75%

Relationship agreements

As required by Listing Rule 9.2.2ADR(1), on 23 July 2014, the Company entered into: (i) an amended and restated relationship agreement (originally entered into on 26 September 2005) with Cuprum Holding Limited, Perry Partners S.A. and Vladimir Kim; and (ii) a relationship agreement with Stansbury International Limited and Eduard Ogay.

In accordance with Listing Rule 6.5.4R, each relationship agreement establishes that all transactions between the Company and the controlling shareholder are undertaken on an arm's length basis and on normal commercial terms, that neither the controlling shareholder nor its associates will cause the Company to breach or circumvent the Listing Rules or prevent the Company from complying with its obligations under the Listing Rules and that neither the controlling shareholder nor any of its associates will propose or procure the proposal of a shareholder resolution which is intended or appears to be intended to circumvent the proper application of the Listing Rules.

Under the relationship agreement with Vladimir Kim, inter alia, there must be a majority of independent Directors on the Board and on all its standing committees, and no material transaction may be entered into without approval of the independent Directors.

Each relationship agreement will continue as long as the ordinary shares are listed on the premium segment of the Official List and traded on the London Stock Exchange, and will terminate should the relevant shareholder cease to be a 'controlling shareholder' as defined in the Listing Rules.

The Company has complied with the independence provisions included in the relationship agreements and, so far as the Company is aware, such provisions have been complied with during the period under review by the controlling shareholders and their associates.

Although Eduard Ogay stepped down from the Board with effect from 31 October 2014, as he continues to be considered to be acting in concert with Vladimir Kim for the purposes of the Code, details of the relationship agreement between the Company, Stansbury International Limited and Eduard Ogay have been included.

Political donations

The Group did not give any money for political purposes in the United Kingdom nor did it make any donations to EU political organisations or incur any EU political expenditure during the year.

Policy on derivatives and financial instruments

The Group's objectives and policies on financial risk management, and information on the Group's exposures to foreign exchange, counterparty credit, commodity price, liquidity and interest rate risks can be found in note 31 commencing on page 152.

Legal proceedings

Neither the Company nor any of its subsidiaries is a defendant in any proceedings which the Directors believe will have a material effect on either the Company's financial position or profitability. Commitments and contingencies are disclosed in note 32 beginning on page 158.

Significant agreements – change of control

The following significant agreements contain certain termination and other rights for the counterparties upon a change of control of the Company.

Each of a $1.3 billion facility agreement and a CNY1.0 billion facility agreement dated 16 December 2011 between KAZ Minerals Aktogay Finance Limited as borrower and China Development Bank Corporation as lender, contain terms which give the lender the right to cancel any of the commitments provided to KAZ Minerals Aktogay Finance Limited and declare all outstanding loans, together with accrued interest, and all other amounts accrued and outstanding immediately due and payable on 30 business days' notice if the Company ceases to hold (directly or indirectly) more than 50 per cent of the issued share capital of KAZ Minerals Aktogay Finance Limited and/or certain other named subsidiaries.

The terms of a pre-export finance debt facility dated 20 December 2012, as amended and restated on 8 June 2017, between KAZ Minerals Finance PLC and a syndicate of banks, provide that if any person (excluding Vladimir Kim and Oleg Novachuk) or group of people acting in concert, secures control of the Company: (i) a lender under the facility shall not be obliged to fund a loan; and (ii) if a lender or lenders whose participation in the loan outstanding exceeds two-thirds of the total loan amount outstanding so require, the parties shall enter into negotiations for a period of not more than 30 days with a view to agreeing alternative terms for continuing the facility. If no alternative basis has been agreed during such period, then the lenders may cancel the commitments of the lenders to lend the facility and declare all outstanding amounts due and payable.

Each of a $1.8 billion facility agreement and a $149 million facility agreement dated 29 December 2014 between KAZ Minerals Finance PLC as borrower and China Development Bank Corporation as lender, contain terms which give the lender the right to cancel any of the commitments provided to KAZ Minerals Finance PLC and declare all outstanding loans, together with accrued interest, and all other amounts accrued and outstanding immediately due and payable on 30 business days' notice if the Company ceases to hold (directly or indirectly) more than 50 per cent of the issued share capital of KAZ Minerals Finance PLC and/or certain other named subsidiaries.

The terms of a credit facility agreement dated 14 December 2016 between KAZ Minerals Aktogay LLC as borrower and Development Bank of Kazakhstan JSC as lender, provide that if there is a change in the ownership structure of the borrower in an amount of 10% or more of the participating interests of the borrower, to a person or persons other than a member of the Group and without the prior written consent of the lender, it would trigger an event of default.

Going concern

The Directors, having made appropriate enquiries, have a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future (which is for this purpose a period of at least 12 months from the date of approval of these financial statements). Accordingly, they continue to adopt the going concern basis of accounting in preparing the consolidated financial statements.

Articles of Association

The following description summarises certain provisions of the Company's Articles of Association and applicable English law concerning companies (the Companies Act 2006). This summary is qualified in its entirety by reference to the Company's Articles of Association and the Companies Act 2006. The Company's Articles of Association may only be amended by a special resolution at a general meeting of shareholders.

Rights attaching to shares

The rights attaching to the ordinary shares of the Company are defined in the Company's Articles of Association.

Voting rights

Members may attend any general meeting of the Company. On a show of hands every member (or his/her representative) who is present in person or by proxy has one vote on each resolution and on a poll every member (or his/her representative) who is present in person or by proxy shall have one vote on each resolution for each share of which he/she is the holder.

In accordance with the Companies Act 2006, which allows multiple proxies appointed by a single member to vote on a show of hands, all substantive resolutions at general meetings will normally be put to a poll vote. Employees who participate in the Company's Share Incentive Plans (SIP) and hold shares in the SIP trusts, provide directions to the trustee to vote on their behalf by way of a form of direction.

The Company is not aware of any agreements between shareholders that may result in restrictions on voting rights.

Dividend rights

Shareholders may by ordinary resolution declare dividends but the amount of the dividend may not exceed the amount recommended by the Board.

Transfer of shares

A total of 22,344,944 ordinary shares in the Company comprising the Initial Equity Consideration on the acquisition of Baimskaya were issued and allotted to the Vendor on Initial Completion on 22 January 2019 and are subject to a three-year lock-up period ending on the third anniversary of Initial Completion.

Other than as set out above, there are no restrictions on the transfer of shares other than certain restrictions as set out in the Company's Articles of Association. Transfers of uncertificated shares must be carried out using CREST and the Board can refuse a transfer of an uncertificated share in accordance with the regulations governing the operation of CREST.

The Company is not aware of any agreements between shareholders that may result in restrictions on the transfer of shares.

Powers of the Directors

The Directors are responsible for the management of the business of the Company and may exercise all powers of the Company subject to applicable legislation and regulation and the Company's Articles of Association.

Appointment and retirement of Directors

The Board shall have the power at any time to appoint any person who is willing to act as a Director, so long as the total number of Directors shall not exceed the maximum number prescribed in the Articles. Any Director so appointed shall retire at the next Annual General Meeting following such appointment. Every Director shall retire at each Annual General Meeting. A Director who retires at an Annual General Meeting (whether by rotation or otherwise) may, if willing to act, be re-appointed.

Audit information

The Directors who held office at the date of approval of this Directors' Report confirm that so far as they each are aware, there is no relevant audit information (being information needed by the auditors in connection with preparing their audit report), of which the Company's auditors are unaware, and each Director has taken all steps that he/she ought to have reasonably taken as a Director to make himself/herself aware of any relevant audit information and to establish that the Company's auditors are aware of that information.

Auditors

Having reviewed the independence, objectivity and performance of the auditors, the Audit Committee has recommended to the Board that the existing auditors, KPMG, be re-appointed. Ordinary resolutions re-appointing them as auditors and authorising the Directors to set their remuneration will be proposed at the 2019 Annual General Meeting.

Statement of Directors' responsibilities in respect of the Annual Report and the financial statements

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

Company law requires the Directors to prepare Group and parent company financial statements for each financial year. Under that law they are required to prepare the Group financial statements in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union (EU) and applicable law, and have elected to prepare the parent company financial statements on the same basis.

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 parent company and of their profit or loss for that period. In preparing each of the Group and parent company financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- state whether they have been prepared in accordance with IFRS as adopted by the EU, subject to any material departures disclosed and explained in the Group and parent company financial statements;
- assess the Group and parent company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- use the going concern basis of accounting unless they either intend to liquidate the Group or the parent company or to cease operations, or have no realistic alternative but to do so.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Group and parent company's transactions and disclose with reasonable accuracy at any time the financial position of the Group and of the parent company and enable them to ensure that the financial, statements comply with the Companies Act 2006.

They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group, to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the Directors are also responsible for preparing a Directors' Report, Directors' Remuneration Report and Corporate Governance Statement that comply with that law and those regulations.

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

Responsibility statement

Each Director confirms to the best of his/her knowledge that:

- the Group and parent company accounts, prepared in accordance with IFRS as adopted by the EU, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole;
- the Strategic Report and Directors' Report include a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face; and
- the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy.

The Strategic Report comprising pages 2 to 73 and the Directors' Report comprising pages 74 to 113, and including the sections of the Annual Report and Accounts referred to in these pages, have been approved by the Board and signed on its behalf by:

Susanna Freeman
Company Secretary
20 February 2019

Registered Office
6th Floor, Cardinal Place
100 Victoria Street
London, SWIE 5JL
United Kingdom

Registered in England and Wales No. 05180783

Independent auditor's report to the members of KAZ Minerals PLC

1. Our opinion is unmodified

We have audited the financial statements of KAZ Minerals PLC ("the Company") for the year ended 31 December 2018 which comprise the consolidated statement of total comprehensive income, consolidated balance sheet, consolidated statement of cash flows, consolidated statement of changes in equity, Company balance sheet, Company statement of cash flows and Company statement of changes in equity, and the related notes, including the accounting policies in note 36.

In our opinion:

- the financial statements give a true and fair view of the state of the Group's and of the parent Company's affairs as at 31 December 2018 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards as adopted by the European Union (IFRSs as adopted by the EU);
- the parent Company financial statements have been properly prepared in accordance with IFRSs as adopted by the EU and as applied in accordance with the provisions of the Companies Act 2006; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities are described below. We believe that the audit evidence we have obtained is a sufficient and appropriate basis for our opinion. Our audit opinion is consistent with our report to the Audit Committee.

We were first appointed as auditor by the shareholders on 15 May 2012. The period of total uninterrupted engagement is for the seven financial years ended 31 December 2018. We have fulfilled our ethical responsibilities under, and we remain independent of the Group in accordance with, UK ethical requirements including the FRC Ethical Standard as applied to listed public interest entities. No non-audit services prohibited by that standard were provided.

Overview

Materiality: Group financial statements as a whole		$27m (2017: $20m) 4.2% (2017: 3.4%) of Group profit before tax
Coverage		99% (2017:99%) of Group profit before tax
Key audit matters		vs 2017
New risk	Disclosures relating to Going concern	▲
Recurring risk	Asset Valuation[1] – Bozymchak	▲
	Bribery and Corruption	◀▶
Parent Company specific risk	Investment impairment	◀▶

1 In 2017, the risk regarding asset valuation related to the identification of impairment indicators for the Group's operating assets and the Koksay development asset. In 2018, the Aktogay and Bozshakol assets continued their successful ramp up and the Koksay asset received external investment such that the focus of this key audit matter was the Bozymchak asset.

2. Key audit matters: our assessment of risks of material misstatement

Key audit matters are those matters that, in our professional judgment, were of most significance in the audit of the financial statements and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by us, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team.

Whilst the Group has made improvements to its internal controls over revenue recognition during 2018, the Group's processes for recording copper revenues remain manual in nature and involve a third party logistics organisation. We continue to perform procedures over Revenue Recognition – copper cathode and concentrate products, however, following the satisfactory results of our 2017 audit and our planned audit procedures for 2018 to address the risk requiring less time and effort relative to other audit areas, we have not assessed this as one of the most significant risks in our current year audit and, therefore, it is not separately identified in our report this year.

We summarise below the key audit matters, in decreasing order of audit significance, in arriving at our audit opinion above, together with our key audit procedures to address those matters and our findings from those procedures in order that the Company's members as a body may better understand the process by which we arrived at our audit opinion. These matters were addressed, and our findings are based on procedures undertaken, in the context of, and solely for the purpose of, our audit of the financial statements as a whole, and in forming our opinion thereon, and consequently are incidental to that opinion, and we do not provide a separate opinion on these matters.

	The risk	Our response
Disclosures related to Going concern Refer to page 90 (Audit Committee Report) and page 126 (financial disclosures)	**Disclosure quality** Note 2(a) to the financial statements explains how the Directors have formed a judgement that use of the going concern basis is appropriate in preparing the financial statements of the Group and parent company. That judgement is based on an evaluation of the inherent risks to the Group's and Company's business model and how those risks might affect the Group's and Company's financial resources or ability to continue operations over a period of at least a year from the date of approval of the financial statements. The risks most likely to adversely affect the Group's and Company's available financial resources over this period were: • The ability of the Group to raise a new $600m financing facility or alternative sources of financing to support the Aktogay expansion. • The ability to defer planned capital expenditure should the new financing not be obtained. In addition, there is inherent estimation uncertainty in the assumptions used in the Group and Company's business model, particularly in respect of copper pricing. The risk for our audit was whether or not those risks were such that they amounted to a material uncertainty that may have cast significant doubt about the ability to continue as a going concern. Had they been such, then that fact would have been required to have been disclosed.	**Our procedures included;** • **Benchmarking assumptions:** Challenging the appropriateness of key assumptions in the cash flow projections (including commodity prices, production costs, inflation, foreign exchange, production volumes, committed and other planned capital expenditure), applying our sector knowledge and experience based on historical production information, internal mine plans and project plans, together with market and other externally available information. • **Sensitivity analysis:** We considered sensitivities over the level of available financial resources indicated by the Group's financial forecasts taking account of reasonably possible (but not unrealistic) adverse effects that could arise from these risks individually and collectively. • **Mathematical accuracy:** Checking the mathematical accuracy of the cash flow projections and recalculating the forecast covenant calculations based on the terms of the Group's borrowing facilities. • **Funding assessment:** Challenging the Directors' assumption that a new $600m finance facility would be available in the first half of 2019 by examining correspondence and supporting documentation with prospective providers, assessing the Company's existing lending arrangements, credit rating and existing loan and covenant terms. • **Evaluating Directors' intent:** We evaluated the achievability of the actions the Directors consider they would take to defer planned expenditure should new financing not be obtained. We examined key contracts relating to the projects marked for deferral to search for clauses that could result in deferral of capital expenditure being prohibited or significant penalties being levied. We enquired of operational management regarding the feasibility and possible consequences of deferral. • **Assessing transparency:** We considered the appropriateness of relevant disclosures, including both the going concern disclosure in note 2 of the financial statements and also the commentary elsewhere in the annual report on the timing and scope of the future growth projects and the need for financing to progress these. **Our findings** We found the Directors' plans to raise additional finance and/or defer capital expenditure to mitigate any shortfall to be feasible and their judgement that there is no material uncertainty to be disclosed to be balanced, and that the disclosure in note 2(a) to the financial statements is proportionate.

	The risk	Our response
Asset valuation – Bozymchak **Carrying Value of CGU $84m (2017: $110m)** **Impairment charge $20m (2017: nil)** Refer to page 90 (Audit Committee Report), page 163 (accounting policy) and page 129 (financial disclosures).	**Forecast based valuation** The carrying value of the Bozymchak asset, relating to the Company's mine in Kyrgyzstan, having previously been impaired in 2014 down to its recoverable amount, is sensitive to changes in key assumptions, circumstances or changes in expectations of the asset's performance. During the period an impairment indicator was identified following the loss of a second appeal for the refund of $16m historical VAT incurred during construction. The Group's impairment test determined the recoverable amount on a fair value less costs to sell basis using a discounted cash flow model, and an impairment charge of $20m was recognised in 2018. As part of our risk assessment, we determined that the estimated recoverable amount of the CGU had a degree of estimation uncertainty with a potential range of reasonable outcomes greater than our materiality for the financial statements as a whole. In conducting our final work, and following the impairment, we reassessed the degree of estimation uncertainty to be less than materiality. The financial statements (note 3) disclose the sensitivity analysis prepared by the Group.	**Our procedures included:** • **Benchmarking assumptions:** We challenged the appropriateness of key assumptions underlying the discounted cash flows (including commodity prices, production costs, foreign exchange, production volume, capital expenditure, country risk and discount rates), and applying our sector knowledge and experience based on historical production information and internal mine plans, together with market and other externally available information. • **Our valuation expertise:** Our valuation specialists assisted us in assessing the appropriateness of the discount rates used. • **Sensitivity analysis:** We evaluated the sensitivity of the outcomes to reasonably possible changes to the key assumptions, primarily the impact of lower copper prices, and a higher discount rate. • **Assessing transparency:** Assessing whether the Group's disclosures about the sensitivity of the outcome of the impairment assessment to changes in key assumptions reflected the risks inherent in the valuation of the asset. **Our findings** We found the relevant risks to have been adequately reflected in either the discount rate or the cash flows. We found the assumptions overall, and the resulting estimated fair value less costs to sell basis and the impairment charge, to be balanced.
Bribery and corruption	**Effects of irregularities:** The Group's business involves mining activities in Kazakhstan and Kyrgyzstan. Transparency International's Corruption Perceptions Index 2018 and our own experience indicates that corruption risks remain significant in both countries. Significant amounts of expenditure continue to be incurred on the major development projects, existing and new projects including payments in respect of social projects. In addition, companies in the mining sector are inherently at higher risk from bribery and corruption due to the significant level of government regulation and their procurement profile. This could result in material losses to the Group, or potential non-compliance with laws and regulations which might result in possible penalties and material improper payments not being identified or appropriately disclosed.	**Our procedures included:** • **Policy assessment:** We assessed the appropriateness of the Group's anti-bribery and corruption policies and procedures including evaluating the tone set by the Board and by senior management, the implementation and oversight thereof across the Group and the Group's externally managed whistleblowing programme. • **Controls design and operation:** Assessing the design and operating effectiveness of the Group's controls over the selection of suppliers and the process over acknowledging acceptance of services/equipment provided by suppliers; • **Test of detail:** Selecting a sample of transactions and journals across the Group in particular relating to third party suppliers and/or cash payments, that at face value appeared as though they might have been outside the normal course of business (including those with government agencies or officials), enquiry of senior management about these transactions and validating such explanations given by inspecting related documentation to investigate the nature and evaluate the business rationale for the transactions or events, taking into account our experience of mining and other industries in Kazakhstan and Kyrgyzstan. **Our findings** The results of our procedures were satisfactory and we did not identify any instances of improper payments or indications of bribery or corruption (2017 audit findings: none identified).

	The risk	Our response
Parent Company risk: Investment in subsidiaries ($4.2bn; 2017: $4.2bn) Refer to page 90 (Audit Committee Report), page 170 (accounting policy and financial disclosures).	**Accounting Judgement:** The parent Company's investment in subsidiaries has been impaired in the past. In 2017 with the successful ramp up of the Group's projects and improved copper prices, $840m of previous impairments were reversed. Following the announcement of the planned Baimskaya acquisition in August 2018 the Company's share price declined significantly and as at the year end the Group's market capitalisation was lower than the carrying value of the parent Company's investments in the Group. There is significant judgement in assessing whether these conditions constitute an impairment trigger. The Directors considered that there was no impairment trigger, as the share price decline during the period was not reflective of a decline in value of the underlying assets. Consequently they did not perform a detailed impairment review in respect of the carrying amount of the Company's investment in subsidiaries.	**Our procedures included:** • **Our sector experience:** Performing our own search for indicators of impairment by analysing the performance of the Group's operational cash generating units and evaluating changes in analysts' long-term expectations of commodity prices in particular copper. • **Our sector experience:** Challenging the Group's assumption that the share price decline did not represent an impairment indicator by considering the key drivers for the share price decline and comparing it to share price movements of market competitors. • **Tests of detail:** Comparing the carrying amount of the investments with the relevant subsidiaries' draft balance sheets used for Group consolidation purposes to identify whether their net assets, being an approximation of their minimum recoverable amount, were in excess of their carrying amount and assessing whether those subsidiaries have historically been profit-making. • **Assessing subsidiary audits:** Assessing the work performed for group audit purposes on those subsidiaries and considering the results of that work on those subsidiaries' profits and net assets. **Our findings** In determining whether an impairment indicator existed, there is room for judgement and we found that within that, the Group's judgement to be balanced.

3. Our application of materiality and an overview of the scope of our audit

Materiality for the Group financial statements as a whole was set at $27m (2017: $20m), determined with reference to a benchmark of Group profit before tax of $642m, of which it represents 4.2% (2017: $580m, 3.4%).

Materiality for the Company financial statements as a whole was set at $21m (2017: $16m), determined with reference to component materiality set by the group audit team. This is lower than the materiality we would otherwise have determined by reference to total assets, and represents 0.5% of the Company's total assets (2017: 0.4%).

We agreed to report to the Audit Committee any corrected or uncorrected identified misstatements exceeding $1.3m (2017:$1.0m), in addition to other identified misstatements that warranted reporting on qualitative grounds.

Of the Group's 37 (2017: 37) reporting components, we subjected 13 (2017:13) to full scope audits for Group purposes. The components within the scope of our work accounted for the percentages illustrated opposite.

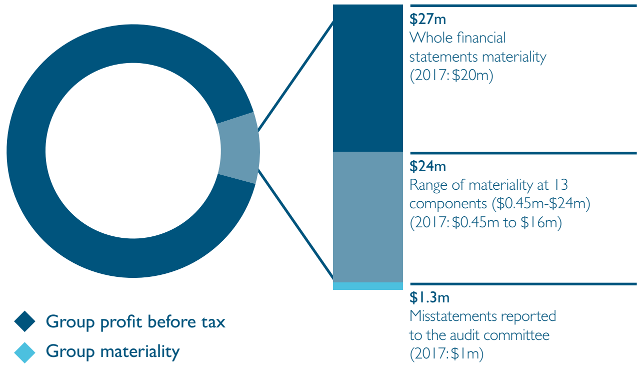
For the residual components, we performed analysis at an aggregated Group level to re-examine our assessment that there were no significant risks of material misstatement within these.

The group team instructed component auditors as to the significant areas to be covered, including the relevant risks detailed above and the information to be reported back. The group team approved the component materialities, which ranged from $0.45m to $24m (2017: $0.45m to $16m), having regard to the mix of size and risk profile of the Group across the components. The work on four of the 13 components (2017: 4 of the 13 components) was performed by component auditors and the rest, including the audit of the Company, was performed by the group team.

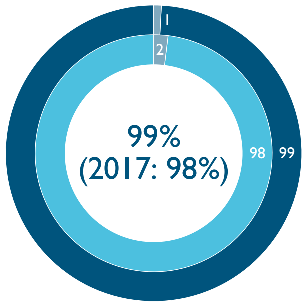
The group team visited all four Kazakhstan and Kyrgyzstan component teams on three (2017: three) separate occasions to assess the audit risk and strategy. Telephone conference meetings were also held with these component auditors frequently throughout the year. At these visits and meetings, the findings reported to the group team were discussed in more detail, and any further work required by the group team was then performed by the component auditor.

Profit before tax
$642m
(2017: $580m)

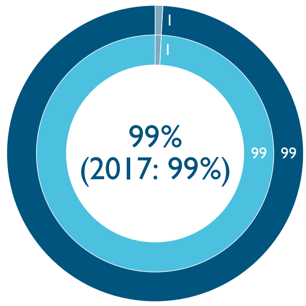
Group materiality
$27m
(2017: $20m)



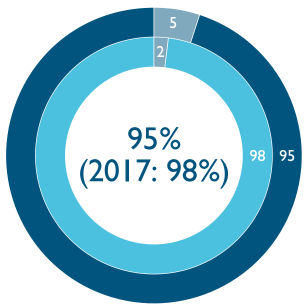
Group revenue



Group profit before tax (absolute)



Group total assets



- Full scope for Group audit purposes 2018
- Full scope for Group audit purposes 2017
- Residual components

4. We have nothing to report on going concern

The Directors have prepared the financial statements on the going concern basis as they do not intend to liquidate the Company or the Group or to cease their operations, and as they have concluded that the Company's and the Group's financial position means that this is realistic. They have also concluded that there are no material uncertainties that could have cast significant doubt over their ability to continue as a going concern for at least a year from the date of approval of the financial statements ("the going concern period").

Our responsibility is to conclude on the appropriateness of the Directors' conclusions and, had there been a material uncertainty related to going concern, to make reference to that in this audit report.

However, as we cannot predict all future events or conditions and as subsequent events, including Brexit, may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the absence of reference to a material uncertainty in this auditor's report is not a guarantee that the Group and the Company will continue in operation.

We identified the disclosures relating to going concern as a key audit matter (see section 3 of this report). Based on the work described in our response to that key audit matter, we are required to report to you if:

- we have anything material to add or draw attention to in relation to the Directors' statement in Note 2 to the financial statements on the use of the going concern basis of accounting with no material uncertainties that may cast significant doubt over the Group and Company's use of that basis for a period of at least twelve months from the date of approval of the financial statements; or
- the related statement under the Listing Rules set out on page 111 is materially inconsistent with our audit knowledge.

We have nothing to report in these respects.

5. We have nothing to report on the other information in the Annual Report

The Directors are responsible for the other information presented in the Annual Report together with the financial statements. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except as explicitly stated below, any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether, based on our financial statements audit work, the information therein is materially misstated or inconsistent with the financial statements or our audit knowledge. Based solely on that work we have not identified material misstatements in the other information.

Strategic report and Directors report

Based solely on our work on the other information:

- we have not identified material misstatements in the Strategic report and the Directors' report;
- in our opinion the information given in those reports for the financial year is consistent with the financial statements; and
- in our opinion those reports have been prepared in accordance with the Companies Act 2006.

Directors' remuneration report

In our opinion the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006.

Disclosures of principal risks and longer-term viability

Based on the knowledge we acquired during our financial statements audit, we have nothing material to add or draw attention to in relation to:

- the Directors' confirmation within the Strategic report on page 65 that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency and liquidity;
- the Principal Risks disclosures describing these risks and explaining how they are being managed and mitigated; and
- the Directors' explanation in the Directors viability statement of how they have assessed the prospects of the Group, over what period they have done so and why they considered that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

Under the Listing Rules we are required to review the Directors' viability statement. We have nothing to report in this respect.

Our work is limited to assessing these matters in the context of only the knowledge acquired during our financial statements audit. As we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgments that were reasonable at the time they were made, the absence of anything to report on these statements is not a guarantee as to the Group's and Company's longer-term viability.

Corporate governance disclosures

We are required to report to you if:

- we have identified material inconsistencies between the knowledge we acquired during our financial statements audit and the Directors' statement that they consider that 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 position and performance, business model and strategy; or
- the section of the annual report describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee.

We are required to report to you if the Corporate Governance Statement does not properly disclose a departure from the eleven provisions of the UK Corporate Governance Code specified by the Listing Rules for our review.

We have nothing to report in these respects.

6. We have nothing to report on the other matters on which we are required to report by exception

Under the Companies Act 2006, we are required to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent Company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent Company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns; or
- certain disclosures of Directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

We have nothing to report in these respects.

7. Respective responsibilities

Directors' responsibilities

As explained more fully in their statement set out on page 112, the Directors are responsible for: the preparation of the financial statements including being satisfied that they give a true and fair view; such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error; assessing the Group and parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and using the going concern basis of accounting unless they either intend to liquidate the Group or the parent Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities

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

A fuller description of our responsibilities is provided on the FRC's website at www.frc.org.uk/auditorsresponsibilities.

Irregularities – ability to detect

We identified areas of laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general commercial and sector experience, through discussion with the Directors and other management (as required by auditing standards), and discussed with the Directors and other management the policies and procedures regarding compliance with laws and regulations. We communicated identified laws and regulations throughout our team and remained alert to any indications of non-compliance throughout the audit. This included communication from the group to component audit teams of relevant laws and regulations identified at group level.

The potential effect of these laws and regulations on the financial statements varies considerably.

Firstly, the Group is subject to laws and regulations that directly affect the financial statements including financial reporting legislation (including related companies legislation), distributable profits legislation, and taxation legislation. We assessed the extent of compliance with these laws and regulations as part of our procedures on the related financial statement items.

Secondly, the Group is subject to many other laws and regulations where the consequences of non- compliance could have a material effect on amounts or disclosures in the financial statements, for instance through the imposition of fines or litigation or the loss of the Group's license to operate. We identified the following areas as those most likely to have such an effect: health and safety, anti-bribery and corruption, employment law and Kazakhstan and Kyrgyzstan mining regulations, recognising the nature of the Group's activities. Auditing standards limit the required audit procedures to identify non-compliance with these laws and regulations to enquiry of the Directors and other management and inspection of regulatory and legal correspondence, if any. These limited procedures did not identify actual or suspected non-compliance. Further detail in respect of bribery and corruption is set out in the key audit matter disclosures in section 2 of this report.

Owing to the inherent limitations of an audit, there is an unavoidable risk that we may not have detected some material misstatements in the financial statements, even though we have properly planned and performed our audit in accordance with auditing standards. For example, the further removed non-compliance with laws and regulations (irregularities) is from the events and transactions reflected in the financial statements, the less likely the inherently limited procedures required by auditing standards would identify it. In addition, as with any audit, there remained a higher risk of non-detection of irregularities, as these may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls. We are not responsible for preventing non-compliance and cannot be expected to detect non-compliance with all laws and regulations.

8. The purpose of our audit work and to whom we owe our responsibilities

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and the terms of our engagement by the Company. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report, and the further matters we are required to state to them in accordance with the terms agreed with the Company, and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members, as a body, for our audit work, for this report, or for the opinions we have formed.

