Exxaro Resources Limited
Consolidated Mineral Resources and Mineral Reserves report
for the year ended 31 December 2024

exxaro

POWERING POSSIBILITY

Contents

Reporting suite

We are committed to transparent reporting and publish an annual reporting suite detailing our performance:


Environmental, social and governance (ESG) report


ESG databook


Integrated report


Group and company annual financial statements


Notice of annual general meeting (AGM)

These reports and other supplementary reports are available online and should be read together for a complete understanding of our business and performance.

1. Who we are

Exxaro is a JSE-listed company operating mainly in South Africa. Coal is our core commodity and we have an established energy solutions business. Our additional growth prospects include energy transition minerals and energy solutions. Having established the business in 2006, we have deep roots in mining with a track record of operational excellence and delivering value.

Our assets have a book value of R94.7 billion (2023: R92.9 billion), including five coal mines[1], two windfarms and a solar project under construction	Our market capitalisation is R55.17 billion (2023: R71.43 billion)
We produced 39.5Mt of coal product (including buy-ins) (2023: 42.5Mt)	We are in the top 30 on the Financial Times Stock Exchange/ JSE Socially Responsible Investment Index
We generated 725GWh of renewable energy (2023: 727GWh)	The business is 30.81% black empowered

A snapshot of where we are going and how we will get there

Purpose

In line with Exxaro's **purpose of powering better lives in Africa and beyond**, our ambition is to provide resources (people, minerals, energy and capital) critical to ensuring the energy transition and a low-carbon future.

Vision

We understand that we cannot grow sustainably without creating a positive impact on the environment and communities we serve. We are committed to responsibly maximising the value of our coal assets by reducing stranded assets, and playing an active role in creating a future that realises our **vision: resources powering a clean world.**

Values

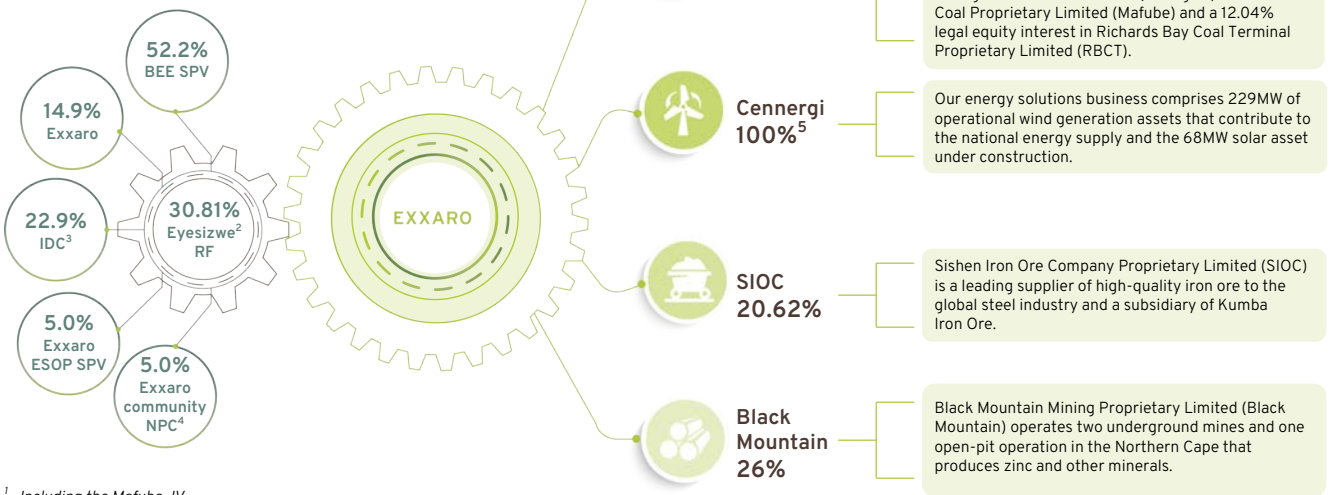
Our success lies in the strength of our culture and values, which strengthen our resilience and ensure we deliver stakeholder value. Our values are:

- **Empowered to grow and contribute**
- **Teamwork**
- **Committed to excellence**
- **Honest responsibility**

Sustainable Growth and Impact strategy

We are creating a resilient, sustainable and impactful business that catalyses economic growth, principled governance, environmental stewardship and positive change. Our strategic objectives enable the successful execution of our strategy.

Ownership structure



Our core operation is thermal, semi-soft coking and metallurgical coal mining, supplying Eskom, other domestic markets and offshore markets.

Our coal mining business is structured under four legal entities, all managed and operated by Exxaro, supplemented by a 50% joint venture (JV) with Thungela Resources Limited (Thungela) in Mafube Coal Proprietary Limited (Mafube) and a 12.04% legal equity interest in Richards Bay Coal Terminal Proprietary Limited (RBCT).

Our energy solutions business comprises 229MW of operational wind generation assets that contribute to the national energy supply and the 68MW solar asset under construction.

Sishen Iron Ore Company Proprietary Limited (SIOC) is a leading supplier of high-quality iron ore to the global steel industry and a subsidiary of Kumba Iron Ore.

Black Mountain Mining Proprietary Limited (Black Mountain) operates two underground mines and one open-pit operation in the Northern Cape that produces zinc and other minerals.

[1] *Including the Mafube JV.*
[2] *Eyesizwe (RF) Proprietary Limited (Eyesizwe), a special purpose vehicle private company, incorporated under South Africa's laws, holds the black economic empowerment (BEE) shares. On 12 March 2025, Eyesizwe RF's shareholders committed to maintaining Exxaro's 30.81% empowerment shareholding until 2027.*
[3] *Industrial Development Corporation of South Africa.*
[4] *Exxaro Aga Setshaba NPC.*
[5] *Exxaro owns 100% of Cennergi; Cennergi owns 95% of Amakhala Emoyeni windfarm and 75% of Tsitsikamma community windfarm.*

For detailed information on our group structure, refer to the 2024 annual financial statements.

2. Introduction

2.1 About this report

Exxaro continuously strives to enhance the level of estimation and reporting of Mineral Resources and Mineral Reserves. The group is committed to the principles of transparency, materiality and competency in reporting its Mineral Resources and Mineral Reserves.

The information in this report aligns with section 12.13 of the JSE Limited (JSE) Listings Requirements. It encapsulates information on reporting governance, competence, tenure, risk, liabilities and assurance and auxiliary descriptions of applicable projects, operations and exploration activities.

Mineral Resources and Mineral Reserves were estimated by Competent Persons on an operational or project basis and in line with the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves, 2016 edition (SAMREC Code) for African properties (coal), with the exception of the Vedanta Resources base metal property, and the Australasian Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves, 2012 edition (JORC Code) for Australian (coal) and the Vedanta Resources property.

For Coal Resources and Coal Reserves under Exxaro management's control, estimation is in line with the South African National Standard 10320:2020, edition 2 – Guide to the systematic evaluation of Coal Resources and Coal Reserves (SANS 10320). Mineral Resource and Mineral Reserve estimates are quoted in full, irrespective of Exxaro's shareholding. The report primarily encompasses all aspects relating to Exxaro's coal estimation and reporting. Therefore, we predominantly refer to Coal Resources and Coal Reserves throughout the report. We also use Mineral Resources and Mineral Reserves to collectively refer to coal, base metal and iron ore estimates.

Exxaro reports Mineral Resource and Mineral Reserve estimates directly under management's control and for entities in which we hold a minority interest. Supplementary descriptions are provided for projects and operations directly under management's control. For projects and operations mentioned in the report over which Exxaro has no management control, please refer to the relevant company's website, as shown below, for supplementary information. This approach ensures maximum compliance with the principles of materiality and transparency.

Anglo American (Moranbah South project):
www.angloamerican.com/investors/annual-reporting

Thungela Resources (Mafube): https://www.thungela.com/

Kumba Iron Ore (Kolomela and Sishen):
www.angloamericankumba.com/investors

Vedanta Resources base metal operations and projects (Black Mountain and Gamsberg):
www.vedantaresources.com/investor-relations/

Feedback

We encourage and welcome feedback from our stakeholders. Please send any comments or suggestions to:

Malusi Buthelezi
Group manager: Governance and reporting
Tel: +27 12 307 3174
Mobile: +27 83 460 3723
Email: Malusi.Buthelezi@exxaro.com

www.exxaro.com

2.2 Certification by group company secretary

In terms of section 88(2)(e) of the Companies Act, 2008 (Act 71 of 2008), as amended (Companies Act), I, Michelle Nana, in my capacity as group company secretary, confirm that, to the best of my knowledge, for the year ended 31 December 2024, Exxaro Resources Limited (Exxaro) has filed with the Companies and Intellectual Property Commission all such returns and notices as required of a public company in terms of the Companies Act, and that all such returns and notices appear to be true, correct and up to date.

Exxaro has legal entitlement to the Coal Resources and Coal Reserves under management control. The directors do not know of any legal impediments or other material conditions that may have an influence on the rights to explore or mine these operations. However, legal entitlements that support all reported Mineral statements are tabled.

Michelle Nana
Group company secretary

Pretoria

15 April 2025

2.3 Certification by lead Competent Persons

The Exxaro executive management team appoints the lead Competent Persons.

The Exxaro lead Coal Resource Competent Person is Henk Lingenfelder, a member of the Geological Society of South Africa who is professionally registered with the South African Council for Natural Scientific Professions (SACNASP). He has a BSc (Geology) (Hons) and 29 years of experience as a geologist in coal, iron ore and industrial minerals.

The person in Exxaro designated to take corporate responsibility for Coal Resources, Henk Lingenfelder, the undersigned, has reviewed and endorsed the reported estimates.

Henk Lingenfelder
BSc (Geology) (Hons)
PrSciNat (400038/11)
Group manager: mineral asset management (MAM)

263B West Avenue, Die Hoewes
Centurion
0163
South Africa

South African Council for Natural Scientific Professions
Private Bag X540
Silverton
0127
South Africa

The Exxaro lead Coal Reserve Competent Person is Chris Ballot, a mining engineer registered with the Engineering Council of South Africa (ECSA). He has 28 years of experience in various technical and management roles in iron ore, mineral sands and coal. His qualifications include BEng (Mining), GDE and MBA.

The person in Exxaro designated to take corporate responsibility for Coal Reserves, Chris Ballot, the undersigned, has reviewed and endorsed the reported estimates.

Chris Ballot
BEng (Mining)
ECSA 20060040
Group manager: mine technical services

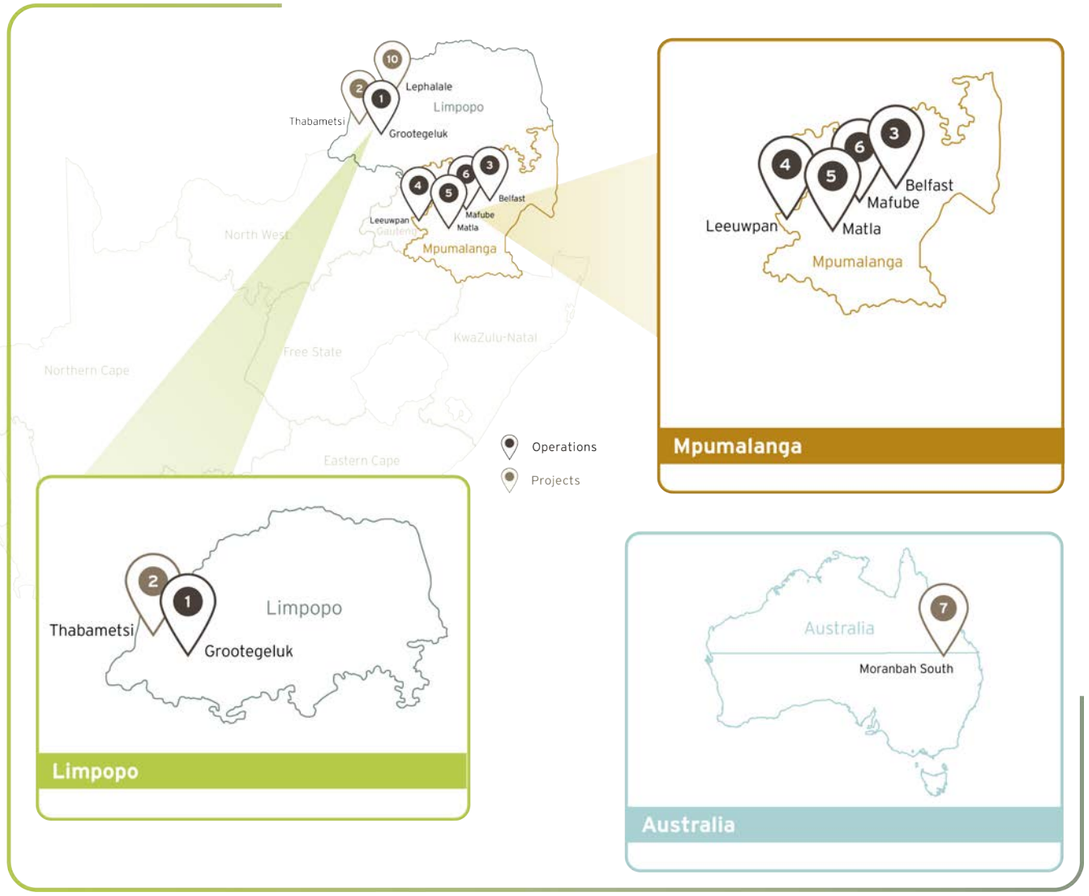
263B West Avenue, Die Hoewes
Centurion
0163
South Africa

Engineering Council of South Africa
Private Bag X691
Bruma
2026
South Africa

Both parties are permanently employed by Exxaro: Henk Lingenfelder as the group manager: MAM and Chris Ballot as the group manager: mine technical services. Both parties consented to the inclusion of the Resource and Reserve estimates in the 2024 integrated report in the form and context in which they were intended and confirm that the reporting complies with the SAMREC Code, the relevant portions of Table 1 and the JSE Listings Requirements (section 12.13). Exxaro has written confirmation from the Competent Persons (Table 2) that the reporting complies with the SAMREC Code, the relevant portions of Table 1 and the JSE Listings Requirements (section 12.13), and that they consent to the publication of the report in the form and context in which it was intended.

3. Our operations and projects: year in review

	Our Waterberg coal complex		Our Australian interest
Operation	1 **Grootegeluk**	2 **Thabametsi**	7 **Moranbah South**
% Attributable	100%	100%	50%
Location	West of Lephalale	West of Lephalale, adjacent to our Grootegeluk mine	Queensland, Australia
Mining type	Open-cut; one of the largest integrated mining and beneficiation coal operations globally	Forms part of the Waterberg coal open-cut strategy, with additional potential for underground	Open-cut and underground
Annual run of mine (RoM) production	51.4Mt, ↓ 8% year on year, mainly due to poor offtake	Forms part of the larger Grootegeluk complex	In project development
Product	Thermal and metallurgical coal	Thermal coal	Coking coal
Annual product produced	Thermal – 23.6Mt, ↓ 10% Metallurgical – 2.0Mt, → 0% The decrease is seen as a cascading effect of the poor offtake in Q1		Not operational
Market	Domestic and export	Domestic	Export
Resource estimation summary	Based on the 2022 model	Forms part of the larger Waterberg coal complex geological model	2024 geological model, including new information from drilling and a 3D seismic geophysical survey
Year-on-year change in Resource	↓ 1%, mainly as a result of mining depletion	No change	↑ 0.4% due to the geological model update
Reserve estimation summary	Depletion of the 2022 life of mine plan (LoMP)	No change	
Year-on-year change in Reserve	↓ 2%, mainly as a result of mining depletion	No change	No Reserves declared yet
Highlights for the year	The drilling campaign at Grootegeluk was successfully executed, adding significant value to the operation	Project options are under review to optimise the integrated Waterberg complex	The conclusion of a successful 3D seismic geophysical survey now ensures that most of the Coal Resource area available for exploitation is covered by high-resolution seismic structural information
Challenges	Grootegeluk is experiencing increased geological structural complexities as the pit advances westwards. The new geological model, to be introduced in 2025, will aide in addressing this issue	Consolidation of legal rights	
2025 forward looking	A geological model developed for smaller, defined geological zones to provide enhanced flexibility for evaluating multiple exploitation scenarios in 2025	Concluding the evaluation of scenarios that will unlock maximum value for the integrated Waterberg business	The exploration results enable the project team to advance formal studies



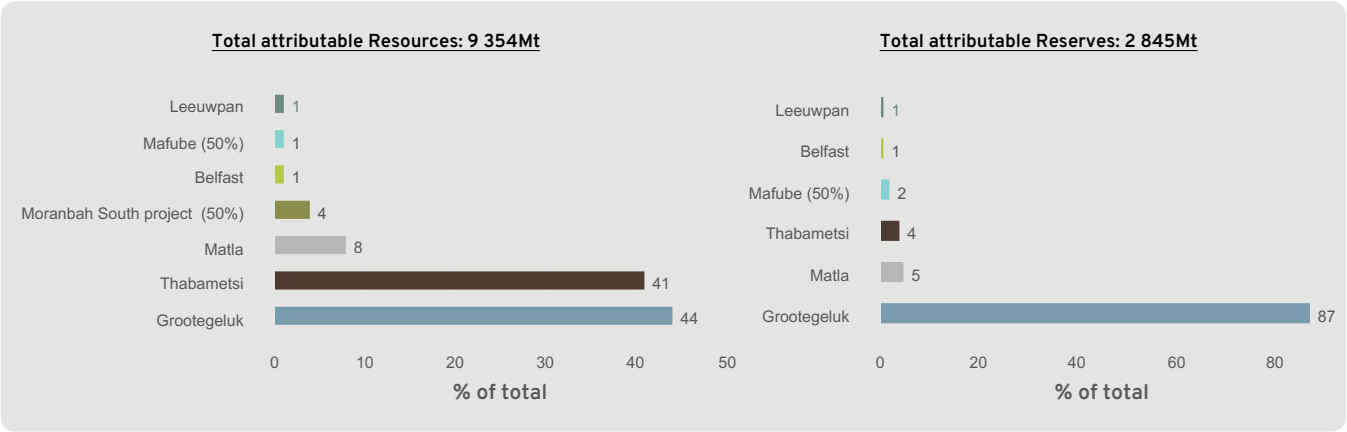
Our Mpumalanga coal operations

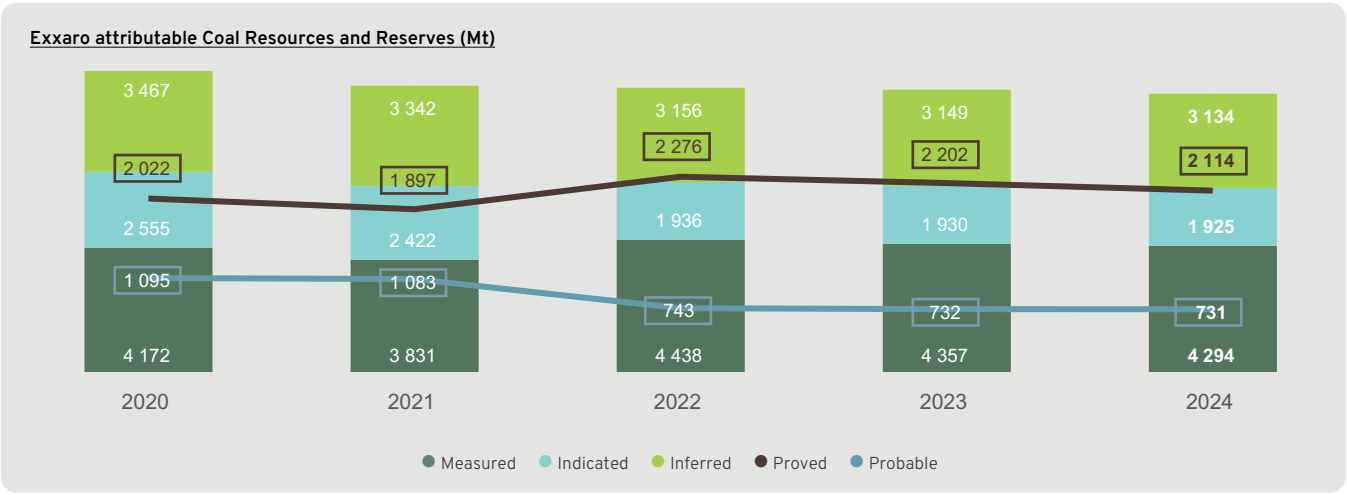
Operation	3 **Belfast**	4 **Leeuwpan**
% Attributable	100%	100%
Location	South of Belfast town	South-east of Delmas town
Mining type	Open-cut	Open-cut
Annual RoM production	3.9Mt, ↑ 24% year on year, reaching budgeted RoM	3.8Mt, ↓ 21% year on year due to changes in the mine exploitation methodology
Product	Thermal coal	Thermal coal
Annual product produced	3.5Mt, ↑ 21% year on year, reflecting RoM	2.45Mt, ↓ 24% year on year due to the RoM change
Market	Export (alternative domestic)	Domestic and export
Resource estimation summary	Extensive exploration drilling conducted during the reporting year is increasing confidence in areas impacted by weathering and seam thickness variance	Based on the 2023 geological model
Year-on-year change in Resource	↓ 4%, mainly as a result of mining depletion	↓ 8%, mainly as a result of mining depletion
Reserve estimation summary	The areas exploited differed in part from those scheduled due to the decision not to re-establish Pit 7 in 2024, with no impact on the Reserve	A change in the mine planning approach, adjusting the focus from plant capacity to activity-based planning, resulted in a revised production plan
Year-on-year change in Reserve	↓ 15%, mainly as a result of depletion (~4.0Mt) and model refinement (0.6Mt)	↓ 11%, mainly as a result of depletion (4.2Mt) and model refinement (0.6Mt)
Highlights for the year	Highest annual production was recorded for the operation	The mine achieved forecast RoM
Challenges		The migration from two pits to one is resulting in a re-evaluation of the required equipment, limiting pit room and slowing mining advancement
2025 forward looking	Belfast licence to operate (BLTO) study anticipated to be completed in 2025, possibly unlocking additional Resources and Reserves	Exploration drilling backlog to be addressed

Our Mpumalanga coal operations continued

Operation	5 **Matla**	6 **Mafube**
% Attributable	100%	50%
Location	West of Kriel, in close proximity to the renowned Kriel and Matla power stations	East of Middelburg town
Mining type	Underground mining from three shafts and multiple sections	Open-cut
Annual RoM production	5.9Mt, ↓ 3% year on year due to life of mine (LoM) projects ramp-up	2.84Mt, ↑ 19% year on year, achieving slightly below budget
Product	Thermal coal	Thermal coal
Annual product produced	5.9Mt, ↓ 3% year on year in line with planned production	1.69Mt, ↑ 8% year on year, impacted by a slight decrease in middlings yield
Market	Domestic (Eskom)	Domestic and export
Resource estimation summary	The new 2024 geological model incorporated 15 additional drill holes, mainly in the low seam access areas, providing more granularity for the reserving process	New exploration information led to the subsequent model update, resulting in increased confidence levels
Year-on-year change in Resource	↓ 2%, mainly as a result of mining depletion	↑ 1%, mainly due to new information and a change in estimation methodology
Reserve estimation summary	A change in the Reserve quality cut-off resulted in the removal of lower-quality mining blocks	New information resulted in a revision of the margin ranking. The exploitation strategy and LoMP will be reviewed in 2025
Year-on-year change in Reserve	↓ 17%, mainly due to an increase in the minimum coal quality cut-off (~21Mt) and depletion (~6Mt)	↓ 3%, as the mining depletion (5.8Mt) is offset by new information
Highlights for the year	Budgeted RoM tonnes were achieved amid severe pit room constraints	The geological model was optimised by the Seam 4 split, allowing for flexibility in mine planning
Challenges		The pending Nooitgedacht North water use licence (WUL)
2025 forward looking	The conclusion of the coal supply agreement (CSA) with Eskom is expected to be finalised in 2025. The mining right lapses in March 2025, and a renewal application was submitted timeously. Some environmental authorisations are pending renewal	The optimisation of the exploitation strategy, considering the selectivity of specific parts of Seam 4

3.1 Our Coal Resource and Coal Reserve changes at a glance





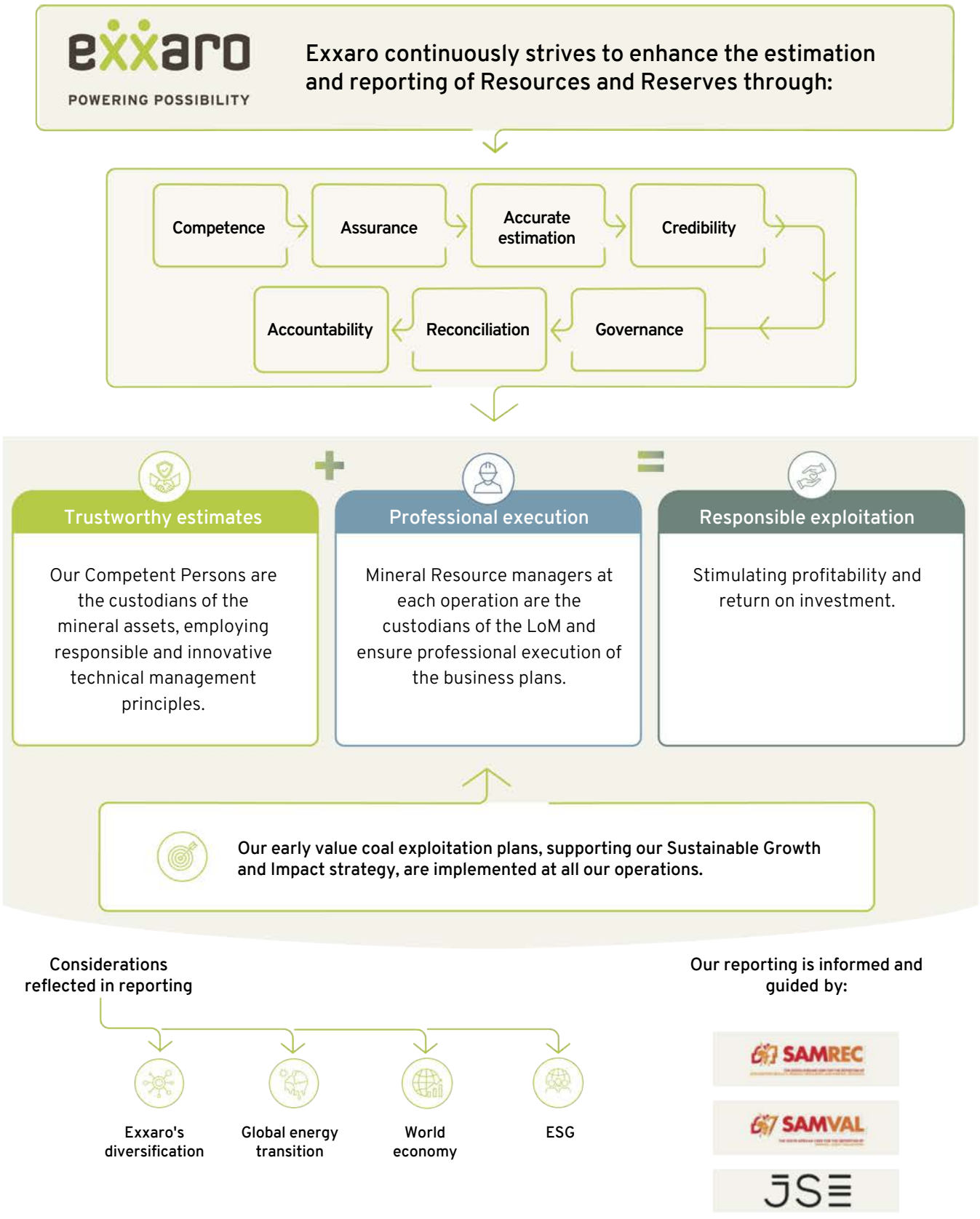
Our total attributable Coal Resource decreased by ~1%, primarily due to mining. On-mine drilling increased confidence levels, resulting in movements between the Coal Resource categories, particularly at our Mafube and Matla mines as well as the Moranbah South project.

Our total attributable Coal Reserve decreased by ~3%, primarily due to mining depletion and revised market assumptions. A material decrease in Coal Reserves occurred at some of our operations. The decrease at Leeuwpan mine (11%) and Belfast mine (15%) was mainly due to mining depletion. The decrease at Matla mine (17%) was due to mining depletion and the decision to adjust the Reserve quality cut-off, which removed some lower coal quality mining blocks within the LoM.

