Final

Independent Technical Report on the Jinyan Kaolin Project

Huaibei, Anhui Province, China
Anhui Jinyan Kaolin New Materials Co., Ltd.

SRK Consulting (Hong Kong) Ltd • JYK001 • July 2025

Final

Independent Technical Report on the Jinyan Kaolin Project

Huaibei, Anhui Province, China

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Disclaimer: The opinions expressed in this Report have been based on the information supplied to SRK Consulting (Hong Kong) Ltd (SRK) by Anhui Jinyan Kaolin New Materials Co., Ltd. (Jinyan). The opinions in this Report are provided in response to a specific request from Jinyan to do so. SRK has exercised all due care in reviewing the supplied information. While SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. Opinions presented in this Report apply to the site conditions and features as they existed at the time of SRK's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report, about which SRK had no prior knowledge nor had the opportunity to evaluate.

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Useful Definitions

This list contains definitions of symbols, units, abbreviations, and terminology that may be unfamiliar to the reader.

Abbreviation	Meaning
°	degrees
°C	degrees Celsius
μm	micrometres, equal to one millionth of a metre
AIG	Australian Institute of Geoscientists
Anticline	An anticline is an arch-like fold in rock layers, where the oldest rocks are at the core of the fold, and the layers dip away from the centre
asl	above sea level
AusIMM	Australasian Institute of Mining and Metallurgy
bulk density	A physical property of mineral components, defined by the weight of an object or material divided by its volume, including the volume of its pore spaces
CAGR	compound annual growth rate
Carboniferous	Time period 359–299 million years ago
CCICT	China Coal Industry Committee of Technology
Channel sample	Sample collected by cutting a continuous groove or channel into the rock face using tools such as chisels, saws, or drills. The groove is typically uniform in width and depth to ensure consistency
CMSS	China Mine Safety Society
compressive	The capacity of a material or structure to withstand loads tending to reduce size, measured by plotting
CRM	certified reference material

drill core	A solid, cylindrical sample of rock produced by an annular drill bit, generally rotatively driven but sometimes cut by percussive methods (drill core is extracted from a drill hole)
drill hole	A hole drilled in the ground by a drill rig, usually for exploratory purposes to obtain geological information and to allow sampling of rock material
EIA	Environmental impact assessment, a comprehensive analysis of the environmental consequences of a mining project
exploration	Activities undertaken to prove the location, volume and quality of a deposit
fault	A fracture or fracture zone in rock along which movement has occurred
fold	A bend or flexure in a rock unit or series of rock units that has been caused by crustal movements
formation	A body of rock having a consistent set of characteristics (lithology) that distinguish it from adjacent bodies of rock
g/cm^3	grams per cubic centimetre
JORC Code	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC), December 2012
kg	kilograms
km	kilometres
km^2	square kilometres
kt	thousand tonnes
kV	kilovolts

kW	kilowatts
log	The record of, or the process of recording, events or the type and characteristics of the rock penetrated in drilling a borehole, as evidenced by the cuttings, core recovered, or information obtained from electric, sonic or radioactivity devices
LOI	loss on ignition
LOM	life-of-mine
m	metres
M	million
m^3	cubic metres
magmatic	Pertaining to, or derived from, magma
Mineral Resource	Concentration or occurrence of material of intrinsic economic interest on or inside the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge
mm	millimetres
MPa	megapascals
Mt	million tonnes
Mtpa	million tonnes per annum
mudstone	Mudstone is a fine-grained sedimentary rock composed primarily of clay-sized particles
oolite	A nearly spherical rock ~2 mm particle formed by concentric deposition around a nucleus; oolitic describes a rock formed from oolites

Ordovician	Time period 485–445 million years ago, follows after Cambrian
Ore Reserve	The economically mineable part of a measured and/or indicated mineral resource
Permian	Time period 299–252 million years ago
PRC	People's Republic of China
QAQC	quality assurance and quality control
Quaternary	Time period 2.58–0 million years ago
RMB	Chinese Renminbi, Chinese currency
ROM	run-of-mine
sedimentary rock	A rock formed from the accumulation and consolidation of sediment, usually in layered deposits and which may consist of rock fragments of various sizes, remains or products of animals or plants, products of chemical action or of evaporation, or mixtures of these
sill	A tabular sheet intrusion of molten rock (magma) that has intruded between older layers of sedimentary rock, a sill does not cut across the pre-existing formations
slope of regression	a fundamental aspect of linear regression analysis, illustrating the relationship between the independent variable (predictor) and the dependent variable (response). In the context of Kriging estimates, the slope of the regression line serves as an indicator of the quality of the estimation
specific gravity	The ratio of its mass to the mass of an equal volume of water
SRK	SRK Consulting (Hong Kong) Limited

stratigraphy	The study of sedimentary rock units, including their geographic extent, age, classification, characteristics and formation
strength	applied force against deformation in a testing machine. It is the maximum compressive stress that can be applied to a material, such as a rock, under given conditions, before failure occurs
strike	Direction of line formed by intersection of a rock surface with a horizontal plane. Strike is always perpendicular to direction of dip
swath plot	A swath plot is typically created by dividing the study area into parallel slices or swaths along a specific direction (e.g., north-south, east-west, or vertical). For each swath, the average estimated value and the average actual value (from sample data) are calculated and plotted against the swath position
syncline	A syncline is a fold where the rock layers dip inward towards the centre, forming a concave shape. The youngest rock layers are typically found at the core of the fold
t	tonnes
variogram model	A variogram is a graph that represents the degree of spatial dependence between sample points as a function of distance. It plots the semivariance (half the average squared difference between paired data points) against the distance separating those points
variography	A fundamental technique in geostatistics used to analyse the spatial variability and correlation of a regionalized variable, such as mineral grades, soil properties, or any other spatially distributed data
vein	Sheet-like body of minerals formed by fracture filling or replacement of lost rock

waste	The part of an ore deposit that is too low in grade to be of economic value at the time of mining, but which may be stored separately for possible treatment later
water absorption	The amount of water that a material can absorb under controlled conditions
wireframe	A skeletal three-dimensional model in which only lines and vertices are represented, a preliminary stage used in preparing a full three-dimensional model
WSCP	Water and Soil Conservation Plan

EXECUTIVE SUMMARY

SRK Consulting (Hong Kong) Limited (SRK) has been commissioned by Anhui Jinyan Kaolin New Materials Co., Ltd. (Jinyan or the Company) to prepare an Independent Technical Report (ITR or the Report) on the Jinyan Kaolin Project (the Project), located Shuoli Town, Duji District near Huaibei City, Anhui Province of the People's Republic of China.

This ITR will be included a prospectus relating to an initial public offering (IPO) of shares in the Company and associated capital raising on the Hong Kong Stock Exchange (HKEx). This Report has been prepared by a multidisciplinary team in accordance to the VALMIN Code (2015), JORC Code (2012) guidelines and HKEx Listing Rules.

The scope of work of this ITR includes a review of the following technical disciplines:

- geology and Mineral Resources
- mining and Ore Reserves
- mineral processing
- product quality
- economic analysis
- permitting, environmental and social considerations.

A risk assessment is also included.

Work program

SRK's work program included a review of the provided information by Jinyan, a site visit conducted by SRK consultants and associates, the estimation of Mineral Resources and Ore Reserves in accordance the JORC Code (2012) and the preparation of this Report.

Jinyan Kaolin Project

The Project encompasses the Shuoli Kaolin underground mine, which is covered by a mining licence spanning approximately 17.9955 km^2, with an approved mining capacity of 0.5 Mtpa. Formerly known as the Shuoli Coal Mine, the mine was converted to kaolin mining after the depletion of coal resources in the same sedimentary succession led to its closure in 2019.

The Project includes a Chamotte Plant located in an industrial area directly above the mine along with a separate Mullite Precision Casting Sand Plant and Powder located in the Longhu Industrial Park, 10 km to the south. The Chamotte Plant produces a range of products, including crushed and screened kaolin ores (raw coke and raw powder), as well as refractory mullite (chamotte). The calcined kaolin materials from the rotary kilns are further processed into precision casting mullite sand and powder products at the Mullite Precision Casting Sand and Powder Plant.

Jinyan has also developed a new ceramic fibre product, with commercial production set to begin in the first quarter of 2025. Waste generated during processing is used to produce non-fired bricks.

Geology and mineralisation

The Project is located in the southern part of Xuhuai Basin, along the southeastern edge of the North China Block. It falls within the Xu-Su Arc Nappe Belt and is mainly controlled by the north-northeast trending Fengpei Fault and the east-west trending Subai Fault. The Project area is underlain by Carboniferous and Permian stratigraphy, primarily consisting of coal-bearing clastic rocks.

From bottom to top, the stratigraphy of the Shuoli Kaolin Mine includes the Carboniferous Taiyuan Formation, Permian Shanxi Formation, Lower Shihezi Formation and Upper Shihezi Formation. In the Permian Lower Shihezi Formation, the basal unit is represented by the light grey to grey-green aluminous mudstone layer. This layer occurs throughout the Project area, and is only partially absent in the northwest and southwest. It has an average thickness of approximately 5 m and a maximum thickness of 9.40 m. With its consistency and distinctive textures, it serves as an important marker unit known as the K2 index layer. It also acts as the host depositional layer of the Project's kaolin mineralisation.

The Project is located on the western limb of the Zhahe Syncline, where the primary fold is relatively well developed, and faults are less prominent. The secondary folds on this limb trend northeast-northwest and appear to have been refolded in a north-south direction. The strata in the area dip gently to moderately. In the southern and southeastern parts of the Project area, a system of faults trending east to northeast form the Project's natural boundary.