Juliette Lowes
for and on behalf of KPMG LLP, Statutory Auditor

Chartered Accountants
15 Canada Square, London , E14 5GL
20 February 2019

$ million (unless otherwise stated)	Notes	2018	2017
Revenues	4(b)	**2,162**	1,663
Cost of sales	5(a)	**(1,077)**	(755)
Gross profit		**1,085**	908
Selling and distribution expenses	5(b)	**(94)**	(69)
Administrative expenses	5(c)	**(115)**	(108)
Net other operating income		**4**	4
Impairment losses	6	**(29)**	(20)
Operating profit		**851**	715
Analysed as:			
Operating profit (excluding special items)		**871**	734
Special items	7	**(20)**	(19)
Finance income	11	**33**	30
Finance costs	11	**(245)**	(165)
Net foreign exchange gain		**3**	–
Profit before tax		**642**	580
Income tax expense	12(a)	**(132)**	(133)
Profit for the year		**510**	447
Analysed as:			
Underlying Profit	13	**530**	476
Special items	7	**(20)**	(29)
Attributable to:			
Equity holders of the Company		**510**	447
Non-controlling interests		**–**	–
		510	447
Other comprehensive (expense)/income for the year after tax:			
Items that may be reclassified subsequently to the income statement:			
Exchange differences on retranslation of foreign operations		**(427)**	8
Items that will never be reclassified to the income statement:			
Actuarial gain on employee benefits, net of tax	25	**–**	1
Other comprehensive (expense)/income for the year		**(427)**	9
Total comprehensive income for the year		**83**	456
Attributable to:			
Equity holders of the Company		**82**	456
Non-controlling interests		**1**	–
		83	456
Earnings per share attributable to equity shareholders of the Company			
Ordinary EPS – basic and diluted ($)	13	**1.14**	1.00
EPS based on Underlying Profit – basic and diluted ($)	13	**1.18**	1.07

CONSOLIDATED BALANCE SHEET
At 31 December 2018

$ million	Notes	2018	2017
Assets			
Non-current assets			
Intangible assets		6	7
Property, plant and equipment	15	2,130	2,535
Mining assets	16	432	438
Other non-current assets	17	301	170
Deferred tax asset	12(b)	28	65
		2,897	3,215
Current assets			
Inventories	18	439	359
Prepayments and other current assets	19	90	82
Income taxes prepaid		18	13
Trade and other receivables	20	127	132
Current investments	21	250	–
Cash and cash equivalents	22	1,219	1,821
		2,143	2,407
Total assets		5,040	5,622
Equity and liabilities			
Equity			
Share capital	23(a)	171	171
Share premium		2,650	2,650
Capital reserves	23(c)	(2,457)	(2,029)
Retained earnings		686	203
Attributable to equity holders of the Company		1,050	995
Non-controlling interests		4	3
Total equity		1,054	998
Non-current liabilities			
Borrowings	24	2,914	3,459
Deferred tax liability	12(b)	76	70
Employee benefits	25	12	14
Provision for closure and site restoration	26	58	67
Other non-current liabilities	27	7	7
		3,067	3,617
Current liabilities			
Trade and other payables	28	320	272
Borrowings	24	539	418
Income taxes payable		11	15
Employee benefits	25	2	2
Provision for closure and site restoration	26	1	–
Other current liabilities	27	46	300
		919	1,007
Total liabilities		3,986	4,624
Total equity and liabilities		5,040	5,622

These financial statements were approved by the Board of Directors on 20 February 2019.

Signed on behalf of the Board of Directors

Andrew Southam
Chief Executive Officer

John Hadfield
Chief Financial Officer

$ million	Notes	2018	2017
Operating activities			
Cash receipts from customers		**2,198**	1,640
Net proceeds on non-current VAT		**3**	232
Cash payments to employees, suppliers and taxes other than non-current VAT and income tax		**(1,204)**	(788)
Cash flows from operations before interest and income taxes paid	29	**997**	1,084
Interest paid		**(229)**	(222)
Income taxes paid		**(95)**	(110)
Net cash flows from operating activities		**673**	752
Investing activities			
Interest received		**32**	16
Proceeds from disposal of property, plant and equipment and mining assets		**–**	1
Purchase of intangible assets		**(2)**	(2)
Purchase of property, plant and equipment		**(567)**	(92)
Investments in mining assets, including licences		**(46)**	(43)
Licence payments for subsoil contracts	27	**(2)**	(1)
Additions to long-term bank deposits	17	**(1)**	–
Baimskaya advances		**(15)**	–
Net additions to current investments	21	**(250)**	–
Advance consideration for investment in Koksay	27	**25**	–
Net cash flows used in investing activities		**(826)**	(121)
Financing activities			
Proceeds from borrowings	30	**–**	376
Repayment of borrowings	30	**(424)**	(294)
Dividends paid by the Company	14	**(27)**	–
Net cash flows (used in)/from financing activities		**(451)**	82
Net (decrease)/increase in cash and cash equivalents	30	**(604)**	713
Cash and cash equivalents at the beginning of the year		**1,821**	1,108
Effect of exchange rate changes on cash and cash equivalents	30	**2**	–
Cash and cash equivalents at the end of the year	22	**1,219**	1,821

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
Year ended 31 December 2018

		Attributable to equity holders of the Company						
$ million	Notes	Share capital	Share premium	Capital reserves[1]	Retained earnings	Total	Non-controlling interests	Total equity
At 1 January 2017		171	2,650	(2,037)	(251)	533	3	536
Profit for the year		–	–	–	447	447	–	447
Exchange differences on retranslation of foreign operations		–	–	8	–	8	–	8
Actuarial gain on employee benefits, net of tax	25	–	–	–	1	1	–	1
Total comprehensive income for the year		–	–	8	448	456	–	456
Share-based payments, net of taxes		–	–	–	6	6	–	6
At 31 December 2017		171	2,650	(2,029)	203	995	3	998
Profit for the year		**–**	**–**	**–**	**510**	**510**	**–**	**510**
Exchange differences on retranslation of foreign operations		**–**	**–**	**(428)**	**–**	**(428)**	**1**	**(427)**
Total comprehensive income/(expense) for the year		**–**	**–**	**(428)**	**510**	**82**	**1**	**83**
Dividends paid by the Company	14	**–**	**–**	**–**	**(27)**	**(27)**	**–**	**(27)**
At 31 December 2018		**171**	**2,650**	**(2,457)**	**686**	**1,050**	**4**	**1,054**

1 See note 23(c) for an analysis of 'Capital reserves'.

1. Corporate information

KAZ Minerals PLC (the 'Company') is a public limited company incorporated in England and Wales. The Company's registered office is 6th Floor, Cardinal Place, 100 Victoria Street, London SW1E 5JL, United Kingdom. The Group comprises the Company and its consolidated divisions as set out below.

The Group operates in the natural resources industry through five divisions, the principal activities of which during 2018 were:

Operating division	Principal activity	Primary country of operations
Bozshakol	Mining and processing of copper and other metals	Kazakhstan
Aktogay	Mining and processing of copper and other metals	Kazakhstan
East Region[1]	Mining and processing of copper and other metals	Kazakhstan
Bozymchak[1]	Mining and processing of copper and gold	Kyrgyzstan
Mining Projects	Development of greenfield metal deposits and processing facilities	Kazakhstan

1 The East Region and Bozymchak are separate divisions but have been combined for segmental reporting purposes.

The legal names of the constituent companies within the above divisions are shown in note 37(k).

2. Basis of preparation

The financial statements set out on pages 122 to 175 have been prepared using accounting policies consistent with IFRSs as adopted by the EU. The Company has taken the exemption under section 408 of the Companies Act 2006 and has not published the Company's income statement and related notes.

(a) Going concern

The Group manages liquidity risk by maintaining adequate committed borrowing facilities and working capital funds. The Board monitors the net debt level and liquidity position of the Group taking into consideration the expected outlook of the Group's financial position, cash flows, future capital expenditure and debt service requirements.

At 31 December 2018, the Group's net debt was $1,986 million with gross debt of $3,453 million and gross liquid funds of $1,467 million. The gross debt facilities, which are fully drawn, consist of:

- $1,345 million of the CDB-Bozshakol and Bozymchak facilities, which amortise over the period to 2025;
- $1,331 million of the CDB-Aktogay US dollar and Chinese yuan facilities, which amortise over the period to 2029;
- $500 million of the PXF facility which amortises over the period from July 2018 to June 2021; and
- $277 million of the DBK facility, which amortises during the period from June 2018 to June 2025.

Since year end the Group has completed the acquisition of Baimskaya comprising an initial cash payment of $386 million with a further $50 million payment expected to be made during 2019.

The Board has considered the Group's cash flow forecasts for the period to 30 March 2020 including the outlook for commodity prices, production levels from the Group's operations, its future capital requirements including the planned expansion of Aktogay and the acquisition and an initial investment in the Baimskaya project, and the principal repayments and interest due under the Group's debt facilities.

The Group's funding strategy is to obtain a new financing facility which the Group's forecasts show is required to finance the construction of the Aktogay expansion. The Board is confident of raising additional liquidity through a combination of new sources of finance and/ or a refinance of debt facilities given the quality of the Group's long-term low cost assets, the low risk nature of the Aktogay expansion and the level of amortisation of existing debt facilities during the period. The Board expects a new facility, in the region of $600 million, to be completed during the first half of 2019 to support the Aktogay expansion.

Assuming additional liquidity is committed as expected, the Board is satisfied that the Group's forecasts, taking into account reasonably possible downside scenarios, show that the Group has adequate liquidity to continue in operational existence for the foreseeable future. There can however be no guarantee that the new liquidity can be secured as expected. In the unlikely event that no new additional financing can be secured, mitigating actions will be taken to defer planned capital expenditure, to ensure the Group has adequate liquidity throughout the going concern period.

In the severe downside scenarios of sustained lower than expected commodity prices with lower production; and sustained lower prices, lower production and higher operating costs, the Group's forecasts indicate that mitigating actions, including a deferral of construction of the Aktogay expansion, would be required by the end of the first half of 2019 if new financing is not obtained. Whilst these scenarios are considered unlikely, the Board considers taking such mitigating steps to be feasible.

Accordingly, the Board is satisfied that it is appropriate to adopt the going concern basis of accounting in the preparation of these consolidated financial statements.

(b) Basis of accounting

The consolidated financial statements have been prepared on a historical cost basis, except for derivative financial instruments which have been measured at fair value. The consolidated financial statements are presented in US dollars ('$') and all financial information has been rounded to the nearest million dollars ('$ million'), except where otherwise indicated.

(c) Basis of consolidation

The consolidated financial statements set out the Group's financial position as at 31 December 2018 and the Group's financial performance for the year ended 31 December 2018.

Subsidiaries are those enterprises controlled by the Group. Control exists when the Group has the power, directly or indirectly, to direct those activities of an enterprise that most significantly affect the returns the Group earns from its involvement with the enterprise. Subsidiaries are consolidated from the date on which control is transferred to the Group and cease to be consolidated from the date on which control is transferred out of the Group. When the Group ceases to have control, any retained interest in the entity is remeasured to its fair value, with the change in carrying amount recognised in the income statement. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This treatment may mean that amounts previously recognised in other comprehensive income are recycled through the income statement. Joint operations are those arrangements jointly controlled by the Group and one or more parties with rights to the assets and obligations for the liabilities relating to the arrangement, as outlined in note 36(b). Joint operations are proportionally consolidated from the date on which the Group obtains joint control and cease to be proportionally consolidated from the date on which the Group no longer has joint control.

The financial statements of subsidiaries and joint operations are prepared for the same reporting year as the Company, using consistent accounting policies. All intercompany balances and transactions, including unrealised profits arising from intragroup transactions, are eliminated in full. Unrealised losses are eliminated in the same way as unrealised gains except that they are only eliminated to the extent that there is no evidence of impairment.

See note 37(k) for a list of all the Company's subsidiaries and joint operations.

(d) Statement of compliance

The consolidated financial statements of the Company, its subsidiaries and joint operations have been prepared in accordance with IFRSs as issued by the IASB and interpretations issued by the IFRIC of the IASB, as adopted by the EU and in accordance with the provisions of the Companies Act 2006.

(e) Adoption of new standards and interpretations

The following accounting standards, amendments and interpretations, which had no significant impact on these financial statements, became effective in the current reporting period on adoption by the EU through the European Financial Reporting Advisory Group ('EFRAG'):

- IFRS 9 '*Financial Instruments*' was adopted on 1 January 2018, replacing IAS 39 *'Financial Instruments: Recognition and Measurement'*. The new standard has been applied retrospectively but did not result in a material change to the Group's accounting policies or a restatement of prior period financial assets and liabilities. As a result of the application of IFRS 9, trade receivables subject to provisional pricing are required to be classified and presented at fair value through profit or loss. Most of the Group's sales contracts are based on provisional pricing which are marked to market at each period end using appropriate quoted market forward prices, with any adjustment included in revenue. Changes in classification and measurement of the Group's financial instruments on transition to IFRS 9 are outlined in note 31(b). The standard also outlines a new 'expected credit loss' model, used to estimate the credit risk to the Group's financial assets measured at amortised cost. The impact of this model was evaluated and found to be immaterial, as outlined in note 31(f), given the nature of the Group's financial assets and its credit risk management policies and procedures which control credit exposure and minimise the risk of loss.
- IFRS 15 '*Revenue from Contracts with Customers*' was adopted on 1 January 2018, replacing IAS 18 *'Revenue'*. The new standard was applied using the 'modified retrospective approach', which did not result in a classification or measurement adjustment to retained earnings on transition or a restatement of comparative information. In applying the transition requirements and provisions of the new standard, the Group reviewed its contracts and assessed the nature of its performance obligations. Certain sales contracts, in particular those relating to copper concentrate, reflect Carriage Insurance Paid delivery terms (Incoterms) which require the Group to deliver the material to a specified location. Whilst the sale and delivery of the material are regarded as two separate performance obligations for which revenue should be recognised, the delivery performance obligation was found to be wholly immaterial compared to the sales performance obligation and therefore no change to prior period revenue recognition was required. The Group also considered the variable consideration constraint on revenue recognition imposed by the new standard in relation to post sale volume adjustments on metal concentrates. Historically, such final volume adjustments on metal concentrates have been minimal and therefore there was no constraint imposed on revenue recognition.
- IFRIC 22 '*Foreign currency transactions and advance considerations*' clarified the accounting for the receipt or payment of advance consideration in a foreign currency. The application of this interpretation had no significant impact on the amounts reported in the Group's consolidated financial statements.
- The application of a number of minor amendments, including those from the 2014-2016 annual improvement cycle which became effective on 1 January 2018, had no impact on the Group's consolidated financial statements due to the nature of its operations. This includes *'Classification and Measurement of Share-based Payment Transactions (Amendments to IFRS 2)'*; *'Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts (Amendments to IFRS 4)'*; *'Transfers of Investment Property (Amendments to IAS 40)'*; *'Amendments to IAS 28 Investments in Associates and Joint Ventures'*; and *'Amendments to IFRS 1 First-time Adoption of International Financial Reporting Standards'*.

2. Basis of preparation continued

(f) New standards and interpretations not yet adopted

The key new standards, interpretations and amendments, as issued by the IASB are expected to be adopted by the Group once they are effective for application in the EU.

- IFRS 16 '*Leases*': the IASB effective date is 1 January 2019 and has been endorsed by the EU. The standard changes the identification of leases and how they will be recognised, measured and disclosed by lessees, requiring the recognition of a right-of-use asset and liability for the future lease payments on the balance sheet. The new standard requires the right-of-use asset to be depreciated over the duration of the lease term and shown within operating profit in the income statement, with the interest cost associated with the financing of the asset included within interest expense. The Group has reviewed its lease contracts in place at 31 December 2018, which mainly relate to leased office buildings and payments for land, and the right-of-use asset and related liability was found to be immaterial. The net impact on profit before tax in 2019 is also expected to be immaterial. The Group has elected to apply the modified retrospective approach requiring no restatement of comparative figures and there will be no impact on opening equity at 1 January 2019. The new standard does not apply to leases to explore for or use natural resources, such as mining licences and rights.
- IFRIC 23 '*Uncertainty over Income Tax Treatments*': the IASB effective date is 1 January 2019 and has been endorsed by the EU. The interpretation clarifies that income tax and deferred tax assets and liabilities should be measured reflecting the uncertainty of any positions adopted under IAS 12 *'Income Taxes'*, where acceptance of such position by the tax authorities is considered as less than probable. The Group has reviewed its income tax positions at 31 December 2018 and has not identified any material uncertain income tax positions.
- *'Borrowing costs eligible for capitalisation (Amendments to IAS 23)'*: the IASB effective date is 1 January 2019 and is yet to be endorsed by the EU. The amendment requires that project specific borrowings are included as general borrowings once those assets are operating as intended and therefore the associated interest will become available for capitalisation on other 'qualifying assets'. In 2019, this amendment will bring the CDB Bozshakol and Bozymchak, CDB Aktogay, and DBK Aktogay loans borrowed specifically for the construction of the respective capital projects into general borrowings. The interest on these loans will be available for capitalisation onto qualifying capital projects such as the expansion of Aktogay.
- *'Definition of a Business (Amendments to IFRS 3)'*: the IASB effective date is 1 January 2020 and is yet to be endorsed by the EU. The amendment provides clearer application guidance to help companies distinguish between a business and a group of assets when applying IFRS 3 *'Business Combinations'*. The amendment also clarifies that classification of a business would not be appropriate if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets. This amendment is not expected to have an impact on the Group as it would not change the accounting for the Baimskaya copper project.
- IFRS 17 '*Insurance Contracts*': the IASB effective date is 1 January 2021 and is yet to be endorsed by the EU. IFRS 17 will replace IFRS 4 *'Insurance Contracts'* and applies to all types of insurance contracts (i.e. life, non-life, direct insurance and reinsurance), regardless of the type of entities that issue them, as well as to certain guarantees and financial instruments with discretionary participation features. This standard is not expected to have an impact on the Group's consolidated financial statements due to the nature of its operations.
- There are a number of other amendments, including those issued following the 2015-2017 annual improvements project, which have not yet been endorsed by the EU and are not expected to have a material impact on the Group's consolidated financial statements.

The Group has not early adopted any new standards or interpretations.

(g) Comparative information

Where a change in the presentation format of the consolidated financial statements has been made during the year, comparative figures have been restated accordingly.

3. Significant accounting judgements and key sources of estimation uncertainty

In the course of preparing these financial statements, the Directors make necessary judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources.

Judgements are based on the Directors' best knowledge of the relevant facts and circumstances having regard to prior experience, but actual results may differ from the amounts included in the consolidated financial statements.

Estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant, but actual results may differ from these estimates. The estimates and underlying assumptions applied are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods, if the revision affects both current and future periods.

The following are the critical judgements, key assumptions and sources of estimation uncertainty concerning the future that arise mainly from the nature of the Group's mining operations and which the Directors believe are likely to have the greatest effect on the amounts recognised in the consolidated financial statements. However, the Directors do not expect a significant risk of a material change to the Group's carrying value of the assets and liabilities affected by these factors in the next 12 months, within a reasonably possible range, with the exception of Bozymchak, as discussed below.

The qualitative disclosures regarding these sources of estimation uncertainty are presented because the Directors consider these to be relevant to the mining industry and useful in understanding the financial statements of the Group. These disclosures go beyond the minimum requirements of IAS 1 *'Presentation of Financial Statements'* which only requires disclosure of estimation uncertainty where changes in estimates, within a reasonably possible range, could have a significant risk of a material effect, within the next 12 months, on the amounts recognised in the financial statements.

Impairment of assets

Significant accounting judgements

The Directors review the carrying value of the Group's assets to determine whether there are any indicators of impairment such that the carrying values of the assets may not be recoverable. The assessment of whether an indicator of impairment or reversal thereof has arisen requires considerable judgement, taking account of future operational and financial plans, commodity prices, market demand and the competitive environment. For exploration and evaluation assets held by the Group, indicators of impairment can include: (a) the right to explore in a specific area has expired and is not expected to be renewed (b) significant expenditure for further exploration or evaluation activities is not being planned (c) exploration and evaluation of mineral resources have not led to the discovery or confirmation of commercially viable resource, or (d) that sufficient data exists to indicate that the carrying amount of the asset may not be recovered in full from development or sale.

Where such indicators exist, the carrying value of the assets of a cash generating unit or exploration and evaluation asset is compared with the recoverable amount of those assets, that is, the higher of its fair value less costs to sell and value in use, which is typically determined on the basis of discounted future cash flows. For the purpose of assessing commodity prices for indicators of impairment, consideration was given to a range of equity analyst long-term copper prices with a median price of around $6,700/t.

An assessment of the key external and internal factors affecting the Group and its cash generating units ('CGUs'), at 31 December 2018 (and 31 December 2017) did not identify any indicators of impairment or reversal thereof at any of the Group's Kazakhstan CGUs.

At the Bozymchak CGU, adverse court rulings in Kyrgyzstan for the recovery of historical VAT incurred on the construction of the plant, amounting to $16 million and previously included within non-current assets, were received in the second half of 2018. This was considered to be an impairment indicator and an impairment review was undertaken (see note 6).

Key sources of estimation uncertainty

The preparation of discounted future cash flows used for impairment reviews where indicators are identified, includes management estimates of commodity prices, market demand and supply, future operating costs, economic and regulatory environments, capital expenditure requirements, long-term mine plans and other factors. Any subsequent revisions to cash flows due to changes in the factors listed above, principally commodity prices, beyond what is considered as reasonably possible, could impact the recoverable amount of the assets. Changes to commodity prices within a reasonably possible range are not expected to significantly impact the carrying value of the Group's Kazakhstan based CGUs.

Bozymchak

An impairment charge of $20 million was recognised against the Bozymchak CGU, which is included in the East Region and Bozymchak segment, following the identification of an impairment indicator. In determining the recoverable amount of the CGU, the Directors made estimates of the future risk adjusted cash flows with the key variables being copper and gold price assumptions, operational costs, production profile, copper grades and the discount rate. The recoverable amount of the CGU was estimated at $84 million and determined as its fair value less costs to sell (see note 6).

3. Significant accounting judgements and key sources of estimation uncertainty continued

Non-current inventories

Significant accounting judgements

Mining activities may result in the stockpiling of ore. Ore which is not expected to be processed within 12 months of the balance sheet date and is considered to fall outside of the normal operating cycle of the operation is classified as a non-current asset. The classification of stockpiled ore between non-current and current assets is based on judgements as to the expected timing of processing and on future production plans.

Key sources of estimation uncertainty

Stockpiled ore is reported at the lower of cost or net realisable value, with net realisable value subject to estimates of further processing, delivery costs and future commodity prices. Commodity prices applied in assessing the net realisable value fall within the range of equity analyst commodity price expectations. Changes to commodity prices in the next 12 months within a reasonably possible range are not expected to significantly impact the carrying value of non-current inventories.

Determination of ore reserves and useful lives of property, plant and equipment

Key sources of estimation uncertainty

Ore reserves are estimates of the amount of product that can be economically and legally extracted from the Group's mining properties. In order to estimate reserves, assumptions are required about a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates. The Group estimates its ore reserves and mineral resources based on information compiled and reviewed by independent competent persons as defined in accordance with the JORC Code.

In assessing the life of a mine for accounting purposes, ore reserves are taken into account where there is a high degree of confidence of economic extraction. Since the economic assumptions used to estimate reserves change from period to period, and as additional geological data is generated during the course of operations, estimates of reserves may change from period to period. Changes in reported reserves may affect the Group's financial results and financial position in a number of ways, including the following:

- asset recoverable amounts may be affected due to changes in estimated future cash flows;
- deferral of stripping costs which are determined using a waste to ore stripping ratio;
- depreciation, depletion and amortisation charged in the income statement may change where such charges are determined by the unit of production basis, or where the useful economic lives of assets change;
- decommissioning, site restoration and environmental provisions may change where changes in estimated reserves affect expectations about the timing or cost of these activities; and
- the carrying value of deferred tax assets may change due to revisions in estimates of the likely recovery of tax benefits.

There are numerous uncertainties inherent in estimating ore reserves and assumptions that are valid at the time of estimation may change significantly when new information becomes available. Changes in the forecast prices of commodities, exchange rates, production costs or recovery rates may change the economic status of reserves and may ultimately result in reserves being revised. The Directors do not expect significant changes in the carrying value of the Group's mining properties; property, plant and equipment; closure liabilities and deferred taxes to arise from changes in ore reserve estimates within a reasonably possible range in the next 12 months. Revisions to ore reserve estimates in 2018 did not result in a material change to the carrying value of these assets and liabilities.

For property, plant and equipment depreciated on a straight-line basis over its useful economic life, the appropriateness of the asset's useful economic life is reviewed at least annually and changes could affect prospective depreciation rates and asset carrying values.

Decommissioning and site restoration costs

Significant accounting judgements

The Directors use judgement and experience in determining the expected timing, closure and decommissioning methods, which can vary, in response to changes in the relevant legal requirements or decommissioning technologies.

Key sources of estimation uncertainty

The ultimate cost of decommissioning and rehabilitation is uncertain and cost estimates can vary in response to many factors including the emergence of new restoration techniques and costs of materials and labour. Therefore, the Group periodically reviews the closure cost estimate at each operation. The expected timing and extent of expenditure can also change in response to revisions in ore reserve estimates, processing levels and commodity prices whilst future costs are discounted using expected discount rates. Due to the relatively long life of the Group's most significant assets, changes in estimates within a reasonable possible range in the next 12 months are not expected to significantly impact the carrying value of the Group's provisions for decommissioning and site restoration costs.

Taxes

Significant accounting judgements

The Directors make judgements in relation to the recognition of various taxes levied on the Group, which are both payable and recoverable. Judgement applies particularly to corporate income taxes, transfer pricing, VAT and outcomes of any tax disputes which would affect the recognition of tax liabilities and deferred tax assets. Judgement over recognition also applies to taxes which are recoverable by the Group, principally VAT paid, for which the recoverability and timing of recovery is assessed. In making judgements related to taxes, the Directors believe that the tax positions it adopts are in line with the applicable legislation and reflect the probable outcome. The tax obligations and receivables, upon audit by the tax authorities at a future date, may differ as a result of differing interpretations. These interpretations may impact the expected timing and quantum of taxes payable and recoverable and are discussed further in note 32.

Key sources of estimation uncertainty

Estimates may be made to determine the amount of taxes recoverable, principally VAT and deferred tax assets. The recognition of deferred tax assets mainly relates to tax losses which may be utilised in the future, giving consideration to future profitability, estimates on commodity prices, interest rates, operating costs and any statute of limitation period. Changes in these estimates within a reasonably possible range in the next 12 months are not expected to significantly alter the carrying value of the Group's taxes that are recoverable.

Joint operations

Significant accounting judgements

Joint arrangements are classified as joint operations where the Group exercises joint control and the parties have the rights to the assets and obligations for the liabilities relating to the arrangement, as outlined in note 36(b). Judgement is required in determining the nature of the joint arrangement based on the particular facts and circumstances, the legal form and purpose of the joint arrangement. Industrial Construction Group LLC ('ICG') is a joint arrangement established to undertake the engineering and construction of the additional sulphide processing facility at Aktogay. The Group exercises joint control as decisions require unanimous consent. As the output of the joint arrangement is the construction of the additional processing facilities at Aktogay and thus benefits the Group, ICG is accounted for as a joint operation and is therefore proportionally consolidated. Further details of the accounting policy for joint operations is outlined in note 36(b).

Achievement of commercial production – applicable to 2017 only

Significant accounting judgements

Once an operation reaches the operating level intended by management and regarded to be 'commercial', capitalisation of development costs including borrowing costs ceases, the depreciation of capitalised costs begins and the revenues and operational costs are recorded in the income statement and not capitalised to the balance sheet. Significant judgement is required to determine when the Group's assets achieve commercial production, including evaluation of the following factors: completion of a reasonable period of commissioning; consistent achievement of operational results at a pre-determined level of expected capacity and indicators exist that this level will continue; mineral recoveries are at or approaching expected levels; and transfer of the operation from project personnel to operational personnel.

For the Bozshakol operation, commercial production of the clay plant was determined to have been achieved on 1 July 2017. In making this judgement, the Directors considered the performance of the plant of at least 60% of its design capacity for a three month period, which is broadly consistent with industry practice. Revenues, production costs and interest incurred on borrowings to finance the project were recognised in the income statement and depreciation of its asset base commenced from that date.

The Aktogay sulphide plant achieved commercial production from 1 October 2017 after consistent production of at least 60% of its design capacity over a three month period. Revenues, production costs and interest incurred on borrowings to finance the project were recognised in the income statement with the commencement of depreciation of its assets from that date.

4. Segment information

Information provided to the Group's Board of Directors for the purposes of resource allocation and the assessment of segmental performance is prepared in accordance with the management and operational structure of the Group. For management and operational purposes, the Group is organised into a number of businesses as shown below, according to the nature of their operations, end-products and services rendered. Each of these business units represents an operating segment in accordance with IFRS 8 '*Operating Segments*'. The East Region and Bozymchak segments are presented on a combined basis.

The Group's operating segments are:

Bozshakol

The Bozshakol open pit, sulphide concentrator and clay plant located in the Pavlodar region of Kazakhstan and the associated international sales and marketing activities managed out of the UK. The sulphide concentrator, which sells copper concentrate with gold content as a by-product, was commissioned in February 2016 and achieved commercial production on 27 October 2016, with its revenues and costs being recognised in the income statement from that date. The clay plant, which was commissioned in the fourth quarter of 2016 and which achieved commercial production on 1 July 2017, is included in the Bozshakol operating segment due to the sharing of infrastructure and mining pit, its relatively small size and to reflect the Group's management structure. The clay plant's pre-commercial revenues and costs were recorded against property, plant and equipment until it achieved commercial production, after which depreciation of the asset base commenced and interest associated with borrowings used to finance the construction of the plant was expensed.

Aktogay

The Aktogay open pit, sulphide concentrator and oxide plant located in the east of Kazakhstan and the associated international sales and marketing activities managed out of the UK. The sulphide concentrator was commissioned in the final quarter of 2016 and achieved commercial production on 1 October 2017, with its revenues and costs being recognised in the income statement from that date. Until commercial production was achieved, the revenues and operating costs of the sulphide concentrator were recorded against property, plant and equipment. The oxide operation, which sells copper cathodes, reached commercial production on 1 July 2016, with its revenues and costs being recognised in the income statement from that date. The oxide plant is included in the Aktogay operating segment due to the sharing of infrastructure, its relatively small size and to reflect the Group's management structure. An expansion of the sulphide processing facilities at Aktogay was announced in December 2017, which is expected to double its sulphide ore processing capacity by the end of 2021.

East Region and Bozymchak

The East Region and Bozymchak operations are shown as one operating segment consisting of Vostoktsvetmet LLC ('East Region'), whose principal activity is the mining and processing of copper and other metals which are produced as by-products from three underground mines and concentrators located in the eastern region of Kazakhstan; and KAZ Minerals Bozymchak LLC ('Bozymchak') a copper-gold open pit mine and concentrator located in western Kyrgyzstan and the associated international sales and marketing activities managed out of the UK. Bozymchak is combined with the East Region operations, given their similar economic characteristics; similar concentrate production processes; and as their combined output is toll processed at the Balkhash smelter and subsequently sold to the Group's customers.