Notes:

- *Resource estimations are based on the latest available geological models, which incorporate new validated geological information and, if applicable, revised seam, Resource definitions and Resource classifications. For the 2024 reporting cycle, reported estimates are derived from actual mining up to the end of September, incorporating the planned estimates for October to December, with the exception of our Mafube mine reporting estimates derived from actual mining up to the end of October, incorporating the planned estimates for November and December*
- *Resource and Reserve estimates in our statements are quoted in full, irrespective of Exxaro's shareholding. Our attributable tonnage is clearly presented in the image above and, when used in our report, always clearly defined as such*
- *Rounding off of quoted figures may result in minor computational discrepancies, although these are not deemed significant*

4. Our Coal Resource and Coal Reserve reporting strategy



5. Our reporting framework

5.1 Governance

Exxaro's annual estimation and reporting process is managed through Exxaro mineral asset management (MAM) and LoM policies, along with associated Coal Resource and Coal Reserve reporting and estimation procedures. These policies and procedures are aligned with the guidelines of section 12.13 of the JSE Listings Requirements and the SAMREC Code.

The policies and procedures dictate technical requirements for estimation and reporting and include guidelines on methodologies, processes and deliverables. Procedures are also implemented for the geophysical, rock engineering, geotechnical, structural geology, hydrogeological, exploration and mine planning disciplines that prescribe methodologies and minimum standards for compliance.

Table 1: Exxaro's reporting structure

Regulatory	Governance	Deliverables	Assurance
JSE Listings Requirements (section 12)	**MAM policy**	**Annual Resource and Reserve estimation schedule**	**Annual review and update of procedures**
Considered 2016 amendments to minimum contents of annual report, point 12.13	Considered integrated update	Followed 2024 estimation schedule for operations under Exxaro's control	2024 considered. Updated MAM policy will inform the updates of procedures in 2025
SAMREC Code (Table 1)	**Exxaro's Mineral Resources and Mineral Reserves reporting procedure**	**Mineral Reserves fact packs**	**Competent Persons' register update and review**
Considered 2016 updated Table 1	Considered integrated update	2024 Mineral Reserves fact packs updates for Matla, Leeuwpan and Mafube	Updated for 2024
SANS 10320	**Exxaro's Mineral Resource estimation procedure included in the MAM policy**	**Annual Mineral Resource and Mineral Reserve Competent Persons' report**	**Exxaro consolidated Mineral Resources and Mineral Reserves report review and lead Competent Person sign-off**
Alignment with proposal and methodologies of SANS 10320:2020 edition 2	Considered integrated update	Competent Persons' reports in place for operations and projects	Sponsor review on compliance to JSE Listings Requirements and signed off by lead Competent Persons
JORC Code	**Exxaro's Mineral Reserve estimation (LoM) policy**	**Mineral Resource and Mineral Reserve report**	**Applicable Competent Person and technical team sign-off**
Considered JORC Code, 2012 edition	Considered, update under review	Reports updated for Grootegeluk, Leeuwpan, Mafube, Belfast and Matla	Included in individual Competent Persons' and annual Resource and Reserve reports, available on request
			Internal (independent and peer) reviews and external audit process
			Conducted independent PwC and peer reviews, and findings are addressed (Assurance section)

5.2 Competent Persons

Exxaro applies three levels of competency to estimating Coal Resources and Coal Reserves:

- **Competent Person** (as defined in the SAMREC and JORC codes) who officially takes responsibility for estimating and reporting Coal Resources and/or Coal Reserves at operational or project level. These appointed Competent Persons have acknowledged acceptance of accountabilities. Names, qualifications, affiliations and relevant experience are included in the independent operational and project reports in the form of a Competent Person's certificate
- **Technical specialists,** including geologists, mining engineers, geohydrologists, geotechnical engineers, financial experts and economists, among others. The Competent Persons' report or Resource and Reserve report contains the names, signatures and contributions of technical specialists who contributed to estimating the operations' Coal Resources and Coal Reserves
- Persons designated to take **corporate responsibility** for the Coal Resource and Coal Reserve estimates presented in the consolidated report are differentiated from the Competent Person at an operational level, who takes overall corporate responsibility

Exxaro's Coal Resources and Coal Reserves were estimated or supervised by the Competent Persons listed in Table 2 (name, affiliation and relevant experience) on an operational basis in accordance with the SAMREC Code for South African properties and the JORC Code for the other properties. All Competent Persons have sufficient relevant experience in the style of mineralisation, type of deposit and/or mining method(s) under consideration and/or being mined and for the activity under their responsibility to qualify as Competent Persons, as defined in the applicable codes at the time of reporting.

The appointed Competent Persons have signed off their respective estimates in their original Competent Persons' reports for the various operations and consent to the inclusion of the information in this report in the form and context in which it appears in the consolidated Mineral Resources and Mineral Reserves report. The appointed Competent Persons are permanently employed by the company. In the case of projects, the Competent Persons conducted appropriate site visits to the mineral property being evaluated.

Table 2: Competent Persons' register

	Mineral Resources				Mineral Reserves			
Operation/ project	**Name**	**Relevant experience (years)**	**Job title – Employer**	**Registration**	**Name**	**Relevant experience (years)**	**Job title – Employer**	**Registration**
Lead Competent Person, Exxaro	JH Lingenfelder	29	Group manager: MAM	SACNASP (400038/11)	C Ballot	28	Group manager: mine technical services	ECSA (20060040)
Belfast mine	G Gcayi	18	Resident geologist, Belfast	SACNASP (400299/11)	Al Dednam	14	Manager: MRM and optimisation, Belfast	Southern African Institute of Mining and Metallurgy (SAIMM) (710051)
Grootegeluk mine	S Mhlongo	13	Resident geologist, Grootegeluk	SACNASP (400044/18)	MA Phoko	13	Principal engineer: strategic mine planning and design	SAIMM (710500)
Leeuwpan mine	MP Bestenbier	6	Resident geologist, Leeuwpan	SACNASP candidate (126500)	R Teffo	16	BU manager, Leeuwpan	ECSA (202180057)
Matla mine	M Dimmick-Touw	12	Resident geologist, Matla	SACNASP (400134/16)	TF Moabi	19	MRM manager, Matla	SACNASP (400067/08)
Thabametsi	S Mhlongo	13	Resident geologist, Grootegeluk	SACNASP (400044/18)	C Ballot	28	Group manager: mine technical services	ECSA (20060040)
Mafube mine	JK Kgarume	11	Geology manager: production, Thungela Resources	SACNASP (117081/17)	D Xaba	25	Technical services manager, Thungela Resources	SACNASP (400115/01)
Moranbah South, Australia	AJ Laws	29	Geoscience modelling specialist, Anglo American Steelmaking Coal Proprietary Limited	AusIMM (209913)	N/A			
Black Mountain Mining (BMM) Deeps mine, Swartberg and Big Syncline projects	M Campodonic	24	Practice leader and corporate consultant, SRK Consulting (UK) Ltd	AusIMM (Competent Person: geology), Fellow of the Geological Society of London (FGS)	J Miles	35	Associate principal consultant: mining engineering, SRK Consulting (UK) Ltd	Member of the Institute of Materials, Minerals and Mining (CEng)
Gamsberg	M Campodonic	24	Practice leader and corporate consultant, SRK Consulting (UK) Ltd	AusIMM (Competent Person: geology), FGS	J Miles	35	Associate principal consultant: mining engineering, SRK Consulting (UK) Ltd	Member of the Institute of Materials, Minerals and Mining (CEng)
Kumba Iron Ore	J Britz	20	Principal: resource geology, Sishen Iron Ore Company Proprietary Limited (SIOC)	SACNASP (400423/04)	CH Cloete	13	Head: mining, SIOC	ECSA (20075395)

** All Competent Persons are Exxaro employees except where otherwise stated, and their qualifications are included in the individual Competent Persons' reports*
** Exxaro Resources: 263B West Avenue, Die Hoewes, Centurion 0163, Gauteng, South Africa*
** South African Council for Natural Scientific Professions: Private Bag X540, Silverton 0127, Gauteng, South Africa*
**Southern African Institute of Mining and Metallurgy: 7th Floor, Rosebank Towers, 19 Biermann Ave, Rosebank, Johannesburg 2196, Gauteng, South Africa*
** Engineering Council of South Africa: Private Bag X691, Bruma 2026, Gauteng, South Africa*
** Australasian Institute of Mining and Metallurgy: 204 Lygon Street, Carlton VIC 3053, Australia*
** The Institute of Materials, Minerals and Mining: 297 Euston Road, London NW1 3AD, United Kingdom*
** SIOC: Hendrik van Eck Street, Kathu 8484, Northern Cape, South Africa*
** Thungela Resources: 25 Bath Avenue, Rosebank, Johannesburg 2196, Gauteng, South Africa*
** Anglo American Steelmaking Coal: 201 Charlotte Street, Brisbane 4000, Queensland, Australia*

5.3 Resource estimation methodology summary

The estimation process, summarised below, applies to all coal operations and projects under Exxaro's management control. The Resource Competent Person is actively involved throughout the process, and no data is included or excluded without consent.

The Resource estimation process for Coal Resources under Exxaro's control is governed by the group's Resource estimation procedure and aligned with the SAMREC Code and SANS 10320. The data used for Resource estimation is managed by separate commodity-specific procedures through which core recovery and logging, sampling, quality assurance and quality control (QAQC), relative density determination and wireline logging standards are enforced.

In 2024, we evaluated the agility of our modelling software and tested the market for solutions that will best complement our operations.

Table 3: Summary of estimation considerations

Item	Description
Resource fact pack	States revised information since the last estimation, eg reasonable prospects for eventual economic extraction (RPEEE) considerations.
Exploration	Annually compiled, integrated and signed-off exploration plans outline planned activities to investigate areas of low confidence and/or geological or structural complexities to ensure Resources with a high level of geological confidence are considered for mine planning. Exploration plans are available as supplementary information to the Competent Persons' report.
Drilling, logging and sampling process	The senior geologist supervises all drill hole drilling and is responsible for logging and sampling in compliance with Exxaro's logging and sampling standards, as well as standard operating procedures. Sampling of drill holes is only conducted after the stratigraphy has been correlated. All drill holes are drilled as vertical drill holes from the surface and the intersection to the seams is considered to be representative of true thickness.
Core recovery	The core recovery standard (>95% in coal seams for valid points of observation), as stipulated in the SAMREC Code and SANS 10320, is not always empirically enforced due to the unavailability of digital core recovery data for pre-2017 drill holes. However, Exxaro's Competent Persons confirm that there is high confidence in core and sample recovery for all drill holes used for Resource estimation purposes, and any deviation is managed by increased geological losses within geological loss domains, downgrading Resource classification and/or re-drilling drill holes. Core recovery is continuously reviewed, and any shortcomings are actively addressed through downhole geophysical surveys, seam validations and re-drilling.
Relative density determination	For Coal Resources, relative density (air-dried) is determined by accredited laboratories using the Archimedes method in all instances, except for Grootegeluk mine and the Thabametsi resource, where relative density is determined using an on-site mine laboratory application of the Archimedes method. The results are continuously used to validate core recovery. A comparative study between the field and laboratory methods was undertaken in 2015 and again in 2023, with results indicating no significant difference between the methodologies.
Technical data validation	Technical data validation is used for Resource estimation and includes collar validation, gap and overlap checks and data distribution.
Data analysis	Entails a review and analysis of the data's geological integrity and continuity in a spatial and geostatistical sense.
Data modelling	GEOVIA Minex™ is used for coal modelling and the Minex™ growth algorithm is the preferred interpolation technique, while the Move software is used for modelling structural features. acQuire or Minex™ is used for coal compositing and, in both instances, representative substitute values are used for unsampled non-coal material. The geological model and structural interpretation are presented by the Resource Competent Person, aided by relevant technical specialists, to a panel comprising Exxaro's lead Competent Person and domain experts for sign-off and approval. Concept-level geological models, where applicable, are compiled for alternative interpretations, and the risks are evaluated during sign-off. Feasibility-level and/or LoMP-level geological models are based on reviewed and signed-off interpretations.
Resource classification	Resource classification follows the Exxaro estimation procedure, aligns with SANS 10320 and considers risk and opportunity domain analysis (RODA). Anomalous drill hole data and structurally complex areas are accounted for, and Resource classification is used to control the adequacy of drill hole data. We determine separate confidence zones for structural features using a matrix approach where applicable. The effect of extrapolation is controlled by Resource classification, which does not extrapolate domains beyond half the average drill hole spacing for the classification category and only uses points of observation with applicable quality data.
Estimation and reporting	Resource reporting uses approved cut-offs and geological loss domains, followed by the completion of all necessary reports and audit trails. Exxaro uses a systematic and integrated review process that measures the level of maturity of exploration work done, the extent of geological potential, licence to operate and associated geological risks to establish the eventual extraction. The criteria for assessing RPEEE are shown in Table 4. Reporting includes technical information that requires subsequent calculations to derive sub-totals, totals and weighted averages. Such calculations may involve a degree of rounding and consequently introduce errors. Where such errors occur, Exxaro does not consider them material.
Review and consolidation	Individual reports are reviewed, and corrections are considered if necessary. Reports are endorsed by management and used to compile the consolidated Mineral Resources and Mineral Reserves report.

RPEEE considerations

"RPEEE should be demonstrated through the application of an appropriate consideration of Mineral Resources. Such a consideration should include a reasoned assessment of the geological, mining engineering, processing, metallurgical, legal, infrastructural, environmental, marketing, socio-political and economic assumptions which, in the opinion of the Competent Person, are likely to influence the prospect of economic extraction. All issues listed under 'reasonable prospects for eventual economic extraction' should be discussed at the level appropriate for the specific investigation." – SAMREC Code

Table 4: Exxaro's RPEEE considerations

Item	Criteria	Considerations
Geological data	Data validated and signed off by a Competent Person	Seam depth, extent, thickness, geological structure and seam quality (cut-off)
Geological model	Geological model considered and signed off	
Structural model	Structural model considered and signed off	
Mining and processing	Mining assumptions considered and defined	Mining method, inputs from metallurgist, rock engineer and hydrogeologist
Assurance	Minimum tier 1 assurance as per Exxaro governance and assurance framework	As per tier 1 requirement
Economic evaluation	Concept-level exploitation and economic evaluation quantifies economic potential based on economic and mining assumptions, including geotechnical and geohydrological assumptions	Preliminary appraisal of layout, cost and profit
Environmental	Assessment of potential impediments and, if any exist, a reasonable expectation of resolution with reasonable demonstration that environmental approvals can be obtained within the context of local, regional and national legislation	
Tenure and socio-political	Formal tenure must be demonstrated and, if any potential legal or socio-political impediments exist, there must be a reasonable expectation of resolution or, if a prospecting right, there should be a reasonable demonstration that a mining right approval can be obtained within the context of local, regional and national legislation	
Infrastructure	Assumptions used should be reasonable and within known or assumed tolerances or have examples of precedence, and any potential impediments should have a reasonable expectation of resolution, considering power, water and transport	
Market	The potential market for the product planned for extraction from the Resource, with a reasonable assumption that this market is sustainable	

5.4 Reserve estimation methodology summary

Exxaro is keenly aware of the importance of our mineral assets for the short-term profitability of our operations and the company's sustainability. We prioritise the optimisation of mineral assets beyond what is generally referred to as MRM.

Changes in the Resources market, increased awareness of protecting the natural environment, and changing legislation and statutory requirements demand a change in the utilisation strategy and execution of mining operations. Exxaro continuously assesses the various LoM strategic plans to consider the best way to address these challenges.

Figure 1: Relationship between exploration results, Mineral Resources and Mineral Reserves – SAMREC Code

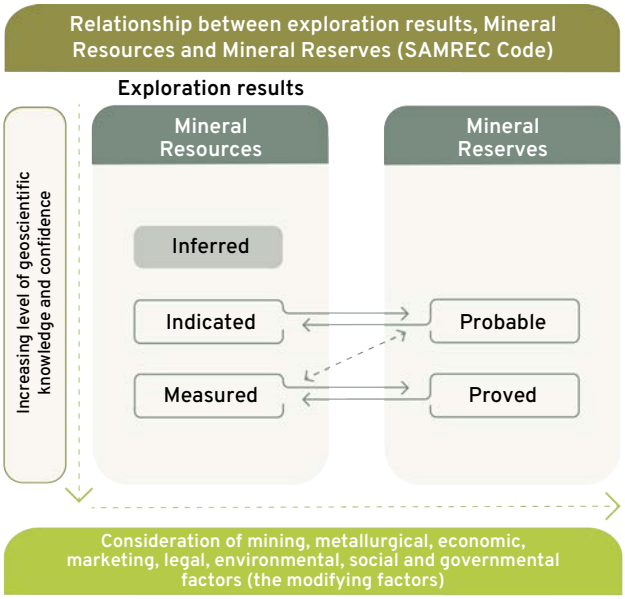


Table 5: Summary of reserving process

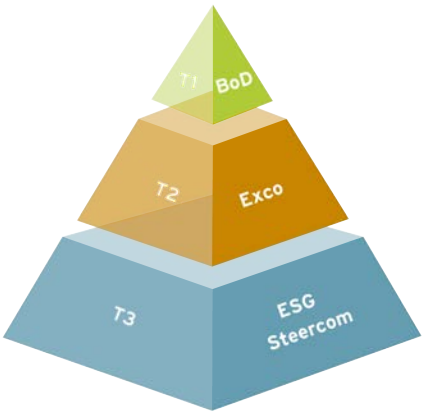
Item	Description
Inputs	To comply with LoM policy, all Reserve estimates require survey, rock engineering, infrastructure, legal, processing, social, economic, political and environmental inputs.
Reserve fact pack report	At the start of the estimation process, the applicable Reserves Competent Person must compile a Reserve fact pack for each operation, outlining the standards and norms of that operation, as well as all relevant planning standards. All standards, norms and planning parameters, the geological model, RODA, infrastructure and environmental authorisations with the structural plan, geotechnical designs, among others, are also considered. The market strategy, supply contracts and planned volumes drive the schedule. All operational standards must be signed off by the applicable mine management and Reserve Competent Person. A similar procedure is followed for projects, and the project steering committee fulfils the role of mine management. Reserve estimation may be conducted either as required (in a project-stage evaluation, for example) or as part of the annual Mineral Resource and Mineral Reserve estimation process. The data conversion, validation and verification report are the first outputs of this procedure.
Geological model validation	Upon receipt of the geological model, the validation procedure is conducted and the model is converted into a mining model. A report is then compiled with possible geological model anomalies and a comparison of volumes in the geological model and mining model to confirm that data conversion was conducted correctly. This information is reviewed by the manager: strategic mine planning and design and signed off as acceptable by the lead Resource and Reserve Competent Persons.
The following components are included in the LoMP and Reserve estimation: exploitation strategy, operational methodology and pit shell.	
Exploitation strategy	The exploitation strategy needs to broadly demonstrate the pit or mining economics in terms of Reserve boundaries, legal and other, such as servitudes. For example, when converting the Resource to Reserve, evaluate the economics in terms of stripping ratio and underground versus open pit, among others. The strategy needs to explain the extraction sequence of mining different areas in terms of access, economics or other criteria deemed most appropriate.
Operational methodology considerations	Material flow explains the flow of material over time, such as open pit (ex-pit, horizontal and vertical distances and underground), geographical expansion versus stooping and deep pit (push-back strategy, minimum and maximum stripping curves). Equipment explains the size and type of equipment for the design, including life of equipment, major interventions and/or major changes (such as open pit to underground) over the life of the Reserve. Waste dumps (size and position), rehabilitation (main issues and interventions), together with legal and other indicated licences obtained and required, are included.
Pit shell	Pit shell is the final delineation or envelope of the Resource that will be converted into a Reserve. The LoMP pit shell is the foundation of the business case and is therefore based on the most accurate information available. Measured and Indicated Resources are used as the basis for conversion.

Table 5: Summary of reserving process continued

Item	Description
Modifying factors	Coal Reserves are estimated using the relevant modifying factors at the time of reporting (mining, metallurgical, economic, marketing, legal, environmental, social and regulatory requirements). Modifying factors are signed off, before Reserve estimation, by the persons responsible for ensuring that all factors are timeously and appropriately considered. Comprehensive modifying factor sign-off and Reserve fact packs that record losses, recoveries/yields and other factors applied are documented in each independent Competent Person's report. Resource volumes/tonnages are converted to Reserve tonnages by applying the following mining modifying factors: • Mining efficiency losses as per average cut thickness are applied to account for net losses of Reserves due to mining equipment selection and mining method. The efficiency factor also accounts for the thickness of the selected RoM and waste horizons relative to selected mining equipment • Layout losses account for the loss of Reserves due to actual mining activities not reaching the defined Reserve boundary or due to the geometry of the Reserve block • RoM extraction accounts for losses incurred using the selected mining method • Contamination accounts for waste or interburden material unintentionally added to the mining horizon as a result of mining operations and equipment used • Free moisture accounts for the change in Reserve tonnage due to the addition of moisture from bench-mining operations
Reserve classification	The Reserve classification methodology for Coal Reserves under Exxaro's control is governed by the LoMP policy and aligned with the SAMREC Code and SANS 10320. In general, Measured Resources are converted to Proved Reserves and Indicated Resources are converted to Probable Reserves. If an operation or project has additional constraints, such as a supply agreement that has not been finalised or a sales/marketing strategy that limits the profitability of the mine, the Measured Resources can be downgraded to Probable Reserves. In situations where this has been applied, it is clearly stated in the footnotes of the Reserves tables.
Inferred Resources	Where Inferred Resources are considered for LoMPs, the amount (Mt) and effect are always clearly stated. When Inferred Resources are included in the LoMP, these tonnages are not scheduled in the first five years of mine life. We explain the rationale for considering the inclusion of Inferred Resources and state our actions to address this issue. Exxaro generally attempts to limit Inferred Resources to less than 15% of total Resources to be considered for LoMPs. Any inclusion of Inferred Resources must be tested and reported. Modifying factors and assumptions applied to the Indicated and Measured Resources to determine the Coal Reserves must be equally applied to Inferred Resources. Inferred Resources are not converted to Coal Reserves or stated as part of the Mineral Reserve. The amount of Inferred Resources considered for the reported LoMP is included separately in the Reserves statement.
Outputs	The following outputs are generated after successfully completing the procedure: validation and verification report, fact pack report, exploitation strategy report, mine design and layout report, mining schedule, and in the case of projects, a mining study report.

5.5 Assurance

Assurance is implemented using a three-tier system, aligned with the guidelines of Exxaro's Mineral Resource and Mineral Reserve reporting procedure, summarised as follows:



Tier 3

External audits are scheduled in a **three-year cycle** or at the discretion of the lead Competent Persons and entail a full review of the **Mineral Resource and Mineral Reserve estimation process** from **drill hole logging** to **Mineral Reserve evaluation**.

Tier 2

Internal reviews are scheduled and planned for a **three-year cycle** or when deemed necessary. The focus is on projects and Resource and associated Reserve compliance with Exxaro's **governance framework**, while **ensuring accountability** and **consequence management.**

Tier 1

Mineral Resource and Mineral Reserve estimation is undertaken as per Exxaro's governance framework. Sign-offs are required at each stage and the process is **concluded** in a **formal sign-off session** by a panel comprising **Exxaro's lead Mineral Resource and Mineral Reserve Competent Persons and technical specialists.** Technical assurance is managed in terms of dedicated standards.

In 2024, **tier 1** assurance was undertaken for the Mafube, Matla and Leeuwpan operations. Geological data validation, data analysis and subsequent updating of geological and structural models were concluded during the reporting period. MAM experts peer reviewed these models for the three operations and they were then signed off by the applicable Competent Persons and their supporting technical teams. The findings were incorporated in the model updates.

The validation process was reviewed, incorporating additional validation tests supported by the metallurgy department, which were applied to the geological models of Mafube, Leeuwpan and Matla.

Table 6 below indicates **tier 2** technical assurances conducted on development projects, focusing on the estimation that underpins these projects. Where reviews identified technical findings that could materially impact the business, remedial action was recommended to ensure project robustness and shareholder returns.

Internal Coal Resource estimation reviews were conducted for Belfast mine to assess compliance with Exxaro's MAM policy and the associated Coal Resource reporting and estimation procedures. A Reserve review of the Leeuwpan, Mafube and Grootegeluk LoM was conducted to revise the plan going forward. A summary of findings is listed in Table 7.

On **tier 3**, PwC conducted an independent audit of our internal Resource and Reserve estimation process at Matla in 2024, with no material findings reported.

Table 6: Tier 2 technical assurances conducted during the reporting year, with general points addressed

Project name	Project description	Summary Resource actions	Summary Reserve actions
Mafube mine residue dump expansion	Residue dump expansion to ensure the mine can accommodate plant discard in the future.		The expansion ensures that the production schedules can be executed as planned, therefore maintaining current Reserve volumes.
Grootegeluk complex (GGC) trucks and shovels strategies	Present an approach for the efficient and effective management of primary mining equipment.		No impact on the Reserve volumes. Actions include providing contingency measures for the foreseen capacity gap and updating the norms, life cycle cost and their potential impact on the estimated schedule.
Matla primary equipment strategy	Maintain equipment production capacity at Matla mine.		No findings.
BLTO (pre-feasibility study)	Selection of the preferred option for mining additional Resources.	Resources remain as per the Competent Person's report.	Reserves to be declared based on pre-feasibility study.

Table 7: Tier 2 internal reviews findings

Area under review	Finding	Conclusion and recommendation*
Leeuwpan	Reviewed the short-term scheduling philosophy, and found that the method has shortcomings	Revised the short-term scheduling philosophy from a plant capacity-driven schedule to an activity-based scheduling philosophy.
Mafube	Lower actual middling yields realised versus mining schedule	The modifying factors were reviewed and adjusted to reflect current plant operating standards.
Belfast	Incomplete capturing of metadata in hardcopy logs and database	The log sheet template and standard operating procedure for logging and sampling will be reviewed and updated. Previously uncaptured data has now been captured in the database.
	Core photographs are on the Belfast SharePoint, not on the exploration document management system	The photographs are available on SharePoint, but the procedure refers to a document management system site. All photographs will be saved in the exploration document management system as per the procedure.
	Drill hole and sample naming conventions were not followed	This will be rectified in the 2025 exploration campaign.
	Indicated Resources within the five-year LoM	The area was planned for drilling in 2024 but could not be accessed. It will be considered for drilling in 2025.

* *Findings are communicated and corrective measures are implemented.*

5.6 ESG matters

Our ESG report details environmental management, including applicable authorisations that support our estimates, closure plans, allocated funding and associated risks. The report is available online under the investors tab.

ESG management

Exxaro is a leader in business management, with sound ESG principles that deliver sustainable economic returns and tangible benefits for all stakeholders. Everything we do today is geared towards ensuring a safer and more productive tomorrow. Our sustainability is founded on creative and mutually constructive relationships and values shared by our stakeholders. We conduct our business activities to create success for Exxaro and society. From how we mine to what we mine, we steward our natural assets and social capital to uplift our communities.

Climate change and carbon management

Climate change resilience refers to our ability to adapt to direct and indirect climate change impacts. In addition to addressing and managing these risks, it encompasses our ability to capitalise on the strategic opportunities presented by the shift to a lower-carbon, resource-constrained economy. Guided by our purpose, our Sustainable Growth and Impact strategy is designed to ensure we manage the direct and indirect climate change impacts on our current portfolio while ensuring we can contribute to the low-carbon environment of the future.

Exxaro measures, manages and reports energy and carbon data in terms of the Greenhouse Gas Protocol. We monitor and report on our scope 1, 2 and 3 emissions annually.

Water use management

Water is a strategic natural resource for South Africa and our business. We are committed to responsible and sustainable water use, as enshrined in our water management policy, which focuses on efficient water use, pollution prevention and recycling. The policy aligns with the legislated environmental framework, mainly governed by the National Water Act, 1998 (Act 36 of 1998). Exxaro set site-specific water intensity targets to drive water conservation and incorporated the performance objectives into its ESG commitments.

Tailings management

Exxaro implements various systems and programmes to monitor and ensure compliance at all its tailings facilities. The operation, monitoring and decommissioning of the tailings dams are guided by comprehensive risk-based management and governance systems in line with internationally recognised best practice. The company is adopting the global industry standard for tailings management. Risk management is a major aspect of our asset management. It includes risk identification, the implementation of controls and the assessment of control performance verification. Internal and external reviews, which encompass assurance processes of the tailings dams, are managed and controlled in the company to manage the risks and ensure continuous improvement.

Air quality management

Air quality management is among our top priorities due to the negative impacts of pollutants, such as dust and particulate matter (PM_{10} and $PM_{2.5}$), prevalent in mining areas.

Our mitigation measures include:
- Applying chemical dust suppressants on unpaved roads
- Adhering to all applicable legislative requirements
- Proactive air quality management planning
- Risk management
- Monitoring, measuring and reporting

Waste management

Managing waste from cradle-to-cradle is critical to maintaining our licence to operate. The group environmental policy and waste management standard are applied across the group to implement the general and hazardous waste management hierarchy aimed at promoting waste prevention, minimisation, reuse, recycling and energy recovery, while ensuring safe disposal to reduce environmental and health risks, in line with the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) (NEMWA) and other relevant legislation. Recycling waste, such as paper, aluminium cans, plastic, used oil and metal scrap, contributes to the circulation of products and materials, eliminating waste and promoting environmental pollution prevention.