The kaolin deposit is hosted by the aluminous mudstone K2 index layer within the basal unit of the Permian Lower Shihezi Formation. This aluminous mudstone unit is located 12-24 m beneath the previously extracted No. 5 coal seam. Although the kaolin layer is continuous, it has been divided into five separate distinct domains based on impurity contents, specifically where Fe_2O_3 is less than 2% and TiO_2 is less than 0.6%. The mineralisation layer extends from 50 m to 240 m below surface and varies in thickness from 0.77 m to 4.76 m. The entire layer dips gently, ranging from approximately 5° to 13°.

Exploration History

Between 1957 and 2006, three historical exploration campaign phases took place: an initial coal resource exploration phase from 1957 to 1966, a combined exploration and active mining phase from 1970 to 1986, and a kaolin exploration phase from 1991 to 2006. A total of 200 drill holes and channels were completed for kaolin sampling during historical explorations; however, the core or pulp samples were not preserved. Of these, 138 drill holes and channels were used for resource estimation, with core recoveries exceeding 80%.

In October 2024, Jinyan conducted an infill and validation program that included 7 drill holes, 21 underground channels and 2 validation holes, based on SRK's recommendations.

Mineral Resources

Leapfrog software (version 2024.1) was used to generate the geological and ore domain models and prepare assay data for statistical/geostatistical analysis, construct the block model, estimate Al_2O_3 and SiO_2 grades and tabulate the Mineral Resources. A 2D estimation approach was applied for the Project's kaolin deposit.

A criterion that combines Al_2O_3 cut-off and Fe_2O_3 and TiO_2 impurity limits was used to define the mineralised intervals: Al_2O_3 greater than 30%, impurity Fe_2O_3 less than 2%, and impurity TiO_2 less than 0.6%. Additionally, a minimum mining thickness (0.7 m) was employed for domains to comply with the limitations of the longwall mining method. Five domains were defined within the Shuoli Kaolin Mine area.

For each estimation domain, estimates were made of 'accumulations' (product of grade and true thickness), and true thickness. For the elements of interest, the block grades were then obtained by dividing the corresponding accumulation estimate by the thickness estimate.

No capping was applied to Al_2O_3 or SiO_2 in this Report. The variograms for the interpolation of Al_2O_3 and SiO_2 accumulations, and true thickness, were modelled using Leapfrog Edge. Due to insufficient samples in Domains 1, 2, 3 and 4 for fitting a meaningful variogram, the variogram model developed for Domain 5 has been applied to these domains. SRK produced the block models for all Resources Domains with dimensions of 100 m × 100 m × variable Z (East × North × Elevation) and sub-blocking with dimensions of 10 m ×10 m × variable Z (East × North × Elevation) in Leapfrog Edge. No rotation has been allowed. A minimum 0.7 m thickness was employed for variable Z of the block model. Block accumulation and true thickness values were interpolated using the Ordinary Kriging (OK) method.

As at 31 May 2025, the mined-out area was surveyed and wireframed as a depletion zone. During the resource estimation process, Mineral Resources within the mined-out area were estimated and subsequently subtracted to obtain the remaining resources.

The Mineral Resource estimates for the remaining deposit within the licence areas, excluding the protective pillar, are given in Table ES 1.

Table ES 1: Mineral Resource Statement — Shuoli Kaolin Mine — as at 31 May 2025

Classification	Tonnage	Al_2O_3	Al_2O_3 Material	SiO_2	SiO_2 Material
	(kt)	*(%)*	*(kt)*	*(%)*	*(kt)*
Measured	2,367	40.35	955	42.83	1,013
Indicated	8,990	40.28	3,621	41.13	3,698
Measured and Indicated	11,357	40.29	4,576	41.49	4,711
Inferred	7,292	40.30	2,939	41.58	3,032
Total	**18,649**	**40.30**	**7,515**	**41.52**	**7,743**

Notes:

1 Any differences between totals and sum of components are due to rounding.

2 A 0.7 m minimum thickness was applied to the resource block model.

3 The models are reported for domains with a thickness greater than 0.7 m, which is the minimum mineable thickness using the current mining method (longwall mining).

4 Mineral Resources that are not Ore Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

5 Mineral Resources are reported inclusive of Ore Reserves.

6 The Mineral Resources are effective as at 31 May 2025.

Competent Person's Statement*: The information in this Report that relates to Mineral Resources is based on information compiled by Dr (Tony) Shuangli Tang who is a Member of the AIG and Member of the AusIMM. Dr Tang is a full-time employee of SRK Consulting (Hong Kong) Limited and has sufficient experience that is relevant to the style of mineralisation, type of deposit under consideration and to the activity which he undertakes to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code).*

Rock engineering

The kaolin mine is located in the lower part of the Permian Lower Shihezi Formation. The strata are stable, with underdeveloped structural fractures. The lithology is solid and intact, with a uniaxial compressive strength of 15.6 MPa and Mohs hardness between 3 and 4. There was no plasticity or swelling when the strata were exposed to water. The surrounding sequences consist of mudstone, sandstone and siltstone, with uniaxial compressive strength values ranging from 26.1 MPa to 11.19 MPa, indicating favourable geotechnical conditions. However, since the No. 5 coal seam located approximately 16 m above the kaolin layer has already been mined, there is a potential risk of disturbance and damage to the roof of roadways. Appropriate measures should be taken for roof management during kaolin mining.

The roof management methods and a series of effective measures are currently employed to prevent roof falls during the kaolin mining process. The monitoring and control systems for tunnel deformation and roof collapse in the main tunnels are comprehensive. Monitoring results indicate that there is minimal displacement of the tunnel walls and negligible roof deformation, which aligns with the observations made during underground inspections. This suggests that with the implementation of appropriate measures, the risks are controllable.

Hydrogeology

The area is characterised by three aquifers, which have minimal impact on kaolin mining. The primary hydrological hazard risk is the accumulation of water in mined-out areas which has been properly managed by the Company. The mine's drainage system, including water storage, pipelines and pumps, currently meets the relevant regulatory requirements.

There are four closed coal mines near the Project, with a total residual water inflow of approximately 330 m^3/h. To prevent this residual water from flowing into the kaolin mine area, a 1,740 m-long sealed partition wall with a water pressure resistance of 11 MPa has been constructed between the kaolin mine and adjacent mines. The residual water will flow through boreholes in the partition wall and pipelines to the central water storage of the Project, from where it will be discharged to the surface. It is anticipated that by October 2026, the residual water level will rise to the level to flow into the kaolin mine, increasing the total water inflow to 440 m^3/h. The reconstruction of the drainage system is expected to be completed by the end of October 2025.

Mining

An assessment of the mining system of the Shuoli Kaolin Mine, including the development system, operations, mining methods, and auxiliary systems and the life-of-mine (LOM) plan was conducted. The assessment covers the key project mining studies and current operation data. The purpose of the assessment is to provide a basis for declaring an Ore Reserve estimate in accordance with the JORC Code (2012). SRK considers the key technical studies are equivalent to pre-feasibility studies as per JORC Code (2012). The data for the review included:

- Preliminary Mine Design for 0.5 Mtpa capacity, dated December 2019
- Mineral Resources Development and Utilisation Plan, dated January 2023
- operations data and records as of October 2024
- site visit findings in October 2024.

The Shuoli Kaolin Mine uses the underground system from the former Shuoli Coal Mine, which was closed in July 2019 due to depletion of the coal resource. It mines kaolin from beneath the mined-out No.5 Coal seam.

The Mine has a designed production capacity of 0.5 Mtpa and employs the main, service, and ventilation shafts from the former coal mine, using single-level development and an incline drive. It operates with a fully mechanised longwall mining method, conveying run-of-mine (ROM) material to the main shaft and hoisting to the surface.

The underground infrastructure, including dewatering, ventilation and power supply, is well maintained. Operations are managed effectively by Jinyan's personnel, with equipment suitable for the mine's capacity. Management reports show that annual targets are consistently achieved.

Long-term mine plans are considered suitable, but SRK has adjusted the life-of-mine (LOM) plan based on updated Mineral Resource estimates. At the annual production volume of 400,000 t, the Mine has an LOM of 16 years. SRK considers the mining method is appropriate and mining conditions are good. Management and staff have the necessary experience, and the production targets can be met.

Ore Reserves

According to the JORC Code, an Ore Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource and includes losses and dilution that may occur by mine design and during the mining operation.

As at 31 May 2025, SRK estimated Ore Reserves of 6.06 Mt within the mining licence boundaries, reported in accordance with the JORC Code (2012) guidelines. This includes 1.09 Mt of Proved Ore Reserves and 4.97 Mt of Probable Ore Reserves. The Ore Reserve is tabulated in Table ES 2.