Mining Projects

The Group's mining projects consist of companies which are responsible for the assessment and greenfield development of metal deposits and processing facilities. The segment includes the Koksay mineral deposit.

Managing and measuring operating segments

The key performance measure which the Directors use internally to assess the performance of the operating segments is EBITDA. Refer to the APMs section on page 179 for further details.

The Treasury department manages the Group's borrowings and monitors finance income and finance costs at the Group level on a net basis, rather than by operating segment.

Segmental information is also provided in respect of revenues, by destination and by product. Segmental information relating to employees is provided in note 8.

(a) Operating segments

(i) Income statement information

$ million	Bozshakol	Aktogay	East Region and Bozymchak	Corporate Services	Total
	Year ended 31 December 2018				
Revenues – income statement	**756**	**775**	**631**	**–**	**2,162**
EBITDA	**520**	**530**	**284**	**(24)**	**1,310**
Special items – note 7	–	–	(20)	–	(20)
EBITDA (after special items)	**520**	**530**	**264**	**(24)**	**1,290**
Less: depreciation, depletion and amortisation[1]	(90)	(108)	(40)	(1)	(239)
Less: MET and royalties[1,2]	(69)	(72)	(59)	–	(200)
Operating profit/(loss)	**361**	**350**	**165**	**(25)**	**851**
Net finance costs and foreign exchange gain					(209)
Income tax expense					(132)
Profit for the year					**510**

$ million	Bozshakol	Aktogay	East Region and Bozymchak	Corporate Services	Total
	Year ended 31 December 2017				
Revenues					
Gross Revenues	719	530	689	–	1,938
Pre-commercial production revenues capitalised to property, plant and equipment[3]	(21)	(254)	–	–	(275)
Revenues – income statement	698	276	689	–	1,663
Gross EBITDA	515	374	371	(25)	1,235
Pre-commercial production EBITDA capitalised to property, plant and equipment[2,3]	(12)	(185)	–	–	(197)
EBITDA	503	189	371	(25)	1,038
Special items[4] – note 7	–	–	(3)	(16)	(19)
EBITDA (after special items)	503	189	368	(41)	1,019
Less: depreciation, depletion and amortisation[1]	(86)	(42)	(43)	(1)	(172)
Less: MET and royalties[1,2]	(52)	(21)	(59)	–	(132)
Operating profit/(loss)	365	126	266	(42)	715
Net finance costs and foreign exchange loss					(135)
Income tax expense					(133)
Profit for the year					447

1 Depreciation, depletion and amortisation and MET and royalties exclude the costs associated with inventories on the balance sheet.

2 MET and royalties have been excluded from the key financial indicator of EBITDA. The Directors believe that MET and royalties are a substitute for a tax on profits, hence their exclusion provides an informed measure of the operational performance of the Group. In 2017, MET incurred at the Bozshakol clay and Aktogay sulphide plants during the pre-commercial production stage of $3 million and $22 million, respectively, was capitalised to property, plant and equipment.

3 During pre-commercial production, revenues and operating costs were capitalised to property, plant and equipment.

4 An impairment of $16 million arose from the decision not to continue with the smelter project and reflects costs incurred. This was disclosed in the Corporate Services segment.

4. Segment information continued

(a) Operating segments continued

(ii) Balance sheet information

$ million	Bozshakol	Aktogay	East Region and Bozymchak	Mining Projects	Corporate Services[4]	Total
						At 31 December 2018
Assets						
Non-current assets[1]	**1,104**	**1,178**	**335**	**236**	**5,325**	**8,178**
Current assets excluding cash and cash equivalents and current investments[2]	**258**	**255**	**1,944**	**–**	**1,746**	**4,203**
Cash and cash equivalents and current investments	**7**	**55**	**12**	**25**	**1,370**	**1,469**
Segment assets	**1,369**	**1,488**	**2,291**	**261**	**8,441**	**13,850**
Taxes receivable						**46**
Elimination						**(8,856)**
Total assets						**5,040**
Liabilities						
Non-current liabilities	**6**	**9**	**59**	**3**	**–**	**77**
Inter-segment borrowings	**941**	**676**	**121**	**–**	**–**	**1,738**
Current liabilities[3]	**99**	**94**	**68**	**25**	**1,892**	**2,178**
Segment liabilities	**1,046**	**779**	**248**	**28**	**1,892**	**3,993**
Borrowings						**3,453**
Taxes payable						**87**
Elimination						**(3,547)**
Total liabilities						**3,986**

$ million	Bozshakol	Aktogay	East Region and Bozymchak	Mining Projects	Corporate Services[4]	Total
						At 31 December 2017
Assets						
Non-current assets[1]	1,342	1,200	363	243	5,307	8,455
Current assets excluding cash and cash equivalents[2]	191	188	198	–	1,877	2,454
Cash and cash equivalents	87	354	176	2	1,202	1,821
Segment assets	1,620	1,742	737	245	8,386	12,730
Taxes receivable						78
Elimination						(7,186)
Total assets						5,622
Liabilities						
Non-current liabilities	9	8	68	3	–	88
Inter-segment borrowings	1,031	694	146	–	–	1,871
Current liabilities[3]	86	354	55	1	88	584
Segment liabilities	1,126	1,056	269	4	88	2,543
Borrowings						3,877
Taxes payable						85
Elimination						(1,881)
Total liabilities						4,624

1 Non-current assets includes property, plant and equipment, mining assets and intangible assets which are located in the principal country of operations of each operating segment. Bozshakol, Aktogay and Mining Projects segments principally operate in Kazakhstan. The East Region and Bozymchak segment includes property, plant and equipment, mining assets and intangible assets of $253 million relating to the East Region assets located in Kazakhstan and $55 million of Bozymchak assets located in Kyrgyzstan (2017: $273 million and $61 million respectively). Additionally included within non-current assets is long-term stockpiled ore of $111 million (2017: $124 million) at Bozshakol and $15 million (2017: $nil million) at Aktogay.

2 Current assets excluding cash and cash equivalents and current investments comprise inventories, prepayments and other current assets and trade and other receivables, including intragroup non-financing receivables.

3 Current liabilities comprise trade and other payables, including intragroup non-financing related payables, and other current liabilities including provisions.

4 Corporate Services non-current assets include $5,309 million of intra-group investments while current assets includes $1,738 million of inter-segment loans, which are eliminated within total assets (2017: $5,305 million and $1,871 million respectively).

(iii) Capital expenditure[1]

$ million	Bozshakol	Aktogay[3]	East Region and Bozymchak	Mining Projects	Corporate Services	Total
	Year ended 31 December 2018					
Property, plant and equipment[2]	25	512	29	–	1	567
Mining assets[2]	4	1	40	1	–	46
Intangible assets	–	1	1	–	–	2
Capital expenditure	**29**	**514**	**70**	**1**	**1**	**615**

$ million	Bozshakol[4]	Aktogay[3]	East Region and Bozymchak	Mining Projects	Corporate Services	Total
	Year ended 31 December 2017					
Property, plant and equipment[2]	71	(29)	35	14	1	92
Mining assets[2]	2	2	39	–	–	43
Intangible assets	1	–	–	–	1	2
Capital expenditure	74	(27)	74	14	2	137

1 The capital expenditure presented by operating segment reflects cash paid and is aligned with the Group's internal capital expenditure reporting.

2 Capital expenditure includes non-current advances paid for items of property, plant and equipment and mining assets.

3 Capital expenditure for Aktogay in 2018 includes $281 million settled in respect of the $300 million NFC deferral. Capital expenditure for Aktogay in 2017 included $106 million of net operating cash inflows capitalised during the period ahead of commercial production.

4 Capital expenditure for Bozshakol in 2017 included $7 million of net operating cash outflows incurred during the period ahead of commercial production. Of the $74 million capital expenditure for Bozshakol in 2017, $35 million related to long-term clay ore stockpiled ahead of commercial production to 30 June 2017.

(b) Information in respect of revenues

Revenues by product to third parties are as follows:

$ million	Bozshakol	Aktogay	East Region and Bozymchak	Total
	Year ended 31 December 2018			
Copper cathodes	67	206	417	690
Copper in concentrate	529	558	–	1,087
Zinc in concentrate	–	–	101	101
Gold	–	–	68	68
Gold in concentrate	144	–	–	144
Silver	2	1	37	40
Silver in concentrate	9	6	–	15
Other revenues including other by-products	5	4	8	17
Revenues – income statement	**756**	**775**	**631**	**2,162**

$ million	Bozshakol	Aktogay	East Region and Bozymchak	Total
	Year ended 31 December 2017			
Copper cathodes	62	212	424	698
Copper in concentrate	510	315	9	834
Zinc in concentrate	–	–	115	115
Gold	–	–	78	78
Gold in concentrate	137	–	1	138
Silver	–	–	50	50
Silver in concentrate	10	3	1	14
Other revenues including other by-products	–	–	11	11
Gross Revenues	719	530	689	1,938
Less: pre-commercial production revenues capitalised to property, plant and equipment	(21)	(254)	–	(275)
Revenues – income statement	698	276	689	1,663

4. Segment information continued

(b) Information in respect of revenues continued

Most of the Group's sales agreements are based on provisional pricing with the final pricing usually determined by the average market price of the respective metal in the month (for silver), the month following (for copper cathode and zinc concentrate) or the second month following (for copper concentrate including by-products) dispatch to the customer. At 31 December, the Group's provisionally priced volumes and their respective average provisional price were as follows:

	At 31 December 2018		At 31 December 2017	
	Provisionally priced volumes	Weighted average provisional price	Provisionally priced volumes	Weighted average provisional price
Copper cathodes	**4 kt**	**6,244 $/t**	4 kt	6,865 $/t
Copper in concentrate[1]	**29 kt**	**5,558 $/t**	22 kt	6,067 $/t
Zinc in concentrate[1]	**2 kt**	**2,102 $/t**	4 kt	2,516 $/t
Gold in concentrate[1]	**21 koz**	**1,217 $/oz**	19 koz	1,276 $/oz
Silver in concentrate[1]	**113 koz**	**14 $/oz**	65 koz	16 $/oz

1 Payable metal in concentrate. Typically priced after deduction of a processing charge.

The final prices for the provisionally priced volumes shown above will be determined during the quarter after the year end. At 31 December 2018, sales contracts which had not been finally priced were marked to market to reflect the expected settlement price based on the appropriate forward metal price (typically one month for copper cathode and zinc concentrate and two months for copper concentrate including by-products). This adjustment decreased revenue by $7 million (2017: $12 million increase in Gross Revenues and revenues). The cumulative commodity pricing adjustments recorded during 2018 between the final price and the forward price at the expected settlement date, at the time of the sale, resulted in a $17 million reduction which is included within revenue.

Revenues by destination from sales to third parties are as follows:

	Year ended 31 December 2018			
$ million	Bozshakol	Aktogay	East Region and Bozymchak	Total
China	**527**	**600**	**298**	**1,425**
Europe	**229**	**175**	**209**	**613**
Kazakhstan and Central Asia	**–**	**–**	**124**	**124**
Revenues – income statement	**756**	**775**	**631**	**2,162**

	Year ended 31 December 2017			
$ million	Bozshakol	Aktogay	East Region and Bozymchak	Total
China	706	371	391	1,468
Europe	13	159	136	308
Kazakhstan and Central Asia	–	–	162	162
Gross Revenues	719	530	689	1,938
Less: pre-commercial production revenues capitalised to property, plant and equipment	(21)	(254)	–	(275)
Revenues – income statement	698	276	689	1,663

The Group's copper concentrate sales and certain cathode and zinc sales have been contracted to Advaita Trade Private Limited ('Advaita'). Sales from all the Group's segments to Advaita comprise 83% ($1,788 million) of revenues (2017: 71% or $1,377 million of Gross Revenues).

5. Cost of sales, selling and distribution expenses and administrative expenses

(a) Cost of sales

$ million	2018	2017
Raw materials	**304**	193
Employee salaries and payroll taxes	**119**	93
Production overheads	**100**	75
Refining services	**72**	64
Energy and utilities	**58**	42
Other taxes	**18**	12
Depreciation, depletion and amortisation	**247**	183
Mineral extraction tax	**197**	162
Change in work in progress and finished goods	**(38)**	(69)
	1,077	755

(b) Selling and distribution expenses

$ million	2018	2017
Transportation expenses	77	57
Royalties	10	6
Other	7	6
	94	69

(c) Administrative expenses

$ million	2018	2017
Employee salaries and payroll taxes	52	51
Legal and professional fees	17	11
Social responsibility costs	10	12
Supplies	7	6
Utilities	6	7
Business travel	6	5
Levies and charges	5	5
Personal injury claims	–	1
Depreciation and amortisation	3	4
Other	9	6
	115	108

6. Impairment losses

$ million	2018	2017
Impairment charges against property, plant and equipment[1]	16	19
Impairment charges against mining assets[1]	4	–
Impairment charges against non-current VAT receivable[1]	–	1
Impairment charges against current VAT receivable	9	–
	29	20

1 These impairments are considered to be special items for the purposes of determining the Group's key financial indicators of EBITDA and Underlying Profit (see note 13).

Bozymchak – impairment charges
The Bozymchak CGU was subject to an impairment review following the identification of an impairment indicator, being adverse court rulings relating to the recovery of VAT incurred on the construction of the plant. The Bozymchak operation is reflected within the East Region and Bozymchak segment. A total impairment of $20 million was recognised, with $16 million recorded against property, plant and equipment and $4 million against mining assets. The impairment charge reduced the carrying value of the Bozymchak operation to its estimated recoverable amount of $84 million, which was determined as its fair value less cost to sell on a discounted cash flow basis at 31 December 2018. The risk adjusted cash flow forecasts were discounted at a post tax nominal discount rate of 12%.

The key assumptions and estimates made in determining the cash flows were the future prices of copper and gold and the discount rate. The price estimates used were consistent with those applied by the Directors in considering whether commodity prices were an indicator of impairment, with reference to a long term copper price of $6,700 per tonne (see note 3). The fair value less cost to sell estimate is a fair value measure that is categorised within Level 3 of the fair value hierarchy.

As a sensitivity, a 5% reduction in the forecast copper prices could result in a further impairment of around $9 million. This is a simple sensitivity on copper prices in isolation and does not consider any actions which management would take to mitigate the impact of a fall in commodity prices. Additionally, a 1% increase in the discount rate could result in a further impairment of around $3 million.

East Region – impairment charges
The $9 million impairment against current VAT receivable was recognised on prior period VAT claims which are approaching the statute of limitation of five years and for which recovery is regarded as less than probable. $3 million was subsequently written off against the provision on the balance sheet. In 2017, an impairment of $4 million was recognised against items of property, plant and equipment which were no longer expected to be utilised.

Mining Projects – impairment charges
In 2017, following an assessment of partnering options and a review of the project, the Group determined that it would not progress the smelter project further. $16 million incurred on the feasibility study was impaired and comprised $15 million of impairment charges against property, plant and equipment and $1 million written off against non-current VAT receivable.

7. Special items

Special items are those items which are non-recurring or variable in nature and which do not impact the underlying trading performance of the business.

$ million	2018	2017
Special items within operating profit		
Impairment charges against property, plant and equipment	16	19
Impairment charges against mining assets	4	–
Impairment charges against non-current VAT receivable	–	1
Other reimbursements	–	(1)
	20	19
Special items within profit before tax		
PXF fees	–	10
Total special items	20	29

Further information on special items is in the Financial review on page 39.

8. Employee information

$ million	2018	2017
Wages and salaries	166	150
Social security costs – employer contributions	18	19
Employee benefits – note 25	–	1
	184	170

In 2018, employee costs included $13 million (2017: $25 million) capitalised to mining and other fixed assets primarily related to the expansion project at Aktogay (2017: pre-commercial period of production). Of the employee costs capitalised, $2 million relates to the Group's share of costs at its joint operation, ICG.

Other non-monetary employee benefits (including sanatorium visits, medical services and treatment expenses) are mainly provided by Vostoktsvetmet LLC, and are included in the income statement in the expense line relating to the nature of the cost.

The average monthly number of employees within the operations and shown by segment, during the year, was as follows:

	2018	2017
Bozshakol	1,681	1,540
Aktogay	2,107	1,490
East Region and Bozymchak	9,541	9,552
Mining Projects	7	16
Central services including Corporate	436	405
	13,772	13,003

Analysed by location of employees as:

	2018	2017
Central Asia[1]	13,735	12,964
UK	32	32
Rest of the world	5	7
	13,772	13,003

1 Includes Kazakhstan and Kyrgyzstan.

The average monthly number of employees at ICG was 690 (2017: nil) with the Group's proportionate share included in the above table.

9. Key management personnel

In accordance with IAS 24 '*Related party disclosures*', key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Group, directly or indirectly. Key management personnel were deemed to be the Directors of the Company, the Chief Financial Officer, the Mining Projects General Director, the Chief Operating Officer, the Aktogay General Director, the Bozshakol General Director, the East Region General Director, the Bozymchak General Director and the General Director of KAZ Minerals Management LLP (2017: appointment of Chief Operating Officer and Aktogay General Director).

Compensation for key management personnel (including Directors) comprises the following:

$ million	2018	2017
Salaries	6.7	5.8
Annual bonuses	3.4	2.9
Share awards[1]	2.5	2.0
Benefits	0.4	0.4
	13.0	11.1

1 Share awards are long term in nature and may be awarded with a vesting period of up to three years and reflect the IFRS 2 charge.

The aggregate amount paid and accrued in respect of Directors was £5.9 million (2017: £5.5 million), including £1.1 million (2017: £1.2 million) in fees and expenses paid to non-executive Directors and £3.0 million (2017: £2.9 million) in fixed remuneration and annual performance bonus, excluding LTIP share awards, paid to executive Directors. Details are included in the Directors' Remuneration report (see pages 101 and 105).

10. Auditor's remuneration

The auditor's remuneration for services provided to the Group during the year ended 31 December 2018 was $1.5 million (2017: $1.3 million), comprised as follows:

$ million	2018	2017
Audit and other services:		
Amounts receivable by the Company's auditor and its associates for the audit of these financial statements	0.6	0.6
Amounts receivable by the Company's auditor and its associates in respect of:		
– the audit of financial statements of subsidiaries of the Company	0.7	0.5
– audit-related assurance services	0.2	0.2
Total remuneration	1.5	1.3

11. Finance income and finance costs

Finance income

$ million	2018	2017
Interest income	33	17
Fair value gains on debt related derivative financial instruments	–	13
	33	30

Finance costs

$ million	2018	2017
Interest expense	236	158
Total interest expense[1]	240	246
Less: amounts capitalised to the cost of qualifying assets[2,3]	(4)	(88)
Interest on employee obligations	1	2
Unwinding of discount on provisions and other liabilities	5	5
Fair value losses on debt related derivative financial instruments	3	–
	245	165

1 Total interest expense includes $239 million (2017: $221 million) of interest incurred on borrowings and $1 million (2017: $15 million) relating to the unwinding of the discount on the NFC deferral (see note 27). The prior year comparative period included $10 million in PXF fees that were treated as a special item.

2 In 2018, the Group capitalised to the cost of the Aktogay expansion project $4 million of general borrowings costs from the PXF facility, at an average rate of interest of 4.97%. In 2017, the Group capitalised to the cost of qualifying assets $10 million of borrowing costs incurred on the outstanding debt during the year on the CDB-Bozshakol and Bozymchak facilities at an average rate of interest (net of interest income) of 5.87%, $56 million on the CDB-Aktogay US$ and CNY facilities at an average rate of interest of 5.60% and 4.54% respectively and $11 million on the $300 million DBK loan at an average rate of interest of 5.89%. Interest capitalised during 2017 also included $11 million of unwinding of interest on the NFC deferral (see note 27).

3 In 2018, the interest cost on borrowings capitalised to qualifying assets of $4 million is deductible for tax purposes against income in the current year. This capitalised interest, which relates to the expansion project at Aktogay arose from interest incurred on the Group's PXF facility, which is regarded as a general borrowing for Group reporting purposes.

Further information relating to finance income and costs is in the Financial review on page 39.

12. Income taxes

(a) Income tax expense

Major components of income tax expense are:

$ million	2018	2017
Current income tax		
Corporate income tax – current period (UK)	–	–
Corporate income tax – current period (overseas)	83	103
Corporate income tax – prior periods (UK)	–	4
Corporate income tax – prior periods (overseas)	1	1
	84	108
Deferred income tax		
Corporate income tax – current period temporary differences	49	24
Corporate income tax – prior periods temporary differences	(1)	1
	48	25
	132	133

A reconciliation of the income tax expense applicable to the accounting profit before tax at the statutory income tax rate to the income tax expense at the effective income tax rate is as follows:

$ million	2018	2017
Profit before tax	642	580
At UK statutory income tax rate of 19.0% (2017: 19.25%)[1]	122	112
Underprovided in prior periods – current income tax	1	5
(Over)/under provided in prior periods – deferred income tax	(1)	1
Unrecognised tax losses	–	4
Effect of domestic tax rates applicable to individual Group entities	5	–
Tax effect of non-deductible items:		
Transfer pricing	1	2
Other non-deductible expenses	4	9
	132	133

1 In 2017, the UK statutory rate for January to March 2017 was 20.0% and for April to December 2017 was 19.0%, giving a weighted average full year rate of 19.25%.

Corporate income tax ('CIT') is calculated at 19.0% (2017: 19.25%) of the assessable profit for the year for the Company and its UK subsidiaries and 20.0% for the operating subsidiaries in Kazakhstan (2017: 20.0%). In Kyrgyzstan, changes to legislation applicable from November 2017 have reduced CIT to 0%, replaced by a tax on gold revenues, which is reflected as royalties within selling expenses.

Effective tax rate

The effective tax rate was 21% (2017: 23%). Tax charges are affected by the mix of profits and tax jurisdictions in which the Group operates. The impact of unrecognised tax losses and non-deductible items, which may include impairment losses, increases the Group's overall effective tax rate.

The following factors impacted the effective tax rate for the year ended 31 December 2018:

Unrecognised tax losses and untaxed income

Bozymchak

No income tax expense is recognised at Bozymchak as CIT is charged at 0%, which has the effect of reducing the Group's overall effective tax rate. With the introduction of this legislation in 2017, Bozymchak will not be able to utilise historical losses.

Other non-deductible expenses

The 2018 non-deductible items mainly comprise of impairment of VAT receivable at the East Region operations and costs relating to the acquisition of the Baimskaya copper project.

Further information relating to income taxes and the change in the effective tax rate is in the Financial review on page 40.

(b) Recognised deferred tax assets and liabilities

The amounts of deferred tax (liabilities)/assets provided in the consolidated financial statements are as follows:

$ million	At 1 January 2018	Charged to income statement	Charged to other comprehensive income	Net exchange translation	At 31 December 2018
Capital allowances	(89)	**(30)**	**–**	**16**	**(103)**
Inventories and receivables	(2)	**6**	**–**	**–**	**4**
Borrowings	(25)	**15**	**–**	**–**	**(10)**
Provisions and employee benefits	16	**–**	**–**	**(2)**	**14**
Trade and other payables	14	**(1)**	**–**	**(1)**	**12**
Tax losses	76	**(38)**	**–**	**(5)**	**33**
Share-based payment schemes	5	**–**	**(3)**	**–**	**2**
Deferred tax (liability)/asset, net	(5)	**(48)**	**(3)**	**8**	**(48)**
Analysed as:					
Deferred tax asset	65	**(42)**	**(3)**	**8**	**28**
Deferred tax liability	(70)	**(6)**	**–**	**–**	**(76)**

$ million	At 1 January 2017	Charged to income statement	Charged to other comprehensive income	Net exchange translation	At 31 December 2017
Capital allowances	(34)	(56)	–	1	(89)
Inventories and receivables	4	(6)	–	–	(2)
Borrowings	(47)	22	–	–	(25)
Provisions and employee benefits	15	2	–	(1)	16
Trade and other payables	9	5	–	–	14
Tax losses	68	8	–	–	76
Share-based payment schemes	1	–	4	–	5
Deferred tax asset/(liability), net	16	(25)	4	–	(5)
Analysed as:					
Deferred tax asset	72	(11)	4	–	65
Deferred tax liability	(56)	(14)	–	–	(70)

(c) Unrecognised deferred tax assets

Deferred tax assets not recognised in the consolidated financial statements are as follows:

$ million	2018	2017
UK – losses carried forward		
Temporary difference	**85**	119
Deferred tax asset	**14**	23

Certain companies in the UK have tax losses that can be carried forward and used against future taxable profits and interest income. There is no time restriction on the utilisation of tax losses. Where there is sufficient certainty that a taxable profit will arise in these companies against which the losses, or interest income can be offset, deferred tax assets are recognised.

(d) Unrecognised deferred tax liability

The gross temporary differences in respect of the undistributed reserves of the Group's Kazakhstan subsidiaries, as shown in their statutory accounts prepared in accordance with applicable accounting standards and translated at the historical rate where relevant, are as follows:

$ million	2018	2017
Undistributed reserves of subsidiaries subject to withholding tax on distribution[1]	**546**	4,902

1 The reserves are presented at historical exchange rates. At the closing exchange rates they are $473 million (2017: $2,422 million).

The Group has not recognised a deferred tax liability in respect of the distributable reserves of its subsidiaries, as (i) it controls the timing of any such distribution and the temporary differences are not expected to reverse in the foreseeable future and (ii) under certain conditions withholding tax may not be payable. Management believes that following a change in legislation in Kazakhstan in 2018, a significant amount of the undistributed reserves are currently not subject to withholding tax on dividends paid.

13. Earnings per share

The following reflects the income and share data used in the EPS computations.

$ million (unless otherwise stated)	2018	2017
Net profit attributable to equity shareholders of the Company	**510**	447
Special items net of tax – note 7	**20**	29
Underlying Profit	**530**	476
Weighted average number of ordinary shares of 20 pence each for EPS on Ordinary and Underlying Profit calculation	**447,331,406**	446,658,862
Ordinary EPS – basic and diluted ($)	**1.14**	1.00
EPS based on Underlying Profit – basic and diluted ($)[1]	**1.18**	1.07

1 Alternative Performance Measures (APMs) are used to assess the performance of the Group and are not defined or specified under IFRS. For further information on APMs, including justification for their use, please refer to the APMs section on page 179.

Ordinary EPS

Basic and diluted EPS is calculated by dividing profit for the year attributable to equity holders of the Company by the weighted average number of ordinary shares of 20 pence each outstanding during the year. Purchases of the Company's shares by the Employee Benefit Trust and by the Company under any share buy-back programmes are both held in treasury and treated as own shares.

Further information relating to EPS based on Underlying Profit is in the Financial review on page 40.

14. Dividends

(a) Dividends paid

The dividends paid during the year ended 31 December 2018 are as follows:

	Per share US cents	Amount $ million
Year ended 31 December 2018		
Interim dividend in respect of year ended 31 December 2018	6.0	27

There were no dividends paid in the year ended 31 December 2017.

(b) Dividends declared after the balance sheet date

	Per share US cents	Amount $ million
Recommended by the Directors on 20 February 2019 (not recognised as a liability at 31 December 2018)		
Final dividend in respect of year ended 31 December 2018	**6.0**	**28**

The amount of the recommended final dividend of 6.0 US cents per share has been estimated based on the ordinary shares in issue (excluding treasury shares) at 31 December 2018 and on the new shares issued in January 2019 as part settlement of the acquisition of the Baimskaya copper project. For further details see note 35.

15. Property, plant and equipment

$ million	Land and buildings	Plant and equipment	Other	Construction in progress	Total
Cost					
At 1 January 2017	755	1,210	83	1,024	3,072
Additions[1,2]	8	15	6	(61)	(32)
Capitalised borrowing costs	–	–	–	88	88
Transfers[3]	254	659	48	(961)	–
Disposals	(3)	(5)	(1)	(1)	(10)
Net exchange adjustment	9	16	1	(19)	7
At 31 December 2017	1,023	1,895	137	70	3,125
Additions[2]	**12**	**21**	**6**	**130**	**169**
Capitalised borrowing costs	**–**	**–**	**–**	**4**	**4**
Transfers	**(1)**	**43**	**14**	**(56)**	**–**
Disposals	**–**	**(9)**	**(3)**	**(1)**	**(13)**
Net exchange adjustment	**(119)**	**(256)**	**(17)**	**(14)**	**(406)**
At 31 December 2018	**915**	**1,694**	**137**	**133**	**2,879**
Depreciation and impairment					
At 1 January 2017	202	159	36	5	402
Depreciation charge	34	129	16	–	179
Transfers	–	–	–	–	–
Disposals	(3)	(4)	(1)	–	(8)
Impairment	1	–	–	18	19
Net exchange adjustment	–	(2)	–	–	(2)
At 31 December 2017	234	282	51	23	590
Depreciation charge	**41**	**172**	**24**	**–**	**237**
Transfers	**2**	**–**	**–**	**(2)**	**–**
Disposals	**–**	**(9)**	**(3)**	**–**	**(12)**
Impairment	**11**	**3**	**2**	**–**	**16**
Net exchange adjustment	**(20)**	**(51)**	**(7)**	**(4)**	**(82)**
At 31 December 2018	**268**	**397**	**67**	**17**	**749**
Net book value					
At 31 December 2018	**647**	**1,297**	**70**	**116**	**2,130**
At 31 December 2017	789	1,613	86	47	2,535

1 Additions for 2017 include $19 million and $156 million of results capitalised during pre-commercial activities from the Bozshakol clay and Aktogay sulphide plants, respectively.

2 Includes a $3 million reduction (2017: $6 million increase) arising from changes in closure provision estimates.

3 Transfers relate mainly to the Bozshakol clay and Aktogay sulphide assets, which reached commercial production on 1 July and 1 October 2017 respectively.