Biodiversity management

One of Exxaro's fundamental goals is to be a low-impact, high-value organisation for current and future generations. A key aspect of achieving this goal is ensuring that all Exxaro mines co-exist harmoniously with their natural environment. This is achieved through biodiversity initiatives that protect indigenous flora and fauna, preserve sensitive ecosystems and promote species growth within and beyond Exxaro's mining operations. Exxaro is committed to exceeding its biodiversity goals, with the vision of leaving a lasting legacy where current and future generations benefit from a healthy and flourishing natural environment.

Land and heritage management

Exxaro focuses on sustainable management of land owned by its subsidiaries. Sustainable land management requires a balanced approach of economic application, ecological preservation and the social needs of legal occupiers and hosting communities.

We use our land assets to support our mineral succession programme, which aims to provide emerging farmers with access to land, finance and markets, as well as technical support, while ensuring compliance. The programme also focuses on the social and economic upliftment of farm tenants, working with their innate knowledge of the land to gain formal training and uplift communities. Exxaro implements its land strategy by focusing on using land to uplift communities and support food security and economic growth. Land management governance at Exxaro ensures a thorough and transparent process where all stakeholders have an equal opportunity to participate.

Rehabilitation and closure

Our business operations review mine closure and rehabilitation financial provisions annually. Rehabilitation plans and closure objectives are amended after environmental management programme performance assessments. We review cost estimates of activities in the concurrent and final closure rehabilitation programme and adjust them accordingly. External auditors visit our sites, review documents and audit the provisions twice a year.

Operational closure, concurrent rehabilitation and land management are part of Exxaro's operating philosophy and moral responsibility. We actively plan our operations with closure in mind to ensure adequate financial resources are available to meet our rehabilitation commitments.

6. Summarised group Mineral Resource and Mineral Reserve estimates

This section outlines the reported Mineral Resources and Mineral Reserves remaining as at 31 December 2024. Mineral Resources and Mineral Reserves figures are not an inventory of all mineral occurrences drilled or sampled, but a realistic record of those, under assumed and justifiable technical and economic conditions, that may be economically extractable currently and in future.

Mineral Resources and Mineral Reserves are reported inclusive of Mineral Resources that have been converted to Mineral Reserves. An exception is reporting for BMM and Sishen and Kolomela mines because figures received from Vedanta Resources (JORC Code) and Kumba Iron Ore represent Mineral Resources excluding those converted to Mineral Reserves.

We provide Coal Resource estimates within LoMP and applicable modifying factors when converting Coal Resources to Coal Reserves. Mineral Resources and Mineral Reserves are reported at 100%, irrespective of the percentage attributable to Exxaro.

Explanations for material changes in year-on-year movements are provided as footnotes in the Mineral Resources and Mineral Reserves tables.

Table 8: Total attributable Coal Resources and Coal Reserves

Commodity: Coal	Category	2024 MTIS (Mt)[1]
Exxaro attributable tonnes	Measured	4 294
	Indicated	1 925
	Inferred	3 134
Total Coal Resources		**9 354**
	Proved	2 114
	Probable	731
Total Coal Reserves		**2 845**

[1] *Mineable tonnes in situ.*

6.1 Coal Resources

The table below details the total inclusive Coal Resources estimated as at 31 December 2024.

Table 9: Coal Resources and qualities

Operation[1]		Resource category	2024 Tonnes and quality[3] Tonnes (Mt)	CV MJ/kg	% Ash	% IM	% VM	% S	2023 Tonnes and quality[3] Tonnes (Mt)	CV MJ/kg	% Ash	% IM	% VM	% S	% change in tonnes[4]
Matla mine (UG) (captive market) Mpumalanga 100% attributed to Exxaro[2]		Measured	625	20.1	30.0	4.6	22.2	1.0	634	20.1	29.9	4.6	22.2	1.0	(1)
		Indicated	91	20.2	29.0	4.6	21.9	0.8	92	19.9	29.7	4.6	21.8	0.8	(1)
		Inferred	76	19.5	31.2	4.1	20.7	0.8	85	19.7	30.9	4.2	20.7	0.8	(10)
		Total	**792**	**20.0**	**30.0**	**4.6**	**22.0**	**1.0**	**810**	**20.0**	**29.9**	**4.6**	**22.0**	**1.0**	**(2)**
		Resources inside LoMP	238	21.4	26.7	4.9	23.2	1.0	294	20.9	27.7	4.9	23.0	1.0	(19)
Leeuwpan mine (OC) (commercial market) Mpumalanga 100% attributed to Exxaro[2]		Measured	58.2	19.9	31.4	3.3	18.4	1.1	63.4	20.0	31.2	3.3	18.5	1.1	(8)
		Indicated													
		Inferred													
		Total	**58.2**	**19.9**	**31.4**	**3.3**	**18.4**	**1.1**	**63.4**	**20.0**	**31.2**	**3.3**	**18.5**	**1.1**	**(8)**
		Resources inside LoMP	30.5	20.0	30.3	3.1	19.4	1.1	35.7	20.1	30.1	3.1	19.6	1.1	(15)
Mafube mine[5] (OC) (commercial market) Mpumalanga 50% attributed to Exxaro[2]		Measured	143.4	20.8	29.1	3.8	21.9	1.0	141.0	21.1	27.2	3.9	22.0	1.0	2
		Indicated	1.7	21.7	25.4	4.3	21.3	1.0	2.2	21.3	26.1	4.4	21.2	1.0	(24)
		Inferred	0.2	19.7	31.9	3.7	20.3	0.5	0.6	20.8	28.2	3.6	20.8	0.5	(60)
		Total	**145.3**	**20.8**	**29.0**	**3.8**	**21.8**	**1.0**	**143.8**	**21.1**	**27.2**	**3.9**	**22.0**	**1.0**	**1**
		Resources inside LoMP	114.4	20.5	30.0	3.8	21.7	1.0	115.3	21.0	27.4	3.9	22.1	1.1	(1)
Belfast mine (OC) (mining right) Mpumalanga 100% attributed to Exxaro[2]		Measured	94.2	23.6	21.9	3.6	22.9	1.2	98.4	23.6	21.9	3.6	22.9	1.2	(4)
		Indicated	7.9	22.8	24.4	3.5	22.5	1.3	8.0	22.8	24.4	3.5	22.5	1.3	(1)
		Inferred	13.3	22.3	25.2	3.7	21.9	1.1	13.3	22.3	25.2	3.7	21.9	1.1	0
		Total	**115.3**	**23.4**	**22.4**	**3.6**	**22.7**	**1.2**	**119.7**	**23.4**	**22.4**	**3.6**	**22.7**	**1.2**	**(4)**
		Resources inside LoMP	31.5	24.8	18.8	3.6	23.7	1.2	35.9	24.8	18.9	3.6	23.6	1.2	(12)
Grootegeluk mine (OC) (commercial market) Limpopo 100% attributed to Exxaro[2]	Volksrust Formation	Measured	2 205	14.2	54.7	1.8	19.7	1.2	2 250	14.2	54.7	1.8	19.7	1.2	(2)
		Indicated	738	14.1	55.2	1.7	19.5	1.4	738	14.1	55.2	1.7	19.5	1.4	0
		Inferred	144	14.0	55.0	1.9	19.5	1.3	144	14.0	55.0	1.9	19.5	1.3	0
		Total	**3 088**	**14.1**	**54.8**	**1.8**	**19.6**	**1.3**	**3 133**	**14.1**	**54.8**	**1.8**	**19.6**	**1.3**	**(1)**
		Resources inside LoMP	2 180	14.2	54.6	1.8	19.8	1.2	2 225	14.2	54.6	1.8	19.8	1.2	(2)
Grootegeluk mine (OC) (commercial market) Limpopo 100% attributed to Exxaro[2]	Vryheid Formation	Measured	717	24.0	27.2	1.9	22.3	2.2	728	24.0	27.2	1.9	22.3	2.2	(2)
		Indicated	229	24.0	27.8	1.7	21.9	2.3	229	24.0	27.8	1.7	21.9	2.3	0
		Inferred	34	24.2	26.7	1.9	21.9	2.1	34	24.2	26.7	1.9	21.9	2.1	0
		Total	**980**	**24.0**	**27.3**	**1.8**	**22.2**	**2.2**	**991**	**24.0**	**27.3**	**1.8**	**22.2**	**2.2**	**(1)**
		Resources inside LoMP	505	24.5	25.7	1.9	22.7	2.3	513	24.5	25.7	1.9	22.7	2.3	(2)
Total Grootegeluk mine (OC) (commercial market) Limpopo 100% attributed to Exxaro[2]		Measured	2 922	16.6	48.0	1.8	20.3	1.5	2 978	16.6	48.0	1.8	20.3	1.5	(2)
		Indicated	967	16.4	48.7	1.7	20.1	1.6	967	16.4	48.7	1.7	20.1	1.6	0
		Inferred	178	15.9	49.6	1.9	19.9	1.4	178	15.9	49.6	1.9	19.9	1.4	0
		Total	**4 067**	**16.5**	**48.2**	**1.8**	**20.2**	**1.5**	**4 123**	**16.5**	**48.2**	**1.8**	**20.2**	**1.5**	**(1)**
		Resources inside Grootegeluk opencast LoMP	2 685	16.2	49.2	1.7	20.2	1.4	2 739	16.2	49.2	1.7	20.3	1.4	(2)
Thabametsi (OC/UG) (mining right) Limpopo 100% attributed to Exxaro[2]		Measured	270	13.0	52.3	1.9	20.0	1.2	270	13.0	52.3	1.9	20.0	1.2	0
		Indicated	749	12.6	53.1	1.8	19.8	1.1	749	12.6	53.1	1.8	19.8	1.1	0
		Inferred	2 857	12.7	52.7	1.9	19.3	1.3	2 857	12.7	52.7	1.9	19.3	1.3	0
		Total	**3 876**	**12.7**	**52.7**	**1.9**	**19.7**	**1.3**	**3 876**	**12.7**	**52.7**	**1.9**	**19.7**	**1.3**	**0**
		Resources inside IPP[7] LoMP	133	12.0	54.7	1.9	20.0	1.0	133	12.0	54.7	1.9	20.0	1.0	0
Moranbah South project[6] (UG) (prospecting) Australia 50% attributed to Exxaro[2]		Measured	505.3	26.6	23.4	2.7	18.5	0.6	484.6	26.9	23.6	2.6	18.5	0.6	4
		Indicated	219.2	27.3	21.5	2.7	17.6	0.5	226.0	27.4	21.4	2.6	17.8	0.5	(3)
		Inferred	18.6	28.3	19.7	2.8	16.9	0.5	29.7	29.7	19.6	2.7	16.9	0.5	(37)
		Total	**743.1**	**26.9**	**22.7**	**2.7**	**18.2**	**0.6**	**740.4**	**27.1**	**22.8**	**2.6**	**18.2**	**0.6**	**0**

- *Rounding of figures may cause computational discrepancies*
- *All changes more than 10% in the total Resources of an operation are explained. Tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt*
- *Coal Resources and qualities (raw coal) are quoted on an MTIS and air-dried basis (adb)*
- *Coal Resources are quoted inclusive of Coal Resources that have been modified to Coal Reserves, unless otherwise stated*
- *Resources inside LoMP refer to MTIS Resources in the LoMP layout*
- *Thickness and quality cut-offs applied at each project or mine are stated in the Ancillary section*

[1] *Operation refers to operating mine or significant project. The mining methods are opencast (OC) and underground (UG).*
[2] *Figures are reported at 100%, irrespective of percentage attributable to Exxaro, and refer to 2024 only.*
[3] *Raw coal qualities (adb); CV: calorific value (gross), IM: inherent moisture, S: total sulphur and VM: volatile matter.*
[4] *The percentage difference between 2024 reported MTIS and 2023 reported MTIS. Brackets signify a decrease.*
[5] *At Mafube, the movements between the categories are the result of new information.*
[6] *Moranbah South estimates are received from Anglo American Steelmaking Coal Proprietary Limited and not audited by Exxaro.*
[7] *Independent power producer (IPP).*

6.2 Coal Reserves

The table below details the total Coal Reserves estimated as at 31 December 2024.

Table 10: Coal Reserves

Operation[1]	LoM (years)[3]	Category	2024 RoM and saleable tonnes: RoM (Mt)	RoM moisture %	Export (Mt)[4]	Thermal (Mt)	Metal-lurgical (Mt)	2023 RoM and saleable tonnes: RoM (Mt)	RoM moisture %	Export (Mt)[4]	Thermal (Mt)	Metal-lurgical (Mt)	% change in RoM[5]
Matla[6] (UG) (captive market) 100% attributed to Exxaro[2]	1	Proved	101	9.5		101		126	9.5		126		(20)
		Probable	30	9.5		30		31	9.5		31		(3)
		Total	**131**	**9.5**		**131**		**157**	**9.5**		**157**		**(17)**
		Inferred Resources inside LoMP	3					5					(40)
Leeuwpan[7] (OC) (commercial market) 100% attributed to Exxaro[2]	9	Proved	26.8	3.0		15.1		30.5	3.1		22.7		(12)
		Probable	3.3	3.0			1.8	3.3	2.6			1.5	–
		Total	**30.1**	**3.0**		**15.1**	**1.8**	**33.8**	**3.0**		**22.7**	**1.5**	**(11)**
		Inferred Resources inside LoMP											
Mafube (OC) (commercial market) 50% attributed to Exxaro[2]	19	Proved	79.2	3.6	42.8	10.4		82.6	3.7	46.9	9.7		(4)
		Probable	32.0	3.8	16.1	0.5		32.0	3.8	20.6	0.6		–
		Total	**111.2**	**3.7**	**58.8**	**10.9**		**114.7**	**3.7**	**67.5**	**10.3**		**(3)**
		Inferred Resources inside LoMP	0.1					0.2					(50)
Belfast[8] (OC) (commercial market) 100% attributed to Exxaro[2]	9	Proved	28.1	3.4	23.6			33.2	3.4	29.4			(15)
		Probable	1.3	3.0	1.0			1.4	2.9	1.1			(7)
		Total	**29.4**	**3.4**	**24.6**			**34.6**	**3.4**	**30.5**			**(15)**
		Inferred Resources inside LoMP	1.0					1.0					–
Grootegeluk mine (OC) (commercial market) 100% attributed to Exxaro[2]	17+	Proved	1 919	3.0	121	720	55	1 971	3.0	123	742	56	(3)
		Probable	550	3.0	37	191	6	550	3.0	37	191	6	–
		Total	**2 469**	**3.0**	**157**	**911**	**61**	**2 521**	**3.0**	**160**	**933**	**62**	**(2)**
		Inferred Resources inside LoMP	73	3.0	5	32	2	73					–
Thabametsi (OC) (IPP market) 100% attributed to Exxaro[2]	22	Proved											
		Probable	130	3.0		127		130	3.0		127		–
		Total	**130**	**3.0**		**127**		**130**	**3.0**		**127**		**–**
		Inferred Resources inside LoMP											

- *Rounding of figures may cause computational discrepancies*
- *Tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt*
- *Inferred Resources inside LoMP refer to Inferred Resources considered for the LoMP. These Resources have not been converted to Reserves*
- *Coal Reserves are quoted on a RoM Reserve tonnage basis, which represents tonnages delivered to the plant at an applicable moisture and quality basis*
- *Saleable Reserve tonnage represents the product tonnes of coal available for sale on an applicable moisture basis.*
- *All changes more than 10% in the total Reserves of an operation are explained*
- *Resource to Reserve modifying factors per operation are stated in the Ancillary section*

[1] *Operation refers to operating mine or significant project. Mining method: opencast (OC) or underground (UG).*
[2] *Figures are reported at 100%, irrespective of percentage attributable to Exxaro, and refer to 2024 only.*
[3] *The + symbol is used in instances where the scheduled LoMP extends beyond the expiry of the mining right. In each instance, Exxaro reasonably expects the mining right to be renewed.*
[4] *Export refers to export thermal coal except at Grootegeluk mine, where it refers to semi-soft coking coal suitable for the export and inland markets.*
[5] *The percentage difference between 2024 reported RoM and 2023 reported RoM. Brackets signify a decrease.*
[6] *The Matla mining right lapses in 2025 and the LoM is scheduled for an additional 15 years thereafter. The decrease is due to mining depletion (~6Mt) and the decision to adjust the Reserve quality cut-off, thereby removing some lower coal quality mining blocks within the LoM (~20Mt).*
[7] *The Leeuwpan decrease is mainly the result of mining depletion (~4Mt).*
[8] *The Belfast decrease is mainly the result of mining depletion (~4Mt), model refinement (0.6Mt) and mining losses incurred (0.3Mt).*

Table 11: Coal Reserve qualities

		THERMAL saleable (Proved and Probable)						METALLURGICAL saleable (Proved and Probable)						COKING saleable (Proved and Probable)					
Operation	Seam/layer	Tonnes (Mt)[1]	CV MJ/kg	% VM	% Ash	% S	Yield %	Tonnes (Mt)[1]	CV MJ/kg	% VM	% Ash	% S	Yield %	Tonnes (Mt)[1]	CV MJ/kg	% VM	% Ash	% S	Yield %
Matla mine	Seam 2	54.1	21.8	23.5	21.3	0.9	100												
	Seam 4	76.9	18.9	22.2	28.0	0.9	100												
Leeuwpan mine	TC[2]	5.02	24.4	19.4	21.3	0.9	44												
	BC[2]	10.09	25.2	24.7	18.2	0.6	58	1.77	28.2	9.3	13.9	0.9	39						
Mafube mine	Middlings	22.8	21.7	21.8	26.2	0.5	23												
	Export	36.1	26.5	27.0	13.4	0.4	36												
	Crush and stack	11.0	20.0	20.0	31.6	0.9	100												
Belfast mine	RB2	16.0	26.8	24.6	14.2	0.5	66												
	RB3	5.2	24.6	22.5	19.9	1.0	100												
	>4 800kcal/kg	3.4	23.8	24.1	21.7	0.7	14												
Grootegeluk mine	All seams	911	21.6	25.1	33.2	1.4	40	61	28.7	23.9	14.0	0.6	60	157	28.6	34.8	13.2	1.1	12
Thabametsi[3]	T1	64	12.7	20.0	53.9	1.1	98												
	T2	63	11.3	19.0	55.7	1.0	98												

- *Rounding of figures may cause computational discrepancies*
- *Volatile matter (VM), sulphur (S), ash content (ash) and gross calorific value (CV)*
- *Saleable Coal Reserve tonnage represents the product tonnes of coal available for sale on an applicable moisture and air-dried quality basis*

[1] *Saleable product tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt.*
[2] *Top coal (TC) and bottom coal (BC).*
[3] *Based on Thabametsi bench configuration as defined in phase 1 of the feasibility study.*

6.3 Base Metal Resources

The table below details Base Metal Resources as at 31 March 2024.

Table 12: Base Metal Resources (additional to Reserves)

Operation[1]	Category	2024 Tonnes and grade Tonnes (Mt)	% Zn	% Pb	% Cu	Ag g/t	2023 Tonnes and grade Tonnes (Mt)	% Zn	% Pb	% Cu	Ag g/t	% change in RoM[3]
Deeps mine[4] Northern Cape (UG) (zinc, lead, copper and silver) 26% attributed to Exxaro[2]	Measured	3.4	2.4	3.6	0.3	46	4.3	2.7	3.6	0.4	46	(21)
	Indicated	5.4	2.2	2.2	0.5	34	6.0	2.6	2.2	0.5	33	(11)
	Inferred											
	Total	**8.8**	**2.3**	**2.8**	**0.4**	**39**	**10.3**	**2.6**	**2.8**	**0.5**	**35**	**(15)**
Swartberg mine Northern Cape (OC/UG) (zinc, lead, copper and silver) 26% attributed to Exxaro[2]	Measured											
	Indicated	69.7	0.8	2.1	0.3	37	69.4	0.9	2.0	0.3	40	–
	Inferred	39.6	0.8	1.8	0.4	35	35.1	1.0	2.2	0.3	41	13
	Total	**109.3**	**0.8**	**2.0**	**0.3**	**36**	**104.5**	**0.9**	**2.1**	**0.3**	**40**	**5**
Big Syncline project Northern Cape (OC) (zinc) 26% attributed to Exxaro[2]	Measured											
	Indicated	6.1	3.0	1.1		16	6.1	3.0	1.1		16	–
	Inferred	185.6	2.4	1.0		12	185.6	2.4	1.0		10	–
	Total	**191.7**	**2.5**	**1.0**		**12**	**191.7**	**2.5**	**1.0**		**12**	**–**
Gamsberg North mine Northern Cape (OC/UG) (zinc) 26% attributed to Exxaro[2]	Measured	7.3	7.7	0.5			7.7	7.7	0.5			(5)
	Indicated	37.0	6.6	0.5			36.7	6.5	0.5			1
	Inferred	15.9	6.5	0.5			20.3	6.4	0.5			(22)
	Total	**60.2**	**6.7**	**0.5**			**64.7**	**6.6**	**0.5**			**(7)**
Gamsberg East Northern Cape (project) (zinc) 26% attributed to Exxaro[2]	Measured											
	Indicated											
	Inferred	63.9	8.0	0.5		5	65.0	7.9	0.5		5	(2)
	Total	**63.9**	**8.0**	**0.5**		**5**	**65.0**	**7.9**	**0.5**		**5**	**(2)**
Gamsberg South[5] Northern Cape (project) (zinc) 26% attributed to Exxaro[2]	Measured											
	Indicated											
	Inferred	29.9	6.4	0.6		7	34.2	6.2	0.5		7	(13)
	Total	**29.9**	**6.4**	**0.6**		**7**	**34.2**	**6.2**	**0.5**		**7**	(13)
Gamsberg Kloof Northern Cape (project) (zinc) 26% attributed to Exxaro[2]	Measured											
	Indicated	18.4	8.8	0.6		7	15.8	8.4	0.6		7	17
	Inferred	6.1	9.7	0.5		6	6.8	9.2	0.5		7	(10)
	Total	**24.6**	**9.0**	**0.6**		**7**	**22.7**	**8.7**	**0.6**		**7**	**8**

For operations over which Exxaro has no management control, please refer to the relevant company's website for supplementary information: www.vedantaresources.com/investor-relations/

- *Rounding of figures may cause computational discrepancies*
- *Percentage zinc (% Zn), percentage copper (% Cu), percentage lead (% Pb), grams per tonne of silver (Ag g/t), percentage manganese (% Mn) and percentage sulphur (% S)*
- *Tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt*
- *Estimates are as received from Vedanta Resources at 31 March 2024 and are not audited by Exxaro*
- *All changes more than 10% are explained*
- *Tonnages are reported on a dry basis*

[1] *Operation refers to the BMM operating mine or significant project. Mining method: opencast (OC) or underground (UG).*
[2] *Figures are reported at 100%, irrespective of percentage attributable to Exxaro.*
[3] *The percentage difference between 2024 reported MTIS and 2023 reported MTIS. Brackets signify a decrease.*
[4] *The Deeps mine decrease is mainly due to an increase in cut-off grade and bigger stope dimensions which resulted in larger exclusion zones adjacent to sterilisation and depletion shapes, as well as ongoing mining in Deeps Lower.*
[5] *At Gamsberg South, there is a decrease in underground tonnage due to an increase in cut-off grade for 2024.*

6.4 Base Metal Reserves

Table 13: Base Metal Reserves

Operation[1]	LoM (years)	Category	2024 Grade and contained metals RoM (Mt)[2]	% Zn	% Pb	% Cu	Ag g/t	2023 Grade and contained metals RoM (Mt)[2]	% Zn	% Pb	% Cu	Ag g/t	% Change in RoM[3]
BMM Deeps mine[4] Northern Cape (UG) (zinc, lead, copper and silver) 26% attributed to Exxaro[2]	1	Proved	0.1	2.8	4.2	0.4	75	0.3	3.1	2.6	0.3	41	(67)
		Probable	1.9	2.6	2.3	0.4	33	1.5	2.9	1.4	0.5	21	27
		Total	**1.9**	**2.6**	**2.4**	**0.4**	**35**	**1.7**	**2.9**	**1.6**	**0.5**	**24**	**12**
		Inferred Resources inside LoMP											
BMM Swartberg mine[5] Northern Cape (OC/UG) (zinc, lead, copper and silver) 26% attributed to Exxaro[2]	23	Proved											
		Probable	48.5	0.6	1.7	0.3	29	53.8	0.6	1.9	0.4	31	(10)
		Total	**48.5**	**0.6**	**1.7**	**0.3**	**29**	**53.8**	**0.6**	**1.9**	**0.4**	**31**	**(10)**
		Inferred Resources inside LoMP											
Gamsberg North mine Northern Cape (OC) (zinc) 26% attributed to Exxaro[2]	11	Proved	62.3	6.4	0.5			65.1	6.4	0.5			(4)
		Probable	26.6	5.0	0.5			26.5	5.0	0.5			0
		Total	**88.9**	**6.0**	**0.5**			**91.6**	**6.0**	**0.5**			**(3)**
		Inferred Resources inside LoMP											

For operations over which Exxaro has no management control, please refer to the relevant company's website for supplementary information: www.vedantaresources.com/investor-relations/

- *Rounding of figures may cause computational discrepancies*
- *Percentage zinc (% Zn), percentage copper (% Cu), percentage lead (% Pb), grams per tonne silver (Ag g/t), percentage manganese (% Mn) and percentage sulphur (% S)*
- *Tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt*
- *Reserves are quoted on a RoM Reserve tonnage basis, which represents tonnages delivered to the plant at applicable moisture and quality*
- *Inferred Resources in LoMP refer to Inferred Resources considered for the LoMP*
- *Estimates are as received from Vedanta Resources at 31 March 2024 and are not audited by Exxaro*
- *All changes more than 10% are explained*

[1] *Operation refers to the BMM operating mine or significant project. Mining method: opencast (OC) or underground (UG).*
[2] *Figures are reported at 100%, irrespective of percentage attributable to Exxaro, and refer to March 2024 only.*
[3] *The percentage difference between 2024 reported RoM and 2023 reported RoM. Brackets signify a decrease.*
[4] *The Deeps mine increase is mainly due to additional stope designs added to the Vedanta Zinc International business plans, notably in Deeps Upper.*
[5] *The Swartberg mine decrease is mainly due to a more constrained PFS UG design footprint (with current UG mine design extended to depth), and partly due to an updated block model with overall lower zinc grades.*

6.5 Iron Ore Mineral Resources

Table 14: Kumba Iron Ore Mineral Resources (in addition to Ore Reserves)