Table ES 2: Shuoli Kaolin Mine Ore Reserve Statement as at 31 May 2025

Category	Ore Reserve	Al_2O_3	Fe_2O_3	TiO_2
	(kt)	*(%)*	*(%)*	*(%)*
Proved	1,093	38.9	0.66	0.51
Probable	4,969	37.9	1.08	0.49
Total	**6,062**	**38.1**	**1.00**	**0.49**

Source: SRK, 2025

Notes:

1 Any differences between totals and sum of components are due to rounding.

2 Cut-offs for ROM to define between ore and waste are Al_2O_3 ≥30%, Fe_2O_3 ≤2%, and TiO_2 ≤0.6%.

3 The minimum mining cutting height is 2 m.

4 The Ore Reserves are reported on a metric dry tonne basis.

5 The Ore Reserves are reported at the reference point (ROM material as received at the processing plant).

6 The Ore Reserves are reported inclusive of Mineral Resources.

7 The Mineral Resources are effective as at 31 May 2025.

***JORC Code Statement**: The information in this Report which relates to the Ore Reserve is compiled by Mr Falong Hu who is a full-time employee of SRK Consulting (China) Limited and a Fellow of the AusIMM. Mr Hu has sufficient experience that is relevant to the style of mineralisation, type of deposit under consideration and the activity which he is undertaking to qualify as Competent Person as defined in the JORC Code (2012).*

Processing

Jinyan has established a calcined kaolin workshop, a kaolin ceramic fibre workshop, and a non-fired brick workshop at its Chamotte Plant. The calcined kaolin workshop uses both rotary and shaft kilns to calcine kaolin ore into mullite, which is then processed into precision casting and refractory mullite products. The mullite produced from the rotary kilns is transported by truck to the Mullite Precision Casting Sand and Powder Plant located in the Longhu Industrial Park where it is processed into precision casting mullite sand and powder products. The calcined kaolin workshop has four rotary kiln production lines and one shaft kiln, with a total production volume of 340,000 tpa. The rotary kiln production lines primarily produce precision casting mullite sand and powder, with lines #1 and #2 each having a production volume of 30,000 tpa, line #3 having a production volume of 50,000 tpa, and the newly built line #4 having a production volume of 200,000 tpa. During SRK's site visit in October 2024, the construction of line #4 was completed. The Company plans to begin commercial production in the first quarter of 2025. The shaft kiln production line calcines large blocks of kaolin ore, primarily producing refractory mullite blocks and granules, with lines #1 and #2 each having a production volume of 15,000 tpa.

The kaolin ceramic fibre workshop uses calcined kaolin as raw material to produce kaolin ceramic fibre, with a designed capacity of 1,000 tpa. The workshop has been built and is scheduled to start production in the first quarter of 2025.

Jinyan also sells some kaolin ore, which is classified into primary-grade raw coke (Fe_2O_3 <1.5%), secondary-grade raw coke (Fe_2O_3 = 1.5~2.0%) and kaolin waste (Fe_2O_3 >2.0%) based on iron content. Based on customer requirements for particle size, primary-grade and secondary-grade materials are screened and classified for sale as products, while waste is used to make non-fired bricks. The production of raw coke is simple, driven by mining volume and customer demand.

The non-fired brick workshop uses kaolin waste and other production waste, such as overburned and underburned kaolin, kiln tail ash, and flue gas desulfurisation ash. These are mixed with cement and water to produce bricks using an automatic machine. Brick production depends on waste availability, and the current machine's capacity is sufficient to process all waste.

Jinyan has strong research and development capabilities, having drafted standards for 'Casting Use Mullite Sand and Powder' and secured several processing patents. Jinyan has developed precision casting shell materials, creating a unique product advantage. In addition to its current products, Jinyan plans to continue developing other high-value-added specialty products.

Market outlook and product quality

The study of product and kaolin market was carried out by Frost & Sullivan, an independent market research consultancy. The Project's primary industrial mineral product will be a hard-rock kaolin ore that is processed by heating (calcined) to produce a variably sized mullite product targeting high-end manufacturing industries. Other products can be produced, including refractory kaolin products. The traditional markets for soft kaolin are typically in the paper coating, filler and ceramics industries and while these still important, the markets are rapidly undergoing change and the hard kaolin calcined kaolin/mullite products can achieve a significant and increasing market share.

The mullite sands and powder are marketed to the newly developing high-technology industries requiring high-precision casting of metallic components. Most potential purchasers of the product are currently located in the East China region. As China is a net importer of various types of soft kaolin, it is anticipated that most sales will continue to be within China, but some may be exported for use in similar industries in East Asia, Japan and Korea, expanding the market.

The average sale prices anticipated for the calcined kaolin/mullite for precision casting mullite products have been estimated in the order of RMB/t 1,250. In 2024, actual prices achieved by the Company ranged between RMB/t 1,300 and RMB/t 1,900. The average price increase predicted to 2028 is 5%, conservatively. Pricing is likely to be most sensitive to cost increases due to energy costs, which should be balanced by the increased demand.

It is assumed that levels of demand will be stable in the short term and increasing in the near term to medium term. A compound annual growth rate (CAGR) of 7.0% for sales revenue for 2025 to 2029 is forecast for precision casting mullite material. The market outlook for these products is optimistic but is dependent on ongoing development of the high-technology industries and manufacturing. These industries are currently forecast to experience significant growth.

With the LOM predicted to be 16 years, it is anticipated that the Huaibei deposit will continue to be a reliable ore source with potential to increase sales to the annual extraction limit and to continue to supply the precision casting mullite and other high-value products under development. There is potential competition from other similar sources of hard-rock kaolin, but the Company was an early adopter of the technology and is considered a market leader.

SRK recommends that the Company carry out detailed market studies and marketing activities to maximise the volume sold and prices achieved for its products and waste/by-products from the mine.

Permitting, environmental and social considerations

The Jinyan Project has obtained the required environmental protection permits for operation, including the safety production, water extraction, and pollutant discharge permits. Several environmental impact assessment (EIA) reports for the Project were completed and approved by the relevant authorities. These EIA reports cover the main production facilities including the Shuoli Kaolin Mine, Chamotte Plant and Mullite Precision Casting Sand and Powder Plant.

Vegetation in the vicinity of the Project mainly comprises common local plant species, with no ecologically sensitive species identified. The area historically affected by coal mining activities has experienced significant subsidence, creating extensive waterlogged areas. Since the Project's facilities are primarily located within the former coal mine and industrial park areas, the Project will not have a significant impact on the habitats of flora and fauna in the region.

Water drained from the mine is treated on site and re-used in production. The plant separates rainwater from wastewater, with industrial and domestic wastewater being collectively discharged to the Longhu Industrial Park wastewater treatment plant. Desulfurisation, denitrification, and dust removal equipment are used to eliminate sulfur dioxide, nitrogen oxides, and other particulates.

SRK understands that the underground mining operation currently generates almost no waste rock. Other major industrial solid wastes from the Project include iron removal residues and dust collected by baghouse filters, which are either re-used or recycled. Hazardous wastes including waste denitrification catalysts, waste oil, and waste oil drums are stored in a designated facility and regularly disposed of by qualified contractors.

Capital and operating costs

From 2022 to May 2025, RMB441.9 million was invested in upgrading the underground mining facilities and constructing new surface workshops, including a kaolin processing workshop, non-fired brick workshop, and ceramic fibre workshop. A new rotary kiln system and a 35 kV substation were also established.

In June-December 2025, Jinyan plans to spend RMB3.8 million on fan and substation upgrades and RMB9.6 million on a resource upgrade drilling program for the area between Domain 1 and Domain 5. Surface operations will incur RMB3.3 million for equipment replacement and RMB1.5 million for dust control upgrades. An annual RMB8 million is allocated for sustaining capital,

A total of RMB103.5 million is budgeted for a mullite aluminium-silicon processing system and a new materials research centre.

Historical operating costs were RMB152.9 million in 2022, RMB154.5 million in 2023, and RMB181.5 million in 2024. The major expenses are fuel, electricity and salaries. Forecast costs from 2024 to 2040 are based on historical data and technical studies. Operating costs are expected to be RMB260.7 million in 2026 and RMB265.9 million in 2027, with major components remaining fuel and electricity. Unit costs over the LOM are RMB/t 979 for precision casting mullite products, RMB/t 847 for refractory mullite products, RMB/t 158 for raw coke and raw powder, and RMB/t 7,124 for ceramic fibre.

1 INTRODUCTION

1.1 Background

SRK Consulting (Hong Kong) Limited (SRK) is an associate company of the international group holding company, SRK Global Limited (the SRK Group). SRK was commissioned by Anhui Jinyan Kaolin New Materials Co., Ltd. (Jinyan or the Company) to prepare an Independent Technical Report (ITR or the Report) relating to the Jinyan Kaolin Project located in Shuoli Township, Duji District, Huaibei City, in the Anhui Province of eastern People's Republic of China (PRC) (the Project).

The Project includes the Shuoli Kaolin underground mine (the Mine), with a designed capacity of 0.5 Mtpa. Following closure of the Shuoli Coal Mine in 2019, its infrastructure was repurposed to kaolin mining after the coal resources were depleted as the known kaolin layers occur in the same sedimentary succession as the coal measures.

The Project also consists of a Chamotte Plant situated in an industry area directly above the underground mining operation and a separate Mullite Precision Casting Sand and Powder Plant located in the Longhu Industrial Park. The processing plants are capable of producing various products, including crushed and screened kaolin ores as well as calcined kaolin ores. The calcined kaolin ore is further processed into precision casting mullite sands and powder, and refractory mullite (chamotte).

Jinyan has developed a new ceramic fibre product, with commercial production expected to commence in the first quarter of 2025. The waste generated during processing is used to produce non-fired bricks.

1.2 Purpose of Report

This Report has been prepared by SRK for inclusion in the prospectus to be published by the Company in connection with the initial public offering (IPO) of shares in the Company and associated capital raising on the Main Board of the Hong Kong Stock Exchange (HKEx).

1.3 Scope of work

The scope of work for this ITR includes the following:

- geology and Mineral Resources
- mining and Ore Reserves
- mineral processing
- product quality

- economic analysis
- permitting, environmental and social considerations.

A risk assessment is also included.

1.4 Work program

SRK's work program completed under this commission included:

- review of supplied information
- site visit by SRK consultants and associates
- estimation of Mineral Resources and Ore Reserves in accordance to the JORC Code (2012)
- preparation of this Report.

1.5 Reporting standard

Key authors of this Report are Members or Fellows of either the Australasian Institute of Mining and Metallurgy (AusIMM) and/or the Australian Institute of Geoscientists (AIG) or other international Recognised Professional Organisations. As such, these authors are bound by international mineral reporting codes (in this case both the VALMIN and JORC Codes).