16. Mining assets

$ million	Mineral licences and properties	Exploration cost	Mine development costs	Mine stripping costs	Construction in progress	Total
Cost						
At 1 January 2017	240	17	248	52	29	586
Additions	–	2	–	9	25	36
Transfers	–	(1)	21	–	(20)	–
Net exchange adjustment	–	–	(1)	–	(1)	(2)
At 31 December 2017	240	18	268	61	33	620
Additions	**–**	**4**	**3**	**6**	**33**	**46**
Transfers	**–**	**–**	**6**	**–**	**(6)**	**–**
Net exchange adjustment	**(6)**	**(2)**	**(27)**	**(7)**	**(8)**	**(50)**
At 31 December 2018	**234**	**20**	**250**	**60**	**52**	**616**
Depletion and impairment						
At 1 January 2017	1	1	145	17	–	164
Depletion charge	–	–	16	2	–	18
Transfers	–	(1)	1	–	–	–
At 31 December 2017	1	–	162	19	–	182
Depletion charge	**–**	**–**	**9**	**4**	**–**	**13**
Transfers	**–**	**–**	**–**	**–**	**–**	**–**
Impairment	**–**	**2**	**–**	**2**	**–**	**4**
Net exchange adjustment	**–**	**–**	**(14)**	**(1)**	**–**	**(15)**
At 31 December 2018	**1**	**2**	**157**	**24**	**–**	**184**
Net book value						
At 31 December 2018	**233**	**18**	**93**	**36**	**52**	**432**
At 31 December 2017	239	18	106	42	33	438

17. Other non-current assets

$ million	2018	2017
Advances paid for property, plant and equipment	**147**	8
Non-current VAT receivable[1]	**11**	38
Non-current inventories[2]	**127**	124
Long-term bank deposits[3]	**3**	2
Other long-term advances[4]	**15**	–
Gross value of other non-current assets	**303**	172
Provision for impairment	**(2)**	(2)
	301	170

1 Comprises VAT incurred at Bozymchak which is subject to audit and other administrative procedures prior to refund, with anticipated refund dates in excess of 12 months from the balance sheet date.

2 Non-current inventories comprise ore stockpiles that are expected to be processed in excess of 12 months from the balance sheet date and relate mainly to clay ore at Bozshakol.

3 Long-term bank deposits are monies placed in escrow accounts with financial institutions in Kazakhstan and Kyrgyzstan as required by the Group's site restoration obligations.

4 Other long-term advances are amounts transferred to the Baimskaya project for study costs, ahead of Initial Completion of the acquisition. Following Initial Completion, announced in January 2019, these amounts will be reclassified to mining assets.

18. Inventories

$ million	2018	2017
Raw materials and consumables	**248**	157
Work in progress	**115**	128
Finished goods	**82**	79
Gross value of inventories	**445**	364
Inventories provision	**(6)**	(5)
	439	359

The carrying amount of inventory that has been written down to net realisable value is $6 million (2017: $5 million).

19. Prepayments and other current assets

$ million	2018	2017
Advances paid for goods and services	17	13
VAT receivable	72	63
Amounts due from related parties	3	1
Other	4	5
Gross value of prepayments and other current assets	96	82
Provision for impairment of prepayments and other current assets[1]	(6)	–
	90	82

1 The provision of $6 million relates to VAT incurred at the East Region operations, the recovery of which is regarded as less than probable and includes claims where the statute of limitation is approaching. $3 million was written off against the provision during the year.

20. Trade and other receivables

$ million	2018	2017
Trade receivables[1]	125	131
Amounts due from related parties	–	1
Amounts due from third parties[2]	125	130
Interest receivable	3	2
Gross value of trade and other receivables	128	133
Allowance for expected credit losses[3]	(1)	(1)
	127	132

1 At 31 December 2018, $114 million of trade receivables relates to provisionally priced contracts measured at fair value through profit and loss (2017: $127 million), as outlined in note 31(b).

2 Amounts due from third parties has been reduced by $7 million (2017: an increase of $12 million) arising from marked to market adjustments on provisionally priced contracts at 31 December 2018.

3 The allowance for expected credit losses of $1 million (2017: $1 million) relates to trade receivables measured at amortised cost with a gross value of $1 million (2017: $1 million), as outlined in note 31(f).

21. Current investments

$ million	2018	2017
Current investments[1]	250	–
	250	–

1 In 2018, both the Group's major growth projects had achieved design levels of production, following which it announced the payment of an interim dividend in the second half of the year. This resulted in a change in the purpose of the Group's term deposits and constituted a change in conditions in accordance with paragraph 16 of IAS 8. Therefore, the Group has prospectively classified deposits with original maturity of greater than three months as current investments.

22. Cash and cash equivalents

$ million	2018	2017
Cash deposits with short-term initial maturities[1]	1,157	1,543
Cash at bank[2]	62	278
	1,219	1,821

1 Excludes term deposits with original maturity of greater than three months classified within current investments.

2 Cash at bank at 31 December 2018 of $2 million (2017: $nil) was restricted by legal or contractual arrangements. These amounts are excluded from the Group's measure of net debt (see note 30). Included within Cash and cash equivalents is $25 million advance consideration received from NFC in respect of the agreement for NFC to invest $70 million for a 19.4% equity stake in Koksay, as announced in June 2018. This amount is to be solely used for the investment into the Koksay project (see note 27).

23. Share capital and reserves

(a) Allotted share capital

	Number	£ million	$ million
Allotted and called up share capital – ordinary shares of 20 pence each			
At 1 January 2017, 31 December 2017 and 2018	**458,379,033**	**92**	**171**

The issued share capital was fully paid. During the year, 1,396,856 (2017: 143,310) treasury shares were used to satisfy awards under the Company's Save As You Earn ('SAYE'), Long Term Incentive Plans ('LTIP') and Deferred Share Bonus Plan ('DSBP') schemes. At 31 December 2018, the Company holds 10,146,890 (2017: 11,543,746) ordinary shares in treasury and the issued share capital of the Company which carries voting rights of one vote per share, comprises 448,232,143 (2017: 446,835,287) ordinary shares (excluding treasury shares).

(b) Own shares purchased under the Group's share-based payment plans

The provision of shares to the Group's share-based payment plans is facilitated by an Employee Benefit Trust. The cost of shares purchased by the Trust is charged against retained earnings as treasury shares. The Employee Benefit Trust has waived the right to receive dividends on these shares. During 2018, the Company made no purchases through the Trust in anticipation of satisfying future awards (2017: no purchases). 14,565 shares (2017: 223,429) were transferred out of the Trust in settlement of share awards granted to employees that were exercised during the period. Following approval from shareholders, shares held in treasury will be used to settle future awards.

At 31 December 2018, the Group, through the Employee Benefit Trust, owned 5,162 shares in the Company (2017: 19,727) with a market value of $35 thousand and a cost of $79 thousand (2017: $0.2 million and $0.1 million respectively). The shares held by the Trust represented less than 0.01% (2017: 0.01%) of the issued share capital at 31 December 2018.

(c) Capital reserves

$ million	Currency translation reserve	Capital redemption reserve	Total
At 1 January 2017	(2,068)	31	(2,037)
Exchange differences on retranslation of foreign operations	8	–	8
At 31 December 2017	(2,060)	31	(2,029)
Exchange differences on retranslation of foreign operations	**(428)**	**–**	**(428)**
At 31 December 2018	**(2,488)**	**31**	**(2,457)**

(i) Currency translation reserve

The foreign currency translation reserve is used to record exchange differences arising from the translation of the financial statements of subsidiaries whose functional currency is not the US dollar into the Group's presentation currency. The decrease in the US dollar value of the Group's foreign currency operations of $428 million (2017: increase of $8 million) follows a 16% decrease in the value of the tenge from 31 December 2017 to 31 December 2018.

(ii) Capital redemption reserve

As a result of the share buy-back programme undertaken in 2008 and the repurchase of Company shares in 2013, transfers were made from share capital to the capital redemption reserve based on the nominal value of the shares cancelled.

24. Borrowings

	Maturity	Average interest rate during the year	Currency of denomination	Current $ million	Non-current $ million	Total $ million
31 December 2018						
CDB-Bozshakol and Bozymchak – US$ LIBOR + 4.50%	2025	6.65%	US dollar	**180**	**1,165**	**1,345**
CDB-Aktogay facility – PBoC 5 year	2028	5.17%	CNY	**12**	**98**	**110**
CDB-Aktogay facility – US$ LIBOR + 4.20%	2029	6.45%	US dollar	**105**	**1,116**	**1,221**
Pre-export finance facility – US$ LIBOR + 3.00% - 4.50%	2021	4.97%	US dollar	**200**	**300**	**500**
Development Bank of Kazakhstan – US$ LIBOR + 4.50%	2025	6.70%	US dollar	**42**	**235**	**277**
				539	**2,914**	**3,453**
31 December 2017						
CDB-Bozshakol and Bozymchak – US$ LIBOR + 4.50%	2025	5.87%	US dollar	179	1,345	1,524
CDB-Aktogay facility – PBoC 5 year	2028	4.54%	CNY	12	116	128
CDB-Aktogay facility – US$ LIBOR + 4.20%	2029	5.60%	US dollar	105	1,222	1,327
Pre-export finance facility – US$ LIBOR + 3.00% - 4.50%	2021	5.04%	US dollar	100	500	600
Development Bank of Kazakhstan – US$ LIBOR + 4.50%	2025	5.89%	US dollar	22	276	298
				418	3,459	3,877

CDB-Bozshakol and Bozymchak facilities
At 31 December 2018, $1.3 billion (2017: $1.5 billion) was drawn under the facility agreements. The facilities accrue interest at US$ LIBOR plus 4.50% and arrangement fees with an amortised cost at 31 December 2018 of $12 million (2017: $15 million) have been netted off against these borrowings in accordance with IFRS 9. During 2018, $183 million of the borrowing was repaid, with $180 million due to be paid within 12 months of the balance sheet date (including $3 million of unamortised debt costs). The facility is repayable in semi-annual instalments in January and July with final maturity in 2025. KAZ Minerals PLC acts as guarantor of the facilities.

CDB-Aktogay finance facilities
The CDB-Aktogay facilities consists of a CNY 1.0 billion facility and a $1.3 billion US dollar facility. The funds mature 15 years from the date of the first draw down. KAZ Minerals PLC acts as guarantor of the loans.

The CNY 1.0 billion facility was fully drawn at 31 December 2015. At 31 December 2018, the drawn US dollar equivalent amount was $110 million (2017: $128 million). The facility accrues interest at the applicable benchmark lending rate published by the People's Bank of China. This facility is repayable in semi-annual instalments in March and September with $12 million repaid in 2018, while $12 million is due to be paid within 12 months of the balance sheet date. To protect the Group from currency risks arising on the CNY denominated debt, the Group has entered into CNY/US$ cross currency swaps for a portion of the exposure. This derivative instrument provides a hedge against movements in the CNY exchange rate against the US dollar and also swaps the interest basis from a CNY interest rate into a US$ LIBOR interest basis. The fair value of the swaps at 31 December 2018, included within payables, is $12 million (2017: $9 million).

The US dollar facility accrues interest at US$ LIBOR plus 4.20%. At 31 December 2018, the $1.3 billion facility was fully drawn. Arrangement fees with an amortised cost of $11 million (2017: $13 million) have been netted off against these borrowings in accordance with IFRS 9. The facility is repayable in semi-annual instalments in March and September commencing from 2018. During 2018, $108 million was repaid, with $105 million due to be paid within 12 months of the balance sheet date (including $2 million of unamortised debt costs).

Pre-export finance facility ('PXF')
In June 2017, the Group completed an amendment and extension of the PXF. The new facility extended the maturity profile of the facility by two and a half years from December 2018 until June 2021. Under the revised repayment profile, principal repayments commenced in July 2018 and continue in equal monthly instalments over a three-year period until final maturity in June 2021.

The facility amount is $600 million and was fully drawn at 31 December 2017. The interest basis of the facility is substantially the same as the previous facility with a variable margin of between 3.0% and 4.5% above US$ LIBOR, dependent on the ratio of net debt to EBITDA which will be tested semi-annually. During 2018, $100 million of the borrowing was repaid, with $200 million due to be paid within 12 months of the balance sheet date. KAZ Minerals PLC, Vostoktsvetmet LLC and KAZ Minerals Sales Limited act as guarantors of the facility.

Development Bank of Kazakhstan facility ('DBK')
In December 2016, the Group entered into a $300 million credit facility with the DBK which was fully drawn at 31 December 2016. The facility extends for a term of eight and a half years and bears an interest rate of US$ LIBOR plus 4.5%. The facility is repayable in instalments with the first repayment made in June 2018, followed by semi-annual repayments in May and November of each year from 2019 until 2024 and a final repayment in June 2025. The facility was drawn by KAZ Minerals Aktogay LLC, a Kazakhstan wholly owned subsidiary. KAZ Minerals PLC acts as guarantor of the facility.

At 31 December 2018, $277 million was drawn under the facility. Arrangement fees with an amortised cost of $1 million (2017: $2 million) have been netted off against these borrowings in accordance with IFRS 9. During 2018, $21 million of the borrowing was repaid, with $42 million due to be paid within 12 months of the balance sheet date.

Undrawn project and general and corporate purpose facilities
All debt facilities were fully drawn at 31 December 2018 and 2017.

25. Employee benefits

Vostoktsvetmet LLC provides post-retirement benefits and other long-term benefits in Kazakhstan which are partially funded. The largest portion of the employee benefits provision is for other long-term benefits, of which the most significant is for long-term disability allowances and which exposes the Group to actuarial risks reflected in the key assumptions below. The other benefits provided include one-time retirement grants, financial aid, dental care, medical benefits, sanatorium visits, annual financial support to pensioners and funeral aid.

The amounts recognised in the income statements are as follows:

$ million	2018	2017
Employer's share of current service cost	–	–
Employer's share of past service cost	–	(1)
Actuarial losses recognised in the year	–	2
Interest cost on benefits obligation	1	2
	1	3

The expense is recognised in the following line items of the income statements:

$ million	2018	2017
Administrative expenses	–	1
Finance costs	1	2
	1	3

The movement in the defined employee benefits obligation is as follows:

$ million	2018	2017
At 1 January	19	19
Employer's share of current service cost	–	–
Employer's share of past service cost	–	(1)
Actuarial losses arising in the income statement	1	3
Actuarial gain recognised in other comprehensive income	–	(1)
Interest cost on benefit obligation	1	2
Benefits paid	(2)	(3)
Net exchange adjustment	(1)	–
Defined benefit obligation at 31 December	**18**	19

The movement in the plan asset is as follows:

$ million	2018	2017
At 1 January	3	2
Contributions by employer	1	2
Benefits paid	(1)	(2)
Actuarial gain on plan assets recognised in the income statement	1	1
Fair value of plan assets at 31 December	**4**	3

The net liability and expected settlement of the defined benefit obligation is as follows:

$ million	2018	2017
Defined benefit obligation	18	19
Less: fair value of plan assets	(4)	(3)
Net liability recognised at 31 December	14	16
Current	2	2
Non-current	12	14
	14	16

The net employee benefits obligation of $14 million (2017: $16 million), consists of $2 million (2017: $3 million) related to post-employment benefits and $12 million (2017: $13 million) related to other long-term benefits mainly for disability allowances.

The principal actuarial assumptions used in determining the employee benefit obligation are as follows:

$ million	2018	2017
Discount rate at 31 December	7.4%	6.7%
Future salary increases	4.1%	3.0%
Medical and other related cost increases	4.1%	4.5%

In addition, mortality rates were determined with reference to the 2016 mortality table of Kazakhstan as published by the Government, adjusted by life expectancy in Kazakhstan forecasted by the United Nations in 2017.

26. Provision for closure and site restoration

$ million	2018	2017
At 1 January	67	57
Utilised	(1)	–
Change in estimate[1]	(3)	5
Unwinding of discount	4	4
Net exchange adjustment	(8)	1
At 31 December	59	67
Current	1	–
Non-current	58	67
	59	67

1 In 2018, a $3 million reduction in the provision (2017: $6 million increase) was capitalised to property, plant and equipment. In 2017, a $1 million reduction in the provision was recognised in the income statement.

The costs of decommissioning and reclamation of mines and processing facilities within the Group are based on the current obligations under Kazakhstan and Kyrgyzstan legislation governing closure and rehabilitation. The provision represents the discounted values of the estimated costs to decommission and reclaim the mines based on the current estimated life of mine of each deposit. The present value of these provisions has been calculated using discount rates of between 6.8% and 7.7% in Kazakhstan, depending on the life of each mine (2017: between 6.3% and 6.7%) and 8.9% in Kyrgyzstan (2017: 8.2%). The liability usually becomes payable after the end of the useful life of each mine, which ranges from one year to around 40 years. Uncertainties in estimating these costs include potential changes in regulatory requirements, decommissioning and reclamation alternatives, the levels of discount and inflation rates and the estimated timing of closure and decommissioning. The reduced estimate for the provision in 2018 arose mainly from the use of a higher discount rate used to determine the obligation. This was partly offset by a reduction in the life of mine estimate of the existing Aktogay concentrator and related infrastructure following the approval of the Aktogay expansion project. The project will construct an additional concentrator which will result in the existing infrastructure being decommissioned in around 25 years compared to the previous estimate of around 50 years. The closure and rehabilitation costs for the additional concentrator will be provided for during its construction.

27. Other liabilities

$ million	Payables to NFC	Advance consideration	Payments for licences	Total
At 1 January 2017	284	–	10	294
Payments	–	–	(1)	(1)
Unwinding of discount	15	–	1	16
Net exchange adjustment	–	–	(2)	(2)
At 31 December 2017	299	–	8	307
Additions	**–**	**25**	**–**	**25**
Payments	**(281)**	**–**	**(2)**	**(283)**
Unwinding of discount	**1**	**–**	**1**	**2**
Net exchange adjustment	**–**	**–**	**2**	**2**
At 31 December 2018	**19**	**25**	**9**	**53**
Current	**19**	**25**	**2**	**46**
Non-current	**–**	**–**	**7**	**7**
At 31 December 2018	**19**	**25**	**9**	**53**
Current	299	–	1	300
Non-current	–	–	7	7
At 31 December 2017	299	–	8	307

(a) Payables to NFC

The Group previously reached an agreement with its principal construction contractor at Aktogay, NFC, to defer payment of $300 million, of which $281 million was settled in 2018 with $19 million to be settled in early 2019.

The extended credit terms were discounted using a rate of US$ LIBOR plus 4.20% on the estimated cost of services performed. The unwinding of the interest was charged to the income statement within finance costs (2017: $11 million charged to property, plant and equipment as a borrowing cost until the date that the project reached commercial production).

(b) Advance consideration

In December 2018, the Group received $25 million advance consideration from NFC in respect of the agreement for NFC to invest $70 million for a 19.4% equity stake in KAZ Minerals Koksay B.V., the immediate parent entity of the Koksay exploration licence holder, as announced in June 2018.

The transaction is expected to complete in the first half of 2019, with the consideration to be solely used for investment in the Koksay project. On completion of the transaction, NFC's share in Koksay will be reflected as a non-controlling interest.

(c) Payments for licences for mining assets

In accordance with its contracts for subsoil use, the Group is liable to repay the costs of geological information provided by the Government of Kazakhstan for licenced deposits. Some of these obligations are payable in tenge while others are payable in US dollars, depending on the terms of each subsoil use contract. The total amount payable by the Group is discounted to its present value using a discount rate of 7.6% for tenge (2017: 7.6%) and 4.0% for US dollar (2017: 4.0%) obligations. Under the subsoil use agreements, the historical cost payments amortise over a 10-year period and commence with first production.

28. Trade and other payables

$ million	2018	2017
Payables for non-current assets	**63**	55
Interest payable	**71**	66
Trade payables	**51**	39
Salaries and related payables	**18**	19
Derivative instrument[1]	**12**	9
Amounts payable to related parties	**2**	3
Other payables and accrued expenses	**6**	8
Payables regarded as financial instruments for disclosure purposes – note 31	**223**	199
Mineral extraction tax and royalties payable	**48**	55
Other taxes payable	**9**	9
Payments received in advance from customers	**40**	9
	320	272

1 Relates to the CNY/US$ cross currency and interest rate swap on the CDB Aktogay loan. The change in the fair value of the derivative of $3 million is included within finance costs in the income statement (2017: $12 million within finance income).

29. Reconciliation of profit before tax to net cash inflow from operating activities

$ million	Notes	2018	2017
Profit before tax		642	580
Finance income	11	(33)	(30)
Finance costs	11	245	165
Share-based payments	34	3	3
Depreciation, amortisation and depletion		251	187
Impairment losses	6	29	20
Unrealised foreign exchange (gain)/loss		(8)	2
Other reimbursements		–	(1)
Operating cash flows before changes in working capital and provisions		1,129	926
Decrease in non-current VAT receivable		3	232
Increase in inventories		(158)	(65)
Increase in prepayments and other current assets		(30)	(41)
Decrease in trade and other receivables		4	27
Decrease in employee benefits		(1)	(1)
Decrease in provision for closure and site restoration		(1)	–
Increase in trade and other payables		51	6
Cash flows from operations before interest and income taxes paid		997	1,084

Non-cash transactions

There were the following non-cash transactions:

- capitalised interest of $4 million (2017: $88 million) for property, plant and equipment; and
- the reassessment of the provision for closure and site restoration during the year has resulted in a decrease of $3 million (2017: increase of $6 million) to property, plant and equipment, with a corresponding decrease (2017: increase) in the site restoration and clean up provisions.

30. Movement in net debt

$ million	At 1 January 2018	Cash flow	Other movements[1]	At 31 December 2018
Cash and cash equivalents	1,821	(604)	2	1,219
Less: restricted cash	–	–	(2)	(2)
Current investments	–	250	–	250
Borrowings[2]	(3,877)	424	–	(3,453)
Net debt[3]	(2,056)	70	–	(1,986)

$ million	At 1 January 2017	Cash flow	Other movements[1]	At 31 December 2017
Cash and cash equivalents	1,108	713	–	1,821
Borrowings[2]	(3,777)	(82)	(18)	(3,877)
Net debt[3]	(2,669)	631	(18)	(2,056)

1 Other movements in 2018 within restricted cash reflect legal or contractual arrangements against cash and cash equivalents which are excluded from the Group's measure of net debt. Other movements on borrowings comprise net foreign exchange movements and non-cash amortisation of fees on borrowings. For the year ended 31 December 2018, the $nil other movement on borrowings consists of $6 million of amortisation of fees on the Group's financing facilities and $6 million foreign exchange gains on the CDB-Aktogay RMB facility. For the year ended 31 December 2017, the $18 million other movement on borrowings consisted of $9 million of amortisation of fees on the Group's financing facilities and $9 million of foreign exchange differences on the CDB-Aktogay RMB facility.

2 The cash flows on borrowings reflect repayments on existing facilities of $424 million (2017: $294 million) with no draw downs in 2018 (2017: $376 million).

3 Net debt is an APM. APMs are used to assess the performance of the Group and are not defined or specified under IFRS. For further information on APMs, including justification for their use, please refer to the APMs section on page 179.

31. Financial risk management

The main risks arising from the Group's financial instruments are liquidity risk, credit risk, interest rate risk, foreign exchange risk and commodity price risk. These risks arise from exposures that occur in the normal course of business and are managed by the Group's Treasury department in close cooperation with the Group's business divisions under oversight of a Treasury Committee, which is chaired by the Chief Financial Officer. The responsibilities of the Treasury Committee include the monitoring of financial risks, management of the Group's cash resources, debt funding programmes and capital structure, approval of treasury counterparties and relevant transaction limits, and oversight of all significant treasury activities undertaken by the Group. The Treasury department operates as a service centre to the business divisions of the Group and not as a profit centre.

A Group Treasury Policy has been approved by the Board and is periodically updated to reflect developments in the financial markets and the financial exposures facing the Group. The Treasury Policy covers specific areas of financial risk management, in particular liquidity risk, credit risk, interest rate risk, foreign exchange risk and commodity price risk. The Group's Treasury Committee and the Group's Internal Audit department monitor compliance with the Treasury Policy on a regular basis.

The Group's Treasury department prepares monthly treasury reports for senior management which monitor all major financial exposures and treasury activities undertaken by the Group. In addition, a treasury report is prepared for each Board meeting which includes a summary of the credit markets and their impact on the implementation of the Group's strategy, progress on the Group's financing initiatives and the significant financial exposures faced by the Group.

The Group's principal financial instruments comprise borrowings, cash and cash equivalents and one derivative used for risk management purposes. The Group's borrowings, surplus liquidity and derivative financial instrument are controlled and managed centrally by the Group's Treasury department. Liquidity retained within Kazakhstan and Kyrgyzstan is only held for working capital purposes.

The Group's accounting policies with regard to financial instruments are detailed in note 36(s).

(a) Derivatives, financial instruments and risk management

The Group periodically uses derivative financial instruments to manage certain exposures to fluctuations in commodity prices, interest rates and exchange rates. The Group's philosophy is generally not to hedge its core revenue streams. In periods of significant market volatility or uncertainty, the Group may use derivative instruments as a means of reducing volatility on its operating cash flows. Limits on the size and type of any derivative hedge transaction are laid down by the Board and subject to strict internal controls.

(b) Categories and fair values of financial assets and financial liabilities

The carrying amounts of financial assets and liabilities by categories are as follows:

$ million	Notes	2018	2017
Financial assets at amortised cost[1]			
Long-term bank deposits	17	**3**	2
Other long-term advances	17	**15**	–
Trade and other receivables not subject to provisional pricing	20	**13**	5
Current investments	21	**250**	–
Cash and cash equivalents	22	**1,219**	1,821
		1,500	1,828
Financial assets at fair value through profit and loss[1]			
Trade receivables subject to provisional pricing[2]	20	**114**	127
Financial liabilities at amortised cost[1]			
Borrowings[3]	24	**(3,453)**	(3,877)
Other liabilities	27	**(53)**	(307)
Trade and other payables[4]	28	**(211)**	(190)
		(3,717)	(4,374)
Financial liabilities at fair value through profit and loss[1]			
Derivative instrument[5]	28	**(12)**	(9)

1 Financial assets at amortised cost were previously classified as 'loans and receivables' under IAS 39. There was no difference between the carrying amount under IAS 39 and the carrying amount under IFRS 9, at 1 January 2018. Trade receivables subject to provisional pricing were previously classified as 'loans and receivables' under IAS 39 whereas they are classified as Financial assets at fair value through profit and loss under IFRS 9. The transition to IFRS did not have any impact on the recognition or measurement of financial assets. There was no change in the classification and measurement of financial liabilities at fair value through profit and loss and financial liabilities at amortised cost from IFRS 9 on 1 January 2018.

2 Trade receivables subject to provisional pricing include $7 million adverse adjustment (2017: $12 million favourable) arising from the marked to market valuation on provisionally priced contracts at the year end. These are measured according to quoted forward prices in a market that is not considered active, which is a level 2 valuation method within the fair value hierarchy.

3 The fair value of borrowings approximates its carrying value and is measured by discounting future cash flows using currently available interest rates for debt of similar maturities, which is a level 3 valuation method within the fair value hierarchy.

4 Excludes payments received in advance from customers, other taxes payable and MET and royalties payable that are not regarded as financial instruments.

5 Derivative financial instruments, representing a cross currency swap and interest rate swap, are measured according to inputs other than quoted prices that are observable for the derivative financial instrument, either directly or indirectly, which is a level 2 valuation method within the fair value hierarchy.

The fair values of each category of financial asset and liability are not materially different from their carrying values as presented.

(c) Foreign exchange risk

The Group has transactional currency exposures which arise from sales or purchases in currencies other than that company's functional currency. The different functional currencies of the Group's entities are outlined in note 36(a) and the currencies giving rise to this foreign currency risk are primarily the US dollar and the CNY. Exchange gains and losses arise principally from bank deposits, trade and other receivables, certain intercompany funding balances that exist within the Group and trade and other payables.

Where possible, the Group attempts to conduct its business, maintain its monetary assets and source corporate debt capital in US dollars to minimise its exposure to other currencies. The Group retains surplus cash balances in US dollars for capital expenditure, acquisitions, servicing of debt and returns to shareholders. Working capital balances are maintained in a mix of US dollars and local currencies depending on the short-term requirements of the business. Whilst there is a strong correlation between many mining input costs and the US dollar, a significant portion of the business' operating costs are denominated in local currencies, particularly the Kazakhstan tenge. Rates of exchange for these currencies relative to the US dollar could fluctuate significantly and may materially impact the profitability of the underlying operations and the net assets of the Group.

The Group generally does not enter into hedging positions in respect of its exposure to foreign currency risk. From time to time, acquisitions and capital investments may expose the Group to movements in other currencies and the Group will consider hedging such exposures on a case-by-case basis.

To protect the Group from currency risks arising on the CDB Aktogay CNY denominated debt, the Group has entered into a CNY/US$ cross currency swap. This derivative instrument provides a hedge against movements in the CNY exchange rate against the US dollar and also swaps the interest basis from a CNY interest rate into a US$ LIBOR interest basis. This derivative is measured at fair value with the fair value adjustment recorded in profit and loss.

(i) Foreign currency exposure by balance sheet account profile

The Group's exposure to foreign currency risk based on gross amounts, which include intercompany balances, is shown below. The table sets out the Group's financial assets and liabilities which are denominated in the stated currencies but held in subsidiaries or joint operations with a different functional currency, thereby exposing the Group to transactional net currency gains and losses which are recognised in the income statement:

$ million	US dollar[1]	UK sterling	KZT[2]	CNY	Other	Total
2018						
Long-term bank deposits	**2**	**–**	**–**	**–**	**–**	**2**
Trade and other receivables	**387**	**–**	**–**	**–**	**1**	**388**
Cash and cash equivalents	**85**	**2**	**–**	**4**	**2**	**93**
Borrowings	**(326)**	**(87)**	**–**	**(110)**	**–**	**(523)**
Other liabilities	**(27)**	**–**	**–**	**–**	**–**	**(27)**
Trade and other payables	**(159)**	**(2)**	**(1,800)**	**–**	**(4)**	**(1,965)**
	(38)	**(87)**	**(1,800)**	**(106)**	**(1)**	**(2,032)**

$ million	US dollar[1]	UK sterling	KZT	CNY	Other	Total
2017						
Trade and other receivables	292	1	–	–	2	295
Cash and cash equivalents	607	1	–	2	1	611
Borrowings	(367)	(90)	–	(128)	–	(585)
Other liabilities	(307)	–	–	–	–	(307)
Trade and other payables	(126)	(4)	–	–	(3)	(133)
	99	(92)	–	(126)	–	(119)

1 The US dollar net monetary liability (2017: asset) arises mainly from KZT functional currency entities, except for a $116 million (2017: $139 million) net monetary liability arising in a KGS functional currency entity.

2 The KZT net monetary liability arises in a US dollar functional currency entity and relates to intercompany balances at 31 December 2018. The Group has entered into an intercompany forward exchange contract to hedge the foreign exchange exposure.