	Operation/project	Ore type	%Attributable to Exxaro	Resource category	2024 Tonnage (Mt)	2024 Average % Fe	2024 % Fe cut-off**	2023 Tonnage (Mt)	2023 Average % Fe	2023 % Fe cut-off**
Kolomela[1]	In situ Mineral Resources (in addition to Ore Reserves)	Haematite	20.37	Measured (outside LoAP)	40.3	64.3	50	52.1	65.1	50
				Indicated (outside LoAP)	46.0	62.5		62.1	63.1	
				Measured and Indicated (outside LoAP)	**86.4**	**63.3**		**114.2**	**64.0**	
				Inferred (considered in LoAP)	0.1	65.0		1.2	64.7	
				Inferred (outside LoAP)	11.1	62.4		17.3	62.5	
				Total Inferred	**11.2**	**62.4**		**18.5**	**62.6**	
				Sub-total	**97.5**	**63.2**		**132.7**	**63.8**	
	Long-term stockpiled Mineral Resources (in addition to Ore Reserves)			Measured (outside LoAP)	0.0	0.0		0.0	0.0	
				Indicated (outside LoAP)	21.4	56.9		0.0	0.0	
				Measured and Indicated (outside LoAP)	**21.4**	**56.9**		**0.0**	**0.0**	
				Inferred (considered in LoAP)	0.0	0.0		0.0	0.0	
				Inferred (outside LoAP)	0.0	0.0		0.0	0.0	
				Total Inferred	**0.0**	**0.0**		**0.0**	**0.0**	
				Sub-total	**21.4**	**56.9**		**0.0**	**0.0**	
	Total Mineral Resources (in addition to Ore Reserves)			Measured (outside LoAP)	**40.3**	**64.3**		52.1	65.1	
				Indicated (outside LoAP)	**67.5**	**60.7**		62.1	63.1	
				Measured and Indicated (outside LoAP)	**107.8**	**62.0**		**114.2**	**64.0**	
				Inferred (considered in LoAP)	**0.1**	**65.0**		1.2	64.7	
				Inferred (outside LoAP)	**11.1**	**62.4**		17.3	62.5	
				Total Inferred	**11.2**	**62.4**		**18.5**	**62.6**	
				Sub-total	**119.0**	**62.0**		**132.7**	**63.8**	
Sishen[2]	In situ Mineral Resources (in addition to Ore Reserves)	Haematite	20.37	Measured (outside LoAP)	160.9	53.2	Beneficiation potential	241.3	56.5	40
				Indicated (outside LoAP)	169.1	55.9		194.9	55.1	
				Measured and Indicated (outside LoAP)	**330.0**	**54.6**		**436.2**	**55.9**	
				Inferred (considered in LoAP)	5.4	55.2		1.4	59.5	
				Inferred (outside LoAP)	13.7	33.5		7.8	47.8	
				Total Inferred	**19.1**	**39.7**		**9.1**	**49.6**	
				Sub-total	**349.1**	**53.8**		**445.3**	**55.8**	
	Long-term stockpiled Mineral Resources (in addition to Ore Reserves)			Measured (outside LoAP)	0.0	0.0		0.0	0.0	
				Indicated (outside LoAP)	2.9	49.7		7.8	53.4	
				Measured and Indicated (outside LoAP)	**2.9**	**49.7**		**7.8**	**53.4**	
				Inferred (considered in LoAP)	0.0	0.0		0.0	0.0	
				Inferred (outside LoAP)	0.0	0.0		0.0	0.0	
				Total Inferred	**0.0**	**0.0**		**0.0**	**0.0**	
				Sub-total	**2.9**	**49.7**		**7.8**	**53.4**	
	Total Mineral Resources (in addition to Ore Reserves)			Measured (outside LoAP)	160.9	53.2		241.3	56.5	
				Indicated (outside LoAP)	172.0	55.8		202.7	55.0	
				Measured and Indicated (outside LoAP)	**332.9**	**54.5**		**444.0**	**55.8**	
				Inferred (considered in LoAP)	5.4	55.2		1.4	59.5	
				Inferred (outside LoAP)	13.7	33.5		7.8	47.8	
				Total Inferred	**19.1**	**39.7**		**9.1**	**49.6**	
				Sub-total	**352.0**	**53.7**		**453.1**	**55.7**	
Company Kumba Iron Ore	**Grand total Mineral Resources (in addition to Ore Reserves)**	Haematite	20.37	Measured (outside LoAP)	201.2	55.4		293.4	58.0	
				Indicated (outside LoAP)	239.5	57.2		264.7	56.9	
				Measured and Indicated (outside LoAP)	**440.7**	**56.4**		**558.1**	**57.5**	
				Inferred (considered in LoAP)	5.5	55.4		2.6	61.9	
				Inferred (outside LoAP)	24.8	46.4		25.1	58.0	
				Total Inferred	**30.3**	**48.0**		**27.7**	**58.4**	
				Sub-total	**471.0**	**55.9**		**585.8**	**57.5**	

For operations over which Exxaro has no management control, please refer to the relevant company's website for supplementary information: www.angloamericankumba.com/investors

- *Mineral Resources are reported as additional to Ore Reserves*
- *The tonnages are quoted in dry metric tonnes and million tonnes is abbreviated as Mt*
- *Rounding of figures may cause computational discrepancies*
- *Mineral Resource figures are reported at 100%, irrespective of percentage attributable to Exxaro ownership*
- *The term Inferred Mineral Resource (outside life of asset plan (LoAP)) refers to that portion of the Inferred Mineral Resources not utilised in the LoAP*
- *The term Inferred Mineral Resource (considered for LoAP) refers to that portion of the Inferred Mineral Resources utilised in the LoAP; reported without having any modifying factors applied – therefore the term "considered for LoAP" instead of "inside LoAP"*
- *While it would be reasonable to expect that the majority of Inferred Mineral Resources would upgrade in confidence to Indicated Mineral Resources with continued exploration, due to the uncertainty of Inferred Mineral Resources, it should not be assumed that such upgrading will always occur on a one-to-one basis*

*** The cut-off quoted for Kolomela is a fixed in situ 50% Fe, while the cut-off quoted for Sishen changed from a fixed in situ 40% Fe in 2023 to a beneficiation potential-based approach in 2024, by assigning yield and product grade parameters via the application of geometallurgical densimetric data derived beneficiation algorithms to each mineralised geological unit in the geological model, to align with the value-based cut-off approach applied to derive the Sishen Ore Reserves since 2023. The beneficiation potential of the various types of iron ore mineralisation in the Resource model is categorised in the form of material classes, which consider yield and product cut-off grades on a bench scale (12.5m vertical scale) but assigned to each 5m(X) x 5m(Y) x 3.125m(Z) cell in the Resource model. Per implication, this means that material with an in situ Fe lower than 40%, that have reasonable economic prospects to be converted to saleable product, are now re-defined as Mineral Resources.*

[1] ***Kolomela mine:*** *Mineral Resources are reported above a cut-off of 50.0% Fe in situ. Kolomela quotes a 13.7Mt (10%) decrease in exclusive Mineral Resources from 2023 to 2024, as a result of Mineral Resources being reallocated to Mineral Inventory (the latter considered to not have reasonable prospects for eventual economic extraction) due to smaller resource shells (revenue factor decreased from 1.3 in 2023 to 1.1 in 2024), as well as Measured and Indicated Mineral Resources being converted to Ore Reserves because of an enlargement of the Kapstevel South pit layout (improved long-term price and ZAR/US$ exchange rate outlook). The decrease was partially offset by the reallocation of RoM buffer stockpile medium-grade Ore Reserves to Mineral Resources, unutilised in the 2024 LoAP due to the halting of the small-scale dense media separation plant.*

[2] ***Sishen mine:*** *Mineral Resources are reported above a beneficiation potential-based cut-off. The Sishen exclusive Mineral Resources showed a 22% year-on-year decrease of 101.1Mt, primarily the result of the conversion of Measured and Indicated Mineral Resources to Ore Reserves due to a larger pit layout, as well as a decrease in low-grade Mineral Resources based on a revised grade estimation method for the banded iron formation low-grade ore, to address historical bias sampling as identified during an external audit conducted in 2023. The decrease is partially countered by the change in the cut-off methodology; the latter resulting in the conversion of some Mineral Inventory (Fe < 40%) to Mineral Resources due to it having reasonable prospects to be economically beneficiated.*

6.6 Iron Ore Reserves

Table 15: Kumba Iron Ore, Ore Reserves

	Operation/project	Operation status	Mining method	Ore type	% Attributable to Exxaro	Reserve category	2024 Tonnage (Mt)	2024 Average grade (% Fe)	2024 Grade cut-off* (% Fe)	2024 Reserve life** (years)	2024 Metal-lurgical yield (%)	2024 Saleable product tonnage (Mt)	2024 Saleable product grade (% Fe) Average	2023 Tonnage (Mt)	2023 Average grade (% Fe)	2023 Grade cut-off* (% Fe)	2023 Reserve life** (years)	2023 Metal-lurgical yield (%)	2023 Saleable product tonnage (Mt)	2023 Saleable product grade (% Fe) Average
Kolomela[1]	Ore Reserves from pit	Steady-state	Open pit	Haematite	20.37	Proved	105.3	63.2	50	16	99.8	105.1	63.0	87.9	64.2	50	11	94.3	83.0	65.0
						Probable	9.4	61.3				9.3	63.0	22.2	63.3				20.9	64.2
						Sub-total	**114.6**	**63.0**				**114.4**	**63.0**	110.1	64.0				103.9	64.8
	Ore Reserves *from RoM buffer stockpiles*					Proved	0.0	0.0				0.0	0.0	0.0	0.0				0.0	0.0
						Probable	1.3	57.0				1.3	63.0	22.7	56.0				21.4	56.9
						Sub-total	**1.3**	**57.0**				**1.3**	**63.0**	22.7	56.0				21.4	56.9
	Total Ore Reserves					**Proved**	**105.3**	**63.2**				**105.1**	**63.0**	**87.9**	**64.2**				**83.0**	**65.0**
						Probable	**10.6**	**60.8**				**10.6**	**63.0**	**44.9**	**59.6**				**42.3**	**60.5**
						Sub-total	**115.9**	**63.0**				**115.7**	**63.0**	**132.8**	**62.6**				**125.3**	**63.5**
Sishen[2]	Ore Reserves from pit	Steady-state	Open pit	Haematite	20.37	Proved	487.4	56.7	Value-based	16	61.1	330.8	64.8	402.2	57.2	Value-based	15	63.4	281.5	65.0
						Probable	141.8	46.8				64.4	61.5	119.2	48.5				61.3	61.7
						Sub-total	629.2	54.5				395.2	64.3	521.4	55.3				342.8	64.4
	Ore Reserves *from RoM buffer stockpiles*					Proved	0.0	0.0				0.0	0.0	0.0	0.0				0.0	0.0
						Probable	65.7	46.0				29.4	61.2	77.2	46.3				36.8	61.1
						Sub-total	65.7	46.0				29.4	61.2	77.2	46.3				36.8	61.1
	Total Ore Reserves					**Proved**	**487.4**	**56.7**				**330.8**	**64.8**	**402.2**	**57.2**				**281.5**	**65.0**
						Probable	**207.5**	**46.5**				**93.8**	**61.4**	**196.5**	**47.6**				**98.1**	**61.5**
						Sub-total	**694.9**	**53.7**				**424.6**	**64.0**	**598.6**	**54.0**				**379.6**	**64.1**
Company Kumba Iron Ore	**Grand total Ore Reserves**				20.37	**Proved**	**592.7**	**57.9**			**66.6**	**435.9**	**64.4**	**490.1**	**58.5**			**69.0**	**364.4**	**65.0**
						Probable	**218.1**	**47.2**				**104.4**	**61.6**	**241.3**	**49.8**				**140.5**	**61.2**
						Sub-total	**810.8**	**55.0**				**540.3**	**63.9**	**731.4**	**55.6**				**504.9**	**63.9**

For operations over which Exxaro has no management control, please refer to the relevant company's website for supplementary information: www.angloamericankumba.com/investors

- *The tonnages are quoted in dry metric tonnes and million tonnes is abbreviated as Mt*
- *Rounding of figures may cause computational discrepancies*
- *Ore Reserve figures are reported at 100%, irrespective of percentage attributable to Exxaro ownership*
- *Saleable product figures are reported at 100%, irrespective of percentage attributable to Exxaro ownership*
- *Yield is calculated as: saleable product tonnes/Ore Reserves tonnes x 100*

* *The cut-off assigned to Ore Reserves is dependent on the beneficiability and blending capacity of the modified ore scheduled as RoM, which is iteratively determined during LoAP scheduling to achieve a target that is set to meet the customer product specifications. In the case of Kolomela mine, which is considered as a direct shipping ore operation in the 2024 LoAP, the lowest RoM Fe grade associated with a scheduled selective mining unit is 50%. In the case of Sishen mine, having large-scale installed dense medium separation (DMS), Jig and ultra-high DMS (UHDMS), and planned 2024 LoAP UHDMS beneficiation capacity, the cut-off is value-based, with the lowest RoM Fe grade associated with a scheduled selective mining unit being 35.1%.*

** *Reserve life represents the period in years in the approved LoAP for scheduled extraction of Proved and Probable Reserves. The Reserve life is limited to the period during which the Ore Reserves can be economically exploited. Where the scheduled Ore Reserves fall below 25% of the average annual production rate, the period beyond this is excluded from the Reserve life.*

1 ***Kolomela mine:*** *Ore Reserves are reported above a processing plant feed derived cut-off of 50.0% Fe inclusive of dilution. Kolomela's Ore Reserves decreased by 16.9Mt (-13%) from 2023 to 2024, primarily attributable to the halting of the small-scale DMS plant as part of Kumba's cost curtailment drive, resulting in the exclusion of medium-grade ore as UHDMS RoM from the 2024 Kolomela LoAP; the Ore Reserves reallocated to exclusive Mineral Resources. A further contributing factor to the year-on-year decrease is the 2024 production as forecast at the time of site-specific reporting. For Kolomela, a 16-year remaining mine life, at an average 7.3 Mtpa RoM (average 9.4 Mtpa for first three years, 7.0 Mtpa for next 12 years and 3.7 Mtpa for last year) is scheduled in the 2024 LoAP (including modified Inferred Mineral Resources), compared to an average 12.2 Mtpa in the 2023 LoAP. The downscaling in output is part of Kumba's business reconfiguration drive to optimise value in a constrained logistical environment. This optimisation is still in progress and volume output may again change, pending capital availability and success in terms of cost curtailment etc.*

2 ***Sishen mine:*** *Ore Reserves increased by 96.2Mt (+16%) from 2023 to 2024, primarily as a result of an enlargement of the Sishen pit layout, allowing for additional RoM to be generated in the 2024 Sishen LoAP. The latter was partially offset by the 2024 production as forecast at the time of site-specific reporting. As a result of the overall increase in Ore Reserves, the Sishen Reserve life increased from 15 years as per the 2023 LoAP to 16 years as per the 2024 LoAP.*

7. Ancillary Resource and Reserve information by operation

7.1 Belfast

Table 16: Belfast overview

Topic	Information	
Location	10km south-west of the town of Belfast in Mpumalanga, South Africa	
History	**Previous ownership**	**Material notes**
1967	Fuel Research Institute of South Africa	Coal Resource delineation drilling (25 drill holes)
1969	Trans-Natal Steenkoolkorporasie Beperk	Coal Resource delineation drilling (10 drill holes)
1975 to 1983	Gold Fields Mining and Development	Coal Resource delineation drilling (43 drill holes)
2001 to 2006	Eyesizwe	Coal Resource delineation drilling (155 drill holes)
2006 to 2023	Exxaro	Drilling to delineate Coal Resources (384 drill holes), detailed box cut designs, five-year mine plan infill drilling and life extension project. The mine produced first coal in April 2019 from pit 5. In 2019, it opened two box cuts on pit 1 and pit 7, ramping up production in 2020. In 2020, pit 2 was opened, followed by pit 4B box cut in 2021 and pit 4 box cut in 2022, ramping up production.
2024	Exxaro	Consolidation of pit 7 into pit 4. Infill drilling (69 drill holes).
Adjacent properties	The mineral tenure areas of Umsimbithi Mining (Wonderfontein coal mine) and Universal Coal (Paardeplaats) are to the west and north of Belfast, respectively.	
Infrastructure	Belfast mine is adjacent to the N4 highway that connects Pretoria and Maputo and can be accessed from the N4 via the D1110 and D1770 district roads. The mine is adjacent to the railway line to Maputo, and nearby loading facilities connect the railway line to the Richards Bay Coal Terminal. Existing Eskom power lines are on the property for electricity supply. Water is sourced on site as per the integrated water use licence (IWUL) specification. Potable water is sourced from authorised water drill holes, and process water for dust suppression and running the beneficiation plant is sourced through dewatering from pits.	
Coalfield	Belfast mine is on the far eastern edge of the Witbank coalfield. The coalfield extends about 190km east-west between Springs and Belfast and about 60km in a north-south direction between Middelburg and Ermelo. The Witbank coalfield has up to five coal seams in the middle Ecca group sediments of the Karoo supergroup. The Karoo sequence in the area is represented by the Dwyka formation and the middle Ecca with little or no lower Ecca development. The middle Ecca sequence of coal horizons, interbedded with sediments, is highly truncated due to erosion, with only minor areas where the full sequence is developed.	
Main seams	S2, S3 and S4 are exploited where economical.	
Seam development	Locally, three seams are mainly targeted (S2, S3 and S4). S5 was intersected in only a few drill holes in the northern part of the project area. S2, the most prevalent seam, is consistently developed, except in areas where it has been eroded. It has an average thickness of 2.6m and gently dips to the south. S3 and S4 are sporadically developed due to erosion, and both have an average thickness of 1.0m.	
Depositional control	Due to the mine's proximity to the northern edge of the Witbank basin, the primary control of coal development is the current weathering surface. The deposit is divided by a perennial stream into two resource blocks under two distinct spurs in the surface topography. There is no indication of pertinent faulting from the drill hole information, but potential intrusions of dolerite dykes are outlined by regional airborne magnetics, indicating the possible occurrence of regional north-south trending dykes. There are no known geological structures that may affect the geology or coal seam continuity.	
Resources and Reserves	Resources occur within most of the mining right and Reserves are limited to the southern mining right area, aligned with the existing LoMP.	
Mining method	Currently, mining occurs from four open pits using the doze-over, truck-and-shovel hybrid mining method. The LoM identifies 10 opencast pits, four or five of which will operate concurrently. There are prospects for additional opencast opportunities north of the existing operations.	
Beneficiation	Thermal coal is beneficiated in a two-stage DMS plant and a crush and stack (C&S) plant.	
Product	CV 4 800kcal/kg, 5 300kcal/kg and 5 750kcal/kg air-dried.	
Market	Belfast supplies export and domestic markets.	
Mining right	Belfast has an approved mining right that covers 5 819.18ha.	
Environmental approvals	All environmental appeals have been favourably addressed for the declared Reserves.	
Projects/feasibility studies	The BLTO bankable feasibility study, evaluating additional Resources to the north of the current LoM area, and studies to establish supporting infrastructure to fully exploit the Resource, are anticipated to be completed in 2025.	

Belfast overview

Figure 2: Belfast mine

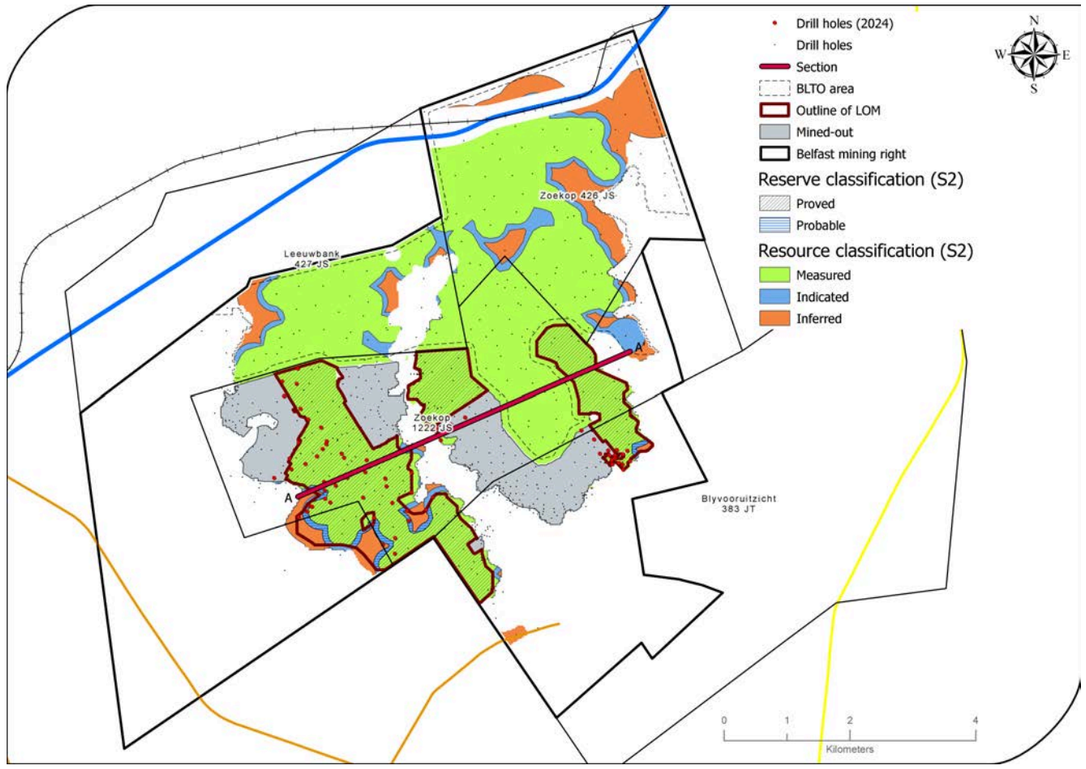
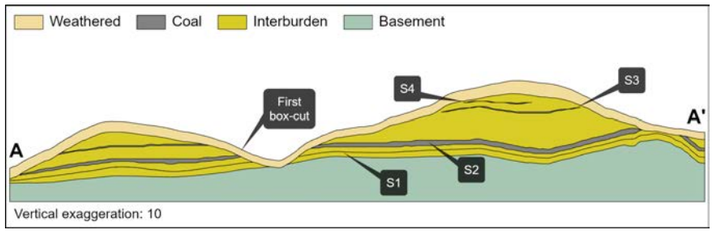


Figure 3: Belfast west-east cross-section



Resource estimation

Table 17: Resource estimation methodology and reporting

Process	Information
Drilling, logging and sampling	Since 2019, most vertical surface drill holes have been wireline logged per Exxaro's procedure. Drilling mainly focuses on delineating the split between soft and hard overburden (OVB) to support geotechnical characterisation and enhanced seam roof and floor mapping to delineate areas of seam floor rolls, seam thinning, seam thickening and seam pinching. We take photographs of the core after marking it. Geological information is captured on log sheets with lithology captured up to centimetre scale with detail. Sampling is conducted on site with the aid of wireline logs.
Laboratory and accreditation	SGS South Africa, SANAS T0561
Laboratory dispatch and receiving process	All samples are collected, bagged and delivered to the laboratory for analysis accompanied by a dispatch sheet. The dispatch sheet also contains the sample advice that guides the laboratory on which analyses will be conducted on the samples. The receiving laboratory personnel sign the dispatch sheet to ensure chain of custody. Once the laboratory receives and signs the dispatch sheet, it is responsible for the safekeeping and storage of that batch of samples.
Laboratory QAQC	We ensure data integrity through rigorous procedures and supervision while processing. Audits are performed internally and externally as part of the assurance and control process. SGS is accredited for analytical work and participates in monthly local and international round robins.
Data datum	WGS 84 – LO29
Drill hole database	acQuire
Number of drill holes in mining right	944
Number of drill holes used for Resource estimation	687
Number of drill holes used for classification	388
Data compositing and weighting	Data compositing is conducted per seam using a weighted value from individual samples that make up the seam, along with each sample's relative density and length. This is conducted in GEOVIA Minex™.
Data validation	Conducted using queries in acQuire, Minex™ and Excel
Geological modelling software	GEOVIA Minex™
Estimation technique	Growth algorithm
Previous model date	2018
Last model update	2022
Grid mesh size	25m x 25m
Scan distance	2 000m
Data boundary	200m
Model build limits	Upper: limit of weathering and topography/collar Lower: basement/Dwyka
Model outputs	Roof, floor and thickness grids generated for structure Raw and wash quality grids
Changes to modelling process	None
Thickness cut-off and extraction height considerations	Opencast ≤0.5m
Quality cut-offs (adb)	Ash ≥50%
Geological loss applied	5%

Table 18: Resource classification criteria

Category	Type of drill holes	Drill hole spacing	Structurally complex areas	Drill holes/ha
Measured	Cored drill holes with applicable coal qualities	0m to 350m	May be more conservative after consideration of RODA	0.16
Indicated	Cored drill holes with applicable coal qualities	350m to 500m	May be more conservative after consideration of RODA	0.01
Inferred	Cored drill holes with applicable coal qualities	500m to 1 000m	May be more conservative after consideration of RODA	0.02

Table 19: RPEEE considerations

Item	Criteria	Criteria met	Comment
Geological data	Data has been validated and signed off by Competent Person.	Yes	Considers geological structures and depositional extent, as well as seam thickness ≤0.5m, ≥50% ash content, with coal qualities reported on an adb.
Geological model	Geological model has been considered and signed off.	Yes	2022
Structural model	Structural model was considered and signed off.	Yes	2022
Mining	Mining assumptions were considered and defined.	Yes	Opencast
Assurance	Exxaro internal review and external audit conducted.	Yes	An internal review was conducted in 2024, while EY conducted an independent audit in 2020.
Economic evaluation	Exploitation study with economic and mining assumptions, including geotechnical and geohydrological assumptions.	Yes	Belfast's pit layouts were revised and adapted in 2023 to address operational challenges and improve the Reserve utilisation.
Environmental	Reasonable demonstration that environmental approvals can be obtained within the context of local, regional and national governmental legislation.	Yes	Environmental management plan, IWUL and National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) licences are in place and compliant.
Tenure	Formal tenure must be a reasonable demonstration that a mining right approval can be obtained within the context of local, regional and national governmental legislation.	Yes	Tenure is secured. Surface rights are secured for the majority of the current LoM, with outstanding surface rights for two portions under procurement negotiations. For the BLTO Reserves, surface access has been secured, and surface acquisitions are in progress. No impediments noted.
Infrastructure	Assumptions used should be reasonable and within known or assumed tolerances or have examples of precedence.	Yes	Existing infrastructure is adequate or can be upgraded, with new required infrastructure under construction.
Market	Potential market for the product with a reasonable assumption that this market is sustainable.	Yes	RB2, RB3 and RB4.

Reserve estimation

Table 20: Reserve estimation

Topic	Information
Software	RPM Global Open Cut Coal Solution (OCCS)
Reserving process	Scheduling of Reserves is determined using a mining scheduling application (Scheduler) from OCCS, the same software used to develop the LoMP schedule. The geological 3D model used for the Resource statement is referred to as the Reserve geological 3D model. The geological model is supplied to mining technical services in the form of Minex™ grids. The grids are then imported into a reserving application (Reserver) from the same OCCS software. This application validates the geological information received by checking the integrity and quality of the geological structure, ensuring wash table values are consistent and converting the geological 3D model into mineable block sizes.
Conversion classification	Indicated Resources are generally converted to Probable Reserves and Measured Resources to Proved Reserves after considering the applicable modifying factors. If one or more of the modifying factors have not been fulfilled, the Measured Resource is either not converted or is converted but downgraded to Probable Reserves, and the associated risk is clearly stated. Inferred Resources are not converted to Coal Reserves.
Inferred Resources inside LoM	1.0Mt of Inferred Resources are included in the LoMP, representing 3.4% of the LoMP, and are not considered material. Inferred Resources, on the western edge of the pit, will only be reached towards the end of LoM.
	Modifying factors
Average thickness cut-off	S2 ≤0.8m, S3 and S4 ≤1.0m
Quality cut-offs	No quality cut-offs. Economic cut-offs are applied.
Mining loss	0.1m
Boundary pillar	N/A
Dilution	0%

Table 20: Reserve estimation continued

Topic	Information
Contamination	0.1m
Mining recovery efficiency	100% (already accounted for in mining loss)
Planned average slope angles	90 degrees on hards and softs (with a 45m-wide bench between hards and softs, as softs are stripped a strip ahead of intended/planned hards face).
Practical plant yield	Considered in the reserving process, as per the wash table data.
Strip ratio cut-off	Considered in the reserving process using the economic model, developed during the exploitation strategy, to identify economical mining boundaries.
Environmentally sensitive areas	Areas considered based on the applicable environmental approvals.
Legal	Applicable mining right considered, and all the reserved areas are within the mining right's boundary and have obtained the WUL. The purchase of two portions of surface rights is pending.
Social	Grave site identified; no impact on the Reserve as final void stockpiles were relocated on design proposal. All households have been relocated.
Geohydrological	Applicable surface and groundwater models considered.

Table 21: Belfast Coal Resource and Coal Reserve statement

Category	2024 (Mt)	2023 (Mt)	Difference in tonnes (Mt)	Difference (%)	Reason for change
Measured	94.2	98.4	(4.2)	(4)	The decrease is due to mining depletion (-3.9Mt), geological losses (-0.1Mt) and mining losses (-0.3Mt).
Indicated	7.9	8.0	(0.1)	(1)	The decrease is the result of mining depletion (-0.1Mt).
Inferred	13.3	13.3	—	—	
Total Coal Resources	**115.3**	**119.7**	**(4.4)**	**(4)**	
Proved	28.1	33.2	(5.1)	(15)	The decrease is the result of mining depletion (-3.9Mt), model refinement (-0.6Mt), geological loss (-0.1Mt), reconciliation (-0.1Mt), disposal (-0.1Mt) and mining loss (-0.3Mt).
Probable	1.3	1.4	(0.1)	(7)	The decrease is the result of the mining depletion of Seam 3 (-0.1Mt).
Total Coal Reserves	**29.4**	**34.6**	**(5.2)**	**(15)**	

- *Rounding of figures may cause computational discrepancies*
- *Tonnages are quoted in metric tonnes and million tonnes (Mt). Coal Resources are quoted as MTIS*

Exploration summary

Table 22 outlines the exploration for the reporting year. For detailed expenditure, refer to Table 64.

Table 22: Exploration summary

Objectives	Progress in reporting year	Plans for next reporting year
Infill drilling in pit 4 Upgrade of Resource classification in pits 5 and 6	A total of 69 drill holes were completed for the reporting year. The extent of weathering was well defined in pits 1 and 2. Infill drilling information from pits 5 and 6 will be utilised in 2025 to update the geological model, increasing Resource confidence.	A total of 53 drill holes are planned to de-risk pits 1, 2 and 4 and to increase Resource confidence in pits 5 and 6.