For the avoidance of doubt, this Report has been prepared according to the following guidelines:

- 2015 edition of the *Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets* (VALMIN Code)
- 2012 edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (JORC Code).

In accordance with the stated reporting guidelines, all geological and other relevant factors defining the Company's Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves have been considered in sufficient detail to serve as a guide for future exploration and development activities. Table 1 of the JORC Code has been used as a checklist during the preparation of this Report and any comments are provided on an 'if not, why not' basis to ensure clarity to an investor on whether aspects of the future development program have been considered as they apply to the JORC Code (2012) Table 1.

The criteria of the JORC Code Table 1 reflect the normal systematic approach to exploration and target evaluation. *Relevance* and *Materiality* are overriding principles which determine the information that needs to be publicly reported. This Report has attempted to provide sufficient comment on all matters that might materially affect a reader's understanding or interpretation of the results being reported. The criteria under which the Project is being evaluated are consistent with the current understanding of the geological controls on the known mineralisation, but as more knowledge is gained, these criteria could change and be improved over time.

As per the VALMIN Code (2015), a draft of the Report was supplied to Jinyan to check for material error, factual accuracy and omissions before the final version of the Report was issued.

1.6 Effective Date and Report Date

The Effective Date for this Report is 31 May 2025.

The Kaolin Mineral Resource and Ore Reserve statements set out in this Report are reported as at 31 May 2025.

The Report Date is 21 July 2025.

1.7 Units and currency

Throughout this Report, SRK has used the International System of Units. All units used in this Report are defined in the glossary of terms.

All monetary values used in this Report are expressed in 2024 terms in Chinese Renminbi (RMB).

1.8 Limitations, reliance on information, declaration and consents

1.8.1 Limitations

SRK's opinion contained herein is based on information provided to SRK by Jinyan throughout the course of SRK's investigations, which in turn reflects various technical and economic conditions at the time of writing. SRK has taken the technical information as provided by Jinyan in good faith.

This Report includes technical information, which requires subsequent calculations to derive subtotals, totals, averages and weighted averages. Where such calculations involve a degree of rounding, SRK does not consider such rounding to be material.

Jinyan has confirmed in writing to SRK that full disclosure has been made of all material information and that, to the best of its knowledge and understanding, the information provided by Jinyan was complete, accurate and true and not incorrect, misleading or irrelevant in any material aspect. SRK has no reason to believe that any material facts have been withheld.

1.8.2 Legal matters

SRK has not been engaged to comment on any legal matters. SRK is not qualified to make legal representations as to the ownership and legal standing of the mineral tenements that are the subject of this Report. SRK has not attempted to confirm the legal status of the mineral titles, joint venture (JV) agreements, local heritage or potential environmental or land access restrictions. SRK understands such matters are discussed elsewhere within Jinyan's prospectus.

1.8.3 Reliance on other experts

SRK has not performed an independent verification of the mining licence and land titles nor the legality of any underlying agreements that may exist concerning the permits, commercial agreements with third parties or sales contracts and instead has relied on information as provided to SRK by Jinyan's independent legal advisors.

The commodity price and inflation forecasts used in this Report for economic evaluation purpose is provided by Jinyan's industry expert, Frost & Sullivan (F&S), an independent market research and consulting company based in PRC.

1.8.4 Warranties

Jinyan has represented in writing to SRK that full disclosure has been made of all material information and that, to the best of its knowledge and understanding, such information is complete, accurate and true.

1.8.5 Indemnities

As recommended by the VALMIN Code (2015), Jinyan has provided SRK with an indemnity under which SRK is to be compensated for any liability and/or any additional work or expenditure resulting from any additional work required:

- which results from SRK's reliance on information provided by Jinyan or Jinyan not providing material information; or

- which relates to any consequential extension workload through queries, questions or public hearings arising from this Report.

1.8.6 Consent

SRK consents to this Report being included, in full, in Jinyan's HKEx listing documents in the form and context in which it is provided and not for any other purpose. SRK provides this consent on the basis that the Technical Assessment expressed in the Executive Summary and in the individual sections of this Report is considered with, and not independently of, the information set out in the complete Report.

Practitioner Consent

The Competent Person who has overall responsibility for the preparation of this Report is Ms Alison Cole. Ms Cole is a Member of the AIG and an associate consultant with SRK Consulting (Hong Kong) Limited and also an employee of Geos Mining, an independent mining consultancy based in Sydney, Australia. Ms Cole has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person as defined under the 2012 edition of the JORC Code. Ms Cole consents to the inclusion in this Report of the Mineral Resources and Ore Reserves in the form and context in which they appear.

The Competent Person who has overall responsibility for the Mineral Resources is Dr (Tony) Shuangli Tang. Dr Tang is a Member of the Australasian Institute of Geoscientists (AIG) and a full-time employee of SRK Consulting (Hong Kong) Limited. Dr Tang has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined under the 2012 edition of the JORC Code. Dr Tang consents to the inclusion in the Report of the Mineral Resources in the form and context in which they appear.

The Competent Person who has overall responsibility for the Ore Reserves is Mr Falong Hu. Mr Hu is a Fellow of the AusIMM and a full-time employee of SRK Consulting (China) Limited. Mr Hu has sufficient experience relevant to the style of mineralisation, type of deposit under consideration, and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the JORC Code. Mr Hu consents to the inclusion in the Report of Ore Reserves in the form and context in which they appear.

HKEx requirements

Ms Alison Cole meets the requirements of the Competent Person, as set out in Chapter 18 of the HKEx Listing Rules. Ms Cole is a Member of good standing of AIG; has more than five years' experience relevant to the style of mineralisation and type of deposit under consideration; is independent of the issuer applying all the tests in sections 18.21 and 18.22 of the Listing Rules; does not have any economic or beneficial interest (present or contingent) in any of the reported assets; has not received a fee dependent on the findings of this ITR; is not officer, employee of a proposed officer for the issuer or any group, holding or associated company of the issuer; and takes overall responsibility for the ITR.

1.8.7 Statement of SRK independence

Neither SRK, nor any of the authors of this Report, has any material present or contingent interest in the outcome of this Report, nor any pecuniary or other interest that could be reasonably regarded as capable of affecting their independence or that of SRK. SRK has no beneficial interest in the outcome of this Report capable of affecting its independence. SRK's fee for completing this Report is approximately HK$3 million. The payment of that professional fee is not contingent on the outcome of this Report.

1.8.8 Corporate capability

SRK is an independent, international group providing specialised consultancy services. Among SRK's clients are many of the world's mining companies, exploration companies, financial institutions, engineering, procurement and construction management (EPCM) and construction firms, and government bodies.

Formed in Johannesburg in 1974, the SRK Group now employs some 1,700 staff internationally in over 40 permanent offices in 20 countries on 6 continents. A broad range of internationally recognised associate consultants complements the core staff.

The SRK Group's independence is ensured by the fact that it is strictly a consultancy organisation, with ownership by staff. SRK does not hold equity in any projects or companies. This permits SRK's consultants to provide clients with conflict-free and objective support on crucial issues.

1.8.9 Stock exchange public report

SRK has prepared many public reports for the HKEx. Selected examples are listed in Table 1.1.

Table 1.1: Public reports prepared by SRK for disclosure on the HKEx

Company	Year	Project Name
Zijin Gold International	2025	Listing on HKEx
Jiaxin International Resources Investment	2025	Listing on HKEx
Xinjiang Xinxin Mining Industry	2025	Major acquisition
Chifeng Jilong Gold Mining	2025	Listing on HKEx
Persistence Resources Group	2024	Listing on HKEx
Huaibei GreenGold	2023	Listing on HKEx
China Graphite	2022	Listing on HKEx
Pizu Group	2020	Major acquisition

Company	Year	Project Name
Heaven-Sent Gold Group	2019	Listing on HKEx
China UniEnergy	2016	Listing on HKEx
China Mining Resources	2016	Major acquisition
Agritrade Resources	2015	Major acquisition
Feishang Non-metals	2015	Listing on HKEx
Future Bright Mining	2014	Listing on HKEx
Hengshi Mining	2013	Listing on HKEx
Jinchuan Group International	2013	Major acquisition
China Daye Non-Ferrous	2012	Very substantial acquisition
MMG	2012	Very substantial acquisition
China Nonferrous Metal Mining	2012	Listing on HKEx
China Hanking Holdings	2011	Listing on HKEx
CNNC International	2010	Major acquisition
Sino Prosper	2010	Major acquisition
United Company RUSAL	2010	Listing on HKEx

Source: SRK, 2025

1.9 Project team

This Report has been prepared by a team of SRK consultants and associates from SRK's offices in Hong Kong, Beijing, Almaty and Brisbane. The qualifications and experience of the consultants and associates who carried out the work in this Report are listed in Table 1.2. They have extensive experience in the mining industry and are members in good standing of appropriate professional institutions.