31. Financial risk management continued

(c) Foreign exchange risk continued

(ii) Foreign currency sensitivity analysis

The estimated impact of a movement in foreign currencies has been determined based on the balances of financial assets and liabilities at 31 December 2018 that are not denominated in the functional currency of the subsidiary or joint operation. This sensitivity does not represent the income statement impact that would be expected from a movement in exchange rates over the course of a period of time and assumes that all other variables, in particular interest rates, remain constant. A 10% strengthening of the US dollar against the following currencies at 31 December would have changed profit after tax by the amounts shown below.

	Impact on profit	
$ million	**2018**	2017
KZT[1]	**6**	19
KGS	**(12)**	(14)
UK sterling	**7**	7
CNY	**9**	10

1 The sensitivity excludes the impact of the $1.8 billion KZT balance as this has been internally hedged as described in note 31(c)(i).

A 10% weakening of the US dollar against the above currencies at 31 December would have an equal and opposite effect, on the basis that all other variables remain constant.

(d) Commodity price risk

The Group's revenues and earnings are directly impacted by fluctuations in the prices of the commodities it produces. The Group's principal commodities (copper, zinc, gold and silver) are priced via reference to global metal exchanges, upon which pricing is derived from global demand and supply and influenced by macroeconomic considerations and financial investment cash flows. The pricing of the Group's principal commodities may also include a pre-determined margin or discount depending on the terms of sales contracts. Commodity prices, particularly those derived from global metal exchanges, may fluctuate significantly and may have a material impact on the Group's financial results.

Management closely monitors the impact of fluctuations in commodity prices on the business and uses conservative pricing assumptions and sensitivity analysis for its forecasting and investment appraisals.

In accordance with IFRS 7, the impact of commodity prices has been determined based on the balances of financial assets and liabilities at 31 December 2018. This sensitivity does not represent the income statement impact that would be expected from a movement in commodity prices over the course of a period of time. In addition, the analysis assumes that all other variables remain constant.

A 10% increase/(decrease) in commodity prices after the period end would impact the Group's provisionally priced sales volumes and increase/(decrease) profit after tax by the amounts shown below.

$ million	**2018**	2017
Copper cathodes	**2**	2
Copper in concentrate	**13**	11
Zinc	**–**	1
Gold	**2**	2

(e) Interest rate risk

The Group has financial assets and liabilities which are exposed to changes in market interest rates. Changes in interest rates primarily impact borrowings by changing their future cash flows (floating rate debt) or their fair value (fixed rate debt) and deposits. The Group's interest rate management policy is generally to borrow and invest at floating rates of interest. In some circumstances, an element of fixed rate funding may be considered appropriate. Fixed rate hedging using interest rate swaps may be undertaken during periods where the Group's exposure to movements in short-term interest rates is more significant, or in periods when interest rates are perceived to be below long-term historical levels. At 31 December 2018, the Group had an outstanding cross currency and interest rate swap on the CDB Aktogay facility of $12 million (2017: $9 million).

The exposure of the Group's floating and fixed rate financial assets and liabilities to interest rate risk is as follows:

$ million	Floating rate	Fixed rate	Non-interest bearing	Total
			At 31 December 2018	
Long-term bank deposits	–	1	2	3
Other long-term advances	–	–	15	15
Trade and other receivables	–	–	127	127
Current investments	–	250	–	250
Cash and cash equivalents	701	453	65	1,219
Borrowings	(3,453)	–	–	(3,453)
Other liabilities	–	(9)	(44)	(53)
Trade and other payables[1]	–	–	(223)	(223)
	(2,752)	695	(58)	(2,115)

$ million	Floating rate	Fixed rate	Non-interest bearing	Total
			At 31 December 2017	
Long-term bank deposits	–	2	–	2
Trade and other receivables	–	–	132	132
Cash and cash equivalents	1,131	660	30	1,821
Borrowings	(3,877)	–	–	(3,877)
Other liabilities	–	(307)	–	(307)
Trade and other payables[1]	–	–	(199)	(199)
	(2,746)	355	(37)	(2,428)

1 Trade and other payables excludes payments received in advance from customers, other taxes payable and MET and royalties that are not regarded as financial instruments.

The interest charged on floating rate financial liabilities is based on the relevant benchmark rate (such as LIBOR). Interest on financial instruments classified as fixed rate is fixed until the maturity of the instrument.

In accordance with IFRS 7, the impact of interest rates has been determined based on the balances of financial assets and liabilities at 31 December 2018. This sensitivity does not represent the income statement impact that would be expected from a movement in interest rates or outstanding borrowings over the course of a period of time. In addition, the analysis assumes that all other variables remain constant. The effect on profit after tax of a 1% movement in US$ LIBOR rates, based on the year end net debt position and with all other variables held constant, is estimated to be $17 million (2017: $17 million).

(f) Credit risk

Exposure to credit risk arises as a result of transactions in the Group's ordinary course of business and is applicable to all financial assets and commitments due from third parties. The Group has adopted policies and procedures to control and monitor these exposures to minimise the risk of loss in the event of non-performance by counterparties. The maximum exposure with respect to credit risk is represented by the carrying amount of each financial asset on the balance sheet, as outlined in note 31(b).

Credit risk relating to trade receivables

Sales of metal to customers are made either on receipt of cash prior to delivery and transfer of title of goods, cash on delivery and transfer of title of goods or through letters of credit which are received from the customer's bank. Credit risk on trade receivables is limited. The Group monitors the credit quality of its significant customers on an ongoing basis and receivables that are neither past due nor impaired are considered of good credit quality.

Cash is received prior to delivery and transfer of title of the goods for sales to European customers. Sales to Chinese customers are predominantly made under letters of credit which are obtained prior to delivery and transfer of title of the goods. For sales made to Chinese customers without letters of credit, cash is received prior to delivery and transfer of title of the goods.

Sales to European and Chinese customers are subject to provisional pricing and then final pricing adjustments. The Group is therefore exposed to the residual final pricing adjustment for each sales transaction although such amounts are not considered material in the context of the Group's overall revenues. The impairment requirements of IFRS 9 relating to expected credit losses do not apply to the Group's trade receivables subject to provisional pricing, which are measured at fair value through profit or loss.

31. Financial risk management continued

(f) Credit risk continued

Credit risk relating to trade receivables continued

The East Region may at times provide certain social services to municipal authorities in the communities in which it operates as part of its contractual obligations under its subsoil licences. For most receivable balances due from municipal authorities, if any, expected credit losses are recognised on a forward looking basis taking into account past payment history. The Group applies a simplified approach to measure the loss allowance for trade receivables not subject to provisional pricing and possible default events have been considered over the lifetime of those receivables. The effect of this assessment has not resulted in a material revision in the loss allowance compared to the prior year.

(i) Concentrations for trade receivables by geographical regions

At 31 December 2018, one customer (2017: four customers) accounted for 87% (2017: 90%) of the trade and other receivables balance. By 15 February 2019, 82% (14 February 2018: 75%) of year-end balances due from these customers had been received in full.

The maximum exposure to credit risk for trade receivables at 31 December by geographic areas was:

$ million	2018	2017
Europe	4	3
China	119	120
Kazakhstan	4	9
	127	132

Of the above, $114 million relates to trade receivables measured at fair value through profit or loss and $13 million is measured at amortised cost (2017: $127 million and $5 million respectively).

(ii) Impairment losses for trade receivables measured at amortised cost

The ageing of trade receivables measured at amortised cost at 31 December, was:

	2018		2017	
$ million	Gross	Impairment	Gross	Impairment
Not past due	13	–	2	–
Past due 0-90 days	–	–	1	–
Past due 91-180 days	–	–	1	–
Past due 181-270 days	–	–	1	–
More than 270 days	1	(1)	1	(1)
	14	(1)	6	(1)

The movement in the loss allowance in respect of trade receivables measured at amortised cost was as follows:

$ million	2018	2017
At 1 January[1]	1	1
Charged to income statement	–	–
At 31 December	1	1

1 There was no change in the loss allowance at 31 December 2017 as a result of initial application of IFRS 9 on 1 January 2018.

Credit risk related to cash and cash equivalents and current investments

Credit risk relating to the Group's other financial assets, principally cash and cash equivalents and current investments, arises from the potential default of counterparties. Credit risk arising from balances with banks and financial institutions is managed by the Group's Treasury Committee in accordance with a Board approved Treasury Policy. The Group's cash management policies emphasise security and liquidity ahead of investment return. Investments of cash and deposits are made only with approved counterparties of high credit worthiness and within credit limits assigned to each counterparty. Exposures are measured against maximum credit limits assigned to each approved counterparty to ensure credit risk is effectively managed. The limits are set to minimise the concentration of risks and therefore mitigate any financial loss through potential counterparty failure.

In order to manage counterparty and liquidity risk, surplus funds within the Group are held predominantly in the UK and funds remaining in Kazakhstan are utilised mainly for working capital purposes. The Group must maintain a level of cash and deposits in Kazakhstan with local branches of international financial institutions and well established local Kazakhstan banks. The surplus funds in the UK are held primarily with major European and US financial institutions with minimum ratings of Standard & Poor's 'A-' and Moody's 'A3' and 'AAA' rated liquidity funds. These limits are reviewed on a regular basis to take account of developments in financial markets and updated accordingly. Expected credit losses take into account the maturities of deposits and changes in observable inputs, such as the spread on credit default swaps, which may indicate changes in the probability of potential default of counterparties. There have been no significant increases in credit risk since initial recognition and possible default events have been considered over a period of 12 months after the reporting date. At 31 December 2018, there were no expected credit losses in respect of cash and cash equivalents and current investments (2017: none).

(g) Liquidity risk

The Group's objective is to maintain a balance between availability of funding and maximising investment return on its liquid resources through the use of liquid cash investments and debt facilities of varying maturities. Management regularly reviews the funding requirements of the Group in selecting appropriate maturities for its liquid cash investments.

The Group's policy is to centralise debt and surplus cash balances to the maximum extent possible.

Maturity of financial liabilities

The table below analyses the Group's financial liabilities, which will be settled on a gross basis, into relevant maturity groups based on the remaining period at the balance sheet date to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows.

$ million	On demand	Less than 3 months	3 to 12 months	1 to 5 years	More than 5 years	Total
2018						
Borrowings[1]	–	(293)	(460)	(2,218)	(1,465)	(4,436)
Other liabilities[2]	–	(44)	(2)	(4)	(4)	(54)
Trade and other payables[3]	–	(140)	–	–	–	(140)
Derivative instrument	–	–	–	(12)	–	(12)
	–	(477)	(462)	(2,234)	(1,469)	(4,642)

$ million	On demand	Less than 3 months	3 to 12 months	1 to 5 years	More than 5 years	Total
2017						
Borrowings[1]	–	(269)	(428)	(2,436)	(1,845)	(4,978)
Other liabilities[2]	–	(250)	(50)	(7)	(3)	(310)
Trade and other payables[3]	–	(124)	–	–	–	(124)
Derivative instrument	–	–	–	(9)	–	(9)
	–	(643)	(478)	(2,452)	(1,848)	(5,421)

1 Borrowings include expected future interest payments based on contracted margins and prevailing LIBOR rates at the balance sheet date.

2 Other liabilities are presented on an undiscounted gross basis.

3 Trade and other payables exclude payments received in advance from customers, other taxes payable and MET and royalties that are not regarded as financial instruments and interest payable which is reflected within borrowings. The interest payable on borrowings in 2017 was reflected within Trade and other payables in the 2017 financial statements. This has been restated to be consistent with the 2018 disclosures.

(h) Capital management

The over-riding objectives of the Group's capital management policy are to safeguard and support the business as a going concern through the commodity cycle, to maximise returns to shareholders (either through dividends or share buy-backs) and benefits to other stakeholders and to maintain an optimal capital structure in order to reduce the Group's cost of capital.

At 31 December 2018, total capital employed (which comprises equity holders' funds, non-controlling interests and borrowings) of the Group amounted to $4,507 million, compared to $4,875 million at 31 December 2017. Total capital employed is the measure that is used by the Directors in managing capital.

At 31 December 2018, the Group is in a net debt position of $1,986 million (2017: $2,056 million).

The Group seeks to maintain a level of net debt which does not exceed two times 'normalised' EBITDA through the commodity cycle. This ratio is reviewed in conjunction with market conditions and prevailing commodity prices in order to ensure an efficient capital structure that is balanced against the risks of carrying excessive leverage. The Board maintains the flexibility to suspend the ratio to allow for higher gearing during periods of major capital investment. The Group does not have a target debt/equity ratio. Included within the current debt facilities are financial covenants related to maximum borrowing levels of the Group (determined by reference to net debt to EBITDA and debt to equity ratios), minimum tangible net worth of individual Group entities and consolidated gross assets to gross liabilities ratios, for which compliance certificates are produced. All financial covenants were fully complied with during the year and up to the date of approval of the financial statements.

32. Commitments and contingencies

(a) Legal claims

In the ordinary course of business, the Group is subject to legal actions and complaints. The Directors believe that the ultimate liability, if any, arising from such actions or complaints will not have a materially adverse effect on the financial condition or results of operations of the Group. As of 31 December 2018 and 2017, the Group was not involved in any significant legal proceedings, including arbitration, which may crystallise a material financial loss for the Group.

(b) Kazakhstan and Kyrgyzstan taxation contingencies

(i) Inherent uncertainties in interpreting tax legislation

The Group is subject to uncertainties relating to judgements used in the determination of its tax liabilities and the timing of recovery of tax refunds. Kazakhstan and Kyrgyzstan tax legislation and practice are in a state of continuous development and, therefore, are subject to varying interpretations and changes which may be applied retrospectively. The Directors' interpretation of tax legislation as applied to the transactions and activities of the Group may not coincide with that of the tax authorities. As a result, the tax authorities may challenge transactions and the Group may be assessed with additional taxes, penalties and fines or refused refunds, which could have a material adverse effect on the Group's financial performance or position.

(ii) Tax audits

Historical tax years relating to various companies within the Group remain open for inspection during a future tax audit. Consequently, the tax figures recorded in the financial statements for these years may be subject to change.

The tax authorities in Kazakhstan are able to raise additional tax assessments for five years after the end of the relevant tax period in respect of all taxes, except for excess profits tax. In respect of excess profits tax, they are able to raise additional tax assessments for five years after the expiration of the terms of the relevant subsoil contract. In Kyrgyzstan, tax authorities are able to raise additional tax assessments for a period of six years after the end of the relevant tax period.

(iii) Transfer pricing

The Kazakhstan transfer pricing legislation provides clarity on various aspects of transfer pricing, including the use of LME and LBMA prices as the basis of market prices, quotation periods to be used for the sale and purchase of traded commodities and the acceptability of discounts with reference to LME/LBMA prices when transacting in traded commodities. Notwithstanding these, the Directors have recognised a provision for the amounts that represent the Directors' best estimate of the probable cash payments that will be required to settle any residual transfer pricing exposures based on the Directors' interpretation of the transfer pricing legislation and the prevailing status of discussions with the tax authorities. The risk remains that the tax authorities may take a different position with regard to the interpretation of the transfer pricing legislation, and amendments thereof, and the outcome of discussions with the Kazakhstan tax authorities may be materially different from the Directors' expectations.

(iv) Possible additional tax liabilities

The Directors believe that the Group is in substantial compliance with the tax laws in Kazakhstan and Kyrgyzstan and any contractual terms entered into that relate to tax which affect its operations and that, consequently, no additional material tax liabilities will arise. However, due to the reasons set out above, the risk remains that the relevant tax authorities may take a differing position with regard to the interpretation of contractual provisions or tax law (inclusive of corporate income taxes, value added tax and subsoil use legislation).

The resulting effect of any positions taken by the tax authorities that differ from those of the Directors is that additional tax liabilities may arise or the timing of refunds due may take longer than expected or may be refused. Therefore it is not practical for the Directors to estimate the financial effect of the timing of tax refunds and of additional tax liabilities, if any, together with any associated penalties and charges for which the Group may be liable that may arise from different interpretations applied by the tax authorities.

The Directors do not believe that there are material uncertain tax positions at 31 December 2018.

(c) Environmental contingencies

Environmental regulations, including emissions legislation, in Kazakhstan and Kyrgyzstan are continually evolving. The outcome of environmental regulations under proposal or any future environmental legislation cannot be reliably estimated at present. As obligations are determined, they will be provided for in accordance with the Group's accounting policies. The Directors believe that there are no significant liabilities under current legislation not accrued for in the Group's consolidated financial statements, however, they recognise that the environmental regulators in Kazakhstan and Kyrgyzstan may take a differing position with regard to the interpretation of environmental legislation. The resulting effect is that additional environmental liabilities may arise however, due to the range of uncertainties, it is not practical for the Directors to estimate any further potential exposures.

The provision that has been made for costs associated with restoration and abandonment of mine sites upon depletion of deposits (see note 26), is based upon the estimation of the Group's specialists or external consultants. Where events occur that change the level of estimated future costs for these activities, the provision will be adjusted accordingly.

(d) Use of subsoil and exploration rights

In Kazakhstan, all subsoil reserves belong to the State, with the Ministry of Investments and Development (the 'Ministry') granting exploration and production rights to third party bodies. Subsoil and exploration rights are not granted in perpetuity and any renewal must be agreed before the expiration of the relevant contract or licence. These rights may be terminated by the Ministry if the Group does not satisfy its contractual obligations. In January 2019, the Ministry approved the extension of the Koksay exploration licence to June 2021.

In Kyrgyzstan, all subsoil reserves belong to the State, with the State Agency for Geology and Mineral Resources of the Kyrgyz Republic (the 'competent body') granting exploration and production rights to third party bodies. Subsoil and exploration rights are not granted in perpetuity and any renewal must be agreed before the expiration of the relevant contract or licence. These rights may be terminated by the competent body if the Company does not satisfy its contractual obligations.

(e) Capital expenditure commitments

The Group has capital expenditure commitments for the purchase of property, plant and equipment at 31 December 2018 amounting to $724 million (2017: $47 million). These amounts relate mainly to the Aktogay expansion project and reflect contractual commitments, not the minimum cost which would be incurred in the event of delay or cancellation.

(f) Operating lease commitments

The operating lease expense for the year was $3 million (2017: $3 million). At 31 December, the Group had the following total commitments under non-cancellable operating leases:

$ million	2018	2017
Within one year	4	3
After one year but not more than five years	5	9
More than five years	3	3
	12	15

33. Related party disclosures

(a) Transactions with related parties

Transactions between the Company and its subsidiaries, which are related parties of the Company, have been eliminated on consolidation and are not disclosed in this note. Details of transactions between the Group and other related parties, including Kazakhmys Holding Group, are disclosed below.

The following table provides the total amount of transactions which have been entered into with related parties for the relevant financial year:

$ million	Sales to related parties	Purchases from related parties	Amounts owed by related parties[1]	Amounts owed to related parties
Kazakhmys Holding Group				
2018	**4**	**101**	**3**	**2**
2017	5	100	2	3

1 No provision is held against the amounts owed by related parties at 31 December 2018 and 2017.

Kazakhmys Holding Group

The related party transactions and balances with companies which are part of the Kazakhmys Holding Group (a company owned by Vladimir Kim, a Director of the Company, and Eduard Ogay, a former Director of the Company) are provided under two Framework Service Agreements. These include the provision of smelting and refining of the Group's copper concentrate, electricity supply and certain maintenance functions.

(b) Terms and conditions of transactions with related parties

Prices for related party transactions are determined by the parties on an ongoing basis depending on the nature of the transaction.

(c) Subsidiaries and joint operations

Details of investments in subsidiaries and joint operations are disclosed in note 37(k).

34. Share-based payment plans

The Company's share-based payment plans consist of a Long Term Incentive Plan ('LTIP'), and a Deferred Share Bonus Plan ('DSBP'). The total expense for the year ended 31 December 2018 arising from these plans was $3 million (2017: $3 million). The total number of shares outstanding under these schemes as at 31 December 2018 was 2,880,433 (2017: 3,756,390). The total number of shares exercisable under these schemes as at 31 December 2018 was 852,602 (2017: 1,040,431).

These plans are discretionary benefits offered by the Company for the benefit of its employees. The main purpose is to increase the interest of the employees in KAZ Minerals long-term business goals and performance through share ownership. They represent incentives for employees future performance and commitment to be aligned to the goals of the Group. For future awards, the Company may issue new shares or use shares held as treasury by the Company, as approved by shareholders, rather than purchase the shares in the open market through the Employee Benefit Trust.

35. Post balance sheet events

(a) Baimskaya copper project

On 22 January 2019, the Group announced the Initial Completion of the acquisition of the Baimskaya copper project in the Chukotka region of Russia. The consideration due at Initial Completion was $436 million in cash and 22.3 million new KAZ Minerals shares, which were allotted to the Vendor. $50 million of the $436 million cash consideration has been withheld pending the release of a guarantee agreement made by the acquired entity which is the legal owner of the Baimskaya licence. The final cash payment of $50 million is expected to be settled in 2019. The 22.3 million shares are subject to a three-year lock-up period ending on the third anniversary of Initial Completion. Deferred Consideration of $225 million for the remaining interest is payable in 21.0 million shares, subject to the achievement of certain Project Delivery Conditions, including a pre-determined level of throughput and development of infrastructure by the Russian state. To the extent these conditions are not met or waived by the Group and therefore not settled in shares, the Deferred Consideration will become payable in cash on 31 March 2029.

In assessing the accounting for the acquisition, consideration was given to whether the copper project consisted of an integrated set of inputs and processes (as defined under IFRS 3 *'Business Combinations'*) that could be used to generate an output. As the copper project is in the exploration stage prior to feasibility, the work undertaken to date was considered to be an assessment of its inputs rather than the existence of inputs and processes capable of generating an output. As such, the acquisition will be accounted for as an asset acquisition, not a business combination, with the majority of the value paid being shown as a mining licence within mining assets.

As part of the consideration is settled in shares, the transaction falls within the scope of IFRS 2 *'Share-based Payment'*. The Initial Consideration of $675 million includes 22.3 million KAZ Minerals PLC shares valued at $239 million, which will be recognised as an increase in share capital of around $6 million and share premium of $233 million. The Deferred Consideration of $225 million will also be included within equity, representing the Group's ability to settle this amount through the issue of 21.0 million shares. The Group obtained a 75% equity stake in the project on Initial Completion, however a non-controlling interest will not be recognised as the remaining 25% will be purchased through Deferred Consideration.

(b) Dividends

On 20 February the Directors of the Company recommended a final dividend for 2018 of 6.0 USc per share. See note 14.

36. Summary of significant accounting policies

The following significant accounting policies have been applied in the preparation of the consolidated financial statements. These accounting policies have been consistently applied across the Group.

(a) Foreign currency translation

The functional currency for each entity in the Group is determined as the currency of the primary economic environment in which it operates. Transactions in currencies other than the functional currency are initially recorded at the functional currency rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the rate of exchange ruling at the balance sheet date. Exchange gains and losses on settlement of foreign currency transactions translated at the rate prevailing at the date of the transactions, or the translation of monetary assets and liabilities at period end exchange rates, are taken to the income statement. Transactions denominated in foreign currencies and that result in the recognition of non-monetary assets and liabilities are translated to the functional currency at the foreign exchange rate ruling at the date of each transaction.

The functional currency of the Company, the Group's main financing and holding companies and KAZ Minerals Sales Limited is the US dollar as the majority of the operating activities are conducted in US dollars. The functional currency of the Group's Kazakh entities and their UK based project finance companies, as applicable, is the Kazakhstan tenge, with the Bozymchak functional currency being the Kyrgyz som. On consolidation, income statements of subsidiaries are translated into US dollars, at average rates of exchange. Balance sheet items are translated into US dollars at period end exchange rates. Exchange differences on the retranslation are taken to a separate component of equity.

The following foreign exchange rates against the US dollar have been used in the preparation of the consolidated financial statements:

	31 December 2018		31 December 2017	
	Spot	Average	Spot	Average
Kazakhstan tenge	**384.20**	**344.71**	332.33	326.00
Kyrgyz som	**69.85**	**68.84**	68.84	68.94
UK pound sterling	**0.78**	**0.75**	0.74	0.78

(b) Business combinations and joint operations

The Group applies the purchase method to account for business combinations. On the acquisition of a subsidiary, the purchase consideration is allocated to the identifiable assets, liabilities and contingent liabilities (identifiable net assets) on the basis of fair values at the date of acquisition. Those mining rights, mineral reserves and resources that are able to be reliably valued are recognised in the assessment of fair values on acquisition. Other potential reserves, resources and mineral rights, for which, in the Directors' opinion, values cannot be reliably determined, are not recognised.

The consideration transferred (cost of acquisition) is the aggregate of: (a) the fair values at the date of exchange, of assets transferred, liabilities incurred or assumed, and equity instruments issued by the Group; and (b) the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred in the income statement.

When the cost of acquisition exceeds the fair value attributable to the Group's share of the identifiable net assets, the difference is treated as purchased goodwill.

If the fair value attributable to the Group's share of the identifiable net assets exceeds the fair value of the consideration, the Group reassesses whether it has correctly identified and measured the assets acquired and liabilities assumed and recognises any additional assets or liabilities that are identified in that review. If that excess remains after reassessment, the Group recognises the resulting gain in the income statement on the acquisition date.

When a subsidiary is acquired in a number of stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date through the income statement.

Joint operations

A joint arrangement is an arrangement in which two or more parties have joint control. Joint control is the contractually agreed sharing of control such that decisions about the relevant activities of the arrangement (those that significantly affect the Group's returns) require unanimous consent of the parties sharing control. A joint operation is a joint arrangement in which the parties that share joint control have rights to the assets and obligations for the liabilities, relating to the arrangement. This includes situations where the parties benefit from the joint activity through a share of the output, rather than by receiving a share of the results of trading.

Joint operations are proportionally consolidated such that the Group's share of its assets, liabilities, revenue and expenses are included within the consolidated financial statements. On consolidation, transactions and balances, including any profit earned, between the Group and the joint operation are eliminated, to the extent of its interest.

(c) Property, plant and equipment

(i) Initial measurement

Property, plant and equipment is stated at cost less accumulated depreciation and impairment losses. The cost of an item of property, plant and equipment comprises its purchase price and any costs directly attributable to bringing it into working condition for its intended use. The cost of self-constructed assets includes the cost of materials, direct labour and an appropriate proportion of production overheads.

Costs which are necessarily incurred and revenues earned whilst commissioning new assets, in the period before they are capable of operating in the manner intended by management, are capitalised. For mining and processing facility assets, this requires judgement based on the facts and circumstances of the operation and is considered to be when these assets have reached commercial levels of production. Commercial production represents production in reasonable commercial quantities and refers to the level of output and not profit or loss and is generally considered to have been achieved when the operation is consistently operating at over 60% of its intended capacity for a sustained period of around three months.

(ii) Depreciation

The cost of each item of property, plant and equipment is depreciated over its useful life to its estimated residual value. Each item's estimated useful life has due regard to both its own physical life limitations and the present assessment of economically recoverable reserves of the mine property at which the item is located. Estimates of remaining useful lives and residual values are made on a regular basis for all mine buildings, plant and equipment, with annual reassessments for major items. Depreciation is charged to the income statement on a straight-line basis over the estimated useful life of the individual asset to its estimated residual value.

Depreciation commences on the date the assets are ready for use within the business. Freehold land is not depreciated.

The expected useful lives are as follows:

• Buildings	15-40 years
• Plant and equipment	4-25 years
• Other	3-15 years

(iii) Construction in progress

Assets in the course of construction are capitalised as a separate component of property, plant and equipment. On completion, the cost of construction is transferred to the appropriate category.

Construction in progress is not depreciated.

36. Summary of significant accounting policies continued

(c) Property, plant and equipment continued

(iv) Repairs and maintenance

Expenditure incurred to replace a component of an item of property, plant and equipment that is accounted for separately, is capitalised with the carrying amount of the replaced component being written off. Repairs and maintenance expenditure, including major overhauls which are infrequent, are capitalised if additional future economic benefits will arise from the expenditure. All other repairs and maintenance expenditure is recognised in the income statement as incurred.

(v) Leased assets

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor and not transferred to the Group are classified as operating leases. Payments made under operating leases are charged to the income statement on a straight-line basis over the period of the lease.

(d) Mining assets

(i) Mineral licences and properties

Costs of acquiring mineral licences and properties are capitalised on the balance sheet in the year in which they are incurred. Costs associated with a start-up period for significant developments are capitalised during the commissioning period (development expenditure) where the asset is incapable of operating at normal levels without a commissioning period. Mineral licences and properties are amortised over the remaining life of the mine using a unit of production method.

The unit of production method is the ratio of commodity production in the period to the estimated quantities of commercial reserves over the life of the mine (using proven and probable mineral reserves as determined by the JORC Code on an annual basis) based on the estimated economically recoverable reserves to which they relate. Changes in estimates, which affect unit of production calculations, are accounted for prospectively.

(ii) Mine development costs

Mine development costs are incurred to obtain access to proved reserves or mineral-bearing ore deposits and to provide facilities for extracting, lifting and storing minerals. Such costs are, upon commencement of production, amortised over the remaining life of the mine using a unit of production method.

(iii) Mine stripping costs

Mine stripping costs incurred in order to access the mineral-bearing ore deposits are deferred prior to the commencement of production. Such costs are amortised over the remaining life of the mine using a unit of production method.

The ongoing mining and development of the open-pit mines is generally performed via a succession of individual phases. The costs of extracting material from an open-pit mine are generally allocated between ore and waste stripping in proportion to the tonnes of waste and ore material extracted (the stripping ratio). The waste stripping costs are generally absorbed into inventory and expensed as that inventory is processed and sold. Where the stripping costs relate to a waste stripping campaign which is expected to provide improved access to an identifiable component of the ore body, the costs of removing waste in order to improve access to that part of the ore body will be capitalised within mining assets. The capitalised costs will then be amortised in a systematic manner over the reserves that directly benefit from the specific stripping activity. Changes to the stripping ratio arising from changes to mine plans or ore reserves are regarded as changes in estimates and are accounted for prospectively.

(iv) Exploration and evaluation costs

Exploration and evaluation expenditure for each area of interest once the legal right to explore has been acquired, other than that acquired through a purchase transaction, is carried forward as an asset, within mining assets, provided that one of the following conditions is met:

- such costs are expected to be recouped through successful exploration and development of the area of interest or, alternatively, by its sale.
- exploration and evaluation activities in the area of interest have not yet reached a stage which permits a reasonable assessment of the existence or otherwise of economically recoverable reserves, and active and significant operations in relation to the area are continuing.