Risks

Other than the risks listed below, there are no known environmental, social, political and governance risks that could potentially impact the exploitation of the Coal Reserves.

Table 23: Belfast risks

Risk	Description	Mitigation
Surface rights	Securing surface rights in the current LoM areas over portions 9 and 15 of Leeuwbank 427JS.	Property valuation concluded on both properties and negotiations are in progress. Capital for the procurement of these properties has been included in the 2025 capital programme.
Transnet Freight Rail (TFR) performance	TFR offtake was lower than planned.	Alternative market offtake agreements to mitigate the risk of recurring poor performance from TFR in 2025.
Technical	Weathered coal is encountered on the Resource boundary.	Mapping of weathering channels and investigation of higher geological loss domains along the Resource boundary.
Qualities	Sporadic sulphur challenges experienced within mining blocks.	Planning for blocks that have low sulphur. Investigating opportunities to blend coal from different blocks. Intensive in-pit sampling programme before coal is dispatched to C&S. Investigating alternative markets that allow for a 1.2% sulphur product.

Operational excellence

While the pioneer siding project has been completed, we are awaiting the first test train. This could potentially expedite rail distribution to the Maputo corridor and unlock opportunities with a service provider in Maputo.

Enhanced grade-control practices that ensure efficient mining will result in maximised beneficiation plant efficiency.

The Resource and Reserve extent will be closely monitored, with additional volumes mined when economically feasible.

7.2 Leeuwpan

Table 24: Leeuwpan overview

Topic	Information	
Location	10km south-east of the town of Delmas in Mpumalanga, South Africa.	
History	**Previous ownership**	**Material notes**
1988 to 2006	Iscor – Iscor mining – Kumba	Exploration began in 1990, the first box cut was commissioned in 1992 and rights were ceded to Exxaro in 2006. ~400 exploration drill holes drilled.
2006 to 2023	Exxaro	Infill exploration drilling (~1 800 drill holes); the mine has been operating for approximately 32 years. OL has been operating since 2013, OI since 2018, and the western OI extension since 2020. Depletion of OI west mining area in 2023 and OL mining ceased in 2024.
2024	Exxaro	Infill exploration drilling (seven drill holes). New planning methodology implemented, extending the LoM from six to nine years.
Adjacent properties	Stuart Colliery, Delta Mining Company and HCI Khusela Coal mines own property near Leeuwpan. Thaba Chueu Mine (silica mine) is adjacent to Leeuwpan.	
Infrastructure	Leeuwpan lies alongside the R50 provincial road and is serviced by a railway line with a rapid load-out station inside Leeuwpan's rail loop. Eskom supplies electricity to the mine directly through a substation at Witklip, which is linked to a nearby Eskom power line. Potable water is supplied from drill holes and pumped into different storage facilities due to the presence of Escherichia coli (E. coli) bacteria. This is used as grey water and purified water is purchased for drinking. Process water is supplied from a closed system, which includes the plant, slimes dams and pit dams. Water replenishment for processing comes from the pits.	
Coalfield	Leeuwpan mine is in the Delmas coalfield, on the western border of the Witbank coalfield. The geology within the Delmas coalfield is similar to that of the Witbank coalfield. Like the Witbank coalfield, the Delmas coalfield has up to five coal seams in the middle Ecca group sediments of the Karoo supergroup. The Karoo sequence in the area is represented by the Dwyka formation and the middle Ecca with little or no lower Ecca development. The middle Ecca sequence of coal horizons, interbedded with sediments, is highly truncated due to erosion, with minor areas where the full sequence is developed. The basement is generally the Malmani dolomites from the Transvaal supergroup.	
Main seams	We identified two coal seams at Leeuwpan: top coal (TC) seam and bottom coal (BC) seam. The BC seam correlates with the S2 of the Witbank and Highveld coalfields and the TC seam correlates with S4 and S5. The BC seam qualities are generally higher than the TC seam qualities.	
Seam development	The coal seams at Leeuwpan are primarily interbedded with sandstone, shale and carbonaceous shale.	
Depositional control	The coal was deposited on glacial sediments of Dwyka tillite, which in turn was deposited on the dolomite of the Transvaal supergroup. A significant amount of magma intruded as concordant sills of dolerite in the Karoo strata in the Delmas area. Thin dolerite dyke structures that transgress the stratigraphy are associated with the dolerite intrusion. Factors controlling geological and quality continuity are mainly surface weathering, significant variation in seam thickness due to an undulating tillite floor, faulting associated with dolerite activity and dolomitic basement, and devolatilisation and weathering due to dolerite intrusions (sills and dykes).	
Resources and Reserves	Coal Resources and Coal Reserves occur in opencast pits OI and UB.	
Mining method	Leeuwpan is an opencast operation. Current mining operation is in the OI Reserves. The mine uses a conventional truck-and-shovel mining method.	
Beneficiation	Leeuwpan has two DMS plants that beneficiate coal primarily for the thermal export market and two crushing plants (C&S and bypass plants) that handle selectively mined thermal coal either for the domestic market or the export market, depending on the quality. The second DMS plant, commissioned in 2016, is operated by an independent contractor, whereas the original plant is operated by Exxaro.	
Product	The dry crushing and screening plants are capable of producing either a 4 200kcal/kg, 4 800kcal/kg or 5 300kcal/kg product depending on the inherent coal qualities.	
Market	Leeuwpan supplies domestic and export markets.	
Mining right	Leeuwpan has an approved mining right that covers 4 269ha. Execution is pending following a section 102 application to consolidate the two mining rights.	
Environmental approvals	Environmental authorisations are in place for the declared Reserves.	
Projects/feasibility studies	None	

Leeuwpan overview

Figure 4: Leeuwpan mine

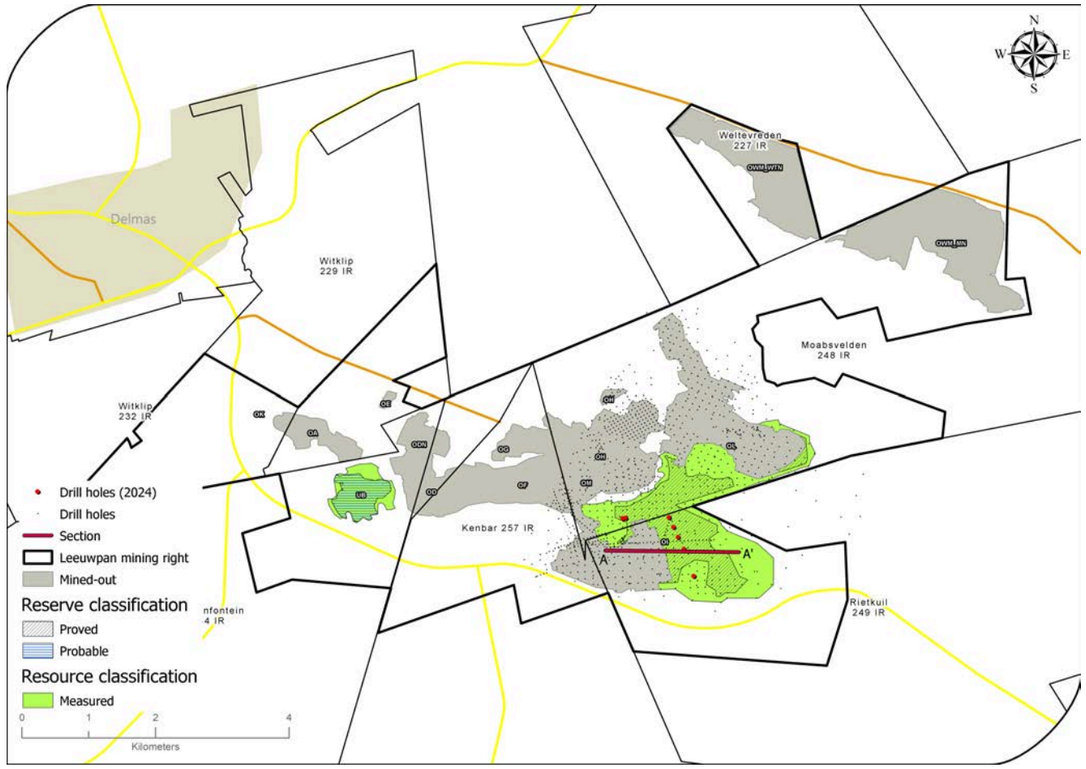
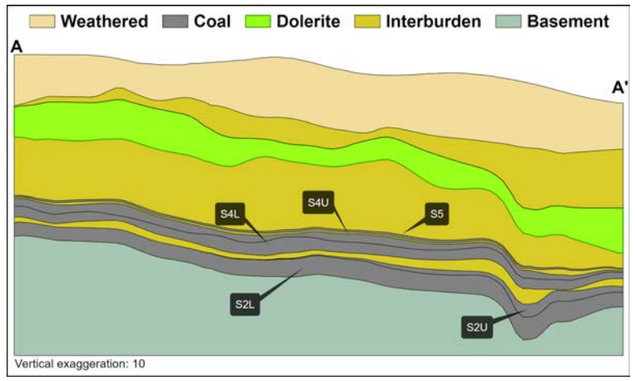


Figure 5: Leeuwpan west-east cross-section through pit OI



Resource estimation

Table 25: Resource estimation methodology and reporting

Process	Information
Drilling, logging and sampling	Vertical surface drill holes are drilled and subsequently logged on site. Lithological codes are used when capturing the lithology. Photographs of the core are taken after marking it. Samples are split on the lithological contact, if needed, using a chisel and hammer to ensure a clean break. Each sample is put in an individual bag with all materials represented in that interval, ensuring no contamination occurs between the materials to be sampled. Two sample tags are marked using a permanent marker. One sample tag is placed inside the bag and the other on the outside; the bag is then sealed with a cable tie.
Laboratory and accreditation	Siza coal laboratory, SANAS T0447
Laboratory dispatch and receiving process	All samples collected and bagged are registered in a sample sheet, which is also used as a dispatch sheet. The receiving laboratory personnel sign the dispatch sheet after ensuring that the number and sample ID on the dispatch sheet match the samples to be analysed. Once the laboratory receives and signs the dispatch sheet, it is responsible for the safekeeping and storage of that batch of samples.
Laboratory QAQC	Siza is accredited for analytical work and participates in monthly local and international round robins.
Data datum	Cape datum – LO29
Drill hole database	acQuire
Number of drill holes in mining right	4 623
Number of drill holes used for Resource estimation	733
Number of drill holes used for classification	630
Data compositing and weighting	Data compositing is conducted per seam using a weighted value from individual samples that make up the seam, along with each sample's relative density and length. This is conducted in GEOVIA Minex™.
Data validation	Conducted using queries in acQuire, Minex™ and Excel.
Geological modelling software	GEOVIA Minex™
Estimation technique	Growth algorithm
Previous model date	2021
Last model update	2023
Grid mesh size	20m x 20m
Scan distance	1 000m
Data boundary	200m
Model build limits	Upper: limit of weathering and topography/collar Lower: basement/Dwyka
Model outputs	Roof, floor and thickness grids generated for seam structure Raw and wash quality grids
Changes to modelling process	None
Thickness cut-off and extraction height considerations	2023 model ≤0.5m (S5 ≤1m)
Quality cut-offs (adb)	Ash ≥50%, a non-material amount of coal ≥50% ash may be included to ensure optimised extraction.
Geological loss applied	5% to 100% based on geological loss domains (5% standard geological loss is applied but may vary based on the consideration of structural complexity (dolerite sill breakthrough – 50% loss within determined spatial extent and fault displacement zone – 100%) and seam floor adulation (10% loss)).

Table 26: Resource classification criteria

Category	Type of drill holes	Drill hole spacing	Structurally complex areas	Drill holes/ha
Measured	Cored drill holes with applicable coal qualities	0m to 100m	May be more conservative after consideration of RODA	1.04
Indicated	Cored drill holes with applicable coal qualities	100m to 200m	May be more conservative after consideration of RODA	N/A
Inferred	Cored drill holes with applicable coal qualities	200m to 1 000m	May be more conservative after consideration of RODA	N/A

Table 27: RPEEE considerations

Item	Criteria	Criteria met	Comment
Geological data	Data has been validated and signed off by Competent Person.	Yes	Seam depth, seam thickness ≤0.5m, all seams except S5 thickness ≤1m, ≥50% ash content but a non-material amount of coal with ≥50% ash may be included to ensure optimised extraction. Coal qualities are reported on an adb.
Geological model	Geological model was considered and signed off.	Yes	2023
Structural model	Structural model was considered and signed off.	Yes	2023
Mining	Mining assumptions were considered and defined.	Yes	Opencast
Assurance	Exxaro internal audits and external audit conducted.	Yes	An internal review was conducted in 2023. EY conducted an independent audit in 2021.
Economic evaluation	Exploitation study with economic and mining assumptions, including geotechnical and geohydrological assumptions.	Yes	The LoM schedule was updated to align with the revised annual production tempo and the evaluation of a new market to supply Eskom as part of the interim coal supply agreement (ISA).
Environmental	Reasonable demonstration that environmental approvals can be obtained within the context of local, regional and national governmental legislation.	Yes	Current required approvals in place.
Tenure	Formal tenure must reasonably demonstrate that a mining right approval can be obtained within the context of local, regional and national governmental legislation.	Yes	Mining right valid until 2039, with no impediments noted.
Infrastructure	Assumptions used should be reasonable and within known or assumed tolerances or have examples of precedence.	Yes	Current infrastructure.
Market	A potential market for the product, with a reasonable assumption that this market is sustainable.	Yes	Current market. Market option review for low-volatile coal.

Reserve estimation

Table 28: Reserve estimation

Topic	Information
Software	OCCS
Reserving process	Reserve scheduling is determined using a mine scheduling application (Scheduler) from OCCS, which is the same software used to develop the LoMP schedule. The geological 3D model used for the Resource statement is referred to as the Reserve geological 3D model. The geological model is supplied to mining technical services in the form of Minex™ grids. The grids are then imported into a reserving application (Reserver) from the same OCCS software. This application validates the geological information received by checking the integrity and quality of the geological structure, ensuring wash table values are consistent and converting the geological 3D model into mineable block sizes. Careful product selection and balancing of remaining Reserves are required at Leeuwpan to ensure maximum value for Exxaro.
Conversion classification	Indicated Resources are generally converted to Probable Reserves and Measured Resources to Proved Reserves, after consideration of all applicable modifying factors. If one or more of the modifying factors have not been fulfilled, a Measured Resource is either not converted or is converted but downgraded to a Probable Reserve, and the associated risk is clearly stated. This is the case for UB, where it is classified as a Probable Reserve because of additional modifying factors such as low volatiles and the limited market for this particular quality of coal. Inferred Resources are not converted to Coal Reserves.
Inferred Resources inside LoM	No Inferred Resources inside LoM.
	Modifying factors
Average thickness cut-off	0.5m all seams except S5, which is 1.0m.
Quality cut-offs	N/A
Mining loss	S5 0.31m, S4U 0.12m, S4L 0.12m, S2U 0.5m, S2L 0.12m, UB S2 0.26m.
Boundary pillar	100m boundary pillar along the new R50 road at OI West pit.
Dilution	S5 0.05m, S4U 0.11m, S4L 0.12m, S2U 0m, S2L 0.11m, UB S2 0.25m.
Contamination	Included in the rest of the modifying factors.
Mining recovery efficiency	Included in the rest of the modifying factors.
Planned average slope angles	45 degrees. For highwall stability, soft material is mined at least one strip ahead of hard material and coal mining activities.

Table 28: Reserve estimation continued

Topic	Information
Practical plant yield	90% DMS and 90% Fraser Alexander DMS, with slimes loss of 9% on DMS and 15% on Fraser Alexander DMS.
Strip ratio cut-off	Strip ratio is determined using the energy strip ratio assessment and is considered in the reserving process using the economic model to identify mining boundaries.
Environmentally sensitive areas	Environmentally sensitive areas applications were made and approval was acquired before mining.
Legal	Applicable mining right considered and all the reserved areas are within the mining right's boundary.
Social	Applicable communities considered. Socially sensitive areas in the mining right (such as graveyards) are excluded from Reserves in the reserving process.
Geohydrological	Applicable surface and groundwater models are considered. The pit floor was considered to minimise water handling in the pit face.

Table 29: Leeuwpan Coal Resources and Coal Reserves statement

Category	2024 (Mt)	2023 (Mt)	Difference in tonnes (Mt)	Difference (%)	Reason for change
Measured	**58.2**	63.4	(5.2)	(8)	The decrease is the result of mining depletion (-4.2Mt), Resource sterilisation (-0.9Mt) and reconciliation (-0.1Mt).
Indicated	**—**	—			
Inferred	**—**	—			
Total Coal Resources	**58.2**	63.4			
Proved	**26.8**	30.5	(3.7)	(12)	The decrease is the result of mining depletion (-4.2Mt) and reconciliation (-0.1Mt), slightly offset by model refinement (0.6Mt).
Probable	**3.3**	3.3			
Total Coal Reserves	**30.1**	33.8	(3.7)	(11)	

- *Rounding of figures may cause computational discrepancies*
- *Tonnages quoted in metric tonnes and million tonnes (Mt). Coal Resources quoted as MTIS*

Exploration summary

Table 30 outlines exploration for the reporting year. For detailed expenditure, refer to Table 64.

Table 30: Leeuwpan exploration summary

Objectives	Progress in reporting year	Plans for next reporting year
Increase confidence in the UB and OI east pits	The exploration campaign for the year had a late start due to supply chain challenges and late onboarding of a drill contractor. Seven drill holes were completed in the OI pit, de-risking the mine plan.	Planning includes 15 holes in the OI pit to delineate structure and de-risk mining operations.

Risks

Other than the risks listed below, there are no known environmental, social, political and governance risks that could potentially impact the exploitation of the Coal Reserves.

Table 31: Leeuwpan risks

Risk	Description	Mitigation
Dolerite sill impact on slope stability	Reserve blocks UB and OI have a dolerite sill overlying the coal strata, and the sill orientation affects slope stability.	Apply RODA to identify the areas of high geological risk. The bench design is modified based on dolerite dipping towards the seam.
Dolerite sill impact on coal devolatilisation	The proximity of the dolerite sill may devolatilise or burn the coal seam.	Higher geological losses are applied to the geological model based on the sill's proximity to the seams. An integrated MRM grade-control process is implemented, highlighting expected Resource/Reserve anomalies (including dykes, sills and weathering) to the mining team.
Major/minor faults	Major faults with displacements greater than the seam widths occur between OL and OI. This is also associated with sill transgression. Minor faults cause slight seam displacements which affect coal and quality continuity.	Inclusion in the RODA plan and higher geological losses applied to major fault zones.
Floor undulations	Undulating floor conditions cause a challenging and complicated mining environment (ie reduced production tempos and contamination).	A floor gradient is included in the RODA. The use of floor contours to plan ramp gradients in each Reserve area.
Coal quality	In-seam quality deviations are generally localised and are associated with minor channel washout.	Continuously monitor quality, which is integrated into the grade-control process.

Operational excellence

Opportunistic mining of Seam 5 is seen in areas of the OI pit where it meets the minimum cut-off of 0.5m. Yield optimisation can also be achieved through higher-than-budget dry crushing and blending with wash-plant production to achieve customer specifications.

7.3 Matla

Table 32: Matla overview

Topic	Information	
Location	15km west of the town of Kriel in Mpumalanga, South Africa.	
History	**Previous ownership**	**Material notes**
1976 to 1990	Trans Natal Mines	Construction began in 1976, with full production in 1983. ~465 exploration drill holes drilled.
1990 to 2006	Eyesizwe	Mining rights ceded to Exxaro in 2006. Continuous exploration drilling ~1 000 drill holes.
2006 to 2023	Exxaro	Full production until Mine 1 closure in 2016. Mine 2 and Mine 3 continue to produce ~6Mtpa, with ongoing exploration drilling to support operations. Continuous exploration drilling ~1 860 drill holes. North-west access incline project reached coal in 2023.
2024	Exxaro	During 2024, the Mine 2 north-west access and Mine 1 relocation LoM expansion projects intersected coal, while shortwall mining ceased in Q2. Exploration campaign (90 drill holes).
Adjacent properties	Seriti's Kriel Colliery neighbours Matla to the east and Zibulo (Seriti) and Khutala (Thungela) are situated to the north.	
Infrastructure	Matla is situated on the P53-1 and R547 secondary roads branching off the R580 and R545. Existing infrastructure supporting the three shaft complexes includes three ventilation shafts, a network of conveyor belts, coal silos and stockpiles, a crushing and screening plant, four pollution-control dams, a hospital, accommodation facilities, offices, workshops and a water treatment plant. Potable water is received from Eskom and no potable water plant exists on the mine property. Electricity is sourced from Eskom (Matla power station). All coal is conveyed from the mine directly to Eskom's Matla power station.	
Coalfield	Matla mine is situated in the Highveld coalfield to the south of the Witbank coalfield. The coal seams are developed in the Vryheid Formation of the Karoo supergroup. The stratigraphic sequence in the Matla area includes five coal seams that can be easily correlated with seams found in the Witbank coalfield.	
Main seams	The principal economic seams currently exploited are S2 and S4, with mining of S5 terminated in 1998 due to high levels of contamination and a subsequent increase in the abrasive index.	
Seam development	Coal seams in the area are generally flat and continuous, with subsequent igneous activity resulting in displacements and devolatilisation of coal seams in localised areas. The S5 is most prominent in the Mine 2 and Mine 3 areas and, to a limited extent, in the western limb of the southern part of the mining right area. The roof comprises approximately 0.5m of thick sandy micaceous shale at Mine 2 that thickens up to approximately 1.6m in Mine 3. The seam consists of mixed coal and torbanitic material with an average thickness of 1.5m. Economic S4 exists in the Mine 1, Mine 2 and southern Reserve areas and, to a limited extent, in the Mine 3 area. At Mine 3, the seam splits into two thin, poor-quality horizons towards the west and is thus excluded from the mineable Reserves. The best quality S4 is located at Mine 1 and at the eastern edges of Mine 2. The seam is composed of dull lustrous coal interspersed with bright coal bands. In-seam partings typically consist of discontinuous lenses of shales and siltstones less than 0.1m thick, but these may thicken locally to 0.3m. Carbonaceous limestone lenses are also prevalent within the central portion of the Mine 2 area. The S2 at Matla is well developed in the north-western part of the mining area in the Mine 2 and Mine 3 Resource areas. It thins out to the south, where the thickness averages between 1.2m and 2.5m. Much of the coal in this area is mined as a low seam. The S2 between Mine 1 and Mine 2 has been burned by a prominent dolerite sill and is thus unmineable. S2 in the Mine 1 area is generally poor in quality and discontinuous due to sill activity. As such, it is not mined in this area.	
Depositional control	The coal was deposited on glacial sediments of Dwyka tillite, which in turn was deposited over a granitic basement. The Matla mining area is characterised by two distinct dolerite types – the B8 (porphyritic) and B4 (olive-rich) types – which have varying effects on seam displacements and coal burning and devolatilisation. A dolerite sill with an average thickness of 10m is generally found above S5 in Mines 2 and 3. However, the sill intersects the coal seams and underlies S2 in Mine 1 and S4 on the south-western part of the Reserves. This sill has burned and devolatilised S2 on the southern part of the mining area in Mine 1. Floor rolls have been encountered in S2 workings, creating challenges in isolated mining areas. The floor rolls strike north-east-south-west, vary in width between 50m and 200m and have amplitudes of up to 1.5m. The floor rolls are more prominent if the seam floor is close to the basement contact. Sandstone lenses encountered are generally less than 0.5m in width but can reach up to 1.5m in	
Resources and Reserves	Coal Resources and Coal Reserves occur within the domains of Mines 1, 2 and 3. The Coal Reserves align with the existing LoMP. The reporting of LoM is restricted to the mineral right lapse date, although there are Coal Reserves well beyond this date.	
Mining method	Matla comprises three underground production facilities: Mine 1, Mine 2 and Mine 3. All three are long-life assets, each with a specific operating capacity comprising conventional coal circuits to produce bituminous coal. Production at Mine 1 was stopped in 2015 due to pillar instability and regained access to coal in 2024. Matla uses bord-and-pillar methods to mine S2 and S4.	
Beneficiation	None of the coal mined at Matla is beneficiated, but it is crushed and screened (sized) before being conveyed to the power station.	
Product	Matla mine produces thermal coal exclusively for Eskom.	
Market	Captive market: Eskom.	
Mining right	Matla has an approved mining right that covers some 23 494ha.	
Environmental approvals	The waste management licence and WUL have expired, and renewal applications have been submitted. Discussions and close cooperation with the Department of Water and Sanitation (DWS) are ongoing.	

Matla overview

Figure 6: Matla mine

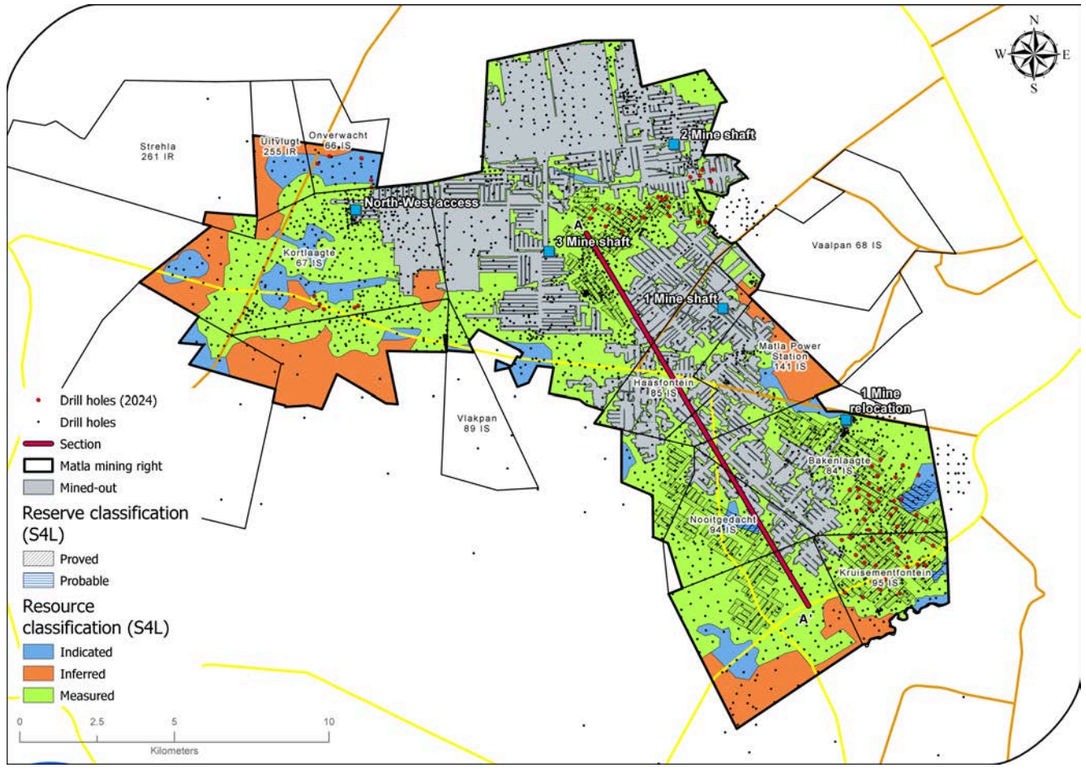


Figure 7: Matla northwest-southeast cross-section

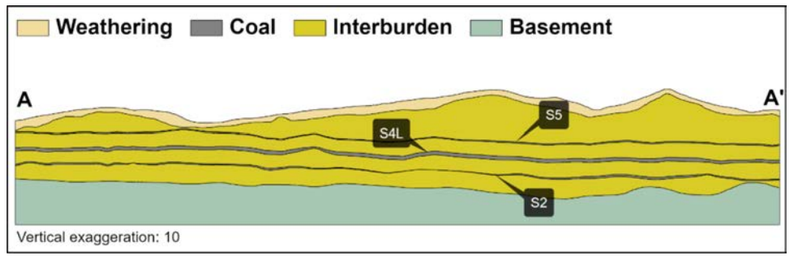


Table 32: Matla overview continued

Topic	Information
Projects/feasibility studies	The geological model was updated with new drill hole information in 2024, resulting in an updated mine planning model. Reviews conducted during 2024, along with the updated LoM project timelines impacting the mine schedule, have resulted in an updated LoMP for Matla. A review of minimum quality cut-offs has impacted the LoM, where coal below 18Mj/kg as received (AR) has been removed from mining areas to ensure a higher quality, more consistent supply of coal to the customer, in line with market requirements. The stooping strategy remained unchanged, prioritising stooping and land purchase requirements according to the LoMP. Three major LoM projects exist at Matla, namely the Matla Mine 1 relocation project (MM1R), the north-west access decline project which will access S2 from the existing S4 Reserves at Mine 3, and the north-west access incline project which will access S4 from the existing S2 Reserves at Mine 2. Washability test work is underway to understand the beneficiation characteristics of the future mining areas at Matla and to identify any potential opportunities for upgrading Coal Reserves. For the Matla Mine 1 project, the remaining work entails conveyor belt structures and plant facilities for the coal transport from the mine to the existing Matla plant. Production from MM1R is expected in 2026. However, an early value strategy aims to start coal production from Mine 1 in 2025. Access to the coal seam was achieved in November 2024, and initiatives to truck the coal to the stockyard are in progress. Trucking to the stockyard will continue until commissioning of the overland conveyor and associated infrastructure is complete. At the Mine 2 incline project, runarounds on the S4 coal were completed by February 2024, and production is using a temporary conveyor belt system. Final civil works and conveyor infrastructure are in progress, with the project expected to be completed by 2025. A total of 484 000 tonnes have been mined on S4 at Mine 2 to date. At the Mine 3 decline project, drop raises were completed in November 2024, and coal runarounds are in progress. Outstanding tasks include the construction of a permanent conveyor belt and the associated civil structures. Mining will commence in 2025. Due to a requirement by the Eskom-owned Matla power station to review and potentially increase the quality specification of coal used for electricity generation, various coal quality improvement studies were initiated in 2023. The option to beneficiate the coal requires additional exploration drill hole sample washability data, which has been scoped, and drilling commenced in 2024. The drilling to obtain the relevant data will run over two to three years. The information will be critical in evaluating the washability characteristics which will be used as the basis for quality improvement studies. Data obtained from more than 80 boreholes in 2024 will be used to update the washability model in Q2 2025 to allow for internal reviews of the washability characteristics of future mining areas.