Table 1.2: Details of qualifications and experience of the project team

Specialist	Position/Company	Responsibility	Length and type of experience	Site inspection	Professional designation
(Gavin) Heung Ngai Chan	Principal Consultant/ SRK Hong Kong	Project Management, capital and operating costs and report compilation	19 years – 16 years in consulting specialising in valuation, financial modelling, project evaluation, geological modelling and resource estimation; 3 years in academia	10-11 October 2024	BSc, MPhil, PhD (Earth Sciences), GradDip (AppFin), GradCert (Geostats), FAIG

Specialist	Position/Company	Responsibility	Length and type of experience	Site inspection	Professional designation
(Tony) Shuangli Tang	Senior Consultant/ SRK Hong Kong	Geology and Mineral Resource	9 years – 2 years in exploration geology and valuation; 7 years in consulting specialising in geological modelling and resource estimation	3-4 October 2024	BSc, MSc, PhD, MAusIMM, MAIG
Alison Cole	Associate Principal Consultant/ SRK Hong Kong	Geology and Mineral Resource, Competent Person taking overall responsibility of the Report	35 years – 16 years in consulting specialising in industrial minerals including heavy mineral sands, dimension stone, aggregate, clays. Exploration, project evaluation and review	10-11 October 2024	BSc, MSc, MAIG
Falong Hu	Principal Consultant/ SRK China	Mining and Ore Reserve	16 years – 3 years in mining engineering; 13 years in consulting specialising in mine planning, technical studies and Ore Reserve estimation	24-25 October 2024	MBA, BEng, FAusIMM
Bruno Strasser	Associate Principal Consultant/ SRK China	Mining and Ore Reserve	30 years – 13 years in mining, processing and construction project, 17 years in consulting	No site visit	BEng, MSc, MAusIMM
Lanliang Niu	Principal Consultant/ SRK China	Mineral processing	38 years – 20 years in academic research and gold and rare earth mines processing; and 18 years in consulting specialising in mineral processing	24-25 October 2024	BEng, MAusIMM
Nan Xue	Principal Consultant/ SRK China	Environmental and Social	18 years – 18 years in consulting specialising in environmental impact assessment and environmental technical studies	24-25 October 2024	BSc, MSc, MBA, MAusIMM

Specialist	Position/Company	Responsibility	Length and type of experience	Site inspection	Professional designation
Minhua Wang . . .	Associate Principal Consultant/ SRK Hong Kong	Geotechnical Engineering and hydrology	38 years – 38 years in coal resources exploration, mine geology, mining, geotechnical engineering and hydrological hazard management	3-4 October 2024	BEng, CCICT, CMSS
Robin Simpson . .	Principal Consultant/ SRK Kazakhstan	Peer review — Geology and Mineral Resource	25 years – 7 years in mine and exploration geology, 19 years in consulting	No site visit	BSc (Hons), MSc, MAIG
Jeames McKibben .	Principal Consultant/ SRK Australasia	Overall Report	30 years in consulting specialising in valuation and corporate advisory; 2 years as an analyst; 8 years in exploration and project management roles	No site visit	BSc (Hons), MBA, MRICS, FGSA, FAusIMM(CP)

Source: SRK, 2025

2 JINYAN KAOLIN PROJECT

2.1 Location

The Jinyan Kaolin Project comprises an underground kaolin mining operation and two processing plants, a Chamotte Plant and Mullite Precision Casting Sand and Powder Plant, which are collectively situated in the northern part of Anhui Province in eastern China. The Project is located in Shuoli Township, Duji District, Huaibei City, approximately 15 km northeast of Huaibei City centre and 535 km northwest of Shanghai (Figure 2.1).

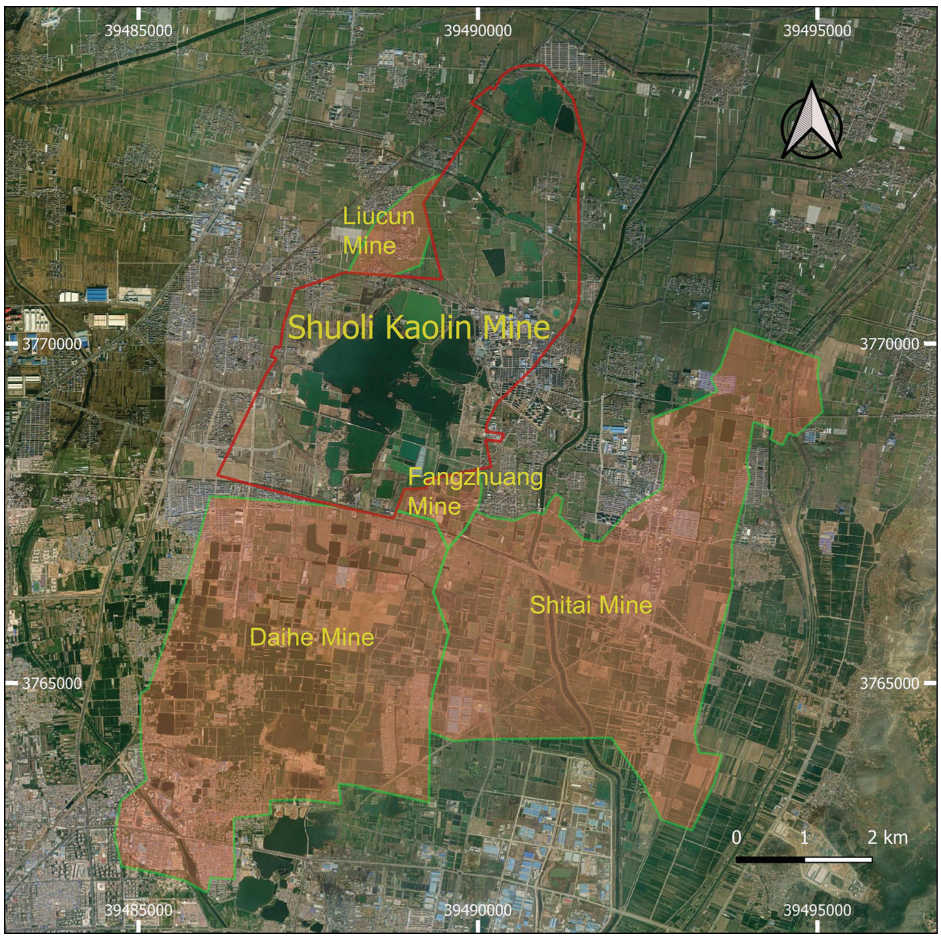
Figure 2.1: Location map of the Project

Source: SRK, 2025

2.2 Adjacent mining operations

The Project is surrounded by four historical coal mining operations: to the south are the Daihe and Fangzhuang coal mines; to the northwest is the Liucun coal mine, and to the southeast is the Shitai coal mine (Figure 2.2).

Figure 2.2: Adjacent coal mines



Source: Jinyan, 2025

All four coal mines operated for decades. They are all now depleted for coal. The last one (Shitai) was closed in 2022.

- The Daihe coal mine commenced operation in December 1965 and closed in 2017. Annual production capacity was 1.2 Mt.
- The Shitai coal mine commenced production in 1975 and closed in 2022. Annual production capacity was 1.5 Mt.

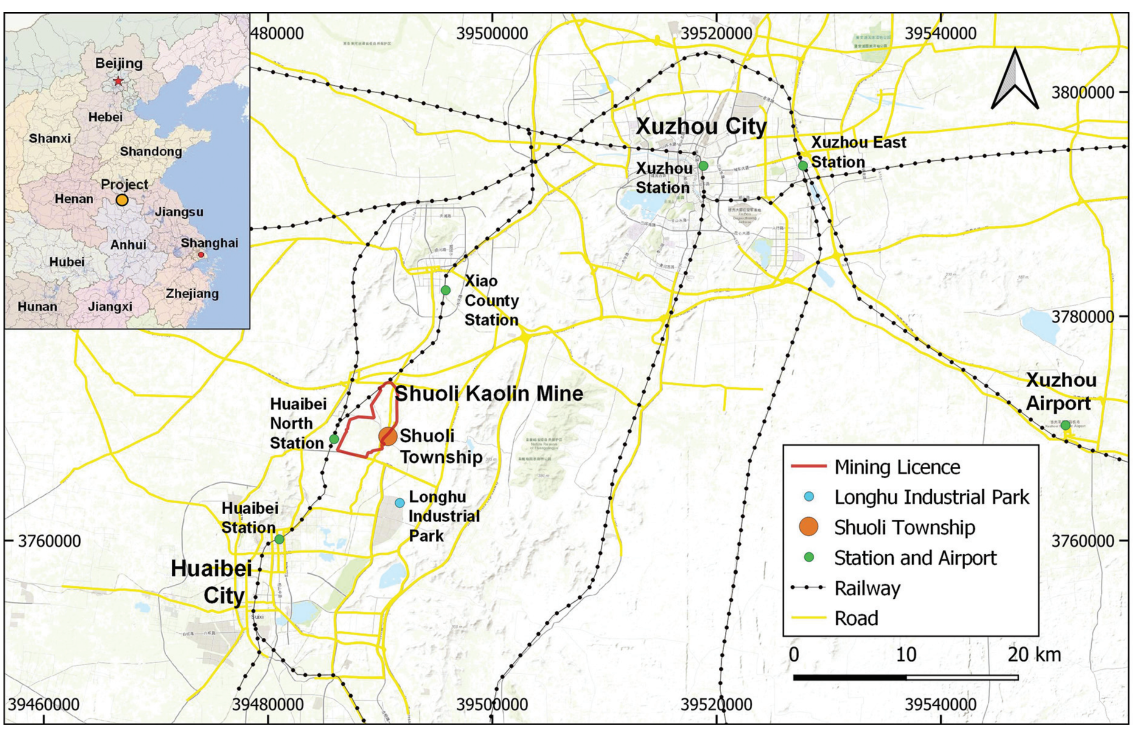
- The Liucun coal mine commenced production in 1998 and closed in November 2009. Annual production capacity was 50,000 t.
- The Fangzhuang coal mine commenced production in 1986 and closed in 2014. Annual production capacity was 0.12 Mt.

2.3 Access, climate and physiography

2.3.1 Accessibility

The Project is situated 15 km northeast of Huaibei City centre and can be accessed by vehicle in 30 minutes. The Huaibei North Station is located 7 km from the Project, while the Xiao County Station is situated 23 km away. The Mullite Precision Casting Sand and Powder Plant is located in the Longhu Industrial Park which is connected to the Shuoli processing plant by paved road for approximately 9 km. The nearest international airport is in Xuzhou City, Jiangsu Province, with regular flights to key cities in China and adjacent countries. The distance from Xuzhou Airport to Project site is approximately 70 km (Figure 2.3).