Exploration expenditure which fails to meet at least one of the conditions outlined above is written off. Administrative and general expenses relating to exploration and evaluation activities are expensed as incurred.

Identifiable exploration and evaluation assets acquired in a purchase transaction are recognised as assets at their cost, or fair value if purchased as part of a business combination. Exploration assets are reassessed on a regular basis and these costs are carried forward provided that at least one of the conditions outlined above is met.

Exploration and evaluation assets transferred to mine development costs when attributable to producing interests are amortised on a unit of production basis over the remaining life of the associated mine.

(e) Impairment

The carrying values of mining assets including capitalised exploration and evaluation expenditure and property, plant and equipment are assessed for impairment when indicators of such impairment exist. In performing impairment reviews, assets are categorised into the smallest identifiable groups (cash generating units) that generate cash flows independently. If any indication of impairment exists, the estimated recoverable amount of the asset or cash generating unit ('CGU') is calculated.

If the carrying amount of the asset or CGU exceeds its recoverable amount, it is impaired with the loss charged to the income statement so as to reduce the carrying amount to its recoverable amount.

Impairment losses are recognised in the income statement in those expense categories consistent with the function of the impaired asset or CGU.

An assessment is made at each reporting date as to whether there is any indication that previously recognised impairment losses may no longer exist or may have decreased. If such indication exists, the Group makes an estimate of the recoverable amount.

(i) Calculation of recoverable amount

The recoverable amount of an asset or CGU is the greater of its value in use and fair value less costs to sell. In assessing value in use, the estimated future cash flows of the asset or CGU in its present condition, are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less cost to sell, consideration will be given to whether the value of the asset or CGU can be determined from an active market (e.g. recognised exchange) or from a binding sale agreement which are classified as level 1 in the fair value hierarchy under IFRS 13 '*Fair Value Measurements*'. Where this is not determinable, fair value less costs to sell for a CGU is usually estimated with reference to a discounted cash flow model, similar to the method used for value in use, but may include estimates of future production, revenues, costs and capital expenditure not currently included in the life of mine plan. Additionally, cash flow estimates include the impact of tax and are discounted using a post-tax discount rate. An estimate made on this basis is classified as level 3 in the fair value hierarchy.

(ii) Reversals of impairment

A previously recognised impairment loss is reversed only if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. If this is the case, the carrying amount of the asset is increased to its recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised for the asset in prior years. Such reversals are recognised in the income statement. Impairment losses recognised in relation to goodwill are not reversed for subsequent increases in the recoverable amount.

(f) Inventories

Inventories are valued at the lower of cost and net realisable value. Cost includes all costs incurred in the normal course of business in bringing each product to its present location and condition. Cost is determined on the following bases:

- Raw materials and consumables are valued at cost on a first-in, first-out (FIFO) basis; and
- Work in progress and finished goods are valued at the cost of production, including the appropriate proportion of depreciation, labour and overheads based on normal operating capacity. The cost of work in progress and finished goods is based on the weighted average cost method.

Net realisable value represents estimated selling price in the ordinary course of business less any further costs expected to be incurred to completion and disposal.

Inventory, usually stockpiled ore that has been extracted, which is not expected to be processed within 12 months of the balance sheet date and is considered to fall outside of the normal operating cycle of the operation, is included within non-current assets.

(g) Current investments

Current investments are cash deposits which do not satisfy the criteria of being held to meet short-term commitments and which have original maturities of more than three months but less than 12 months. These deposits are held mainly with major European and US financial institutions with high credit worthiness (minimum 'A-', 'A3' and 'AAA' rated liquidity funds) and within approved credit limits. Current investments are included within the definition of net debt which is a measure used by management and the Group's lenders in assessing compliance with borrowing covenants (see note 30).

(h) Cash and cash equivalents

Cash and cash equivalents, held for the purpose of meeting short-term commitments, comprise cash at bank and in hand, short-term deposits held on call or with original maturities of three months or less and highly liquid investments that are readily convertible into known amounts of cash and which are subject to insignificant risk of changes in value, and bank overdrafts.

In 2018, both of the Group's major projects achieved design levels of production, following which it announced the payment of an interim dividend. This resulted in a change in the purpose of the Group's deposits going forward and constituted a change in the conditions in accordance with paragraph 16 of IAS 8 '*Accounting Policies, Changes in Accounting Estimates and Errors*'.

36. Summary of significant accounting policies continued

(h) Cash and cash equivalents continued

During 2018, the FRC queried the appropriateness of the Group's accounting policy for cash and cash equivalents in the 2017 Annual Reports and Accounts. In doing so, the FRC queried whether the term deposits with original maturity of three to 12 months (disclosed as $350 million in note 31(g) of the 2017 financial statements), had the required characteristics to be considered as cash and cash equivalents under IAS 7 *'Statement of Cash Flows'*.

Following the change in the Group's conditions and with regard to the FRC's view, deposits with original maturities in excess of three months are prospectively classified as current investments.

Short-term deposits with a maturity in excess of three months at inception were $250 million at 31 December 2018. See note 21.

(i) Employee benefits

(i) Long-term employee benefits

The Group's entities located in Kazakhstan remit contributions to State managed pension plans on behalf of its employees. Contributions to be paid by the Group are withheld from employees' salaries based on prescribed rates and are recognised as part of the salary expense in the income statement as incurred.

The Group's defined benefit plans, including the death and disability plans for current and former employees, are accounted for in accordance with IAS 19 *'Employee Benefits (Revised)'*, such that the plan liabilities and assets are measured by actuarial valuations using the projected unit credit method.

The future benefit that employees have earned is discounted to determine the present value. The discount rate is determined by reference to the US Treasury bond rate adjusted for country specific inflation and risk. The Treasury bond used approximates the average maturity profile of the Group's benefit obligations. The calculation is performed by a qualified independent actuary on a rotational basis.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise for defined benefit plans not considered to be other long-term employee benefits. In respect of other long-term employee benefit plans, namely the Group's disability benefits obligation, all actuarial gains and losses are recognised in the income statement in the period in which they arise. The expense in relation to all long-term employee benefits is charged to the income statement so as to match the cost of providing these benefits to the period of service of the employees.

(ii) Share-based payments

Certain employees of the Group receive part of their remuneration in the form of share-based payment transactions, whereby employees render services in exchange for shares or rights over shares (equity-settled transactions). The cost of equity-settled transactions with employees is measured at fair value at the date at which they are granted. The fair value of share awards with market-related vesting conditions is determined using the Monte Carlo method and the fair value at the grant date is expensed on a straight-line basis over the vesting period based on the Group's estimate of shares that will eventually vest.

The estimate of the number of awards likely to vest is reviewed at each balance sheet date up to the vesting date at which point the estimate is adjusted to reflect the actual outcome of awards which have vested. No adjustment is made to the fair value after the vesting date even if the awards are forfeited or not exercised.

(j) Own shares

Own equity instruments which are re-acquired either by the Employee Benefit Trust for the purposes of the Group's employee share-based payment plans or by the Company as part of any share buy-back programmes are recognised at cost and deducted from equity. No gain or loss is recognised in the income statement on the purchase, sale, issue or cancellation of the Group's own equity instruments. Any difference between the carrying amount and the consideration paid to acquire such equity instruments is recognised within equity.

(k) Social responsibility costs

The Group contributes towards social programmes for the benefit of the local community at large. The Group's contributions towards these programmes are expensed to the income statement at the point when the Group is committed to the expenditure.

(l) Provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, and it is probable that an outflow of resources will be required to settle the obligation and a reliable estimate can be made of the amount. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

(i) Site restoration costs

Site restoration provisions are made in respect of the estimated future costs of closure and restoration, and for environmental rehabilitation costs (which include the dismantling and demolition of infrastructure, removal of residual materials and remediation of disturbed areas) in the accounting period when the related environmental disturbance occurs. The provision is discounted where material and the unwinding of the discount is included in finance costs. Over time, the discounted provision is increased for the change in present value based on the discount rates that reflect current market assessments and the risks specific to the liability. At the time of establishing the provision, a corresponding asset is capitalised where it gives rise to a future benefit and depreciated over the remaining life of the mine to which it relates using a unit of production method. The provision is reviewed on an annual basis for changes in cost estimates, discount rates or life of operations. Any change in restoration costs or assumptions will be recognised as additions or charges to the corresponding asset and provision when they occur. For permanently closed sites, changes to estimated costs are recognised immediately in the income statement.

(ii) Other

Other provisions are accounted for when the Group has a legal or constructive obligation for which it is probable there will be an outflow of resources and for which the amount can be reliably estimated.

(m) Revenue

Revenue mainly represents the income arising from the sale of the Group's mineral products and is measured at the transaction price it expects to receive. The Group's products are priced with reference to LME, for copper and zinc, or LBMA, for gold and silver, market prices. The prices achieved for the sale of copper, zinc, gold and silver in concentrate are reduced by contractually determined treatment and refining charges (TC/RCs), which are usually agreed annually in advance and with reference to market rates.

Revenue is recognised when the Group has satisfied its contractual performance obligations to customers, which generally require the delivery of an agreed quantity of a metal product to a specified location. Revenue is recognised as control of the material, including legal title and the risks and rewards of ownership have transferred to the customer, per the contractual delivery Incoterms, and the Group has no other performance obligations. For copper concentrate (including any contained gold and silver by-products), the contractual terms may include an additional performance obligation for the delivery of the material to a specified location, usually a smelter, after control of the product has passed to the customer. For such contractual terms, normally referred to as CIP (Carriage Insurance Paid), the majority of revenue will be recognised when control of the product passes to the customer. Where the revenue attributed to the delivery performance obligation is material, it will be recognised once the concentrate is delivered to the customer.

Most of the sales agreements for the Group's mineral products are provisionally priced, whereby the selling price is subject to final adjustment at the end of a quotation period (typically one to three months), based on the average LME/LBMA market price for the period stipulated in the contract. At each reporting date, provisionally priced metal sales are marked-to-market using forward prices aligned with the quotation period (up to a maximum of two months), with any gains and losses recorded in revenue in the income statement and in trade receivables in the balance sheet.

Copper (including any contained by-products) and zinc concentrates are subject to final volume adjustments based on independent laboratory confirmation of volumes produced, compared to volumes estimated at the time of pricing. Revenue recognised from the sale of copper (including by-products) and zinc concentrate is restricted to the extent that a material reversal in revenue resulting from final volume adjustments will not occur in a subsequent period. In applying the restriction, the Group uses its experience in assessing whether material negative volume adjustments are likely to occur in the next reporting period.

(n) Finance income

Finance income comprises interest income on funds invested. Interest income is recognised as it accrues, calculated in accordance with the effective interest rate method.

(o) Finance costs

Finance costs comprise interest on borrowings which are not capitalised under the borrowing costs accounting policy (see note 36(p) below), and the unwinding of interest costs on provisions.

(p) Borrowing costs

Borrowing costs directly relating to the acquisition, construction or production of a qualifying capital project under construction are capitalised and added to the project cost during construction until such time as the assets are considered substantially ready for their intended use, i.e. when they are capable of commercial production. Where funds are borrowed specifically to finance a project, the amount capitalised represents the actual borrowing costs incurred. Where surplus funds are available for a short period of time from money borrowed specifically to finance a project, the income generated from the temporary investment of such amounts is also capitalised and deducted from the total capitalised borrowing costs. Where the funds used to finance a project form part of general borrowings, the amount capitalised is calculated using a weighted average of rates applicable to relevant general borrowings of the Group during the year. All other borrowing costs are recognised in the income statement in the period in which they are incurred using the effective interest rate method.

36. Summary of significant accounting policies continued

(p) Borrowing costs continued

Borrowing costs that represent avoidable costs not related to the financing arrangements of the development projects and are therefore not directly attributable to the construction of these respective assets are expensed in the period as incurred. These borrowing costs generally arise where the funds are drawn down under the Group's financing facilities, whether specific or general, which are in excess of the near term cash flow requirements of the development projects for which the financing is intended, and the funds are drawn down ahead of any contractual obligation to do so.

(q) Income tax

Income tax for the year comprises current and deferred tax. Income tax is recognised in the income statement except to the extent that it relates to items charged or credited directly to equity, in which case it is recognised in equity.

Current tax expense is the expected tax payable on the taxable income for the year and any adjustment to tax payable in respect of previous years.

Deferred tax is provided using the balance sheet liability method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The following temporary differences are not provided for:

- those arising on the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither accounting profit nor taxable profit; and
- investments in subsidiaries where the timing of the reversal of the temporary difference can be controlled and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on the tax rates (and tax laws) that have been enacted or substantively enacted at the balance sheet date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the asset can be utilised and in combination with other deferred tax assets. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Deferred tax assets and liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

(r) Dividends

Dividends are recognised as a liability in the period in which they are approved by shareholders. Dividends receivable are recognised when the Group's right to receive payment is established.

(s) Financial instruments

The Group recognises financial assets and liabilities on its balance sheet when it becomes a party to the contractual provisions of the instrument.

(i) Financial assets

Classification and initial measurement

Financial assets within the scope of IFRS 9 are classified as financial assets at amortised cost, fair value through profit or loss or fair value through other comprehensive income. The Group determines this classification at initial recognition depending on the business model for managing the financial asset and the contractual terms of the cash flows.

The Group's financial assets include cash and cash equivalents, current investments, trade and other receivables, long-term bank deposits and derivative financial instruments.

When financial assets are initially recognised, they are measured at fair value being the consideration given or received plus directly attributable transaction costs. Any gain or loss at initial recognition is recognised in the income statement.

The Group's financial assets measured at amortised cost are held for the collection of contractual cash flows where those cash flows have specified dates and represent solely payments of principal and interest, such as cash and cash equivalents, current investments or trade receivables that are not based on listed commodity metal prices or subject to provisional pricing.

The Group's financial assets measured at fair value through profit or loss are those financial assets where the contractual cash flows do not represent solely payments of principal and interest, such as trade receivables which are priced with reference to LME or LBMA prices and are subject to provisional pricing.

Subsequent measurement

Financial assets held for the collection of contractual cash flows that are solely payments of principal and interest (and classified as amortised cost) are subsequently measured at amortised cost using the effective interest rate method ('EIR'). Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the income statement. Allowance for impairment is estimated on a case-by-case basis.

Almost all sales agreements for the Group's mineral products are provisionally priced based on the LME/LBMA market price for the relevant quotation period stipulated in the contract (refer to the revenue accounting policy note 36 (m)). At each reporting date, provisionally priced metal sales are marked to market using the relevant forward prices aligned with the quotation period. A gain or loss on a trade receivable which is priced based on listed metal prices, being a financial asset measured at fair value through profit or loss, is recognised within revenue in the income statement in the period in which it arises.

Derecognition

A financial asset is derecognised when the Group loses control over the contractual rights that comprise that asset. This occurs when the rights are realised, expire or are surrendered.

Impairment of financial assets

The Group assesses on a forward looking basis the expected credit losses that might arise on financial assets measured at amortised cost. This assessment considers the probability of a default event occurring that could result in the expected cash flows due from a counterparty falling short of those contractually agreed.

Expected credit losses are estimated for default events possible over the lifetime of a financial asset measured at amortised cost. However, where the financial asset is not a trade receivable measured at amortised cost and there have been no significant increases in that financial asset's credit risk since initial recognition, expected credit losses are estimated for default events possible within 12 months of the reporting date.

(ii) Financial liabilities

Classification and initial measurement

Financial liabilities within the scope of IFRS 9 are classified as financial liabilities at amortised cost or fair value through profit or loss. The Group determines the classification of its financial liabilities at initial recognition.

The Group's financial liabilities include trade and other payables, other liabilities and borrowings which are classified as amortised cost; and a derivative financial instrument which is classified as fair value through profit or loss. Trade payables may be designated and measured at fair value through profit or loss when doing so eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities on a different basis.

All financial liabilities are recognised initially at fair value while financial liabilities at amortised cost additionally include directly attributable transaction costs.

Subsequent measurement

Trade and other payables, borrowings and other financial liabilities are subsequently measured at amortised cost using the EIR method after initial recognition. Gains and losses are recognised in the income statement through the EIR amortisation process. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance costs in the income statement.

A gain or loss on a financial liability measured at fair value through profit or loss is recognised in the income statement in the period in which it arises.

Where the Group enters into derivative contracts that are not hedging instruments in hedge relationships as defined by IFRS 9, these are carried on the balance sheet at fair value with subsequent changes recognised in finance income or finance costs in the income statement.

Derecognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognised in the income statement.

(iii) Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount reported in the balance sheet when there is an enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, or to realise the assets and settle the liabilities simultaneously.

(iv) Fair value of financial instruments

At each reporting date, the fair value of financial instruments that are traded in active markets is determined by reference to quoted market prices, without any deduction for transaction costs. For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques. Such techniques may include using recent arm's length market transactions, reference to the current fair value of another instrument that is substantially the same, discounted cash flow analysis or other valuation models.

37. Company financial statements

(a) Company balance sheet

$ million	Notes	2018	2017
Assets			
Non-current assets			
Investments	37(e)	**4,193**	4,192
Deferred tax asset		**2**	5
		4,195	4,197
Current assets			
Prepayments and other current assets		**1**	1
Intercompany loan	37(f)	**123**	73
Intercompany receivables	37(g)	**6**	3
Cash and cash equivalents		**1**	1
		131	78
Total assets		**4,326**	4,275
Equity and liabilities			
Equity			
Share capital	23(a)	**171**	171
Share premium		**2,650**	2,650
Capital reserves	37(h)	**31**	31
Retained earnings		**1,385**	1,330
Total equity		**4,237**	4,182
Current liabilities			
Trade and other payables		**2**	3
Intercompany payables	37(j)	**87**	90
Total liabilities		**89**	93
Total equity and liabilities		**4,326**	4,275

These financial statements were approved by the Board of Directors on 20 February 2019.

Signed on behalf of the Board of Directors

Andrew Southam
Chief Executive Officer

John Hadfield
Chief Financial Officer

(b) Company statement of cash flows

$ million	Notes	2018	2017
Operating activities			
Profit before tax		**81**	861
Interest income		**(1)**	–
Share-based payments		**3**	1
Impairment reversal	37(e)	**–**	(840)
Dividend income		**(100)**	(50)
Unrealised foreign exchange (gain)/loss		**(5)**	8
Operating cash flows before changes in working capital		**(22)**	(20)
Decrease in prepayments and other current assets		–	1
(Decrease)/increase in trade and other payables		**(1)**	1
Cash flows used in operations before interest, income taxes and dividends received		**(23)**	(18)
Income taxes paid		**–**	–
Net cash flows used in operating activities		**(23)**	(18)
Investing activities			
Amounts paid under intercompany loan		**(49)**	(31)
Dividends received		**100**	50
Capital contributions into subsidiary undertakings	37(e)	**(1)**	–
Net cash flows from investing activities		**50**	19
Financing activities			
Dividends paid by the Company	14	**(27)**	–
Net cash flows used in financing activities		**(27)**	–
Net increase in cash and cash equivalents		**–**	1
Cash and cash equivalents at the beginning of year		**1**	–
Cash and cash equivalents at the end of year		**1**	1

(c) Company statement of changes in equity

$ million	Notes	Share capital	Share premium	Capital reserves[1]	Retained earnings	Total equity
At 1 January 2017		171	2,650	30	465	3,316
Total comprehensive income for the year		–	–	–	861	861
Share-based payments		–	–	–	5	5
Employee share awards exercised		–	–	1	(1)	–
At 31 December 2017		171	2,650	31	1,330	4,182
Total comprehensive income for the year		**–**	**–**	**–**	**81**	**81**
Share-based payments		**–**	**–**	**–**	**1**	**1**
Dividends paid by the Company	14	**–**	**–**	**–**	**(27)**	**(27)**
At 31 December 2018		**171**	**2,650**	**31**	**1,385**	**4,237**

1 See note 37(h) for an analysis of 'Capital reserves'.

(d) Company accounting policies

Basis of preparation

The KAZ Minerals PLC parent company balance sheet, statement of cash flows, statement of changes in equity and related notes have been prepared in accordance with IFRSs as adopted by the EU as applied in accordance with the provisions of the Companies Act 2006. The financial information has been prepared on a historical cost basis. These financial statements have been prepared on a going concern basis (see note 2(a)).

The functional currency of the Company and the presentational currency adopted is US dollars.

Principal accounting policies

The principal accounting policies are consistent with those applied in the consolidated financial statements (see notes 2 and 36) except for the additional accounting policy relating to non-current investments set out below. There were no changes to the non-current investments accounting policy during the year.

37. Company financial statements continued

(d) Company accounting policies continued

Principal accounting policies continued

The preparation of financial statements in conformity with IFRSs as adopted by the EU requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the period. Although these estimates are based on management's best knowledge of the amount, event or actions, following implementation of these standards, actual results may differ from those estimates.

Non-current investments

Non-current investments are held at cost. The Company assesses investments for impairment whenever events or changes in circumstances indicate that the carrying value of an investment may not be recoverable. If any such indication of impairment exists, the Company makes an estimate of its recoverable amount. Where the carrying amount of an investment exceeds its recoverable amount, the investment is considered impaired and is written down to its recoverable amount. Any positive change in the amount or timing of estimated future cash flows or in the discount rate such that fair value of the Company's investments increases, consideration will be given to whether previously recognised impairments should be reversed.

(e) Company non-current investments

$ million	2018	2017
Cost		
At 1 January	**7,830**	7,830
Additions	**1**	–
At 31 December	**7,831**	7,830
Provision for impairment		
At 1 January	**3,638**	4,478
Impairment reversals	**–**	(840)
At 31 December	**3,638**	3,638
Net book value	**4,193**	4,192

(i) KAZ Minerals Investments Limited

The Company reviewed the carrying value of its investments to determine whether there were any indicators of impairment. This assessment requires judgement, taking into account the future operational and financial plans of the underlying investment, commodity prices and cost estimates. The Group uses a consistent methodology for impairment indicator reviews across its cash generating units. This methodology did not identify any impairment indicators in respect of the carrying value of the Company's investments and no impairment review was performed. Additionally, no indicators of impairment reversal were identified. The reduction in the Company's share price in August 2018, was not found to be driven by fundamental changes to the long-term value of the existing operations.

In 2017, the continued ramp up to design capacity of the Bozshakol sulphide and Aktogay oxide plants, the achievement of commercial production of the Bozshakol clay and Aktogay sulphide plants, the improvement in the near term copper prices, the successful refinancing and increasing of the PXF financing facility and the Group's decision to proceed with the Aktogay expansion project, led to a reassessment of the carrying value of the Company's previously impaired investments. The estimated recoverable amount of the Group's investment exceeded its carrying value and a reversal of impairment of $840 million was recognised. The recoverable amount was supported by a range of internal valuations that were prepared using discounted cash flow models using assumptions relating to long-term pricing and other assumptions including inflation, cost estimates and production profiles based on the Group's expectations of the assets. The revised carrying value of the Company's investment was also supported by a range of recent equity analyst discounted cash flow valuations.

Changes in the outlook to commodity prices as well as any future changes in mine production plans, could impact the recoverable amount of the investment.

The determination of the fair value less costs to sell, as estimated in 2017, was subject to the key sources of estimation uncertainty as disclosed in note 3.

(ii) KAZ Minerals Services Limited

In 2018, additional investment of $1 million (2017: $nil) relating to capital contributions made by the Company to KAZ Minerals Services Limited was recognised in respect of the share awards issued by the Company on behalf of employees of KAZ Minerals Services Limited.

(iii) Other companies

The Company holds its interests in other subsidiaries in the Group either directly or via intermediate holding companies for those businesses in Central Asia.

(f) Company intercompany loan

The intercompany loan receivable comprises $123 million due from KAZ Minerals Finance PLC (2017: $73 million) and has been advanced by the Company for general corporate purposes. This balance is repayable on demand. The loan to KAZ Minerals Finance PLC bears interest at US$ LIBOR minus 0.10%. At 31 December 2018, interest receivable of $5 million (2017: $3 million) had accrued on this loan balance and is included within trade and other receivables (note 37(g)). The advance was considered for impairment under the IFRS 9 expected credit loss method. As the loan is repayable on demand and as KAZ Minerals Finance PLC has the ability to repay this on demand, the expected credit loss was estimated at $nil.

(g) Company intercompany receivables

$ million	2018	2017
Interest receivables	5	3
Other receivables	1	–
	6	3

(h) Company capital reserves

$ million	Capital redemption reserve	Employee Benefit Trust share	Total
At 1 January 2017	31	(1)	30
Own shares issued upon exercise of options	–	1	1
At 31 December 2017	31	–	31
Own shares issued upon exercise of options	–	–	–
At 31 December 2018	**31**	**–**	**31**

(i) Capital redemption reserve

As a result of the share buy-back programme undertaken in 2008 and the re-purchase of KAZ Minerals PLC shares received from the ENRC disposal in 2013, transfers were made from share capital to the capital redemption reserve based on the nominal value of the shares cancelled.

(ii) Employee Benefit Trust shares

The share reserve represents the cost of the Company's shares purchased by the Employee Benefit Trust to satisfy the share options awarded under the Company's share-based payment schemes.

(i) Company financial risk management

The Company, as a holding company, has exposure to foreign exchange risk and limited exposure to credit and interest rate risks. These are shown below. The Company's monetary assets and liabilities have no exposure to commodity or price risks.

(i) Categories and fair values of financial assets and liabilities

The carrying amounts of the Company's financial assets and liabilities by categories are as follows:

$ million	Notes	2018	2017
Financial assets at amortised cost			
Intercompany loan	37(f)	123	73
Intercompany receivables	37(g)	6	3
Cash and cash equivalents		1	1
		130	77
Financial liabilities at amortised cost			
Trade and other payables		(2)	(3)
Intercompany payables	37(j)	(87)	(90)
		(89)	(93)

The fair values of each category of financial asset and liability are not materially different from their carrying values as presented.

(ii) Foreign exchange risk

The Company has transactional currency exposures principally arising from transactions relating to corporate costs which are denominated in currencies other than the Company's functional currency, being the US dollar. Corporate costs are primarily denominated in UK pound sterling. The Company is exposed to foreign exchange risk on its obligation to KAZ Minerals Services Limited, as it is payable in UK pound sterling.

During 2018, a foreign exchange gain of $6 million (2017: foreign exchange loss of $8 million) was recognised on the intercompany liability payable to KAZ Minerals Services Limited following the weakening of the UK pound sterling in the year (2017: strengthening of the UK pound sterling). The Company generally does not enter into hedging positions in respect of its exposure to foreign currency risk. The amount payable at 31 December 2018 was $87 million (2017: $90 million).

A 10% strengthening of the US dollar against the UK pound sterling at 31 December would have increased profit after tax by $7 million (2017: $7 million). This sensitivity does not represent the income statement impact that would be expected from a movement in exchange rates over the course of a period of time and assumes that all other variables, in particular interest rates, remain constant. A 10% weakening of the US dollar against the UK pound sterling at 31 December would have had an equal but opposite effect, on the basis that all other variables remain constant.

37. Company financial statements continued

(i) Company financial risk management continued

(iii) Credit risk

Credit risk for the Company relates to cash and cash equivalents. Balances within intercompany loans and trade and other receivables mostly relate to amounts owed by Group undertakings resulting in reduced credit risk for these balances. Nonetheless, possible default events have been considered over a period of 12 months after the reporting date and the assessment for expected credit losses takes into account the ongoing viability of the Group. At 31 December 2018, there were no expected credit losses in respect of intercompany loan and receivables (2017: none).

The maximum exposure with respect to credit risk is represented by the carrying amount of each financial asset on the balance sheet, as outlined in note 37(i)(i).

The exposure to credit risk for intercompany loan and receivables at 31 December 2018 and 2017 by geographic areas was all European.

(iv) Interest rate risk

The Company has limited balances subject to interest rate risk and all of its financial liabilities are non-interest bearing. The exposure of the Company's floating and fixed rate financial assets to interest rate risk is as follows:

	At 31 December 2018		
$ million	Floating rate	Fixed rate	Total
Financial assets			
Intercompany loan	123	–	123
Cash and cash equivalents	1	–	1
Total financial assets	124	–	124

	At 31 December 2017		
$ million	Floating rate	Fixed rate	Total
Financial assets			
Intercompany loan	73	–	73
Cash and cash equivalents	1	–	1
Total financial assets	74	–	74

All of the Company's interest bearing monetary assets are denominated in US dollars and have a maturity of less than one year.

In accordance with IFRS 7, the impact of interest rates has been determined based on the balances of the Company's interest bearing financial instruments at 31 December 2018. This sensitivity does not represent the income statement impact that would be expected from a movement in interest rates or outstanding borrowings over the course of a period of time. In addition, the analysis assumes that all other variables remain constant. The effect on profit after tax of a 1% movement in US$ LIBOR rates, based on the above interest bearing financial instruments and with all other variables held constant, is estimated to be $1 million (2017: $1 million).

(v) Capital management

The over-riding objectives of the Company's capital management policy are to safeguard and support the business as a going concern through the commodity cycle, to maximise returns to shareholders and benefits to other stakeholders and to maintain an optimal capital structure in order to reduce the Company's cost of capital (see note 31(h)).

(j) Company related party disclosures

(i) Transactions with related parties

Transactions with related parties comprise interest earned from KAZ Minerals Finance PLC of $1 million (2017: $0.2 million) and management fees to KAZ Minerals Services Limited for services provided on behalf of the Company during the year under a management service agreement of $20 million (2017: $17 million).

The amounts outstanding from subsidiary companies are provided in notes 37(f) and 37(g).

The intercompany payables amount of $87 million is due to KAZ Minerals Services Limited for management fees discussed above and other services (2017: $90 million). The balance is payable on demand and is interest free.

The Company received an interim dividend of $100 million (2017: $50 million) from KAZ Minerals Sales Limited during the year.

Additional investment of $1 million relating to capital contributions was made to KAZ Minerals Services Limited during 2018 (2017: $nil) (see note 37(d)(ii)).

(ii) Terms and conditions of transactions with related parties

Prices for related party transactions are determined by the parties on an ongoing basis depending on the nature of the transaction.