Resource estimation

Table 33: Resource estimation methodology and reporting

Process	Information
Drilling, logging and sampling	Surface vertical, surface inclined and underground horizontal drilling methods are employed at Matla. Only the vertical surface drill holes are used for Resource modelling. All drill holes are geologically logged on a detailed log sheet, with the content dictated by the Exxaro logging procedure. Logging is conducted by recording lithology down to 1cm detail on logging sheets, according to the classification of the lithology. Once all core and sample markings are in place, the core is photographed at 1m intervals. Once correlated, sample intervals are defined based on lithological contacts and logical boundaries along the drill hole, across the named intervals or seams. If the entire unit is homogenous, samples are then collected at 1.5m intervals. All samples are placed into plastic sample bags and a sample tag is placed inside the bag with a duplicate attached to a cable tie on the bag's exterior. The sample tags are used to identify the samples according to a sampling convention, which is recorded in the log sheet and geological database to allow the laboratory results to be assigned to the correct interval in each specific drill hole.
Laboratory and accreditation	SGS South Africa, SANAS T0561 as well as Siza coal laboratory, SANAS T0447
Laboratory dispatch and receiving process	All samples are allocated unique alphanumeric IDs corresponding to the associated drill hole ID, seam sampled and number of the individual sample. These samples are collected, bagged and registered in a sample sheet which is also used as a dispatch sheet. All exploration samples are weighed on site prior to dispatch and recorded at the mine. The laboratory reports the weight of each individual sample and these results are compared to the mine weights to validate that the correct samples were conveyed properly and safely to the laboratory. The receiving laboratory personnel sign the dispatch sheet after ensuring that the number and sample ID on the dispatch sheet match the samples to be analysed. The analyses required are also clearly explained in the sample dispatch sheet. All sample results are validated following a standard procedure including visual, logical and mathematical verification before acceptance and capture into the mine's database.
Laboratory QAQC	As part of the procurement process, Matla conducted QAQC on the various laboratories.
Data datum	Cape datum – LO29
Drill hole database	acQuire
Number of drill holes in mining right	2 784
Number of drill holes used for Resource estimation	S2 – 1 926 S4 – 2 492
Number of drill holes used for classification	S2 – 1 926 S4 – 2 492
Data compositing and weighting	Data compositing is conducted per seam using a weighted value from individual samples that make up the seam, along with each sample's relative density and length. This is conducted in GEOVIA Minex™.
Data validation	Conducted using queries in acQuire, Minex™ and Excel.
Geological modelling software	GEOVIA Minex™
Estimation technique	Growth algorithm
Previous model date	2023
Last model update	2024
Grid mesh size	25m x 25m
Scan distance	2 000m
Data boundary	200m
Model build limits	Upper: limit of weathering and topography/collar Lower: basement/Dwyka
Model outputs	Roof, floor and thickness grids generated for seam structure. Raw quality grids.
Changes to modelling process	None
Thickness cut-off and extraction height considerations	≤1.8m
Quality cut-offs (adb)	DAFV ≤ 26%, CV ≤15MJ/kg and ash ≥50%
Geological loss applied	10% (may vary, considering RODA)

Table 34: Resource classification criteria

Category	Type of drill holes	Drill hole spacing	Structurally complex areas	Drill holes/ha
Measured	Cored drill holes with applicable coal qualities	0m to 350m	Infill drilling is conducted where basement highs and or seam structure create uncertainty around continuity.	S2 – 0.14 S4 – 0.13
Indicated	Cored drill holes with applicable coal qualities	350m to 500m	Infill drilling is conducted where basement highs and or seam structure create uncertainty around continuity.	S2 – 0.04 S4 – 0.05
Inferred	Cored drill holes with applicable coal qualities	500m to 1 000m	Infill drilling is conducted where basement highs and or seam structure create uncertainty around continuity.	S2 – 0.02 S4 – 0.02

Table 35: RPEEE considerations

Item	Criteria	Criteria met	Comment
Geological data	Data has been validated and signed off by Competent Person.	Yes	Seam depth ≤40m, seam thickness ≤1.8m, dry ash free volatiles ≤26%, CV≤15MJ/kg and ash ≥50%, with coal qualities reported on an adb.
Geological model	Geological model has been considered and signed off.	Yes	2024
Structural model	Structural model was considered and signed off.	Yes	2023
Mining	Mining assumptions considered and defined.	Yes	Underground
Assurance	Exxaro internal audits and an external audit.	Yes	An internal review was conducted in 2023, with an independent process audit by PwC in 2024.
Economic evaluation	Exploitation study with economic and mining assumptions, including geotechnical and geohydrological assumptions.	Yes	LoM schedule revised to align with project dates and quality specifications.
Environmental	Reasonable demonstration that environmental approvals can be obtained within the context of local, regional and national governmental legislation.	Yes	Current required approvals are in place. An application for stooping was submitted and there is a reasonable expectation that the approval will not be withheld. Surface acquisitions for future stooping can be achieved based on the current acquisition strategy.
Tenure	Formal tenure must reasonably demonstrate that a mining right approval can be obtained within the context of local, regional and national governmental legislation.	Yes	The mining right expires in 2025. An application to renew was submitted, and there is reasonable expectation that it will be approved, with no impediments noted.
Infrastructure	Assumptions used should be reasonable and within known or assumed tolerances or have examples of precedence.	Yes	Current infrastructure.
Market	A potential market for the product with a reasonable assumption that this market is sustainable.	Yes	An ISA is in place until March 2025, and the extension period and terms are under negotiation. All considerations remain. Exxaro has reasonable expectation that the CSA will be renewed.

Reserve estimation

Table 36: Reserve estimation

Topic	Information
Software	Underground Coal Solution (UGCS)
Reserving process	Scheduling of the Coal Reserve is determined using mine scheduling applications from UGCS. The geological 3D model used for the Coal Reserve estimation is referred to as the Reserve 3D model. The Coal Resource model uses the full coal seam while the Reserve model only defines a select mining height. The process ensures that the model represents reality regarding the technical capability of current production equipment. Resources are converted to Reserves where the Resource confidence, continuity and other factors (including economic, environmental, safety and social aspects) allow for the reasonable expectation of successful extraction. Reserves are converted using modifying factors which account for layout design and associated losses. The Reserves stated are subject to verification according to an approved fact pack which sets out the standards and considerations for all reserving and scheduling processes. This document is reviewed annually and vetted by all relevant stakeholders.
Conversion classification	At Matla, Indicated Resources are generally converted to Probable Reserves and Measured Resources to Proved Reserves, except when any modifying factors have not been (partly) fulfilled; where the Resource is either not converted or downgraded to the Probable Reserve category, clearly stating the outstanding requirement and risk. Inferred Resources are not converted to Coal Reserves.
Inferred Resources inside LoM	Some 3Mt of Inferred Resources are included in the LoMP, representing 2.3% of the LoMP, and are not considered material.
	Modifying factors
Average thickness cut-off	≤1.8m, low seam ≤2.1m, high seam ≤3.6m and ≥4.8m.
Quality cut-offs	DAFV ≤26% and 18.0Mj/kg AR CV are used as a boundary for exclusion zones for the mine plan, unless required for development.
Mining loss	Already included in the model, based on specific geological conditions and mining restrictions.
Depth to roof	40m unless rock strength allows otherwise.
Safety factor	Main development >2.1, secondary panels >1.8 and tertiary panels >1.6.
Bord width	<7.5m
Barrier pillar	Main development 19m, secondary and tertiary panels 17m.
Pillar centres	Main development 24m, secondary panels 20m and tertiary panels 19m.
Boundary pillar	Main development 24m, secondary and tertiary panels 17m.
Mining height	Low seam ≤2.1m, high seam ≤3.6m and ≥4.8m.
Extraction factor	Low seam 58%, S2 48% and S4 50%.
Dilution	Already included in the model.
Contamination	Low seam 2.1m plus 10cm roof cut. Other seams 7cm roof cut.
Practical plant yield	N/A
Strip ratio cut-off	N/A
Environmentally sensitive areas	Areas underlying wetlands and other eco-sensitive areas are excluded from Reserves. A higher safety factor is used underneath rivers and surface structures.
Legal	Reserves are downgraded from Proved to Probable where surface ownership is pending for stooping.
Social	Applicable communities considered.
Geohydrological	Applicable surface and groundwater models considered.

Table 37: Matla Coal Resources and Coal Reserves statement

Category	2024 (Mt)	2023 (Mt)	Difference in tonnes (Mt)	Difference (%)	Reason for change
Measured	**625**	634	(9)	(1)	Mining depletion (-10Mt) and sterilisation of Resources between mined out pillars (-5Mt) were slightly offset by increased Resource confidence (6Mt).
Indicated	**91**	92	(1)	(1)	The decrease is mainly due to the model update (-1Mt).
Inferred	**76**	85	(9)	(10)	The decrease is the result of new information (-6Mt) upgrading Inferred to Measured, and better defined thin and burned seam (-3Mt).
Total Coal Resources	**792**	810	(18)	(2)	
Proved	**101**	126	(25)	(20)	The decrease is the result of mining depletion (-6Mt) and the decision to adjust the Coal Reserve quality cut-off to 18Mj/kg (AR), thereby removing some lower coal quality mining blocks within the LoM (-19Mt).
Probable	**30**	31	(1)	(3)	The decrease is the result of new information (-1Mt).
Total Coal Reserves	**131**	157	(26)	(17)	

- *Rounding of figures may cause computational discrepancies*
- *Tonnages quoted in metric tonnes and million tonnes (Mt). Coal Resources quoted as MTIS*

Exploration summary

Table 38 outlines the exploration for the reporting year. For detailed expenditure, please refer to Table 64.

Table 38: Matla exploration summary

Objectives	Progress in reporting year	Plans for next reporting year
Washability characteristics in support of the beneficiation study **Delineate structures and increase confidence in critical areas** **Short-term Resource definition for ad hoc mining due to project delays in 2024**	Drilled all planned holes. Ability to increase model confidence in Mine 1 S4 and Mine 2 S4 mining areas for washability modelling in 2025. Identification of coal continuity, thinning and undulations. Ongoing support in mining areas.	Continue with washability study drilling at Mine 1 and drilling for main development confidence at Mine 3 areas ahead of the five-year mining window.

Risks

Other than the risks listed below, there are no known environmental, social, political and governance risks that could potentially impact the exploitation of the Coal Reserves.

Table 39: Matla risks

Risk	Description	Mitigation
Pit room constraints	Pit room constraints due to project delays place a high risk on qualities as lower-quality areas are more prevalent.	Qualities are known and understood and are incorporated into the schedule. Sections of low quality will be phased out in 2025, with a transition to the project mining areas.
Geological structures	High-risk geological structures impact mining due to ground stability and the need to develop through these structures to access mineable Reserves. Structures include dolerite sills and dykes, faults and jointed ground within known shear zones.	Structure delineation is conducted through surface directional and underground horizontal drilling, targeting structures defined using geophysical interpretation. The resultant structural data informs the mine plan layout, orientation, roof and sidewall support during excavation.
Eskom purchasing of surface farms to commence with stooping	Stooping is a total extraction mining method that will impact the surface farmland. Ownership of the farms where stooping is planned is required.	Eskom to purchase surface ownership of a list of farms as per the CSA. Stooping ground below private land is reported as Probable Reserves.
Environmental authorisation for stooping	The environmental management plan for total extraction during stooping can commence when land ownership has been secured.	The application process for environmental approvals for all farms will be initiated. However, farm purchasing must be completed to allow for all approvals and undermining for total extraction. A list of critical farms has been established.
Economic	The Eskom CSA expired in March 2024 and has been extended until March 2025. The terms for the long-term extension are under negotiation between Exxaro and Eskom. This risk carries implications for both the contract extension for the mine as well as the potential changes in product quality specifications, which could impact on the current LoM assumptions.	There is reasonable expectation for the renewal of this contract. Ongoing projects for LoM expansion are in progress along with constant communication on the contractual way forward post-March 2025.
Tenure	Mining right expires in 2025.	The updated mine works programme is complete, and the document was submitted in Q4 2024 in line with the director general's requirements. There is a reasonable expectation that the renewal will be granted.

Operational excellence

Continuous on-mine exploration ensures mining confidence and continuation in existing mining areas during the final phase of project construction, preventing any delays during transitions between current mining areas to project areas.

There is an opportunity to improve coal qualities by washing select seams to remove in-seam parting material from mined coal seams. Washability test work is being conducted on 2024 drilling campaign samples which will be modelled and simulated in 2025, where preliminary results will be evaluated.

7.4 Grootegeluk

Table 40: Grootegeluk overview

Topic	Information	
Location	25km west of the town of Lephalale in Limpopo, South Africa	
History	**Previous ownership**	**Material notes**
1960s to 1980	Yskor – Iscor – Iscor mining – Kumba	Exploration drilling (~200 drill holes)
1980 to 2020	Kumba – Kumba coal – Exxaro Resources	The mine was commissioned in 1980 and has been in operation for approximately 43 years. There is continuous exploration drilling to increase Resource confidence and aid structural delineation and OVB classification (~1 480 drill holes).
2021 to 2023	Exxaro Resources	Pit layout shifted in 2021 according to the latest wings exploitation strategy. The GG 6 plant was commissioned in 2022. We completed 149 exploration drill holes.
2024	Exxaro Resources	Infill drilling (34 drill holes)
Adjacent properties	The Thabametsi resource, an Exxaro mining right, adjacent to the western boundary of the operation.	
Infrastructure	Grootegeluk can be reached from Lephalale via the hard-topped Nelson Mandela Drive which is linked to the R510 road connecting Lephalale to the town of Vaalwater to the south, and the Stockpoort border post between South Africa and Botswana to the north. Power supply to the mine is obtained directly from Matimba power station via two 132kV lines that supply the mine's three 840MVA transformers. Raw water is delivered to the mine and to a water treatment plant on the farm in Zeeland by the 700mm diameter Hans Strijdom pipeline. The pipeline originates at the Mokolo Dam. Potable water from the Zeeland water treatment plant is in turn routed to the mine and local communities.	
Coalfield	Grootegeluk is located in the Waterberg coalfield and the coal seams are from the Volksrust and Vryheid formations.	
Main seams	The upper part of the coal deposit – the Volksrust Formation (approximately 60m thick) – is classified as a thick interbedded seam deposit type, comprising intercalated mudstone or carbonaceous shale and bright coal layers. The Vryheid Formation, approximately 55m thick, forms the lower part of the coal deposit and comprises carbonaceous shale and sandstone, with interbedded dull coal seams varying in thickness from 1.5m to 9m. It is therefore classified as a multiple-seam coal deposit type.	
Seam development	These coal seams are subdivided into 11 coal zones, further divided into separate coal and non-coal samples for analysis. A total of 77 samples are analysed per full succession drill hole. The Volksrust Formation consists of 30 coal samples and 30 non-coal samples whereas the Vryheid Formation consists of 13 coal samples and four non-coal samples.	
Depositional control	The Zoetfontein fault forms the boundary of the Waterberg coalfield in the north, and the Eenzaamheid fault forms the boundary in the south. The Daarby fault, with a throw of some 350m, divides the coalfield into a deep north-eastern portion and a shallow south-western portion. On average, the first fresh coal in the shallow south-western portion is 20m below surface. The lowermost coal seam (Zone 1) occurs at a depth of about 130m in the shallow portion of the coalfield, but this may vary depending on the local structure. The predominantly horizontal coal-bearing formations have a very gentle dip to the south-east near Grootegeluk. Only a few dolerite dykes outcrop in the south-eastern portion of the Waterberg coalfield, and no sills have been encountered in any exploration drill holes drilled in the mining right area to date.	
Resources and Reserves	The Resource extent is restricted by the depositional controls discussed above. The Reserves are restricted within the Resource blocks. The reporting of LoM is limited to the lapse of the mining right, although Coal Reserves exist well beyond this date. A small area of Coal Resources is located within the adjacent Thabametsi mining right included in the Grootegeluk LoM (Figure 8) due to practical pit design considerations. Exxaro owns both rights.	
Mining method	Grootegeluk comprises one open-pit mine with three OVB benches, 10 RoM benches and four interburden benches. A series of parallel benches is advanced progressively across the deposit via drilling, blasting, loading and hauling with truck-and-shovel fleets. RoM is transported to the Grootegeluk beneficiation complex via haul trucks and in-pit crushing and conveying systems.	
Beneficiation	Grootegeluk uses six processing plants to beneficiate coal. This includes four DMS beneficiation plants and two crushing and screening plants.	
Product	Various sized metallurgical coal products at 15% ash and 11.25% ash, semi-soft coking coal at 10.3% ash and thermal coal at 33.2% ash are railed to various customers and shipped to international customers via an export harbour. A small portion of the total product is sold on site to smaller customers and dispatched by road.	
Market	Grootegeluk supplies domestic and export markets.	
Mining right	Grootegeluk has an approved mining right that covers some 8 703.35ha.	
Environmental approvals	All environmental appeals have been favourably addressed for the declared Reserves.	
Projects/feasibility studies	There are no ongoing feasibility studies directly linked to Resources and Reserves or changes in the LoMP. However, a study is being conducted on the efficient and effective management of the Grootegeluk trucks and shovels. Grootegeluk mine is a mature operation that is in steady-state production. The installed capacity is sufficient to meet current and foreseeable demand. Despite this, optimising the use of this installed capacity is a continuous process that is assessed and adjusted as required.	

Grootegeluk overview

Figure 8: Grootegeluk mine

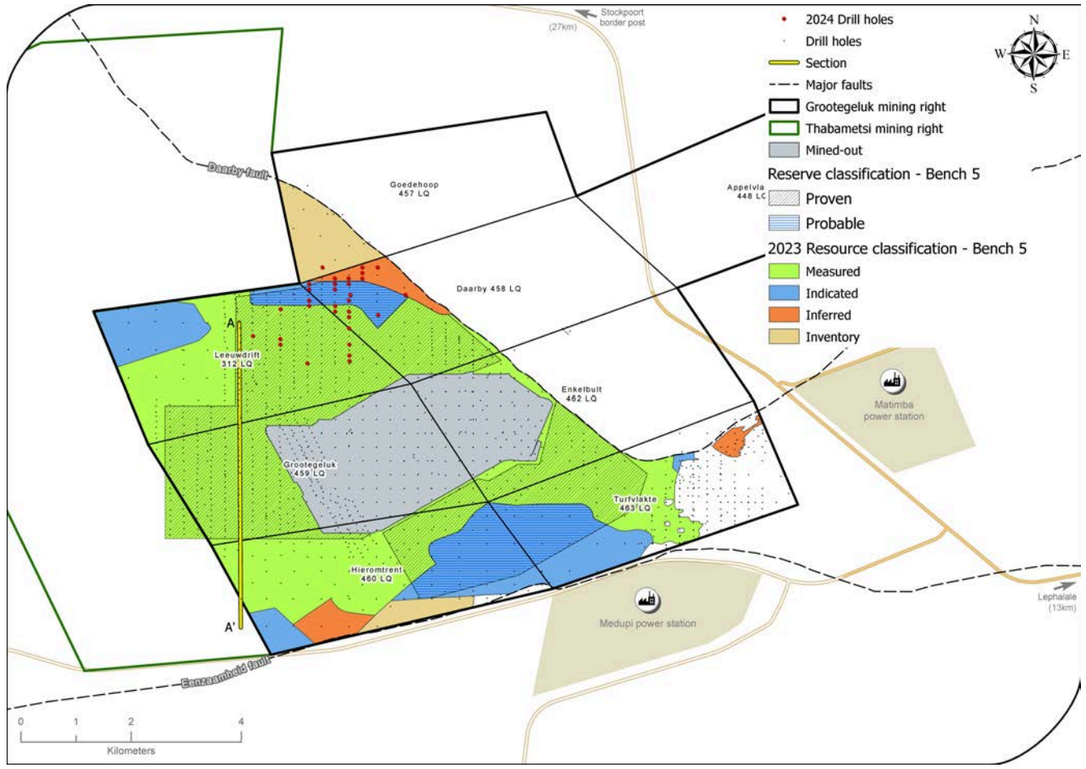
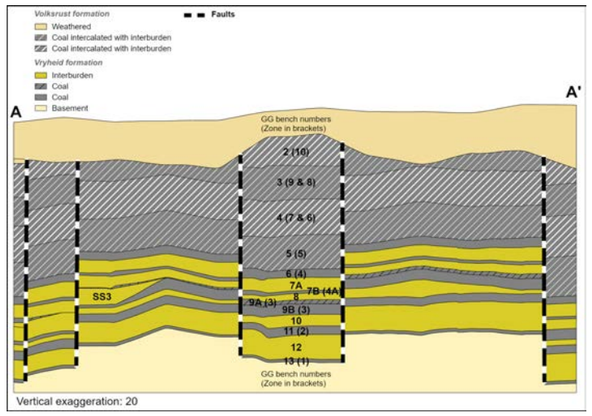


Figure 9: Grootegeluk north-south cross-section



Resource estimation

Table 41: Resource estimation methodology and reporting

Process	Information
Drilling, logging and sampling	To have sufficient material available from each sample for the required suite of analyses at relative densities of 2.20g/m^3, large-diameter (123mm diameter) rotary core drill holes are used. These drill holes are drilled in between the existing 500m x 500m grid of small-diameter drill holes. This placement ensures that the analysis of samples from the large-diameter drill holes is used to supplement the analysis of existing small-diameter drill holes where samples and density fractions are absent. Sampling of drill holes is only conducted after the stratigraphy has been correlated. The geologist in charge supervises all drill hole drilling and is responsible for logging and sampling.
Laboratory and accreditation	Bureau Veritas, SANAS T0469.
Laboratory dispatch and receiving process	Each sample submitted to the laboratory is accompanied by a unique sample number for validation and tracking, with a submission list that serves as a sample advice sheet with instructions for analysis.
Laboratory QAQC	Audits are performed internally and externally as part of the QAQC. Bureau Veritas is accredited for analytical work and participates in monthly local and international round robins.
Data datum	WGS84 – LO27
Drill hole database	acQuire
Number of drill holes in mining right	1 685 (including Thabametsi mining right area)
Number of drill holes used for Resource estimation	1 341
Number of drill holes used for classification	581
Data compositing and weighting	Data compositing is conducted per seam using a weighted value from individual samples that make up the seam, along with each sample's relative density and length. This is conducted in acQuire.
Data validation	Conducted using queries in acQuire, Minex™ and Excel
Geological modelling software	GEOVIA Minex™
Estimation technique	Growth algorithm
Previous model date	2020
Last model update	2022
Grid mesh size	20m x 20m
Scan distance	1 000m
Data boundary	100m
Model build limits	Upper: limit of weathering and topography/collar Lower: Zone 1 floor The model extent is limited by the Daarby and Eenzaamheid faults
Model outputs	Roof, floor and thickness grids generated for structure Raw and wash quality grids
Changes to modelling process	None
Thickness cut-off and extraction height considerations	Opencast ≤0.5m
Quality cut-offs (adb)	≥65% ash Volksrust Formation coal, ≥50% ash Vryheid Formation coal
Geological loss applied	Variable per bench, calculated each year considering geological model estimation error and physical geological loss. 0.5% to 0.75% for Proved Reserves, 1% to 1.5% for Probable Reserves.

Table 42: Resource classification criteria

Category	Type of drill holes	Drill hole spacing	Structurally complex areas	Drill holes/ha
Measured	Cored drill holes with applicable coal qualities	0m to 500m	(Matrix) Additional geophysically logged drill holes needed	0.10
Indicated	Cored drill holes with applicable coal qualities	500m to 1 000m	(Matrix) Additional geophysically logged drill holes needed	0.05
Inferred	Cored drill holes with applicable coal qualities	1 000m to 3 000m	(Matrix) Additional geophysically logged drill holes needed	0.02

Table 43: RPEEE considerations

Item	Criteria	Criteria met	Comment
Geological data	Data has been validated and signed off by Competent Person.	Yes	Geological structures, seam thickness ≤0.5m, ash content ≥65% ash Volksrust Formation coal and ≥50% ash Vryheid Formation coal. Coal qualities reported on an adb.
Geological model	Geological model has been considered and signed off.	Yes	2022
Structural model	Structural model was considered and signed off.	Yes	2022
Mining	Mining assumptions were considered and defined.	Yes	Opencast
Assurance	Exxaro internal audits and an external audit were conducted.	Yes	An internal review on Resource processes and LoM was conducted in 2022, while an independent process audit was conducted by PwC in 2023.
Economic evaluation	Conducted an exploitation study with economic and mining assumptions, including geotechnical and geohydrological assumptions.	Yes	Exploitation strategy over mining right.
Environmental	Reasonable demonstration that environmental approvals can be obtained within the context of local, regional and national governmental legislation.	Yes	All applicable approvals are in place.
Tenure	Formal tenure must reasonably demonstrate that a mining right approval can be obtained within the context of local, regional and national governmental legislation.	Yes	The mining right, with no impediments, is valid until 2041, and there is a reasonable expectation that it will be renewed.
Infrastructure	Assumptions used should be reasonable and within known or assumed tolerances or have examples of precedence.	Yes	Existing infrastructure is adequate and can be upgraded, with new required infrastructure under construction.
Market	A potential market for the product with a reasonable assumption that this market is sustainable.	Yes	Current CSAs for domestic and export markets.

Reserve estimation

Table 44: Reserve estimation

Topic	Information
Software	OCCS
Reserving process	Production scenarios are defined by scrutinising different market demand scenarios for product sales and evaluating estimated future installed production capacity. Ultimately, care is taken to select the most probable scenario to be scheduled as the LoMP. Once the RoM and product schedule are completed, OVB and interburden scheduling is altered to obtain a "smoothed" year-on-year ex-pit profile to prevent erratic mining equipment requirements. The pit shell is designed from an economic and product quality perspective to ensure the operation's longevity.
Conversion classification	Indicated Resources are generally converted to Probable Reserves and Measured Resources to Proved Reserves after consideration of all applicable modifying factors. If one or more of the modifying factors have not been fulfilled, Measured Resources are either not converted or are converted but downgraded to Probable, and the associated risk is clearly stated. Inferred Resources are not converted to Coal Reserves.
Inferred Resources inside LoM	Some 73Mt of Inferred Resources are included in the LoMP, representing 3.0% of the LoMP, and are not considered material. The impact of the Inferred Resources is known, with the majority occurring at the tail end of the LoMP and addressed by an integrated exploration plan that is reviewed every year.
	Modifying factors
Average thickness cut-off	≤0.5m
Quality cut-offs	≥65% ash content (raw in situ)
Mining loss	No loss applied as all mining boundaries are reached, and no pillars are left.
Boundary pillar	N/A
Dilution	Applied to in situ mineable Reserves due to the interlayered composition of the deposit.
Contamination	Varies per bench: 0 to 0.75m applied to interburden seams.