Figure 2.3: Project location



Source: SRK, 2025

2.3.2 Climate

The local climate is characterised by a warm temperate to semi-humid monsoonal climate. Winters are cold, dry, and windy, while summers are hot and rainy, with mild conditions in spring and autumn. The average annual temperature is 14.5°C. January is the coldest month, with an average temperature of -0.1°C and July is the hottest month, with an average temperature of 27.5°C.

The average annual precipitation is 847.2 mm, and the maximum monthly precipitation is 601.5 mm. Precipitation is unevenly distributed throughout the year, with 55–60% occurring from June to August. The predominant wind direction is southeast and east in spring and summer, and changes to north in winter. There are no climatic impediments to year-round exploration and development activities at the Project.

2.3.3 Physiography

The Project lies in the northern part of the Huaibei Plain, an area characterised by low relief with elevations ranging from 32 m to 35 m above sea level (asl). The Mine is covered by a Quaternary alluvial layer (40–80 m thick). The terrain is higher in the north and lower in the south.

There are no natural rivers; however, there is an artificially constructed river that runs through Gewa Village (葛窪村) to the east. Due to historical coal mining, a total of 14 km^2 of surface subsidence and water pooling occur in the western, southern and eastern parts of the Project's mining licence, with subsidence reaching depths of 8.0 m (Figure 3.2). Some of these subsidence areas have been backfilled and reclaimed, while others have been transformed into an artificial lake. Currently, the total area of remaining surface water bodies is 8.07 km^2. The maximum water depth is 6.5 m.

3 PROJECT OVERVIEW

3.1 Background

The Shuoli Kaolin Mine, formerly known as the Shuoli Coal Mine, commenced production in 1971 and was formally closed in 2019 after the coal resources were depleted. Following the cessation of coal production, all personnel, mining equipment and infrastructure from the former coal mine was repurposed towards kaolin production.

Kaolin within the Project area is found in a hard alumina-rich mudstone layer, averaging 2 m in thickness, located approximately 16 m below the main coal seam at depths ranging from 50 m to 250 m beneath the surface. Although the kaolin layer is continuous, it is divided into five domains, based on impurity contents, specifically Fe_2O_3 less than 2% and TiO_2 less than 0.6% (Figure 5.3).

Since 1997, the kaolin deposit has been extracted using the longwall mining method, similar to the previous coal mining operation. The current kaolin mining operations have focused on Domain 5, located in the southern part of the mining licence area, with dimensions of 1,800 m by 940 m and an average thickness of 2.5 m. The Mine has a design mining capacity of 0.5 Mtpa, but the actual mining volume was approximately 0.3 Mt in 2023 due to constraints in the market demand. As at 31 December 2023, the total kaolin depletion amounted to 3.03 Mt.

Jinyan has recently expanded the Chamotte Plant. It now consists of four rotary kiln production lines and two shaft kiln production lines, with a total annual production volume of 0.34 Mt (Figure 3.1). The plant produces various products, including crushed and screened kaolin ores, which are commercially referred to as raw coke and raw powder as well as refractory mullite, commercially known as chamotte. The calcined kaolin from the rotary kilns is transported to the Mullite Precision Casting Sand and Powder Plant located in the Longhu Industrial Plant where it is processed to produce precision casting mullite sands and powder products. Jinyan has developed a new ceramic fibre product, with commercial production expected to commence in first quarter of 2025. This new production line is also located at the Chamotte Plant. The waste generated during processing is used to produce non-fired bricks.

Figure 3.1: Aerial view of the Chamotte Plant

Source: SRK site visit, October 2024

3.2 Mining licence

Since 2021, Jinyan has owned the mining licence of the Shuoli Kaolin Mine, granted by the Huaibei Municipal Bureau of Natural Resources and Planning. The current licence was renewed on 6 March 2024 and is valid until 20 November 2039 (C3400002019117120148949). The licence covers an area of 17.9955 km^2 and permits kaolin production from depths between -50 m asl and -240 m asl. The mining licence coordinates are presented in Table 3.1 and shown in Figure 3.2. The approved annual production capacity is 0.5 Mt.

Table 3.1: Shuoli mining licence coordinates

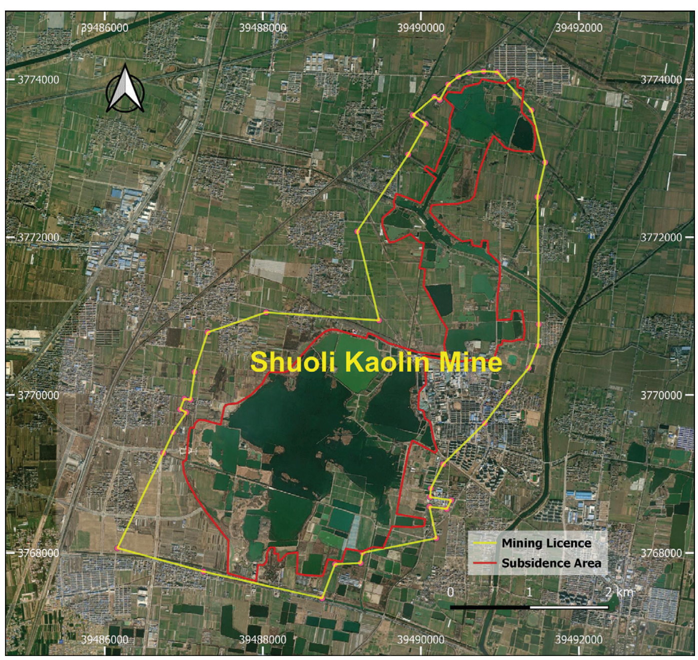
Corner	X	Y
1	39490195	3768184
2	39489262	3768000
3	39489238	3767870
4	39488914	3767854
5	39488751	3767423
6	39487250	3767762
7	39486161	3768059
8	39486742	3769264
9	39486865	3769527
10	39487031	3769778
11	39486953	3769817
12	39487007	3769952
13	39487085	3769940
14	39487136	3770291
15	39487302	3770793
16	39488041	3771047
17	39489471	3770945
18	39489195	3772072
19	39489840	3773047
20	39490062	3773437
21	39489898	3773545
22	39490172	3773780
23	39490239	3773740
24	39490345	3773936
25	39490472	3774033
26	39490610	3774085
27	39490795	3774102
28	39490970	3774092
29	39491400	3773609
30	39491573	3772947
31	39491475	3772510

Corner	X	Y
32	39491492	3770894
33	39491483	3770622
34	39491366	3770342
35	39491105	3770035
36	39490808	3769641
37	39490282	3769122
38	39490127	3768817
39	39490117	3768706
40	39490385	3768665
41	39490328	3768555
42	39490110	3768584

Source: Jinyan, 2025

Note: Xi'an 1954 projection.

Figure 3.2: Mining licence projected on satellite image



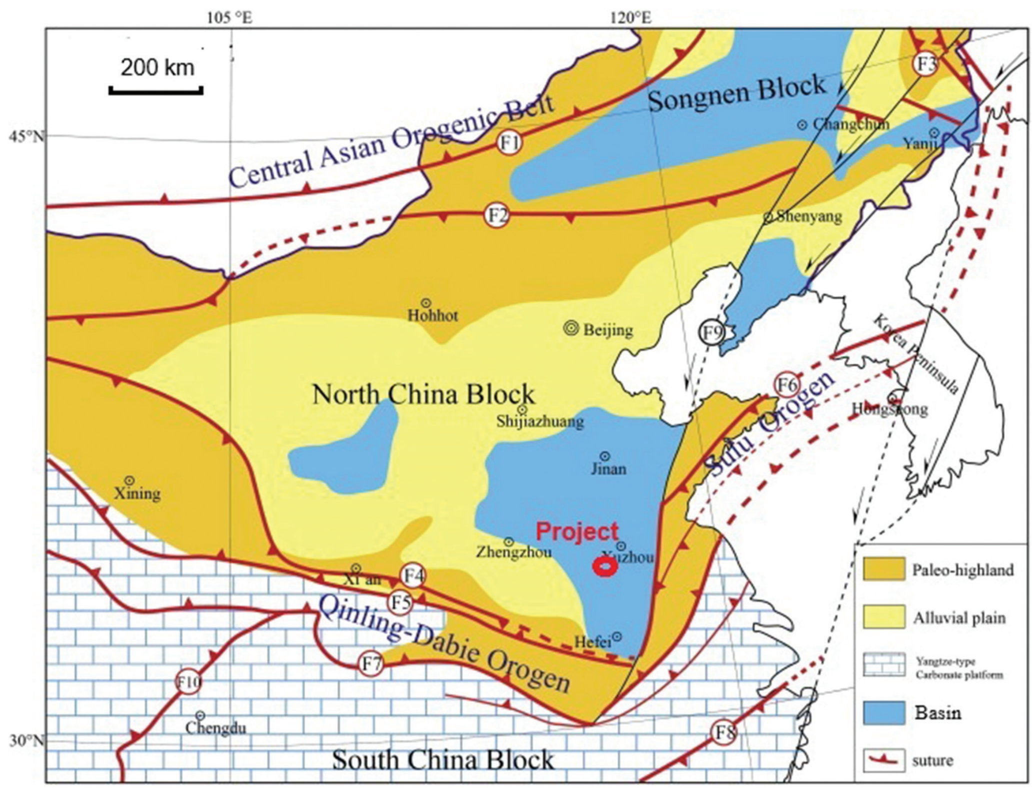
Source: Jinyan, 2025

4 GEOLOGICAL SETTING AND MINERALISATION

4.1 Regional geology

Tectonically, the Project is located in the southern part of Xuhuai Basin, along the southeastern edge of the North China Block (Figure 4.1). The Xuhuai Basin is bound to the east by the Tanlu Fault Zone and to the south by the Qinling-Dabie Orogen.