(k) Subsidiaries and joint operations

The consolidated financial statements include the financial statements of the Company and its subsidiaries and joint operations listed in the following table:

	Principal activity	Operating division	Country of incorporation	Share class	Equity interest at 31 December 2018 %	Equity interest at 31 December 2017 %
Aktogay Copper Smelter B.V.	Inactive	Mining Projects	The Netherlands	€1.00 A Class and B Class Ordinary shares	51.0[1]	51.0[1]
Industrial Construction Group LLC	Construction	Aktogay	Kazakhstan	–	49.0[1]	–
KAZ Minerals Aktogay B.V.	Holding company	Aktogay	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Aktogay Finance Limited	Group project financing company	Corporate Services	England and Wales	US$1.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Aktogay LLC	Copper mining and concentrating	Aktogay	Kazakhstan	–	100.0[1]	100.0[1]
KAZ Minerals Aktogay Project Finance Limited	Group project financing company	Corporate Services	England and Wales	US$1.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Aktogay Smelter LLP	Smelting feasibility	Aktogay	Kazakhstan	–	100.0[1]	100.0[1]
KAZ Minerals Bozshakol B.V.	Holding company	Bozshakol	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Bozshakol LLC	Copper mining and concentrating	Bozshakol	Kazakhstan	–	100.0[1]	100.0[1]
KAZ Minerals Bozymchak LLC	Copper/gold mining and concentrating	Bozymchak	Kyrgyzstan	–	100.0[1]	100.0[1]
KAZ Minerals Copper B.V.	Holding company	East Region	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Copper Finance Limited	Financing company	Corporate Services	England and Wales	US$1.00 Ordinary shares	99.9[1]	99.9[1]
KAZ Minerals Copper Smelter B.V.	Holding company	Mining Projects	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Finance PLC	Group financing company	Corporate Services	England and Wales	£1.00 Ordinary shares	100.0	100.0
KAZ Minerals Fourteen B.V.	Holding company	Corporate Services	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Gold B.V.	Holding company	Bozymchak	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Holding B.V.	Holding company	Corporate Services	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Holdings International B.V.	Holding company	Corporate services	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Investments Limited	Holding company	Corporate Services	England and Wales	£1.00 Ordinary shares	100.0	100.0
KAZ Minerals Koksay B.V.	Holding company	Mining Projects	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Koksay Holding B.V.	Holding company	Mining Projects	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]

37. Company financial statements continued

(k) Subsidiaries and joint operations continued

	Principal activity	Operating division	Country of incorporation	Share class	Equity interest at 31 December 2018 %	Equity interest at 31 December 2017 %
KAZ Minerals Kupfer B.V.	Holding company	Corporate Services	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Management LLP	Management and services company	Corporate Services	Kazakhstan	–	100.0[1]	100.0[1]
KAZ Minerals Marketing and Logistics Limited[2]	Inactive	East Region	Hong Kong	HK$1.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Mining B.V.	Holding company	Corporate Services	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals One Limited	Holding company	Corporate Services	England and Wales	£1.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Projects B.V.	Project management company	Mining Projects	The Netherlands	€10.00 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Projects Finance Limited	Group project financing company	Corporate Services	England and Wales	US$1.00 and US$0.65 Ordinary shares	100.0[1]	100.0[1]
KAZ Minerals Sales Limited	Sales and logistics	East Region and Bozymchak, Bozshakol and Aktogay	England and Wales	£1.00 Ordinary shares	100.0	100.0
KAZ Minerals Service LLP	Repairs and maintenance service entity	East Region	Kazakhstan	–	100.0[1]	100.0[1]
KAZ Minerals Services Limited	Management and services company	Corporate Services	England and Wales	£1.00 Ordinary shares	100.0	100.0
KM Trading LLP	Kazakhstan sales company	East Region, Bozymchak, Bozshakol and Aktogay	Kazakhstan	–	100.0[1]	100.0[1]
Konsolidirovannaya Stroitelnaya Gornorudnaya Kompaniya LLP	Koksay exploration licence	Mining Projects	Kazakhstan	–	100.0[1]	100.0[1]
Kytco B.V.	Holding company	Bozymchak	The Netherlands	€100.00 Ordinary shares	100.0[1]	100.0[1]
Vostokenergo LLC	Utility company (heat, water, electricity supply and distribution)	East Region	Kazakhstan	–	99.9[1]	99.9[1]
Vostoktsvetmet LLC	Copper mining and concentrating	East Region	Kazakhstan	–	99.9[1]	99.9[1]

1 Indirectly held by the Company.

2 KAZ Minerals Marketing and Logistics Limited is in the process of deregistration.

All companies in the above list incorporated in England and Wales have their registered address at 6th Floor, Cardinal Place, 100 Victoria Street, London SW1E 5JL, United Kingdom.

All companies in the list incorporated in the Netherlands have their registered address at Strawinskylaan 453, 1077XX, Amsterdam, The Netherlands.

KAZ Minerals Aktogay LLC, KAZ Minerals Management LLP and KM Trading LLP have their registered office at Building 8, Zhamal Omarova Street, Almaty, 050020, Kazakhstan.

The following entities and their registered office are as follows:

- KAZ Minerals Bozshakol LLC, Building 13, Tortkuduk village, Tort-Kudukskiy village region, Ekibastuz city, Pavlodar oblast, 141218, Kazakhstan.
- Konsolidirovannaya Stroitelnaya Gornorudnaya Kompaniya LLC, 142 Bogenbay Batyr Street, Almaty, 050000, Kazakhstan.
- Vostoktsvetmet LLC and KAZ Minerals Services LLC, 121 Aleksander Protozanov Street, Ust-Kamenogorsk city, East-Kazakhstan oblast, 070004, Kazakhstan.
- Vostokenergo LLC, 81/2 Kazakhstan Street, Ust-Kamenogorsk, East-Kazakhstan oblast, 070019, Kazakhstan.
- KAZ Minerals Aktogay Smelter LLP, 142 Bogenbay Batyr Street, Almaty, 050000, Kazakhstan.
- Industrial Construction Group LLC, 140 Hizmet Abdullin Street, Zharkent, Almaty oblast, Panfilovsky district, 041300, Kazakhstan.
- KAZ Minerals Bozymchak LLC, 41 Umetalieva Street Bishkek, 720010, Kyrgyzstan.
- KAZ Minerals Marketing and Logistics Limited, Unit No 4706 47/F Central Plaza, 18 Harbour Road Wanchai, Hong Kong.

(l) Guarantees

The Company is the guarantor for the following:

- the $600 million PXF debt facility (together with Vostoktsvetmet LLC and KAZ Minerals Sales Limited) (see note 24);
- the CDB Bozshakol and Bozymchak finance facilities totalling $1.5 billion (see note 24);
- the CDB Aktogay finance facilities totalling $1.5 billion for the Aktogay project (see note 24);
- the $300 million Development Bank of Kazakhstan facility (see note 24);
- the $19 million payable to NFC following the deferral of payments on the Aktogay construction project; and
- the operating lease on the Company's office in London.

(m) Subsequent events

On 22 January 2019, the Group announced the Initial Completion of the acquisition of the Baimskaya copper project in the Chukotka region of Russia. As contained in note 35(a) to the consolidated financial statements, part of the consideration was settled by 22.3 million new shares in KAZ Minerals PLC. The shares are subject to a three-year lock-up period ending on the third anniversary of Initial Completion. Deferred Consideration of $225 million for the remaining interest is payable in 21.0 million shares, subject to the achievement of certain Project Delivery Conditions, including a pre-determined level of throughput and development of infrastructure by the Russian state. To the extent these conditions are not met or waived by the Group and therefore not settled in shares, the Deferred Consideration will become payable in cash on 31 March 2029.

On 20 February 2019, the Directors of the Company recommended a final dividend of 6.0 US cents per share which will be payable to shareholders on 17 May 2019. The estimated total amount of the final dividend payment is $28 million.

$ million (unless otherwise stated)	2018	2017	2016	2015	2014
Results					
Revenues[1]	**2,162**	1,663	766	665	846
Profit before finance items and tax[1]	**851**	715	218	90	94
Profit/(loss) before tax[1]	**642**	580	220	12	(169)
Profit/(loss) after tax[1]	**510**	447	177	(12)	(234)
Loss for the year from discontinued operations	**–**	–	–	–	(2,128)
Profit/(loss) attributable to equity shareholders	**510**	447	177	(12)	(2,362)
Assets employed					
Non-current assets	**2,897**	3,215	3,536	2,715	3,222
Current assets	**2,143**	2,407	1,521	1,443	2,496
Non-current liabilities	**(3,067)**	(3,617)	(3,866)	(3,263)	(2,976)
Current liabilities	**(919)**	(1,007)	(655)	(573)	(638)
Net assets	**1,054**	998	536	322	2,104
Financed by					
Equity	**1,050**	995	533	319	2,101
Minority interests	**4**	3	3	3	3
	1,054	998	536	322	2,104
Key statistics					
EBITDA[1,2]	**1,310**	1,038	351	202	355
Underlying Profit/(Loss)[1,2]	**530**	476	180	(10)	86
Free Cash Flow[2]	**585**	452	(60)	(145)	(31)
Free Cash Flow excluding interest payments[2]	**814**	674	119	2	119
EPS – basic and diluted ($)[1,2]	**1.14**	1.00	0.40	(0.03)	(0.52)
EPS based on Underlying Profit/(Loss) ($)[1,2]	**1.18**	1.07	0.40	(0.02)	0.19
Dividends per share (US cents) – paid	**6.0**	–	–	–	–
Maintenance spend per tonne of own copper production ($/t)[2,3]	**288**	263	662	789	635

1 Reflects continuing operations only.

2 Alternative Performance Measures (APMs) are used to assess the performance of the Group and are not defined or specified under IFRS. For further information on APMs, including justification for their use, please refer to the APMs section on page 179.

3 Comparatives for 2014, 2015 and 2016 have been restated to reflect the new definition of copper production used from 2017.

1. Summary of significant production and sales figures

kt (unless otherwise stated)	2018	2017
Ore mined	76,525	64,779
Ore processed	53,250	41,671
Copper content in ore processed (%)	0.63	0.71
Copper production[1]	294.7	258.5
Copper sales[2]	296	256
Zinc in concentrate production	49.7	57.6
Gold production (koz)[3]	183.4	178.7
Silver production (koz)[3]	3,511	3,506

1 Payable metal in concentrate and copper cathodes from Aktogay oxide ore.

2 Includes volumes sold during the period of pre-commercial production in 2017.

3 Payable metal in concentrate.

2. Copper processing

(a) Concentrating

	Ore processed		Copper grade		Copper concentrate produced		Copper in concentrate	
	2018 kt	2017 kt	2018 %	2017 %	2018 kt	2017 kt	2018 %	2017 %
Bozshakol								
Bozshakol – sulphide	23,704	21,164	0.47	0.52	416.1	405.2	22.3	22.6
Bozshakol – clay	4,750	3,394	0.50	0.60	74.3	75.6	18.4	19.1
	28,454	24,558	0.48	0.53	490.4	480.8	21.7	22.1
Aktogay								
Aktogay – sulphide	20,766	12,941	0.61	0.66	505.1	298.6	21.9	22.8
East Region and Bozymchak								
Orlovsky	1,087	1,067	3.24	3.60	172.9	175.7	18.3	19.8
Nikolayevsky	1,404	1,460	1.53	1.49	86.8	87.3	22.5	22.4
Belousovsky	537	636	1.41	1.54	34.6	45.5	19.0	18.7
Bozymchak	1,002	1,009	0.86	0.89	33.1	33.9	22.9	23.6
	4,030	4,172	1.81	1.89	327.4	342.4	20.0	20.7
Total	53,250	41,671	0.63	0.71	1,322.9	1,121.8	21.3	21.9

(b) Heap leaching

	Ore to leach pad		Copper grade	
	2018 kt	2017 kt	2018 %	2017 %
Aktogay	16,104	13,040	0.33	0.36

3. Production

	Copper[1]		Zinc		Gold[2]		Silver[2]	
	2018 kt	2017 kt	**2018 kt**	2017 kt	**2018 koz**	2017 koz	**2018 koz**	2017 koz
Bozshakol	**101.6**	101.3	**–**	–	**127.8**	119.0	**666**	687
Aktogay – oxide	**25.7**	25.1	**–**	–	**–**	–	**–**	–
Aktogay – sulphide	**105.7**	65.1	**–**	–	**0.6**	0.8	**489**	270
East Region	**54.5**	59.5	**49.7**	57.6	**15.3**	17.6	**2,114**	2,300
Bozymchak	**7.2**	7.5	**–**	–	**39.7**	41.3	**242**	249
Total	**294.7**	258.5	**49.7**	57.6	**183.4**	178.7	**3,511**	3,506

1 Payable metal in concentrate and copper cathodes from Aktogay oxide ore.

2 Payable metal in concentrate.

4. Tolled production

	Copper cathode		Gold bar		Silver bar	
	2018 kt	2017 kt	**2018 koz**	2017 koz	**2018 koz**	2017 koz
Bozshakol	**10.2**	10.0	**15.2**	10.4	**83**	53
Aktogay – sulphide	**5.4**	9.3	**–**	0.8	**18**	41
East Region	**57.1**	60.1	**14.7**	18.0	**2,233**	2,473
Bozymchak	**7.5**	8.0	**39.2**	43.9	**239**	276
Total	**80.2**	87.4	**69.1**	73.1	**2,573**	2,843

5. Other production

	2018 kt	2017 kt
Acid	**364.3**	369.7
Lead dust	**2.5**	2.2
Molybdenum	**0.1**	–

6. Sales

	2018		2017[1]	
kt (unless otherwise stated)	kt	$ million	kt	$ million
Copper cathodes	**106**	**690**	112	698
Copper in concentrate[2]	**190**	**1,087**	144	834
Zinc in concentrate	**50**	**101**	57	115
Gold bar (koz)	**54**	**68**	62	78
Gold in concentrate (koz)[2]	**115**	**144**	107	138
Silver bar (koz)	**2,518**	**40**	2,940	50
Silver in concentrate (koz)[2]	**1,009**	**15**	819	14

1 Includes all revenues and sales volumes including pre-commercial production.

2 Payable metal in concentrate sold.

7. Average realised prices

	2018	2017[1]
Copper cathodes ($/t)	**6,531**	6,233
Copper in concentrate ($/t)	**5,709**	5,804
Zinc concentrate ($/t)	**2,015**	2,038
Gold bar ($/oz)	**1,265**	1,262
Gold in concentrate ($/oz)	**1,258**	1,280
Silver bar ($/oz)	**15.7**	17.1
Silver in concentrate ($/oz)	**15.3**	16.5

1 Based on all revenues and volumes sold including the pre-commercial period.

Alternative Performance Measures

Alternative Performance Measures (APMs) are measures of financial performance, financial position or cash flows that are not defined or specified under IFRS. APMs are used by the Directors internally to assess the performance of the Group and assist in providing relevant and useful information to users of the Annual Report and Accounts.

APMs are not uniformly defined by all companies, including those in the Group's industry. 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 measures of financial performance, financial position or cash flows reported in accordance with IFRS.

The Group uses APMs to improve the comparability of information between reporting periods and segments, either by adjusting for special items which impact upon IFRS measures or by aggregating or disaggregating IFRS measures, to aid understanding of the Group's performance. The definition and relevance of the APMs used by the Group is set out below.

(a) EBITDA

EBITDA is defined as earnings before interest, taxation, depreciation, depletion, amortisation, MET and royalties and special items[1]. EBITDA is a key non-IFRS measure that the Directors use internally to assess the performance of the Group's segments and is viewed as relevant to capital intensive industries with long life assets. The Directors believe that the exclusion of MET and royalties provides an informed measure of the operational profitability given the nature of the taxes, as further explained in the 'Taxation' section on page 40. Special items are excluded to enhance the comparability of EBITDA and certain other APMs from period to period. This performance measure is one of the Group's KPIs, the relevance of which is shown on page 28. A reconciliation to operating profit is provided in note 4(a)(i) of the consolidated financial statements.

(b) Underlying Profit

Underlying Profit is defined as profit/loss excluding special items[1] and their resulting tax and non-controlling interest effects. This measure is considered to be useful as it provides an indication of the profit resulting from the underlying trading performance of the Group. Underlying Profit is reconciled from net profit attributable to equity holders of the Company on page 40 as set out in note 13 to the consolidated financial statements.

(c) EPS based on Underlying Profit

EPS based on Underlying Profit is profit/loss excluding special items[1] and their resulting tax and non-controlling interest effects, divided by the weighted average number of ordinary shares in issue during the period (see note 13 of the consolidated financial statements). This is one of the Group's KPIs for measuring financial performance, the relevance of which is outlined on page 28. A calculation of EPS based on Underlying Profit is included within note 13 of the consolidated financial statements.

(d) Gross liquid funds

Gross liquid funds is defined as the aggregate of cash and cash equivalents and current investments less restricted cash.

$ million	2018	2017
Cash and cash equivalents	1,219	1,821
Current investments	250	–
Less: restricted cash	(2)	–
Gross liquid funds	**1,467**	1,821

(e) Net debt

Net debt is the excess of current and non-current borrowings over gross liquid funds. The Board uses this measure for the purposes of capital management, which is further described in note 31(h). A reconciliation of net debt is included on page 43 of the Annual Report and note 30 of the consolidated financial statements.

(f) Free Cash Flow

Free Cash Flow is net cash flow from operating activities, as reflected in the consolidated statement of cash flows on page 124 of the Annual Report and Accounts, before capital expenditure and non-current VAT associated with expansionary and new projects less sustaining capital expenditure. This is one of the Group's KPIs for measuring financial performance, the relevance of which is outlined on page 28. A reconciliation from net cash flow from operating activities is provided below.

$ million	2018	2017
Net cash flows from operating activities	673	752
Less: net proceeds on non-current VAT	(3)	(232)
Less: sustaining capital expenditure	(85)	(68)
Free Cash Flow	**585**	452

1 Special items are defined as those items which are non-recurring or variable in nature and do not impact the underlying trading performance of the Group. Special items are identified in note 7 in the consolidated financial statements.

(g) Gross cash costs

Gross cash costs is defined as cash operating costs, including pre-commercial production costs, excluding purchased cathode plus TC/RC on concentrate sales, divided by the volume of own copper sales. Cash costs are a standard industry measure applied by most major copper mining companies. The Directors use gross cash costs to measure the performance of the Group in managing its costs. A reconciliation from revenues is shown below.

$ million (unless otherwise stated)	2018	2017
Revenues	2,162	1,663
Less: EBITDA – see note 4(a)(i)	(1,310)	(1,038)
Cash operating costs	852	625
Less: cash operating costs at corporate segment	(24)	(25)
Less: tolling revenues included within other revenues	(4)	–
Add: TC/RC on concentrate sales	115	98
Add: pre-commercial production costs capitalised to property, plant and equipment	–	78
Gross cash costs	939	776
Own copper sales (kt)	296.1	255.7
Gross cash costs ($/t)	3,171	3,035
Gross cash costs (USc/lb)	144	138

(h) Net cash costs

Net cash costs is defined as gross cash costs less by-product Gross Revenues, divided by the volume of own copper sales. This is one of the Group's KPIs for measuring cost performance, the relevance of which is outlined on page 29. A reconciliation from gross cash costs is shown below.

$ million (unless otherwise stated)	2018	2017
Gross cash costs – see note (g) above	939	776
Less: by-product Gross Revenues – see note 4(b)	(381)	(406)
Net cash costs	558	370
Own copper sales (kt)	296.1	255.7
Net cash costs ($/t)	1,884	1,447
Net cash costs (USc/lb)	85	66

(i) Maintenance spend per tonne of copper produced

Maintenance spend per tonne of copper produced is defined as sustaining capital expenditure, divided by copper production volumes. This is one of the Group's KPIs for measuring the efficiency of controlling sustaining capital expenditure, the relevance of which is outlined on page 29. A reconciliation from capital expenditure included within the consolidated statement of cash flows is shown below.

$ million (unless otherwise stated)	2018	2017
Purchase of intangible assets – cash flow statement	2	2
Purchase of property, plant and equipment – cash flow statement	567	92
Investments in mining assets, including licences – cash flow statement	46	43
Less: expansionary capital expenditure – see Financial review	(530)	(69)
Sustaining capital expenditure	85	68
Copper production (kt)	294.7	258.5
Maintenance spend per tonne of copper produced ($/t)	288	263

(j) Gross Revenues – applicable to 2017 only

Gross Revenues are sales proceeds from all volumes sold, including pre-commercial production volumes. This measure includes the results of the pre-commercial Bozshakol and Aktogay operations before capitalisation and provides a measure of their performance for the full year. A reconciliation to revenues is in note 4(a)(i) of the consolidated financial statements.

(k) Gross EBITDA – applicable to 2017 only

Gross EBITDA is defined as earnings, including pre-commercial earnings, before interest, taxation, depreciation, depletion, amortisation, MET and royalties and special items[1]. This measure includes the results of the pre-commercial Bozshakol and Aktogay operations before capitalisation and provides a measure of their performance for the full year. A reconciliation to operating profit is in note 4(a)(i) of the consolidated financial statements.

1 Special items are defined as those items which are non-recurring or variable in nature and do not impact the underlying trading performance of the Group. Special items are identified in note 7 in the consolidated financial statements.

Ore Reserves and Mineral Resources estimation methods

Kazakhstan inherited the classification system and estimation methods for minerals that were established in the Former Soviet Union ('FSU'). Updated 'Regulations for the Classification of Non-ferrous Metals Reserves' became law in Kazakhstan in 2006. In practice, this means that the statements of resources and reserves developed by KAZ Minerals (and the mining plans to which they relate) must be submitted for approval to the corresponding committees of the Ministry for Investment and Development, for which adherence to the standardised national system of resource and reserve estimation is mandatory.

Mineral deposits are classified according to their degree of geological complexity into one of three deposit categories (for copper deposits), which determine the density of exploration sampling and the proportions and classifications of GKZ (State Commission on Mineral Reserves) reserves that must be estimated. As part of the exploitation licence for each mineral deposit, a set of 'Conditions for Estimation of Reserves' are prepared by a Kazakhstan licenced design institute and submitted for approval to the State. The Conditions for each deposit specify the minimum thickness for exploitation of the orebody and cut-off grades, plus special considerations which may apply where the conditions for mineral extraction are exceptional or present difficulties.

Resources and reserves have traditionally been estimated by KAZ Minerals (and previously Kazakhmys) according to the FSU's 'Classification and Estimation Methods for Reserves'. It is apparent that there is a growing trend towards greater flexibility and discussion between state authorities and mining companies with respect to resource estimation methods. This has been reflected in the increased use of computers and associated software by KAZ Minerals in order to maintain records about reserves at the operating mines and using databases linked to modelling software to assist in exploration and preliminary resource estimation. DMT Consulting Ltd ('DMT'), the Group's consultant in resource and reserve estimation, recognises that this is an important step towards achieving verifiable and internally consistent resource and reserve estimates.

For the operating mines in the East Region and Kyrgyzstan, DMT has reviewed the reserves statements of KAZ Minerals and presented them in accordance with the criteria required to meet JORC standards. 'Guidelines on the Alignment of Kazakh minerals reporting standards and the CRIRSCO Template' were published during 2015 as a joint initiative of the Committee for Mineral Reserves International Reporting Standards ('CRIRSCO') and the Kazakh Committee of Geology and Subsoil Use and State Reserves Committee. The guidelines have been used to align categories of reserves (A, B, C_1 and C_2) with appropriate, internationally recognised, Mineral Resource categories (Measured, Indicated and Inferred). The JORC Competent Person, however, remains responsible for any estimate that is reported.

Mineral Resources, by definition, must have reasonable prospects for eventual economic extraction. In general, therefore, the total active balance reserve, where no unresolvable problems are foreseen, is considered as the Mineral Resource. Balanced reserves in categories B and C_1 are assigned to the Measured Mineral Resource and the C_2 category is assigned to the Indicated Mineral Resource. Ore Reserves in Proved and Probable categories are then converted from the Resources, after consideration of mining plans and after the application of appropriate modifying factors for loss and dilution. Legal approval for the exploitation of a particular reserve block is also taken into consideration.

For the Company's new mining operations at Aktogay and Bozshakol, and the growth project at Koksay, DMT has based the assessment of Mineral Resources and Ore Reserves on estimates derived from computer modelling that are estimated in accordance with the guidelines of JORC, typically by external consultants. The JORC Code specifies that a pre-feasibility study is the minimum level of engineering design required before a Mineral Resource can be converted to an Ore Reserve. Each of these projects is being developed following international best practice, which includes the creation of a computerised geological model linked to an electronic database. GKZ estimates of tonnage and metal content will continue to be undertaken to comply with national Kazakh requirements. DMT, however, believes that these projects will be best understood by potential investors if the resources and reserves are reported along conventional international lines from the outset, using the JORC Code.

Stockpiling of mined ore is common practice at large open pit mines, usually as a means of providing a consistent tonnage and grade feed to the processing plant. DMT will include stockpiled ore in the inventory of Ore Reserves and Mineral Resources, but refer to the quantity of material held in stockpile at year end. In the case of mined ore added to a heap leach pad, this is considered as 'in process' and hence is not included in the Ore Reserve and Mineral Resource Statement.

DMT's visit to KAZ Minerals' Almaty office for this year's audit took place in December 2018. Mine production data for the operating assets has therefore been based on actual figures until October 2018 and then based on forecasts to arrive at 'end-of-year' results.

The assessment of Inferred Resources for KAZ Minerals is incomplete. The mines do not keep records of 'prognosticated reserves' (as defined in Kazakhstan), categories P1, P2 and P3 under GKZ, which may include material that could be considered equivalent to the JORC category of Inferred Resources. Inferred Resources are shown in the tabulations for Aktogay, Bozshakol and Koksay where model based estimates have been used and Inferred Resources have been categorised as such by a Competent Person under the JORC Code.

All Ore Reserves quoted in the following tables are discounted for ore losses and dilution and refer to estimates of tonnes and contained metal grades at the point of delivery to the processing plant.

Mineral Resources are not discounted for losses and dilution and are inclusive of Ore Reserves.

All figures in reserves and resources are in dry metric tonnes and are dated as at 31 December 2018.

Summary of Ore Reserves

		Reserves[1] kt		Copper %		Zinc %		Gold g/t		Silver g/t		Lead %		Molybdenum %	
		2018	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
Artemyevsky	Proved	13,331	11,998	2.17	2.31	5.33	5.64	1.24	1.20	108	135	1.72	1.75	–	–
	Probable	7,718	10,414	1.16	1.18	1.63	1.57	0.33	0.32	37	34	0.53	0.46	–	–
	Total	21,049	22,412	1.80	1.78	3.97	3.75	0.91	0.79	82	88	1.29	1.15	–	–
Irtyshky	Proved	3,836	4,333	1.61	1.77	4.09	4.31	0.29	0.31	67	71	0.55	0.54	–	–
	Probable	47	392	1.02	1.91	1.48	4.73	0.22	0.38	33	73	0.26	0.73	–	–
	Total	3,883	4,725	1.60	1.78	4.05	4.34	0.29	0.32	67	71	0.55	0.56	–	–
Orlovsky	Proved	6,721	4,983	3.47	2.59	5.03	6.20	0.74	1.07	46	55	1.04	1.40	–	–
	Probable	805	–	5.30	–	2.32	–	0.90	–	33	–	0.82	–	–	–
	Total	7,526	4,983	3.66	2.59	4.74	6.20	0.76	1.07	45	55	1.02	1.40	–	–
Total East Region	**Proved**	23,888	21,314	2.45	2.27	5.05	5.50	0.95	0.99	84	103	1.34	1.42	–	–
	Probable	8,570	10,806	1.55	1.21	1.69	1.68	0.38	0.32	37	35	0.56	0.47	–	–
	Total	32,458	32,120	2.21	1.91	4.16	4.22	0.80	0.76	72	80	1.14	1.10	–	–
Bozymchak	Proved	8,090	8,376	0.72	0.73	–	–	1.20	1.23	7.6	7.9	–	–	–	–
	Probable	4,910	5,262	0.71	0.74	–	–	1.09	1.13	6.5	7.0	–	–	–	–
	Total	13,000	13,638	0.71	0.73	–	–	1.16	1.19	7.2	7.5	–	–	–	–
Aktogay sulphide[2]	Proved	729,217	754,839	0.34	0.35	–	–	–	–	–	–	–	–	0.007	0.007
	Probable	628,000	628,000	0.34	0.34	–	–	–	–	–	–	–	–	0.008	0.008
	Total	1,357,217	1,382,839	0.34	0.35	–	–	–	–	–	–	–	–	0.007	0.007
Aktogay oxide	Proved	68,825	85,118	0.36	0.35	–	–	–	–	–	–	–	–	–	–
	Probable	900	900	0.29	0.29	–	–	–	–	–	–	–	–	–	–
	Total	69,725	86,018	0.36	0.35	–	–	–	–	–	–	–	–	–	–
Total Aktogay[2]	**Proved**	798,042	839,957	0.34	0.35	–	–	–	–	–	–	–	–	0.006	0.006
	Probable	628,900	628,900	0.34	0.34	–	–	–	–	–	–	–	–	0.008	0.008
	Total	1,426,942	1,468,857	0.34	0.35	–	–	–	–	–	–	–	–	0.007	0.007
Bozshakol sulphide[3, 4, 5]	Proved	279,495	84,536	0.40	0.35	–	–	0.18	–	1.3	–	–	–	0.007	–
	Probable	177,825	426,000	0.37	0.35	–	–	0.17	–	1.3	–	–	–	0.008	–
	Total	457,320	510,536	0.39	0.35	–	–	0.18	–	1.3	–	–	–	0.007	–
Bozshakol clay[3, 4, 5]	Proved	89,060	–	0.46	–	–	–	0.22	–	1.3	–	–	–	0.006	–
	Probable	645	25,002	0.54	0.65	–	–	0.24	–	1.9	–	–	–	0.004	–
	Total	89,705	25,002	0.46	0.65	–	–	0.22	–	1.3	–	–	–	0.006	–
Total Bozshakol[3, 4, 5]	**Proved**	368,555	84,536	0.41	0.35	–	–	0.19	–	1.3	–	–	–	0.007	–
	Probable	178,470	451,002	0.37	0.37	–	–	0.17	–	1.3	–	–	–	0.008	–
	Total	547,025	535,538	0.40	0.36	–	–	0.18	–	1.3	–	–	–	0.007	–
Total KAZ Minerals	**Proved**	1,198,575	954,183	0.41	0.40	0.10	0.12	0.09	0.03	2.1	2.4	0.03	0.03	0.006	0.006
	Probable	820,850	1,095,970	0.36	0.36	0.02	0.02	0.05	0.01	0.7	0.4	0.01	0.01	0.008	0.005
	Total	2,019,425	2,050,153	0.39	0.38	0.07	0.07	0.07	0.02	1.6	1.3	0.02	0.02	0.007	0.005

1 Includes allowance for ore loss and dilution. Ore Reserves = Mineral Resources – Ore Loss + Dilution.

2 The molybdenum grade at Aktogay shown in the Proved Reserve is estimated to the Probable Reserve level of confidence.

3 In 2018, the Bozshakol geological model was updated for the results of ongoing drilling and a new Mineral Resource Estimate was issued by CSA Global (UK) Ltd.