Table 44: Reserve estimation continued

Topic	Information
Mining recovery efficiency	Varies per bench: 0 to 0.75m depending on bench height.
Planned average slope angles	<61.7 degrees
Practical plant yield	Considered in the reserving process as per the wash table information for each combination of blocks per planning increment and the empirically determined practical yield adjustment factor.
Strip ratio cut-off	Energy strip ratio >7GJ/ex-pit tonne. It is kept at an average of 0.74t/t for the next five years as per FC9+3 2023.
Environmentally sensitive areas	Areas underlying wetlands and other eco-sensitive areas are excluded from the Reserves; distance as per environmental requirements.
Legal	The layout is within the mining right boundary and not closer than 15m.
Social	The pit layout has no known socially sensitive areas (for example, graveyards and dwellings).
Geohydrological	Areas identified are flagged and excluded or reclassified in the reserving process.

Table 45: Grootegeluk Coal Resources and Coal Reserves statement

Category	2024 (Mt)	2023 (Mt)	Difference in tonnes (Mt)	Difference (%)	Reason for change
Measured	2 922	2 978	(56)	(2)	The decrease is due to depletion (-56Mt) and sterilisation of bench 13 (-1Mt). This was slightly offset by reconciliation (~1Mt).
Indicated	967	967	—	—	
Inferred	178	178	—	—	
Total Coal Resources	**4 067**	**4 123**	(56)	(1)	
Proved	1 919	1 971	(52)	(3)	The decrease is due to depletion (-55Mt), and this was slightly offset by reconciliation and coal gains (~4Mt).
Probable	550	550	—	—	
Total Coal Reserves	**2 469**	**2 521**	(52)	(2)	

- *Rounding of figures may cause computational discrepancies*
- *Tonnages quoted in metric tonnes and million tonnes (Mt). Coal Resources quoted as MTIS*

Exploration summary

Table 46 outlines the exploration for the reporting year. For detailed expenditure, please refer to Table 64.

Table 46: Exploration summary

Objective	Progress in reporting year	Plans for the next reporting year
Geological and geotechnical OVB material characterisation, geotechnical characterisation of the coal benches, delineation of structures and Resource classification	23 percussion holes drilled for OVB material classification and to aid fault delineation in structurally complex areas. Three rotary core triple-tube drill holes drilled for geotechnical characterisation of the coal benches. Eight deep rotary core drill holes drilled to obtain samples for quality analysis and to aid in Resource classification.	Seven rotary core drill holes for Resource estimation and classification. 23 percussion drill holes for OVB classification and structural delineation. Three rotary core drill holes for geotechnical characterisation of the coal benches.

Risks

Other than the risks listed below, there are no known environmental, social, political and governance risks that could potentially impact the exploitation of the Coal Reserves.

Table 47: Grootegeluk risks

Risk	Description	Mitigation
Economic	In recent years, logistical constraints caused by a shortage in the supply of trains from TFR have hampered the delivery of higher-value products from the mine. In addition, like any commodity, coal is subject to price fluctuation, which can have varying impacts on profitability.	The mine's primary product is power station coal for which long-term supply agreements are in place with Eskom. Exxaro constantly monitors prevailing market conditions to ensure an optimal product mix that supports sustainability. Additionally, TFR's performance has improved.
Increase in sulphur content	An increase in the sulphur content of benches used to produce semi-soft coking coal (SSCC) and on the benches used for dry crush and screen power station coal production.	Blending the SSCC-producing benches and dry crush and screen benches is still the best solution for this risk. The GG 7 plant has the capacity to wash the coarse fraction where pyritic sulphur deports.
Faulting	The structure interpretation (fault position) in the geological model is based on drill hole information that is widespread in the Inferred category.	Additional percussion boreholes are drilled in structurally complex areas after they are covered by the normal cored exploration drill hole grid to finalise the position and characteristics of the faults, by geophysical logging of the drill holes. These additional drill holes assist in better understanding the potential impacts of the structures on operations to derive mitigating exploitation strategies. The implementation of the new zone geological model will assist in mining flexibility in handling geological structure complexity.

Operational excellence

New geological zones model developed in 2024

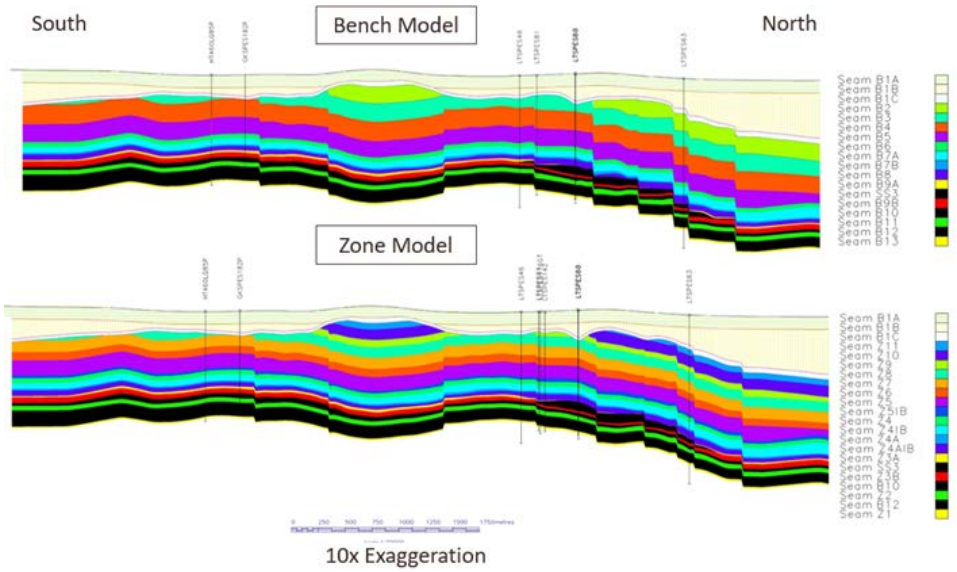
One of the key responsibilities of the geology department in any mining operation is accurately representing the Mineral Resource through a geological model. Geological models form the basis for Resource classification, estimation, and subsequent Resource and Reserve reporting.

Grootegeluk, a mature operation, has traditionally used a bench-based geological model for this purpose. Throughout its operational history, the Grootegeluk "long-term bench model" has consistently proven its efficiency and accuracy. However, its alignment to the current mining practice is limiting. As the impacts of structural complexity become more evident at the operation, the geological model must be adapted to evaluate multiple exploitation scenarios, ensuring optimal Reserve scheduling and extraction in the long term. Moreover, the benefits of developing a more detailed geological model, on a smaller scale, have long been recognised at Grootegeluk. Implementing the sample-based short-term geological model has proven vital in addressing the short-term operational challenges presented by the increased impact of geological structures on the Resource.

In 2024, a decision was made to develop a long-term geological model on a smaller scale. A model based on geological zones – which is comparable to a traditional coal seam model – was chosen as it was found to be the most appropriate for the operation's long-term needs.

After extensive internal evaluation, the "long-term zones model" was found to offer an ideal balance between:
- Greater geological detail, which allows for more flexibility in evaluating exploitation scenarios
- Simplicity of use in subsequent Resource and Reserve reporting and scheduling processes
- Better alignment with the geology as opposed to mining practices

These benefits are realised without compromising the accuracy of the Resource or Reserve estimates. The model is expected to be fully integrated into Grootegeluk's Resource and Reserve reporting and scheduling outputs by 2025. This new approach to modelling is expected to unlock opportunities to redefine mining benches, helping to resolve structural complexities while optimising coal qualities.



7.5 Thabametsi

Table 48: Thabametsi overview

Topic	Information	
Location	22km west of the town of Lephalale in Limpopo, South Africa	
History	**Previous ownership**	**Material notes**
1976 to 1988	Iscor – Iscor mining	Exploration drilling
1989 to 2006	Kumba	Exploration drilling
2007 to 2015	Exxaro Resources	Prospecting right and exploration activities
2016 to present	Exxaro Resources	Mining right registered in 2016, valid until 2046
Adjacent properties	Grootegeluk mine to the east	
Infrastructure	Thabametsi is adjacent to Grootegeluk and therefore uses the same infrastructure. It can be reached from Lephalale via the hard-topped Nelson Mandela Drive, which is linked to the R510 road connecting Lephalale to the town of Vaalwater to the south and the Stockpoort border post between South Africa and Botswana to the north. Power supply to Grootegeluk is obtained directly from the power station via two 132kV lines. Raw water is delivered to the mine and to a water treatment plant on the farm in Zeeland by the 700mm diameter Hans Strijdom pipeline. The pipeline originates at the Mokolo Dam in the Waterberg Mountain.	
Coalfield	Waterberg coalfield	
Main seams	The upper part of the coal deposit – the Volksrust Formation (approximately 60m thick) – is classified as a thick interbedded seam deposit type, comprising intercalated mudstone or carbonaceous shale and bright coal layers. The Vryheid Formation, approximately 55m thick, forms the lower part of the coal deposit and comprises carbonaceous shale and sandstone, with interbedded dull coal seams varying in thickness from 1.5m to 9m. It is therefore classified as a multiple-seam deposit type.	
Seam development	The geology is similar to Grootegeluk's, but practical mining practice requires a different bench configuration. In the north, the full succession of the Volksrust and Vryheid formations are present. However, further south, the Volksrust Formation thins out and eventually disappears. A pertinent channel sandstone in the northern portion of the project area affects benches 9A and 9B.	
Depositional control	The Zoetfontein fault forms the boundary of the Waterberg coalfield in the north while the Eenzaamheid fault forms the boundary in the south. The Daarby fault, with a throw of some 350m, divides the coalfield into a deep north-eastern portion and a shallow south-western portion. On average, the first fresh coal in the shallow south-western portion is 20m below surface. The lowermost coal seam (Zone 1) occurs at a depth of about 130m in the shallow portion of the coalfield, but this may vary depending on the local structure. The predominantly horizontal coal-bearing formations have a very gentle dip to the south-east near Grootegeluk. Only a few dolerite dykes outcrop in the south-eastern portion of the Waterberg coalfield, and no sills have been encountered in any exploration drill holes drilled in the mining right area to date.	
Resources and Reserves	The Resource extent is restricted by the depositional controls discussed above. The Reserves are restricted within the Resource blocks.	
Mining method	The project area is divided into a northern opencast portion and a southern underground area.	
Beneficiation	N/A	
Product	The northern portion aims to produce power station coal for an on-site IPP as part of phase 1.	
Market	Domestic	
Mining right	Thabametsi has an approved mining right that covers some 5 455ha.	
Environmental approvals	All environmental appeals have been favourably addressed for the declared Reserves.	
Projects/feasibility studies	A feasibility study on phase 1 was successfully concluded in 2016, and studies to extend this phase and the southern project area are ongoing. In October 2016, the South African Minister of Mineral Resources and Energy announced that the Thabametsi power project, for which the Thabametsi project has a 30-year CSA, had been selected as a preferred bidder in the first bid window of South Africa's coal-baseload IPP procurement programme. The project development agreement with our IPP project partner lapsed and we subsequently changed our reporting of Proved Reserves to the Probable category to address this uncertainty. Exxaro is ensuring that all compliance actions are executed.	

Thabametsi overview

Figure 10: Thabametsi resource

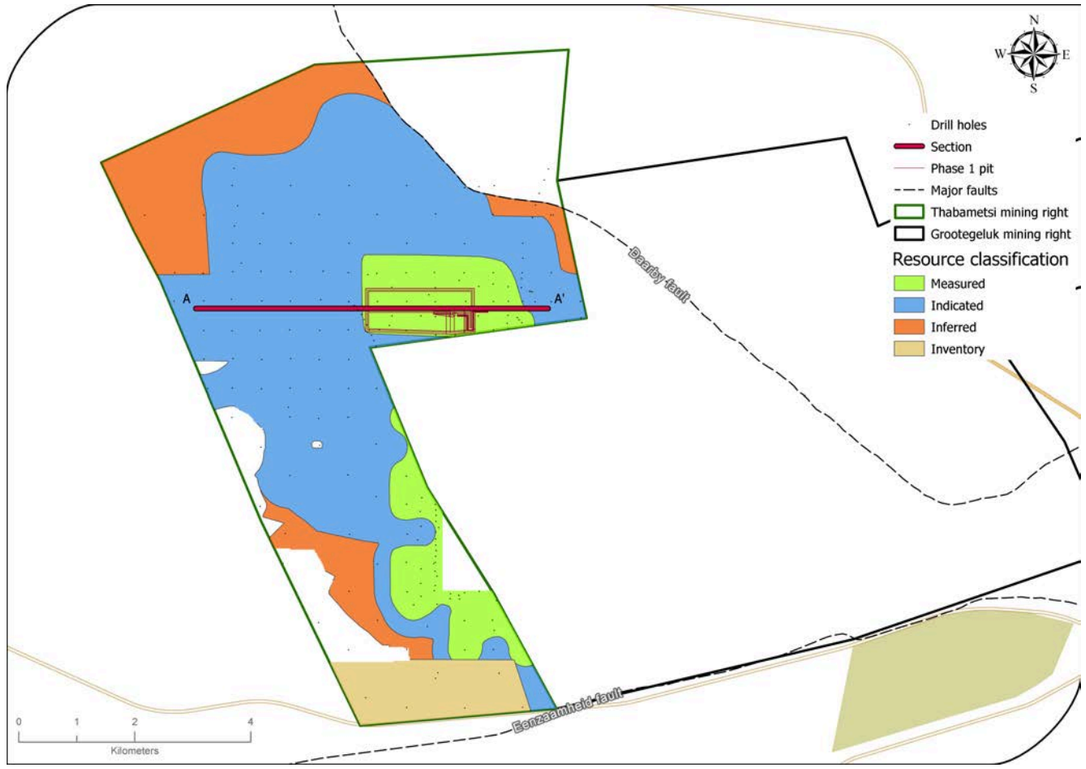
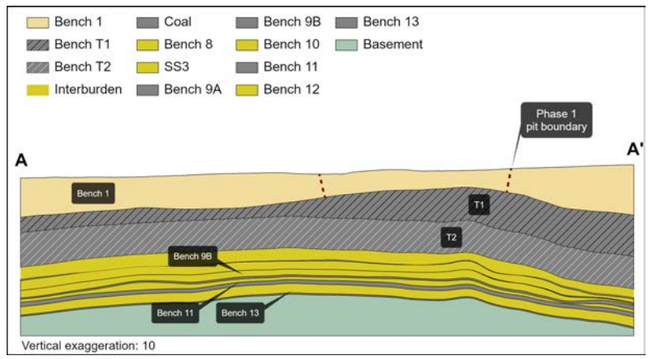


Figure 11: Thabametsi west-east cross-section



Resource estimation

Table 49: Resource estimation methodology and reporting

Process	Information
Drilling, logging and sampling	Logging and sampling follow the same protocols as at Grootegeluk mine.
Laboratory and accreditation	Bureau Veritas, SANAS T0469.
Laboratory dispatch and receiving process	Sampling of drill holes is only conducted after the stratigraphy has been correlated. The geologist in charge supervises all drill hole drilling and is responsible for logging and sampling. Each sample submitted to the laboratory is accompanied by a unique sample number for validation and tracking, and a submission list that serves as a sample advice sheet with instructions for analysis.
Laboratory QAQC	The laboratory follows one of four standard suites of analysis for each sample from Grootegeluk, namely Volksrust Formation coal, Volksrust Formation shale, Vryheid Formation coal and Vryheid Formation shale. Emphasis is placed on ensuring data integrity through rigorous procedures and supervision while processing. Audits are performed internally and externally as part of the assurance and control process. Bureau Veritas is accredited for analytical work and participates in monthly local and international round robins.
Data datum	WGS84 – LO27
Drill hole database	acQuire
Number of drill holes in mining right	218
Number of drill holes used for Resource estimation	116
Number of drill holes used for classification	116
Data compositing and weighting	Coal analysis and beneficiation module in Sable Data Works Proprietary Limited
Data validation	Conducted using queries in acQuire, Minex™ and Excel
Geological modelling software	GEOVIA Minex™
Estimation technique	Growth algorithm
Previous model date	2014
Last model update	2015
Grid mesh size	45m x 45m
Scan distance	1 000m
Data boundary	300m
Model build limits	Upper: limit of weathering and topography/collar Lower: Zone 1 floor
Model outputs	Roof, floor and thickness grids generated for structure Raw and wash quality grids
Changes to modelling process	None
Thickness cut-off and extraction height considerations	Opencast ≤0.5m
Quality cut-offs (adb)	Ash ≥65%
Geological loss applied	Variable per bench based on the adjacent Grootegeluk methodology

Table 50: Resource classification criteria

Category	Type of drill holes	Drill hole spacing	Structurally complex areas	Drill holes/ha
Measured	Cored drill holes with applicable coal qualities	0m to 350m	(Matrix) Additional geophysically logged drill holes needed	0.08
Indicated	Cored drill holes with applicable coal qualities	350m to 500m	(Matrix) Additional geophysically logged drill holes needed	0.04
Inferred	Cored drill holes with applicable coal qualities	500m to 1 000m	(Matrix) Additional geophysically logged drill holes needed	0.01

Table 51: RPEEE considerations

Item	Criteria	Criteria met	Comment
Geological data	Data has been validated and signed off by Competent Person.	Yes	Geological structures, seam thickness ≤0.5m, ash content ≥65%. Coal qualities reported on an adb.
Geological model	Geological model has been considered and signed off.	Yes	2015
Structural model	Structural model was considered and signed off.	Yes	2015
Mining	Mining assumptions were considered and defined.	Yes	Opencast and underground.
Assurance	Exxaro internal audits and an external audit were conducted.	Yes	2015
Economic evaluation	Exploitation study with economic and mining assumptions, including geotechnical and geohydrological assumptions.	Yes	Studies that underpin the IPP study and mining right mine works programme.
Environmental	Reasonable demonstration that environmental approvals can be obtained within the context of local, regional and national governmental legislation.	Yes	All environmental approvals and land ownership in place.
Tenure	Formal tenure must reasonably demonstrate that a mining right approval can be obtained within the context of local, regional and national governmental legislation.	Yes	Mining right expires in 2046, with no impediments noted. A proposal was submitted to the applicable authorities regarding a revised mine works programme.
Infrastructure	Assumptions used should be reasonable and within known or assumed tolerances or have examples of precedence.	Yes	Current infrastructure.
Market	A potential market for the product with a reasonable assumption that this market is sustainable.	Yes	IPP and current Grootegeluk steam coal market.

Reserve estimation

Table 52: Reserve estimation

Topic	Information
Software	XPAC
Reserving process	For phase 1 of the IPP feasibility study, XPAC mine scheduling software is used to derive the remaining saleable Reserves from RoM Reserves in the approved pit layout. After converting the geological model's grids to the appropriate format, the floor, roof and thickness data, along with the quality data for each bench, are imported into the XPAC model. With this model, validations are performed to evaluate the data for possible errors, such as incremental yields for each bench rising with increases in relative float densities.
Conversion classification	Indicated Resources are generally converted to Probable Reserves and Measured Resources to Proved Reserves after consideration of all applicable modifying factors. If one or more of the modifying factors have not been fulfilled, Measured Resources are either not converted or are converted but downgraded to Probable, and the associated risk is clearly stated. Inferred Resources are not converted to Coal Reserves. The Coal Reserves are based on a bankable feasibility project level of investigation. The project development agreement with our IPP project partner lapsed, and we subsequently changed our reporting of Proved Reserves to the Probable category to address this uncertainty. Exxaro is ensuring that all compliance actions are executed.
Inferred Resources inside LoM	N/A
	Modifying factors
Average thickness cut-off	≤1m
Quality cut-offs	Raw CV ≤11Mj/kg
Mining loss	*T1 – 0.5m losses to OVB *T2 – 0.25% of coal left in pit bottom
Boundary pillar	N/A
Dilution	Applied to in situ mineable Reserves due to interlayered composition of deposit.
Contamination	T2 – 0.3m
Mining recovery efficiency	No additional losses due to proposed mining method. Coal transfer between benches T1 and T2 will balance out over time as both go to the same plant.
Planned average slope angles	35 degrees
Practical plant yield	Crushing and screening process 98%
Strip ratio cut-off	Energy strip ratio >7Gj/ex-pit tonnes Strip ratio <0.3m^3/t
Environmentally sensitive areas	No sensitive areas in the pit layout.
Legal	The layout is within the mining right boundary.
Social	The pit layout has no known socially sensitive areas (for example, graveyards and dwellings).
Geohydrological	No areas identified in the mining area.

** T1 and T2 mining benches (Figure 11).*

Table 53: Thabametsi Coal Resources and Coal Reserves statement

Category	2024 (Mt)	2023 (Mt)	Difference in tonnes (Mt)	Difference (%)	Reason for change
Measured	270	270			
Indicated	749	749			
Inferred	2 857	2 857			
Total Coal Resources	**3 876**	**3 876**			No change
Proved					
Probable	130	130			
Total Coal Reserves	**130**	**130**			

- *Rounding of figures may cause computational discrepancies*
- *Tonnages quoted in metric tonnes and million tonnes (Mt). Coal Resources quoted as MTIS*

Exploration summary

Table 54 outlines the exploration for the reporting year. For detailed expenditure, please refer to Table 64.

Table 54: Exploration summary

Objectives	Progress in reporting year	Plans for next reporting year
	No drilling.	Desktop studies to further optimise extraction alternatives.

Risks

Other than the risks listed below, there are no known environmental, social, political and governance risks that could potentially impact the exploitation of the Coal Reserves.

Table 55: Thabametsi risks

Risk	Description	Mitigation
Market	The project development agreement with our IPP project partner lapsed.	Exxaro concluded the evaluation of the Thabametsi mining right's potential. We compiled a consolidation plan for submission to the applicable authorities, and we have a reasonable expectation that this consolidation plan will be accepted and implemented.

Operational excellence

Grootegeluk is considering scenarios to extract maximum value through an integrated approach for the Waterberg business.

7.6 Mafube

Table 56: Mafube overview

Topic	Information	
Location	30km east of the town of Middelburg in Mpumalanga, South Africa	
History	**Previous ownership**	**Material notes**
1950 to 2017	Anglo American Coal	Coal Resource delineation drilling (~900 drill holes).
2017 to 2021	Mafube Coal	Coal Resource delineation drilling and five-year mine plan infill drilling (731 drill holes). Mining ceased at Springboklaagte in 2018 and commenced at Nooitgedacht in the same year.
2022 to present	Thungela	Resource definition drilling to support and de-risk the mine plan (~450 drill holes).
Adjacent properties	Most of the properties next to Mafube are owned by the Glencore Operations South Africa Proprietary Limited (Glencore) – Phembani Group's Umcebo Holdings Mining Proprietary Limited (Umcebo). Other nearby owners of coal rights are Arnot Colliery (now owned by the Arnot OpCo consortium, consisting of former Arnot Colliery employees, communities and Wescoal Holdings Limited); Nucoal Mining (ground to the west of Mafube); Sumo Colliery Proprietary Limited and Optimum Colliery.	
Infrastructure	The mine is accessible by tarred regional roads leading off the N4 national road, and a railway line traverses the property in the north, connecting the rail load-out terminal with the Richards Bay Coal Terminal. Eskom supplies direct bulk power at two points: the main consumer substation adjacent to the coal processing plant and the Overland Conveyor No 3 substation. Potable water is sourced on site per the IWUL specification from three authorised production drill holes at Springboklaagte and one at Nooitgedacht.	
Coalfield	Mafube mine is situated near the northern edge of the Witbank coalfield. The coalfield extends about 190km east-west between Springs and Belfast, and about 60km in a north-south direction between Middelburg and Ermelo. The Witbank coalfield has up to five coal seams in the middle Ecca group sediments of the Karoo supergroup. The Karoo sequence in the area is represented by the Dwyka formation and the middle Ecca, with little or no lower Ecca development. The middle Ecca sequence of coal horizons, interbedded with sediments, is highly truncated due to erosion. Only four of the five main coal seams occur within Mafube, and S5 has been eroded.	
Main seams	S4, S2L and S1.	
Seam development	S4 is confined to the deeper parts (north-west) of the mining area, and S3 is thin and of no current economic significance. An upper sub-seam, designated S2 upper (S2U), is sometimes present. The S2U and S2 lower (S2L) are separated by a thin but distinctive parting (designated S2 parting (P2) with an average thickness of 0.25m). The S2U is fairly thin and consists of lower-quality coal; it is therefore not economic. S2L is the main economic seam, with an average thickness of 4.91m. The quality is variable due to interbedded bright and dull coal plies, along with some shale and carbonaceous shale, mudstone and occasional sandstone bands. S1 is thin (average thickness of 0.75m) and continuous throughout the Mafube area. It lies approximately 0.5m below the S2L. Two minor seams occasionally occur below S1 (designated S1L and S1LL). However, they are of no economic significance.	
Depositional control	Due to the mine's proximity to the northern edge of the Witbank basin, the primary control of coal development is surface topography and the pre-Karoo basement floor. Despite aeromagnetic results tentatively identifying some north-south trending lineaments, there is minor influence from geological faulting, thrusting and intrusions within the Mafube area. These aeromagnetic structures have not been confirmed by subsequent drilling. There are no known major geological structures that may affect the geology or coal seam continuity.	
Resources and Reserves	Resources occur within most of the mining right and are limited by the boundary and the limit of weathering (coal sub-crop), whereas the Reserves are limited by the mining economics aligned with the existing LoMP strategy.	
Mining method	The extraction of coal is based on the opencast mining method. Six opencast pits have been identified as per the LoM. Four to five will operate concurrently.	
Beneficiation	Thermal coal is beneficiated in a two-stage DMS plant.	
Product	CV 4 600kcal/kg and 5 800kcal/kg net AR.	
Market	Domestic and export markets.	
Mining right	Mafube has two granted and executed new order mining rights that cover 10 933ha in total. We are addressing competing applications.	
Environmental approvals	All environmental approvals and authorisations are in place for the declared Reserves, except for the Nooitgedacht North Reserves (previously known as Rooipan), which are reported as Probable pending the approval of the IWUL and environmental authorisations.	
Projects/feasibility studies	The debottlenecking project, which aims to enable a RoM production ramp-up to 7Mt per annum, is on hold pending the Nooitgedacht North IWUL approval.	