Figure 4.1: Tectonics map of North China Block in Late Permian

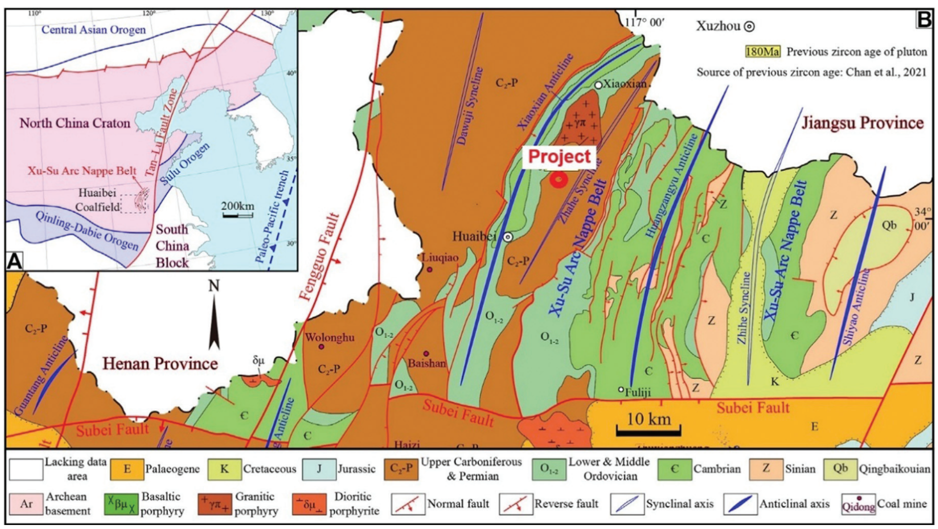


Fault names: F1-Hegenshan-Heihe Suture; F2-Solonkor Suture; F3-Mudanjiang Suture in NE China; F4-Kuanping Suture and its extension; F5-Shangdan Suture and its extension; F6-Wulian-Yantai Suture (an eastern extension of the Shangdan and Kuanping sutures); F7-Mianlue Suture and its extension; F8-Jiangshao Suture; F9-Tan-Lu Fault; F10-Longmenshan Transpressional Fault

Source: modified after Li et al., 2017.

The Project is part of the Xu-Su Arc Nappe Belt and is mainly controlled by the north-northeast trending Fengpei Fault and the east-west trending Subai Fault. It is also deformed by the north-south trending Zhahe Syncline and Xiaoxian Anticline (Figure 4.2). The area is underlain by Carboniferous and Permian rocks, primarily consisting of coal-bearing clastic rocks. Above this sedimentary layer, there are Neogene and Quaternary rocks which include semi-consolidated and loose clay, sub-clay, fine sand, and sub-sandy soil, with some local gravel layers. Magmatic rocks, including quartz porphyry, diorite and diabase, are reported to intrude the strata in the Huaibei area, typically appearing as stocks, dykes, sills and veins. However, these magmatic rocks are not observed in the Project area.

Figure 4.2: Structural geological map of Huaibei area



Source: modified after Gu et al., 2023

4.2 Local geology

4.2.1 Stratigraphy

The stratigraphy of the Shuoli Kaolin Mine from the oldest to the youngest includes the Carboniferous Taiyuan Formation, Permian Shanxi Formation, Lower Shihezi Formation, Upper Shihezi Formation and Quaternary residual deposits (Table 4.1).

Table 4.1: General stratigraphy

Period	Stratum	Description	Average thickness *(m)*	Key features
Quaternary		Yellowish-brown, reddish-brown or greenish-yellow sandy clay, clayey sand, silt and gravel.	61	
Permian	Upper Shihezi Formation	Conformably overlies the underlying strata, which consist of grey to grey-white siltstone and sandstone, grey to purple mudstone, and thin coal seams.	89	The basal layer consists of grey to grey-white fine to medium sandstone (12 m). This layer marks the boundary between the lower and upper Permian and serves as a key marker unit known as the K3 index layer.
Permian	Lower Shihezi Formation	Conformably overlies the Shanxi Formation. Dark grey to grey mudstone, grey to light grey sandstone, and the main coal seams.	190	It contains 6 coal seams, with the No. 3 and No. 5 seams being the main seams. An aluminous mudstone layer at the basal unit serves as the marker unit known as the K2 index layer. This is the target kaolin layer.

Period	Stratum	Description	Average thickness (m)	Key features
Permian	Shanxi Formation	Conformably overlies the Taiyuan Formation.	139	Grey to dark grey siltstone to coarse sandstone, mudstone, and thin coal seams. It contains No. 6 and No. 7 coal seams.
Carboniferous. .	Taiyuan Formation	Conformably overlies the underlying strata, primarily limestone with thin layers of fine sandstone, siltstone, and mudstone with coal seams.	143	The top layer is a dense black mudstone (11 m), marking the boundary with the Shanxi Formation. Below is a grey fossiliferous limestone layer (1.35 m), serving as a marker unit known as the K1 index layer.

Source: Jinyan, 2025

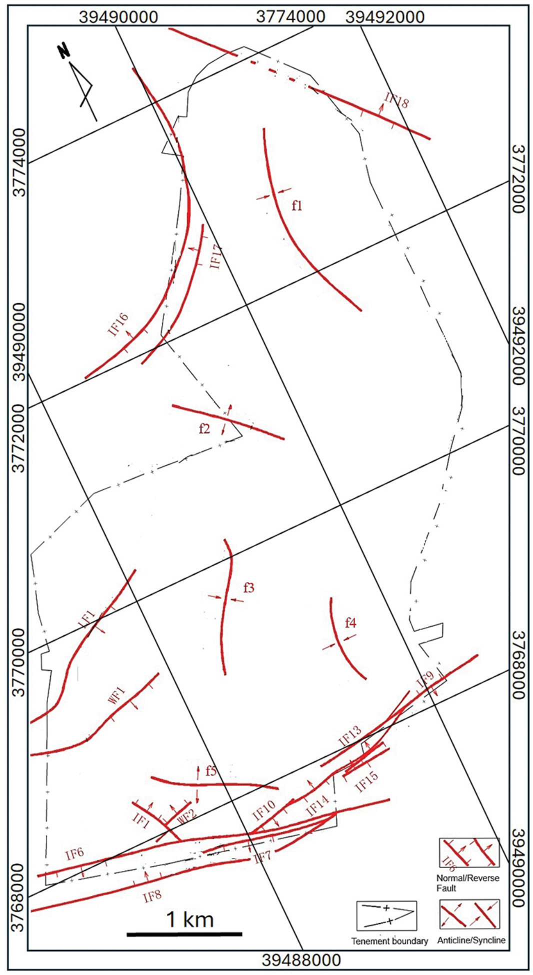
In the Permian Lower Shihezi Formation, the basal unit is represented by the light grey to grey-green aluminous mudstone layer. This layer occurs throughout the Project area, and is only partially absent in the northwest and southwest. Its average thickness is approximately 5 m, and the maximum thickness is 9.4 m. The layer is dense and blocky, with a slippery texture, containing purple patches and oolitic siderite with grain sizes of 0.5-1.0 mm. Due to its consistency and distinctive textures, this layer serves as an important marker unit (K2 index layer) for identifying the base of the Lower Shihezi Formation and for coal seam identification. It is also the host depositional layer of the Project's defined kaolin mineralisation, which is the focus of this Report.

4.2.2 Structure

The Project is located on the western limb of the regional Zhahe Syncline of the Huaibei Coalfield, where broad and gentle secondary folds are well developed.

In the central part of the Project area, the Cuolou Anticline (f2) divides the region into two secondary structural domains: the Huangwan Syncline (f3) to the south and the Gewa Syncline (f1) to the north (Figure 4.3). These folds trend northeast to northwest and appear to have been refolded in a north-south direction. The strata in the area dip gently to moderately. In the southern and southeastern parts of the Project area, a system of faults trending east to northeast form the Project's natural boundary.

Figure 4.3: Shuoli Kaolin Mine structural geology map



Source: Jinyan, 2025

Folds in the Project area include:

- Gewa Syncline (f1): Located in the north, it is the second largest structure, 3,100 m long, with dip angle ranging between 10° and 24°, steeper on the eastern side.

- Cuolou Anticline (f2): In the centre, this gently southeast dipping anticline is about 1,100 m long, with dip angle ranging between 8° and 6°.

- Huangwan Syncline (f3): On the southwestern side, it has a north-south axis and is 1,900 m long, with dip angle ranging between 6° and 17°.

- Wangtanzhuang Syncline (f4): Located on the eastern side, it is 1,400 m long, with steep dip angle ranging between 16° and 24° in the eastern limb and a fault (IF19) with nearly 20 m of displacement.

- Liuyuan Anticline (f5): In the south, this anticline is about 1,100 m long, with dip angle ranging between 6° and 17°.

Faults are mostly on the southern and eastern sides of the Liuyuan Anticline (f5). In total, there are 22 faults with displacements of 10 m or more, comprising:

- 1 fault with displacement of >100 m

- 3 faults with displacement of 50-100 m

- 10 faults with displacement of 20-50 m

- 8 faults with displacement of 10-20 m.

The faults include 14 normal faults and 8 reverse faults. Based on the fault orientation, these structures can be categorised into three groups, east-west, north-south, and north, with the east-west faults being the largest in scale.

Key faults are:

- IF6 Normal Fault: Southern boundary, with 28-60 m displacement, extending over 3.3 km.