4 Bozshakol gold and silver grades for 2017 were estimated to the Inferred Resource level of confidence and were not converted to reserves. The Mineral Resource grades for sulphide ore for 2017 were 0.1 g/t for gold and 1.3 g/t for silver, and for clay ore, 0.7 g/t for gold and 1.3 g/t for silver.

5 Reserve tonnages for Bozshakol include stockpiled material.

Summary of Mineral Resources

		Resources[1] kt		Copper %		Zinc %		Gold g/t		Silver g/t		Lead %		Molybdenum %	
		2018	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
Artemyevsky	Measured	12,686	13,641	2.47	2.64	6.07	6.55	1.41	1.39	123	129	1.96	1.99	–	–
	Indicated	7,311	10,555	1.32	1.32	1.86	1.70	0.38	0.35	43	36	0.61	0.50	–	–
	Total	19,997	24,196	2.05	2.06	4.53	4.43	1.03	0.94	94	88	1.47	1.34	–	–
Irtyshsky	Measured	3,842	4,300	2.26	2.25	5.30	5.32	0.38	0.37	92	88	0.71	0.68	–	–
	Indicated	36	345	1.60	2.34	2.32	5.81	0.34	0.46	51	90	0.40	0.89	–	–
	Total	3,878	4,645	2.25	2.26	5.28	5.36	0.38	0.38	92	88	0.71	0.70	–	–
Orlovsky	Measured	9,308	10,835	3.39	3.10	5.20	4.45	0.90	0.91	53	41	1.31	1.12	–	–
	Indicated	2,536	2,626	2.91	3.03	2.10	2.10	0.71	0.69	22	22	0.61	0.60	–	–
	Total	11,844	13,461	3.29	3.09	4.53	3.99	0.86	0.87	46	38	1.16	1.02	–	–
Total East Region[2]	**Measured**	25,836	28,776	2.77	2.75	5.64	5.58	1.07	1.06	93	90	1.54	1.47	–	–
	Indicated	9,883	13,526	1.73	1.68	1.92	1.88	0.46	0.42	37	35	0.61	0.53	–	–
	Total	35,719	42,302	2.48	2.41	4.61	4.39	0.90	0.85	78	72	1.28	1.17	–	–
Bozymchak[2]	Measured	9,359	9,800	0.78	0.84	–	–	1.35	1.40	8.6	9.0	–	–	–	–
	Indicated	5,484	5,929	0.77	0.84	–	–	1.25	1.28	7.6	7.9	–	–	–	–
	Total	14,843	15,729	0.78	0.84	–	–	1.31	1.35	8.2	8.6	–	–	–	–
Aktogay sulphide[3]	Measured	773,810	799,154	0.33	0.34	–	–	–	–	–	–	–	–	0.008	0.008
	Indicated	784,300	784,300	0.32	0.32	–	–	–	–	–	–	–	–	0.008	0.008
	Total	1,558,110	1,583,454	0.33	0.33	–	–	–	–	–	–	–	–	0.008	0.008
	Inferred	486,200	486,200	0.30	0.30	–	–	–	–	–	–	–	–	0.007	0.007
Aktogay oxide	Measured	73,019	89,307	0.37	0.36	–	–	–	–	–	–	–	–	–	–
	Indicated	950	950	0.32	0.32	–	–	–	–	–	–	–	–	–	–
	Total	73,969	90,257	0.37	0.36	–	–	–	–	–	–	–	–	–	–
	Inferred	1,350	1,350	0.23	0.23	–	–	–	–	–	–	–	–	–	–
Total Aktogay[3]	**Measured**	846,829	888,461	0.34	0.34	–	–	–	–	–	–	–	–	0.007	0.007
	Indicated	785,250	785,250	0.32	0.32	–	–	–	–	–	–	–	–	0.008	0.008
	Total	1,632,079	1,673,711	0.33	0.33	–	–	–	–	–	–	–	–	0.008	0.008
	Inferred	487,550	487,550	0.30	0.30	–	–	–	–	–	–	–	–	0.007	0.007
Bozshakol sulphide[4, 5, 6]	Measured	472,880	454,164	0.37	0.33	–	–	0.15	0.10	1.1	1.4	–	–	0.008	0.005
	Indicated	429,770	418,000	0.35	0.38	–	–	0.12	0.20	1.1	1.2	–	–	0.009	0.006
	Total	902,650	872,164	0.36	0.35	–	–	0.14	0.15	1.1	1.3	–	–	0.008	0.005
	Inferred	261,310	235,000	0.34	0.31	–	–	0.14	0.10	1.2	0.8	–	–	0.008	0.003
Bozshakol clay[4, 5, 6]	Measured	115,740	1,603	0.44	0.38	–	–	0.20	0.09	1.3	2.0	–	–	0.006	–
	Indicated	1,090	25,016	0.48	0.67	–	–	0.27	0.70	1.6	1.3	–	–	0.004	–
	Total	116,830	26,619	0.44	0.65	–	–	0.20	0.66	1.3	1.3	–	–	0.006	–
	Inferred	60	49,000	0.36	0.35	–	–	0.40	0.40	1.7	0.9	–	–	0.003	–
Total Bozshakol[4, 5, 6]	**Measured**	588,620	455,767	0.38	0.33	–	–	0.16	0.10	1.2	1.4	–	–	0.008	0.005
	Indicated	430,860	443,016	0.35	0.40	–	–	0.12	0.23	1.1	1.2	–	–	0.009	0.006
	Total	1,019,480	898,783	0.37	0.36	–	–	0.14	0.16	1.1	1.3	–	–	0.008	0.005
	Inferred	261,370	284,000	0.34	0.32	–	–	0.14	0.15	1.2	0.8	–	–	0.008	0.002
Koksay[7]	Measured	246,500	246,500	0.41	0.41	–	–	–	–	–	–	–	–	0.004	0.004
	Indicated	340,800	340,800	0.45	0.45	–	–	–	–	–	–	–	–	0.003	0.003
	Total	587,300	587,300	0.43	0.43	–	–	–	–	–	–	–	–	0.003	0.003
	Inferred	148,700	148,700	0.37	0.37	–	–	–	–	–	–	–	–	0.002	0.002
Total KAZ Minerals	**Measured**	1,717,144	1,629,304	0.40	0.39	0.08	0.10	0.08	0.06	1.8	2.0	0.02	0.03	0.007	0.006
	Indicated	1,572,277	1,588,521	0.37	0.38	0.01	0.02	0.04	0.07	0.6	0.7	0.004	0.01	0.007	0.006
	Total	3,289,421	3,217,825	0.39	0.39	0.05	0.06	0.06	0.06	1.2	1.4	0.01	0.02	0.007	0.006
	Inferred	897,620	920,250	0.32	0.32	–	–	0.04	0.05	0.3	0.3	–	–	0.006	0.005

1 Resources include undiscounted Reserves. No ore loss or dilution has been included.

2 Inferred Resources for East Region and Bozymchak mines are nil.

3 Molybdenum grades at Aktogay, although shown in Measured Resources, are estimated only to the Indicated Resource level of confidence.

4 In 2018, the Bozshakol geological model was updated for the results of ongoing drilling and a new Mineral Resource Estimate was issued by CSA Global (UK) Ltd.

5 The 2017 Bozshakol gold, silver and molybdenum grades shown in Measured and Indicated Resources were estimated only at the Inferred Resource level of confidence.

6 Resource tonnages for Bozshakol include stockpiled material.

7 Gold is concentrated within a portion of the Koksay deposit, so the gold tonnage and grade are reported separately. The Measured and Indicated Resource containing gold is 249.5 Mt at a grade of 0.07 g/t.

Revision of Mineral Resources and Ore Reserves statement to 31 December 2018

DMT Consulting Ltd ('DMT' or the 'Consultant') has undertaken a review of the Mineral Resources and Ore Reserves estimates prepared by KAZ Minerals PLC ('the Company'), as the basis for the preparation of a statement of Mineral Resources and Ore Reserves for the Company as at 31 December 2018. Tabulations of Mineral Resources and Ore Reserves, comparisons with the previous annual statement and short technical descriptions are provided for the Company's copper and gold assets.

DMT's technical understanding of the mines and projects held by KAZ Minerals is largely based on the Competent Person's Reports that IMC (prior to changing name to DMT) prepared for the Company in 2005, for the London listing, and again in 2010, for the Hong Kong listing. Additional technical site visits have been made since 2010, as part of the audit process, when DMT considered them necessary, either to look at new assets or where significant material changes have taken place (e.g. new exploration drilling). As part of the 2018 review, DMT consultants visited the underground operation at Artemyevsky and the Aktogay open pit mine. Technical familiarity with the Company's mines and projects is a critical aspect of the annual review, in support of what is primarily a desktop exercise.

The annual review of Mineral Resources and Ore Reserves carried out by DMT is predominantly focused on mine reserve reports, depletion through production, analysis of Company plans, new exploration results, new technical reports and other changes affecting the Mineral Resources and Ore Reserves.

The Statement of Mineral Resources and Ore Reserves is restated in accordance with the criteria of the 2012 version of the 'Australasian Code for Reporting Mineral Resources and Ore Reserves', published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy and collaborating institutions (the 'JORC Code').

The consideration of Mineral Resources is based on the JORC definition which says that a Mineral Resource is an occurrence of minerals in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. In converting Mineral Resources to Ore Reserves in accordance with the JORC Code, DMT considers a number of 'Modifying Factors'. Consequently, the Code defines an Ore Reserve as "the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate, at the time of reporting, that extraction could reasonably be justified."

The term 'economically mineable' has no fixed definition in the JORC Code, and short-term fluctuations in factors such as metal prices or operating expenditure do not warrant the re-classification from Ore Reserves to Mineral Resources. If, however, the changes are expected to be long term or permanent in nature, then such re-classification is required.

For the sake of clarity in this report, references to the JORC categories 'Ore Reserve' and 'Mineral Resource' are capitalised. The non-capitalised term 'reserve' refers to the Kazakh use of the word which can, depending on the context, be synonymous with both JORC terms 'Ore Reserve' and 'Mineral Resource'.

DMT is satisfied, from the audit undertaken, that the recently revised estimates of resources and reserves prepared by the Company for the East Region and Kyrgyz operating mines are in accordance with the classification system required by law in Kazakhstan and that, correspondingly, the estimates have a consistent basis for expressing the degree of confidence for stating quantities of exploitable minerals at specific grades of metal content. On the basis of the estimates supplied by the Company, DMT has applied the same technical criteria as used in previous audits, for preparation of the restatement of Ore Reserves and Mineral Resources as at 31 December 2018, in accordance with the JORC Code.

Guidelines for the alignment of Russian minerals reporting standards and the JORC Code were published in 2010 and these have been applied in the preparation of the Mineral Resource and Ore Reserve statement for the East Region and Kyrgyz operating mines. This is considered appropriate as all these mineral deposits, currently being mined by KAZ Minerals, were explored during the Soviet era and reserves approved during that era are still referenced. The aim of the guidelines is to provide a standard reporting terminology for use in disclosure of the assets of mining companies to stock markets.

Simon Pepper
Director - Mining, DMT Consulting Ltd
8 February 2019

DMT Consulting Ltd
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Geneva-1 (Building D)
Unit 8, Lake View Drive
Sherwood Park
Nottingham NG15 0ED
United Kingdom

Shareholder information

Annual General Meeting

The Annual General Meeting of the Company will be held at 12.15pm on Thursday 2 May 2019 at the offices of Linklaters LLP, One Silk Street, London EC2Y 8HQ, United Kingdom. The Notice of Annual General Meeting and Form of Proxy are enclosed with this Annual Report and Accounts. The Notice of Annual General Meeting can also be found in the Investors section on the KAZ Minerals website (www.kazminerals.com).

Electronic shareholder communications

KAZ Minerals uses its website (www.kazminerals.com) as its primary means of communication with its shareholders provided that the individual shareholder has agreed or is deemed to have agreed that communications may be sent or supplied in that manner. Electronic communications allow shareholders to access information instantly as well as helping KAZ Minerals reduce its costs and its impact on the environment. Shareholders can sign up for electronic communications via Computershare's Investor Centre website at www.investorcentre.co.uk. Shareholders that have consented or are deemed to have consented to electronic communications can revoke their consent at any time by contacting the Company's registrar. In addition to enabling shareholders to register to receive communications by email, Computershare's Investor Centre website provides a facility for shareholders to manage their shareholding online by allowing them to:

- view their share balance;
- change their address;
- view payment and tax information; and
- update payment instructions.

Computershare's Investor Centre website also offers a share dealing service for shareholders on the UK register. Please contact Computershare for further information.

Electronic voting

Shareholders can submit proxies for the 2019 Annual General Meeting electronically by logging on to www.investorcentre.co.uk/eproxy. Electronic proxy appointments must be received by the Company's registrar no later than 12.15pm on Tuesday 30 April 2019 (or not less than 48 hours before the time fixed for any adjourned meeting).

Website

A wide range of information on KAZ Minerals is available at www.kazminerals.com, including:

- financial and operational information – annual and half-yearly reports as well as quarterly production reports;
- share price information – current trading details and historical charts;
- shareholder information – dividend information, Annual General Meeting results and details of the Company's registrar; and
- press releases – current and historical.

Shareholder interests at 31 December 2018

Number of shareholders: 1,432

Number of shares in issue: 458,379,033

By size of holding	No. of accounts	% of total accounts	% of ordinary share capital
1,000 and under	660	46.09%	0.05%
1,001 – 5,000	280	19.55%	0.15%
5,001 – 10,000	97	6.77%	0.15%
10,001 – 100,000	208	14.53%	1.65%
100,001 +	187	13.06%	98.00%
Totals	**1,432**	**100.00%**	**100.00%**

By category of shareholder	No. of accounts	% of total accounts	% of ordinary share capital
Private Shareholders	659	46.02%	0.66%
Banks/Nominees	735	51.33%	95.15%
Pension Funds	1	0.07%	0.00%
Investment/Unit Trusts	4	0.28%	0.01%
Insurance Companies	1	0.07%	0.00%
Corporate Holders	30	2.09%	1.96%
Share Plan Control Account	1	0.07%	0.01%
Treasury Account	1	0.07%	2.21%
Totals	**1,432**	**100.00%**	**100.00%**

Financial calendar

Ex-dividend date	18 April 2019
Record date	23 April 2019
Final dividend payable	17 May 2019

Events calendar

Q1 Production Report	25 April 2019
Annual General Meeting	2 May 2019
Q2 Production Report	25 July 2019
Half-yearly results announced	15 August 2019
Q3 Production Report	24 October 2019

Registrars

For information about proxy voting, dividends and to report changes in personal details, shareholders should contact:

For shareholders holding their shares on the UK register:

Computershare Investor Services PLC

The Pavilions
Bridgwater Road
Bristol BS13 8AE
United Kingdom
Tel: +44 (0)370 707 1100
Fax: +44 (0)370 703 6101
Email: web.queries@computershare.co.uk

For shareholders holding their shares on the Kazakhstan Stock Exchange:

Shareholder Enquiries

KAZ Minerals PLC
6th Floor, Cardinal Place
100 Victoria Street
London SW1E 5JL
United Kingdom
Tel: +44 (0)20 7901 7898
Email: shareholder@kazminerals.com

Unsolicited telephone calls and correspondence

Shareholders are advised to be wary of any unsolicited advice, offers to buy shares at a discount, or offers of free reports about the Company. These are typically from overseas based 'brokers' who target US or UK shareholders, offering to sell them what often turn out to be worthless or high risk shares. These operations are commonly known as 'boiler rooms' and the 'brokers' can be very persistent and extremely persuasive. If shareholders receive any unsolicited investment advice, they can check whether the person or organisation is properly authorised by the Financial Conduct Authority (FCA) at www.fca.org.uk/register and the matter may be reported to the FCA by using the share fraud reporting form at www.fca.org.uk/scams or by calling 0800 111 6768 (UK) or +44 20 7066 1000 (international). Further information is available at www.fca.org.uk/scansmart. Details of any share dealing facilities that the Company endorses will be included in Company mailings and on our website.

Dividends

The Board recommends the payment of a final dividend for the year ended 31 December 2018 of 6 US cents per ordinary share (2017: nil). If approved, the dividend will be paid on 17 May 2019 to shareholders on the UK register of members at the close of business in the UK on 23 April 2019.

Currency option and dividend mandate

The Company declares dividends in US dollars. For those shareholders who hold their shares on the UK register, the default currency for receipt of their dividends is US dollars, although they can elect to receive their dividends in UK pounds sterling. Those shareholders who wish to receive their dividend in UK pounds sterling, should contact the Company's registrar to request a currency election form.

Shareholders on the UK register can arrange for dividends to be paid directly into a UK bank or building society account. To take advantage of this facility, you should contact the Company's registrar to request a dividend mandate form or register online at www.investorcentre.co.uk. The arrangement is only available in respect of dividends paid in UK pounds sterling.

Company Secretary

Susanna Freeman
Tel: +44 (0)20 7901 7800
Email: susanna.freeman@kazminerals.com

Registered office

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Tel: +44 (0)20 7901 7800
Registered number: 05180783

Joint corporate brokers

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33 Canada Square
Canary Wharf
London E14 5LB
United Kingdom

UBS Limited
5 Broadgate
London EC2M 2QS
United Kingdom

Auditors

KPMG LLP
15 Canada Square
Canary Wharf
London E14 5GL
United Kingdom

Glossary

APMs
Alternative Performance Measures being measures of financial performance, financial position or cash flows that are not defined or specified under IFRS but used by the Directors internally to assess the performance of the Group

Baimskaya copper project
the mining licence covering the Peschanka copper deposit, located in the Chukotka region of Russia

Board or Board of Directors
the Board of Directors of the Company

Brexit
the UK's departure from the European Union

CAGR
compound annual growth rate

capital employed
the aggregate of equity attributable to owners of the Company, non-controlling interests and borrowings

cash operating costs
all costs included within profit before finance items and taxation, net of other operating income, excluding MET, royalties, depreciation, depletion, amortisation and special items

CDB or China Development Bank
China Development Bank Corporation

CIS
Commonwealth of Independent States, comprising former Soviet Republics

CIT
corporate income tax

CNY
Chinese yuan, basic unit of the renminbi

CO_2
carbon dioxide

Code or UK Corporate Governance Code
the UK Corporate Governance Code issued by the Financial Reporting Council in April 2016

Commercial Production (Baimskaya)
the first commissioned concentrator at the Project achieving 70 per cent of nameplate processing capacity for six consecutive calendar months

Committee or Committees
any or all of the Audit; Health, Safety and Environment; Remuneration; Nomination; Operations Ramp Up Assurance; and Projects Assurance Committees depending on the context in which the reference is used

Company or KAZ Minerals
KAZ Minerals PLC

continuing operations
the Group following completion of the Restructuring

Copper Equivalent Production
copper equivalent production units consisting of copper production, plus gold production converted into copper units assuming analyst consensus long term average price forecasts of $6,700/t for copper and $1,300/oz for gold

CREST
an electronic means of settling share transactions and registering investors on a company's register of members

Cuprum Holding
Cuprum Netherlands Holding B.V. (now named Kazakhmys Holding Group B.V.), the entity to which the Disposal Assets were transferred

DBK
Development Bank of Kazakhstan

Directors
the Directors of the Company

Deferred Cash Consideration
$225 million in cash payable to the Vendor at the Long Stop Date, in lieu (in whole or in part) of payment of Deferred Equity Consideration at Final Completion, if and to the extent that the Project Delivery Conditions are not satisfied at the date of Commercial Production

Deferred Consideration
any Deferred Equity Consideration payable at Final Completion and any deferred Cash Consideration payable at the Long Stop Date, with a total value of $225 million

Deferred Equity Consideration
up to 21,009,973 million KAZ Minerals shares to be issued to the Vendor or its nominee at Final Completion, if and to the extent that the Project Delivery Conditions are satisfied at the date of Commercial Production

Disposal Assets
the Disposal Assets comprised the mining, processing, auxiliary, transportation and heat and power assets of the Group in the Zhezkazgan and Central Regions of Kazakhstan. The Disposal Assets included 12 copper mines, mine development opportunities, four concentrators, two smelters, two coal mines and three captive heat and power stations, all of which were disposed of as a result of the Restructuring

dollar or $ or US$
United States dollars, the currency of the United States of America

EBITDA
earnings before interest, taxation, depreciation, depletion, amortisation, MET and royalties and special items.
A reconciliation to operating profit is in note 4(a)(i) of the consolidated financial statements

EPS
earnings per share

EPS based on Underlying Profit/(Loss)
profit/loss excluding special items and their resulting tax and non-controlling interest effects, divided by the weighted average number of ordinary shares in issue during the period (see note 13 of the consolidated financial statements)

EU
European Union

EUR
Euro, the currency of certain member states of the European Union

Final Completion
completion of the acquisition by KAZ Minerals of the remaining 25 per cent interest in the Baimskaya copper project, which will be at the earlier of (i) a date shortly after the date of Commercial Production and (ii) the Long Stop Date

Fluor
Fluor Corporation

Free Cash Flow
net cash flow from operating activities before capital expenditure and non-current VAT associated with expansionary and new projects less sustaining capital expenditure (see page 179 for a reconciliation to the closest IFRS based measure)

General Directors
the heads of the Group's operations at Bozshakol, Aktogay, the East Region and Bozymchak

GHG
greenhouse gas

g/t
grammes per metric tonne

GRI4
Global Reporting Initiative Sustainability Guidelines version 4

gross cash cost
cash operating costs, including pre-commercial production costs, excluding purchased cathode plus TC/RC on concentrate sales, divided by the volume of own copper sales

Gross EBITDA
earnings, including pre-commercial earnings, before interest, taxation, depreciation, depletion, amortisation, MET and royalties and special items. A reconciliation to operating profit is in note 4(a)(i) of the consolidated financial statements

gross liquid funds
the aggregate amount of cash and cash equivalents and current investments less restricted cash

Gross Revenues
sales proceeds from all volumes sold, including pre-commercial production volumes. A reconciliation to revenues is in note 4(a)(i) of the consolidated financial statements

the Group
KAZ Minerals PLC and its subsidiary companies

HSE
Health, Safety and Environment

IAS
International Accounting Standard

IASB
International Accounting Standards Board

ICG
Industrial Construction Group LLC

ICMM
International Council on Mining and Metals

IFRIC
International Financial Reporting Interpretations Committee

IFRS
International Financial Reporting Standard

Initial Cash Consideration
$436 million in cash

Initial Completion
completion of the acquisition by KAZ Minerals of a 75 per cent interest in the Baimskaya copper project in the first half of 2019, after obtaining anti-monopoly and other regulatory approvals and satisfaction of certain other conditions

Initial Consideration
the Initial Cash Consideration and the Initial Equity Consideration payable at Initial Completion, with a total value of $675 million (at 31 July 2018)

Initial Equity Consideration
22,344,944 million new KAZ Minerals shares valued at $239 million at 31 July 2018

IRR
internal rate of return

JORC
Joint Ore Reserves Committee

JORC Code
the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, a professional code of practice that sets minimum standards for Public Reporting of Minerals Exploration Results, Mineral Resources and Ore Reserves

Kazakhmys Holding Group
The entity to which the Disposal Assets were transferred (formerly Cuprum Netherlands Holding B.V.)

Kazakhmys Group
Kazakhmys Corporation LLC, the Group's principal operating subsidiary in Kazakhstan prior to the Restructuring

Kazakhstan
the Republic of Kazakhstan

koz
thousand ounces

KPI
key performance indicator

kt
thousand metric tonnes

Kyrgyzstan
the Kyrgyz Republic

lb
pound, unit of weight

LBMA
London Bullion Market Association

LIBOR
London Interbank Offered Rate

Listing
the listing of the Company's ordinary shares on the London Stock Exchange on 12 October 2005

Listing Rules
the Listing Rules of the UK Listing Authority

LME
London Metal Exchange

Long Stop Date
31 March 2029

major growth projects
Bozshakol and Aktogay

megalitre
thousand cubic metres

MET
mineral extraction tax

Mt
million metric tonnes

net cash costs
gross cash costs less by-product Gross Revenues, divided by the volume of own copper sales

net debt
the excess of current and non-current borrowings over gross liquid funds. A reconciliation of net debt is in note 30 of the consolidated financial statements

New Code
UK Corporate Governance Code and accompanying Guidance on Board Effectiveness published in July 2018

NFC
China Non Ferrous Metal Industry's Foreign Engineering and Construction Co., Ltd

NPV
net present value

ounce or oz
a troy ounce, which equates to 31.1035 grammes

PJ
a standard unit of energy, work and heat equal to 10^{15} joules

ppm
parts per million

Project Delivery Conditions
conditions to the payment of Deferred Equity Consideration at Final Completion in lieu of payment of Deferred Cash Consideration at the Long Stop Date, which relate to state construction of transport and power infrastructure, confirmation of federal tax incentives and demonstration of year-round concentrate shipment from the port of Pevek on agreed terms

PXF
pre-export finance debt facility

Recordable Case
a Recordable Injury case or a Recordable Disease case

Recordable Disease
a new disease in the categories of occupational respiratory disorders, occupational hearing loss, musculoskeletal disorders, occupational cancers and other occupational medical disorders

Recordable Injury
a new occupational injury of sufficient severity that it requires medical treatment beyond first aid or results in the worker's inability to perform his or her routine function on the next calendar day

Restructuring
the transfer, subject to certain consents and approvals, of the Disposal Assets to Cuprum Netherlands Holding B.V. (now named Kazakhmys Holding Group B.V.) which was approved by shareholders at the General Meeting on 15 August 2014 and completed on 31 October 2014

RMB
renminbi, the official currency of the People's Republic of China

$/t or $/tonne
US dollars per metric tonne

Scope 1 emissions
direct greenhouse gas emissions from sources that are owned by the Group

Scope 2 emissions
indirect greenhouse gas emissions from consumption of purchased electricity, heat or steam

som
the official currency of Kyrgyzstan

Speak-Up
the Group's confidential whistleblowing arrangements

special items
those items which are non-recurring or variable in nature and which do not impact the underlying trading performance of the Group. Special items are set out in note 7 to the consolidated financial statements

SX/EW
solvent extraction and electrowinning, a two-stage metallurgy process used for the extraction of copper

t
metric tonnes

TASED
a territory of accelerated social and economic development

TC/RCs
treatment charges and refining charges for smelting and refining services

tenge or KZT
the official currency of the Republic of Kazakhstan

TJ
a standard unit of energy, work and heat equal to 10^{12} joules

Total Recordable Case Frequency Rate
the number of Recordable Cases occurring per million hours worked

TRI
Total Recordable Injuries

Total Recordable Injury Frequency Rate or TRIFR
the number of Recordable Injuries occurring per million hours worked

UK
United Kingdom

Underlying Profit/(Loss)
profit/loss excluding special items and their resulting tax and non-controlling interest effects. Underlying Profit is set out in note 13(b) to the consolidated financial statements

US
United States of America

USc/lb
US cents per pound

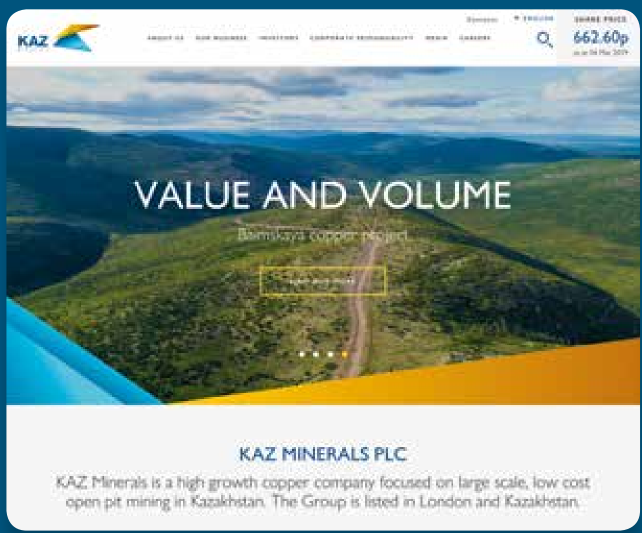
Vendor
Aristus Holdings Limited, a company owned and controlled by a consortium of individual investors including Roman Abramovich and Alexander Abramov

Cautionary notice concerning forward-looking statements

This Annual Report and Accounts includes forward-looking statements with respect to the business, strategy and plans of KAZ Minerals and its current goals, assumptions and expectations relating to its future financial condition, performance and results. Although KAZ Minerals believes that the expectations reflected in such forward-looking statements are reasonable and are made by the Directors in good faith, based on current plans, estimates and projections, no assurance can be given that such expectations will prove to be correct. By their nature, forward-looking statements involve known and unknown risks, assumptions and uncertainties and other factors which are unpredictable as they relate to events and depend on circumstances that will occur in the future which may cause actual results, performance or achievements of KAZ Minerals to be materially different from those expressed or implied in these forward-looking statements. Principal risk factors that could cause KAZ Minerals' actual results, performance or achievements to differ materially from those in the forward-looking statements include (without limitation) occupational health and safety, commodity prices, foreign exchange and inflation, mergers, acquisitions and divestments, major projects ramp up, business interruption, new projects, external suppliers and contractors, community and labour relations, exposure to China, staff skills, recruitment and retention, political risk, liquidity management, tax regime and legislation compliance, environmental management, reserves and resources, and such other risk factors disclosed in this Annual Report and Accounts. Forward-looking statements should therefore be construed in light of such risk factors. These forward-looking statements should not be construed as a profit forecast.

No part of this Annual Report and Accounts constitutes, or shall be taken to constitute, an invitation or inducement to invest in KAZ Minerals PLC, or any other entity, and shareholders are cautioned not to place undue reliance on the forward-looking statements. Except as required by the Listing Rules and applicable law, KAZ Minerals does not undertake any obligation to update or change any forward-looking statements to reflect events occurring after the date of this Annual Report and Accounts.

For all the latest information
and to find out more about
the Company, please visit our website
www.kazminerals.com



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