Mafube overview

Figure 12: Mafube mine

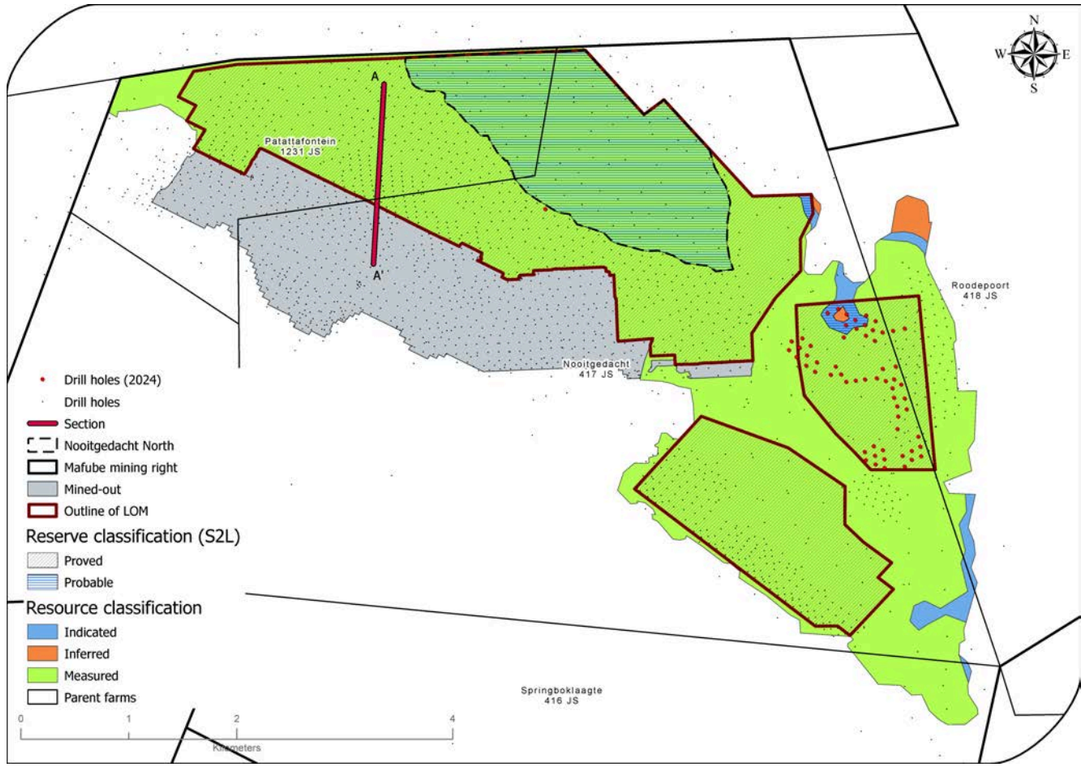
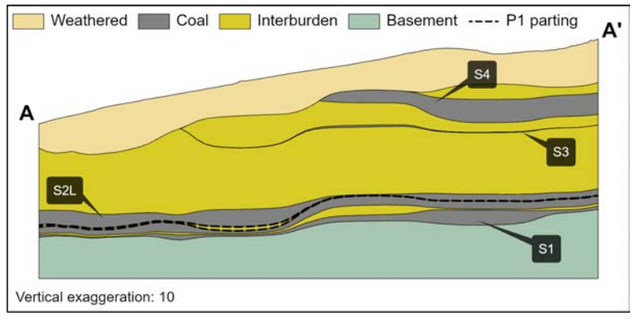


Figure 13: Mafube north-south cross-section



50%

attributable to Exxaro

Resource estimation

Table 57: Resource estimation methodology and reporting

Process	Information
Drilling, logging and sampling	Mafube has typically used conventional core drilling (diamond drilling) for most of the holes drilled. This produces a 63.5mm diameter solid core for logging and sampling. Full core is usually produced once competent strata have been intersected. Open-hole drilling techniques are employed for the near-surface OVB material (usually by-products of current-day weathering). The core is measured, and any core loss is identified and recorded, and important geological units are marked off before logging commences. The core is logged by the field geologist responsible for Mafube exploration drilling. Core logging data is recorded manually on the borehole coding sheets (logging sheets) using a logical letter coding system ("Dictionary of Codes"). This data is then captured into Excel and imported into the acQuire database where standard QAQC routines ensure the correctness of the data. Since 2019, most vertical surface drill holes have been wireline logged for the purpose of enhanced seam roof and floor mapping to delineate areas of seam floor rolls, seam thinning, seam thickening and seam pinching. Photographs of the core are taken after marking the core. Geological information is captured on log sheets with lithology captured up to centimetre details. Sampling is conducted on site with the aid of wireline logs as per the Mafube sampling standard.
Laboratory and accreditation	Bureau Veritas Inspectorate Laboratories Proprietary Limited and SANAS T0313.
Laboratory dispatch and receiving process	All samples collected and bagged are registered in a sample control sheet and the sample advice sheet. Once the samples are entered onto the control sheet, request forms are generated to keep track of samples requested and sent to the laboratory. Upon receiving the samples, laboratory personnel ensure that the number and sample ID on the request forms match the samples to be analysed. The laboratory personnel then sign the request forms in duplicate, with one copy kept at the lab and the other filed by the exploration geologist at the mine.
Laboratory QAQC	Emphasis is placed on ensuring data integrity through rigorous procedures and supervision while processing. Audits are performed internally and externally as part of the assurance and control process. Bureau Veritas is accredited for analytical work and participates in monthly local and international round robins.
Data datum	WGS 84 – LO29
Drill hole database	acQuire
Number of drill holes in mining right	2 091
Number of drill holes used for Resource estimation	S4U – 184; S4L – 142; S2 – 1 729; S1 – 1 059
Number of drill holes used for classification	S4U – 148; S4L – 117; S2 – 1 244; S1 – 536
Data compositing and weighting	Data compositing is conducted per seam using a weighted value from individual samples that make up the seam, along with each sample's relative density and length. This is conducted in GEOVIA Minex™.
Data validation	Conducted using queries in acQuire and Excel
Geological modelling software	GEOVIA Minex™
Estimation technique	Growth algorithm
Previous model date	2023
Last model update	2024
Grid mesh size	25m x 25m
Scan distance	2 000m
Data boundary	200m
Model build limits	Upper: limit of weathering and topography/collar Lower: basement/Dwyka
Model outputs	Roof, floor and thickness grids generated for structure Raw and wash quality grids
Changes to modelling process	None
Thickness cut-off and extraction height considerations	S1 ≤0.8m, S2L ≤1.0m, Seam 4 lower (S4L) and Seam 4 upper (S4U) ≤1.0m
Quality cut-offs (adb)	Ash ≥50%
Geological loss applied	Sub-outcrop/Inferred – 30% Indicated – 12% Measured – 10%

Table 58: Resource classification criteria

Category	Type of drill holes	Drill hole spacing	Structurally complex areas	Drill holes/ha
Measured	Cored drill holes with applicable coal qualities	0m to 350m	Geoloss domains of 10%	0.85
Indicated	Cored drill holes with applicable coal qualities	350m to 500m	Geoloss domains of 12%	0.18
Inferred	Cored drill holes with applicable coal qualities	500m to 1 000m	Geoloss domains of 30%	0.01

Table 59: RPEEE considerations

Item	Criteria	Criteria met	Comment
Geological data	Data has been validated and signed off by Competent Person.	Yes	Geological structures and depositional extent are considered, as well as seam thickness, with coal qualities reported on an adb.
Geological model	Geological model has been considered and signed off.	Yes	
Structural model	Structural model was considered and signed off.	Yes	2024
Mining	Mining assumptions considered and defined.	Yes	Opencast
Assurance	Exxaro internal audits and an external audit conducted.	Yes	External independent review by SRK in 2020.
Economic evaluation	Exploitation study with economic and mining assumptions, including geotechnical and geohydrological assumptions.	Yes	Mafube early value exploitation strategy and debottleneck project.
Environmental	Reasonable demonstration that environmental approvals can be obtained within the context of local, regional and national governmental legislation.	Yes	The NEMA and NEMWA application processes were concluded, and the final environmental impact assessment/environmental management programme was submitted to the Department of Mineral Resources and Energy (DMRE) on 30 October 2023. The record of decision was submitted to the DMRE for review and drafting of the environmental authorisation. Mafube is currently awaiting the final environmental authorisation issuance. In addition, the WUL application was submitted to the DWS on 13 August 2024 following the completion of the additional technical specialist studies. Approval is anticipated in Q1 2025.
Tenure	Formal tenure must reasonably demonstrate that a mining right approval can be obtained within the context of local, regional and national governmental legislation.	Yes	Tenure is secured, with no impediments noted. Surface right ownership is secured for the current LoM.
Infrastructure	Assumptions used should be reasonable and within known or assumed tolerances or have examples of precedence.	Yes	Existing infrastructure is adequate or can be upgraded, with new required infrastructure under construction.
Market	Potential market for the product with a reasonable assumption that this market is sustainable.	Yes	Primary and middlings products are sold to joint venture partners for their individual export markets.

Reserve estimation

Table 60: Reserve estimation

Topic	Information
Software	OCCS
Reserving process	Scheduling of the Reserve is determined using a mining scheduling application (Scheduler) from OCCS, which is the same software used to develop the LoMP schedule. The geological model is supplied to mining technical services in the form of Minex™ grids. The grids are then imported into a reserving application (Reserver) from the same OCCS software. This application validates the geological information received by checking the integrity of the geological structure and its quality, ensuring wash table values are consistent, and converting the geological 3D model into mineable block sizes.
Conversion classification	Indicated Resources are generally converted to Probable Reserves and Measured Resources to Proved Reserves after consideration of all applicable modifying factors. If one or more of the modifying factors have not been fulfilled, the Measured Resource is either not converted or is converted but downgraded to Probable (as is the case with Nooitgedacht North), and the associated risk is clearly stated. Inferred Resources are not converted to Coal Reserves.

Table 60: Reserve estimation continued

Topic	Information
Inferred Resources inside LoM	Some 0.1Mt of Inferred Resources are included in the LoMP, representing 0.1% of the LoMP. They are not considered material.
	Modifying factors
Average thickness cut-off	S1 cut-off of 0.8m, S2L cut-off of 1.0m, S4L and S4U cut-off of 0.8m
Quality cut-offs	Ash <50% cut-off VM >17% cut-off
Mining loss	10% mining loss is subtracted from the mineable Resource to calculate the uncontaminated RoM.
Boundary pillar	N/A
Dilution	Already included in geological model.
Contamination	0.1m
Mining recovery efficiency	100% (already accounted for in mining loss)
Planned average slope angles	90 degrees on hards and 45 degrees on softs.
Practical plant yield	Considered in the reserving process.
Strip ratio cut-off	Considered in the reserving process using the economic model, developed during the exploitation strategy, to identify mining boundaries.
Environmentally sensitive areas	100m boundary. Nooitgedacht North Resources were included in the Reserve in 2022 based on the then RPEEE. Additional specialist studies were completed during 2023 and 2024, with the final submission of permit application in October 2024. The environmental authorisation and WUL are in the final stages of review and approval, following public participation and verification of the audited closure financial statement by the authorities.
Legal	Applicable mining right considered along with competing applications.
Social	Applicable communities are relocated and are considered through various annual Mafube Social and Labour Plan projects. Despite this, a homestead and the associated graves are still not relocated, posing a risk to the mine plan.
Geohydrological	Applicable surface and groundwater models considered.

Table 61: Mafube Coal Resources and Coal Reserves statement

Category	2024 (Mt)	2023 (Mt)	Difference in tonnes (Mt)	Difference (%)	Reason for change
Measured	**143.4**	141.0	2.4	2	The mining depletion (-6.0Mt) and modelling methodology change (-1.4Mt) was greatly offset by a model update (1.4Mt) and the change in estimation methodology (8.5Mt).
Indicated	**1.7**	2.2	(0.5)	(24)	The decrease is due to the model update (-0.3Mt) and a change in the modelling methodology (-0.2Mt).
Inferred	**0.2**	0.6	(0.4)	(60)	The decrease is due to the model update (-0.4Mt).
Total Coal Resources	**145.3**	143.8	1.5	1	
Proved	**79.2**	82.6	(3.4)	(4)	The slight decrease is due to a mining depletion (-5.8Mt) and modelling methodology change (-1.6Mt) that was offset by the updated model (3.9Mt).
Probable	**32.0**	32.0	—	—	
Total Coal Reserves	**111.2**	114.7	(3.5)	(3)	

- *Rounding of figures may cause computational discrepancies*
- *Tonnages quoted in metric tonnes and million tonnes (Mt). Coal Resources quoted as MTIS*

Exploration summary

Table 62 outlines the exploration for the reporting year. For detailed expenditure, refer to Table 64.

Table 62: Exploration summary

Objectives	Progress in reporting year	Plans for next reporting year
Grade-control drilling of MGF; MGA and accessible areas of MGG	78 of the planned 168 holes were completed in the reporting year. This drilling increased Resource confidence and allows for future investigation of the possibility to mine between MGG and MGF.	182 drill holes are planned as infill drilling, catching up on 2024 drilling, as well as grade-control drilling of MGF and accessible areas of MGG.

Risks

Other than the risks listed below, there are no known environmental, social, political and governance risks that could potentially impact the exploitation of the Coal Reserves.

Table 63: Mafube risks

Risk	Description	Mitigation
Environmental	Environmental approval for Nooitgedacht North Resources was included based on the recent WUL application resubmission in Q4 2024. This is pending approval.	Mining of Nooitgedacht North has been delayed by one year to 2026 due to approval delays.
Social	A homestead and their graves were not relocated.	The area is not excluded, but production is delayed until 2026. The eviction process has begun.
Competing applications	Competing coal prospecting right application over Patattafontein.	It was legally contested. The area is not excluded, but production is delayed until 2026.

Operational excellence

A change in the modelling methodology in 2024 included the split of Seam 4 into Seam 4 upper, the parting and Seam 4 lower as individual layers in the geological model. This will allow for different exploitation scenarios to be considered in 2025, optimising Resource value and extraction.

Optimisation of market to resource considerations is evaluating the potential product change to 5 750 NAR.

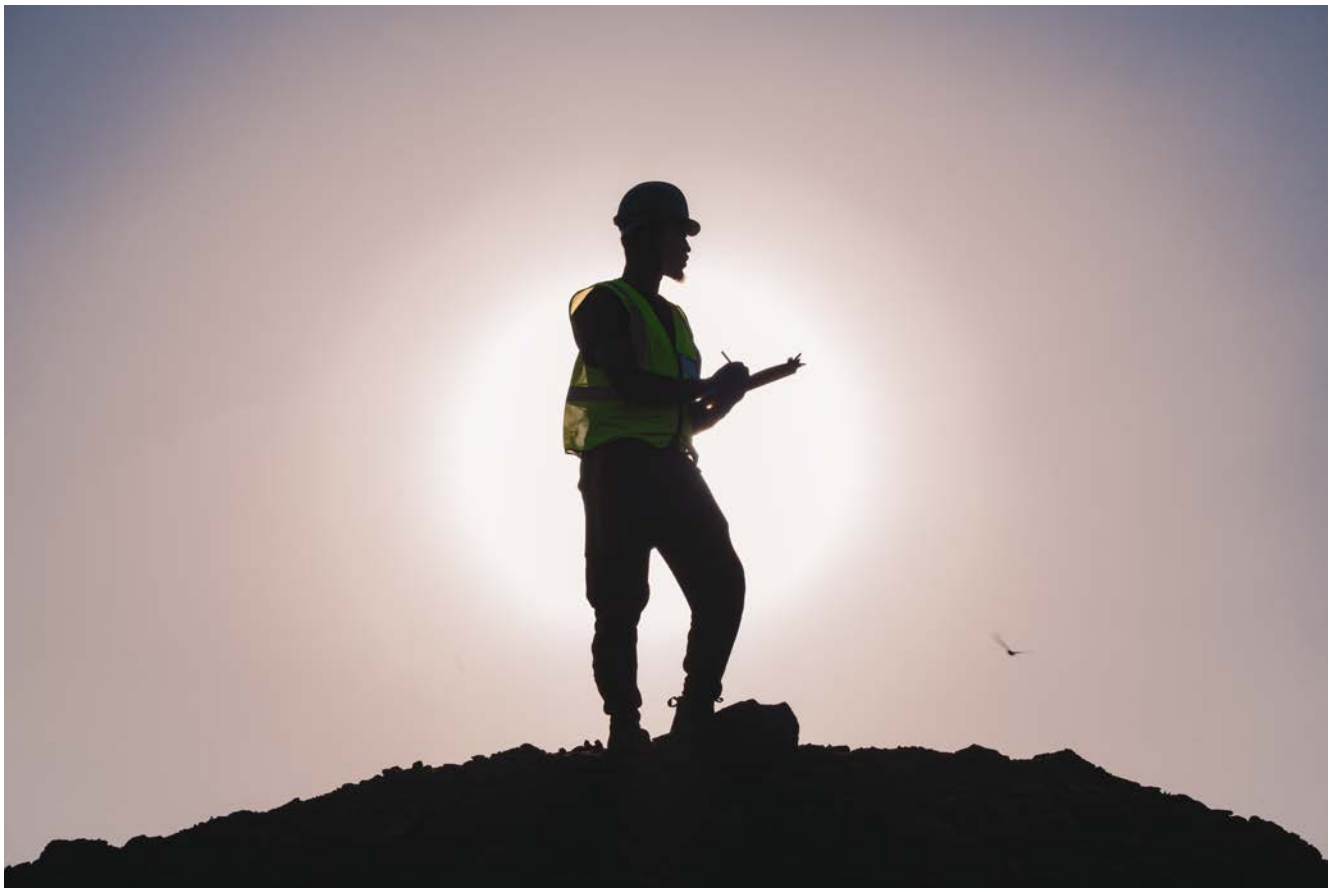
8. Exploration expenditure

Table 64: Exploration expenditure

Project or mining operation	2023 actual		2024 actual				2025 planning[1]	
	Number of drill holes	Total cost (Rm)	Number of drill holes	Drilling cost (Rm)	Analysis and other costs (Rm)	Total cost (Rm)	Number of drill holes	Total cost (Rm)[2]
Grootegeluk	41	17.9	**34**	**6.9**	**9.5**	**16.4**	33	18.0
Matla	18	13.7	**90**	**8.5**	**4.4**	**12.9**	80	15.9
Belfast	None		**69**	**2.2**	**1.0**	**3.2**	53	2.9
Leeuwpan	None		**7**	**0.7**	**0.2**	**0.9**	15	1.8
Thabametsi[3]	None	0.5	**0**	**0.0**	**0.3**	**0.3**	0	0.2
Other (projects not reported on)								
Total	59	32.1	**200**	**18.4**	**15.3**	**33.7**	181	38.7
Moranbah South project (not under operational control)[4]	10	A$8.0m	**1**	**A$0.14m**	**A$0.96m**	**A$1.10m**	15	A$5m
Mafube (not under operational control)	182	12.5	**78**	**4.9**	**0.8**	**5.6**	182	22.6

[1] *Non-committed.*
[2] *Includes all associated exploration costs such as drilling, geophysics surveys and geotechnical, hydrogeological and metallurgical test work. Excludes personnel costs.*
[3] *Includes Resource and Reserve studies.*
[4] *Total cost includes the completion of 33km^2 3D seismic in 2024 and the installation of three water monitoring holes.*

Exploration results are outlined in the Ancillary section within the discussions of the individual operations. We did not conduct exploration in areas not included in the Coal Resource statement. Exploration plans are available on request from the group company secretary.



9. Endorsement

The Exxaro executive management team appoints the lead Competent Persons.

The Exxaro lead Coal Resource Competent Person is Henk Lingenfelder, who is a member of the Geological Society of South Africa and registered (400038/11) with the SACNASP. He has a BSc (Geology) (Hons) and 29 years of experience as a geologist in coal, iron ore and industrial minerals.

The person in Exxaro designated to take corporate responsibility for Coal Resources, Henk Lingenfelder, the undersigned, has reviewed and endorsed the reported estimates.

Henk Lingenfelder

BSc (Geology) (Hons)
PrSciNat (400038/11)
Group manager: MAM
263B West Avenue, Die Hoewes
Centurion
0163
South Africa

South African Council for Natural Scientific Professions

Private Bag X540
Silverton
0127
Gauteng
South Africa

The Exxaro lead Coal Reserve Competent Person is Chris Ballot, a mining engineer registered (20060040) with the Engineering Council of South Africa. He has 28 years of experience in various technical and management roles in iron ore, mineral sands and coal. His qualifications include BEng (Mining), GDE and MBA.

The person in Exxaro designated to take corporate responsibility for Coal Reserves, Chris Ballot, the undersigned, has reviewed and endorsed the reported estimates.

Chris Ballot

BEng (Mining)
ECSA 20060040
Group manager: mine technical services
263B West Avenue, Die Hoewes
Centurion
0163
South Africa

Engineering Council of South Africa

Private Bag X691
Bruma
2026
Gauteng
South Africa

Both parties are permanently employed by Exxaro: Henk Lingenfelder as the group manager: MAM and Chris Ballot as the group manager: mine technical services. Both parties consented to the inclusion of the Resource and Reserve estimates in the 2024 integrated report. Exxaro has written confirmation from the Competent Persons that the reporting complies with the SAMREC Code, the relevant portions of Table 1 and the JSE Listings Requirements (section 12.13), in the form and context in which it was intended (in line with the JSE Listings Requirements section 12.13(i)(6)), and that they consent to the publication of the report.

10. Abbreviations

adb	Air-dried basis
Ag	Silver
AR	As received
BC	Bottom coal
BLTO	Belfast licence to operate
BMM	Black Mountain Mining
CSA	Coal supply agreement
C&S	Crush and stack
Cu	Copper
CV	Calorific value
DMRE	Department of Mineral Resources and Energy
DMS	Dense medium separation
DWS	Department of Water and Sanitation
ECSA	Engineering Council of South Africa
ESG	Environmental, social and governance
ha	Hectare
IM	Inherent moisture
IPP	Independent power producer
IWUL	Integrated water use licence
JORC Code	Australasian Code for Reporting of Exploration Results, Mineral Resources and Mineral Ore Reserves, 2012 edition
JSE	JSE Limited (founded in 1887 as the Johannesburg Stock Exchange)
JV	Joint venture
kcal/kg	Kilocalories per kilogram
LoAP	Life of asset plan
LoM	Life of mine
LoMP	Life of mine plan
MAM	Mineral asset management
MJ/kg	Megajoules per kilogram
Mn	Manganese
MRM	Mineral Resource Management
MTIS	Mineable tonnes in situ
Mt/Mtpa	Million tonnes/per annum
NEMA	National Environmental Management Act, 1998 (Act 107 of 1998)
NEMWA	National Environmental Management: Waste Act, 2008 (Act 59 of 2008)
OC	Opencast mining method
OCCS	Open Cut Coal Solution (mine scheduling software)
OVB	Overburden
Pb	Lead
QAQC	Quality assurance and quality control
RODA	Risk and opportunity domain analysis
RoM	Run of mine
RPEEE	Reasonable prospects for eventual economic extraction
S	Sulphur
SACNASP	South African Council for Natural Scientific Professions
SAMREC	South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves, 2016 edition
SANS	South African National Standard
SSCC	Semi-soft coking coal
TC	Top coal
TFR	Transnet Freight Rail
UG	Underground mining method
UGCS	Underground Coal Solution (mine scheduling software)
VM	Volatile matter
WUL	Water use licence
Zn	Zinc

11. Appendix

Table 65: Shareholding and tenure of reported Mineral Resources and Mineral Reserves

Tenure information					
Complex	**UG/OC**	**Name of right**	**Type**	**Status**	**Expiry date**
Matla	Matla (UG)	Matla (327MR*)	Mining right	Executed	4 March 2025
Leeuwpan	Leeuwpan (OC)	Leeuwpan (157MR)	Mining right	Registered	31 May 2039
		Leeuwpan Ext (171MR)	Mining right	Registered	31 May 2039
Mafube	Mafube (OC)	Mafube (172MR)	Mining right	Registered	30 July 2030
		Nooitgedacht (10026MR)	Mining right	Registered	13 November 2043
Belfast	Belfast (OC)	Belfast (431MR)	Mining right	Registered	20 February 2043
Grootegeluk	Grootegeluk (OC)	Grootegeluk (46MR)	Mining right	Registered	13 February 2041
Thabametsi	Thabametsi (UG and OC)	Thabametsi (10013MR)	Mining right	Registered	20 May 2046
Australian region	Moranbah South (OC and UG)	MDL277 and 377	Mineral development licences	Granted	31 July 2026 and 30 September 2028
		EPC548	Exploration permit	Granted	20 February 2027
Base metals	Deeps and Swartberg (zinc, lead, copper and silver)		Converted right	Executed	30 September 2038
	Gamsberg North and Gamsberg East prospecting (zinc)		Converted right	Executed	18 August 2038
Iron ore	Kolomela		Converted right	Registered (amendments registered)	17 September 2038
	Sishen mine		Converted right	Registered (amendments registered)	10 November 2039

* *Mining right.*

No impediments exist, and tenure risks and/or RPEEE considerations are noted, where relevant, under the individual operations.

Figure 14: Coal RoM figures (Mt)

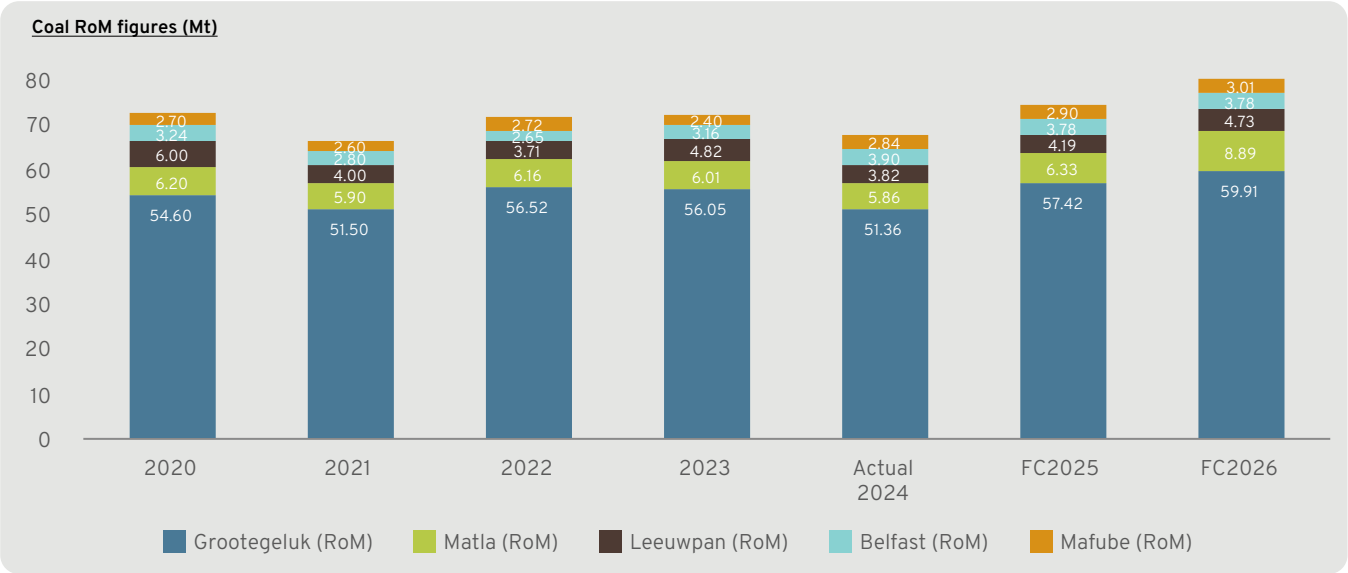
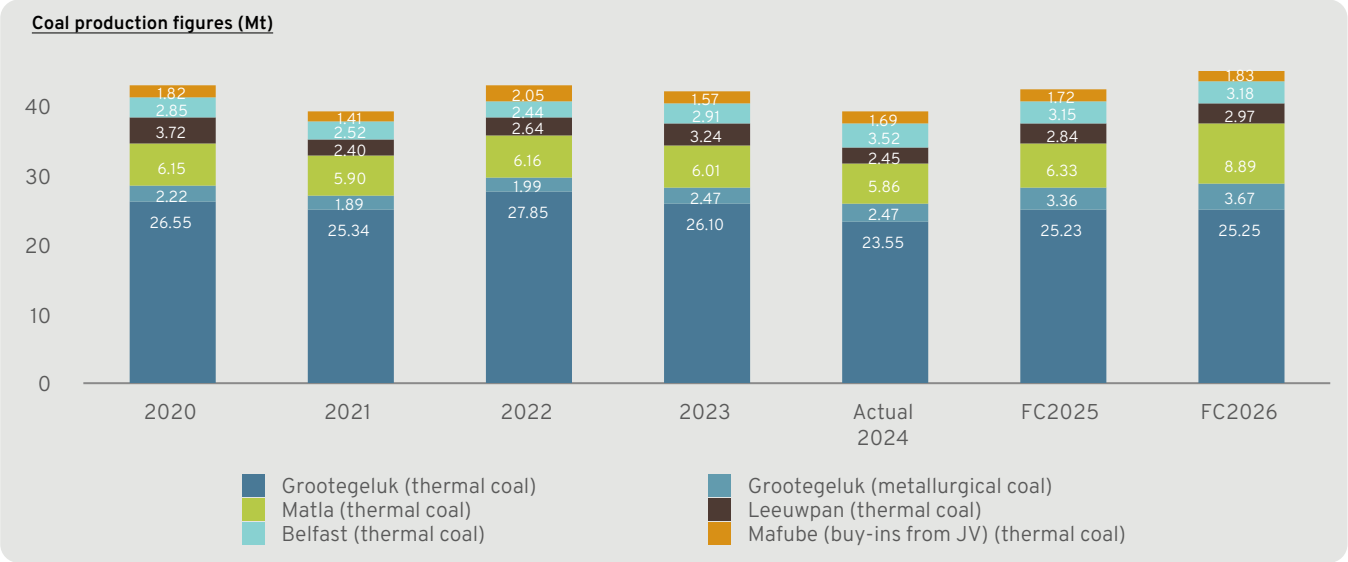


Figure 15: Coal production figures (Mt)



Administration

Group company secretary and registered office

Michelle Nana

Exxaro Resources Limited
The conneXXion
263B West Avenue
Die Hoewes, Centurion, 0157
PO Box 9229, Pretoria 0001
South Africa
Telephone: +27 12 307 5000

Lead equity sponsor and debt sponsor

Absa Bank Limited (acting through its corporate and investment bank division)
Absa Sandton North
15 Alice Lane
Sandton
2196
Telephone: +27 11 895 6000

Joint equity sponsor

Tamela Holdings Proprietary Limited
First Floor
Golden Oak House
Ballyoaks Office Park
35 Ballyclare Drive
Bryanston
2021
Telephone: +27 11 783 5027/4907

Company registration number

2000/011076/06
JSE share code: EXX
ISIN code: ZAE000084992
ADR code: EXXAY
Bond issuer code: EXXI

Independent external auditor

For the financial year ended 31 December 2024
KPMG Inc
85 Empire Road
Parktown
2193
Private Bag 9
Parkview
2123
Telephone: +27 11 647 7111

Commercial banker

Absa Bank Limited

Corporate legal adviser

Inlexso Proprietary Limited
Building 3 Summit Place
221 Garsfontein Road
Menlyn
Pretoria
0181
Telephone: +27 12 942 5555

Transfer secretaries

JSE Investor Services Proprietary Limited
One Exchange Square
Gwen Lane
Sandown
Sandton
2196
PO Box 4844
Johannesburg
2000
Telephone: +27 86 154 6572 or +27 11 713 0800