- IF10 Normal Fault: Southern boundary, with 8-50 m displacement and a length of 375 m.

- IF9 Reverse Fault: Southeastern boundary, with 6-46 m displacement, extending 1.4 km.

- IF18 Reverse Fault: Northern boundary, with 54-110 m displacement, extending over 3.3 km.

These faults are mainly in areas where no kaolin mining activities are planned.

4.3 Mineralisation

The kaolin deposit is hosted by the aluminous mudstone within the basal unit of the Permian Lower Shihezi Formation, known as the K2 index layer. This aluminous mudstone unit is located 12-24 m beneath the No. 5 coal seam.

Although the kaolin layer is continuous, it has been divided into five separate domains based on impurity contents, specifically where Fe_2O_3 is less than 2% and TiO_2 is less than 0.6%. The mineralisation layer extends from 50 m to 240 m below surface and varies in thickness from 0.77 m to 4.76 m. The entire layer dips gently, ranging from approximately 5° to 13°.

5 EXPLORATION AND DRILLING

Between 1957 and 2006, several exploration campaigns targeting coal and kaolin deposits were conducted in the area. In September-October 2024, Jinyan conducted an infill and validation drilling program based on SRK's recommendations.

5.1 Historical exploration

The historical exploration campaigns took place in three distinct phases:

- an initial coal resource exploration phase from 1957 to 1966
- a combined exploration and active mining phase from 1970 to 1986
- a kaolin exploration phase from 1991 to 2006.

5.1.1 1957-1966 coal exploration

From 1957 to 1966, the Anhui Province Geology Bureau 325 Brigade (Anhui 325 Brigade) completed 206 drill holes for a total of 42,588.37 m. In accordance with the Chinese coal exploration standard, the drill spacing was approximately 500 m × 500 m.

During this phase, 198 drill holes were cored for coal and kaolin, with an average core recovery rate of 71%. From 1957 to 1962, the core recovery rate was lower, averaging 63%, with 45% of the drill holes exceeding a 75% recovery rate. In 1965, the average core recovery rate was 74%, with 80% of the drill holes achieving recovery over 75%. The highest core recovery rate was in 1964, averaging 76%, with 86% of the drill holes achieving recovery over 75%. Of the 198 drill holes, 178 intercepted coal seams, with an average core recovery rate of 83%. SRK compiled the information received for 163 drill holes, with a total length of 30,925.52 m.

For kaolin sampling, 79 drill holes were cored and 457 core samples were collected. The analyses included SiO_2, Al_2O_3, Fe_2O_3, TiO_2 and Loss on Ignition (LOI). Some samples were also tested for CaO, MgO, K_2O, Na_2O and SO_3. A total of 123 samples were also taken for bulk density analysis.

5.1.2 1970-1986 exploration

From 1970 to 1986, further exploration was conducted: 122 drill holes for a total length of 26,984.25 m were completed. The nominal drill spacing was 300 m × 350 m.

Drill holes completed between 1971 and 1972 had a relatively low average recovery rate (69%), while those from 1985 to 1986 had a higher average recovery rate of 85%. Downhole geophysical surveys were carried out on most of the drill holes. The kaolin layers exhibit several characteristics, including low to medium apparent resistivity, medium gamma response and high anomaly values in natural gamma due to the elevated clay content. The resistivity ranged from low to medium, while conductivity was classified as medium. SRK compiled the information received for 117 drill holes, with a total length of 24,589.07 m.

For kaolin sampling, 54 drill holes were cored, resulting in the collection of 183 core samples. The analyses included SiO_2, Al_2O_3, Fe_2O_3 and TiO_2 content, and LOI. Some samples were also tested for CaO, MgO, K_2O, Na_2O and SO_3, with 98 bulk samples collected.

5.1.3 1991-2006 kaolin exploration

From 1991 to 2006, 31 underground drill holes were completed targeting the K2 layer, totalling 761.95 m along with 36 underground channels measuring 114.87 m at a spacing of 100 m × 200 m. The drill holes had a core diameter of 75 mm, achieving a core recovery rate of 75-100%. Specifically, the average recovery rate for downward drill holes was 86%, while upward drill holes had a 100% recovery rate.

Channels were excavated in underground workings where kaolin layers were exposed during coal production. The dimensions of these channels were 10 cm × 5 cm.

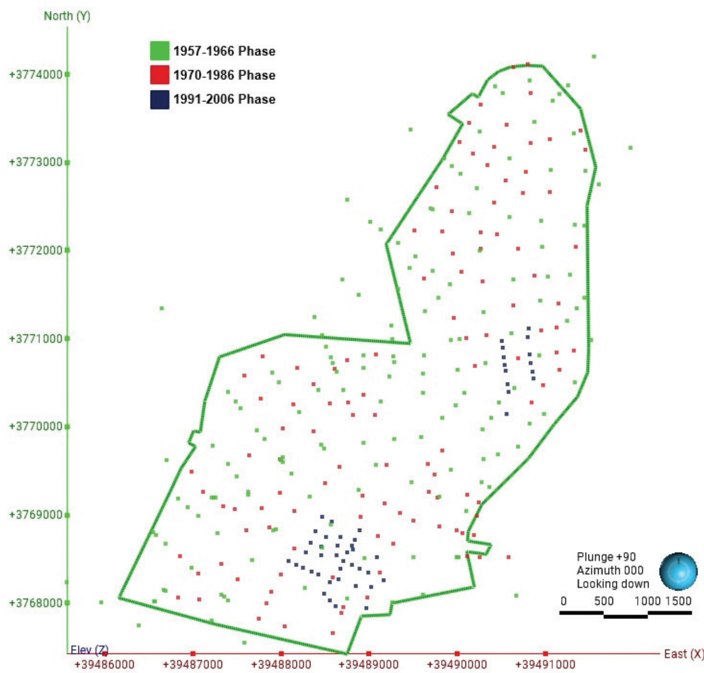
A total of 255 channel and core samples were collected for geochemical analysis and mineralogical analysis. The analyses included SiO_2, Al_2O_3, Fe_2O_3 and TiO_2 content, and LOI. An additional 16 samples were collected for bulk density tests and processing tests.

SRK received details relating to all 255 samples: 167 samples from 29 underground drill holes, with an aggregated length of 671.84 m, and 88 channel samples with a total length of 108.37 m.

5.1.4 Summary

A total of 200 drill holes and channels were completed for kaolin sampling during historical exploration; however, these core or pulp samples were not preserved. Of these, SRK used 138 drill holes and channels for resource estimation purposes, based on core recoveries exceeding 80%. The drill holes and channels from these three historical exploration phases are illustrated in the plan view map shown in Figure 5.1.

Figure 5.1: Plan view of historical drill holes and channels



Source: SRK, 2025

The information on all drill holes and channels is summarised in Table 5.1. The database provided to SRK is summarised in Table 5.2.

Table 5.1: Summary of historical drill holes and channel samples

Phase		Drill hole	Length	Assay
		(counts)	*(m)*	*(counts)*
1957-1966	Drill hole	206	42,588.37	unknown
	Kaolin cored	79	unknown	457
1970-1986	Drill hole	122	26,984.25	unknown
	Kaolin cored	54	unknown	183
1991-2006	Drill hole	31	761.95	unknown
	Kaolin cored	31	761.95	unknown
	Channel	36	114.87	unknown
Total	**Drill hole and channel**	**395**	**70,449.44**	**unknown**
	Kaolin cored and channel sampled	**200**	**>876.82**	**>640**

Source: SRK, 2025

Table 5.2: Drill hole and underground channel database

Phase		Drill hole	Length	Assay
		(counts)	*(m)*	*(counts)*
1957-1966.	Drill hole	163	30,925.52	
	Kaolin cored	45	8,428.23	267
1970-1986.	Drill hole	117	24,589.07	
	Kaolin cored	42	8,756.45	151
1991-2006.	Drill hole	29	671.84	
	Kaolin cored	29	671.84	167
	Channel	22	108.37	88
Total.	**Drill hole and channel**	**331**	**56,294.80**	
	Kaolin cored and channel sampled	**138**	**17,964.89**	**673**

Source: SRK, 2025

5.2 2024 infill and validation drilling

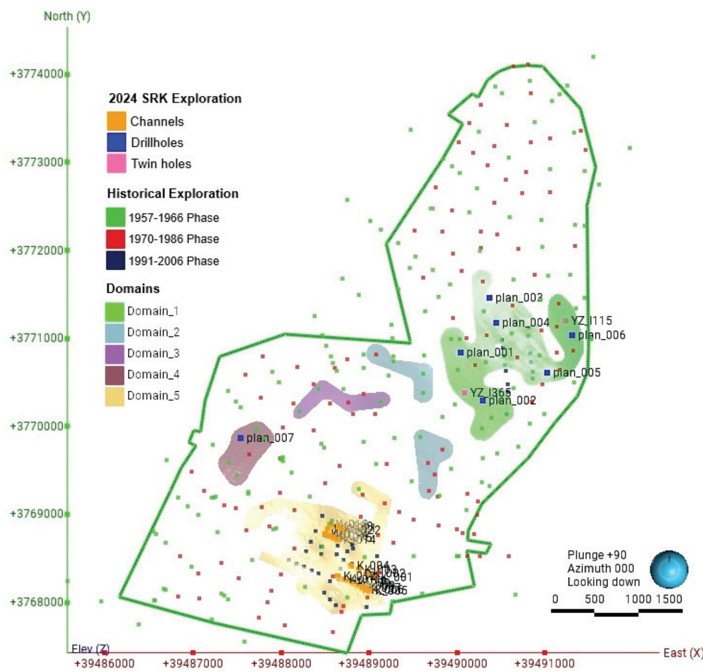
In October 2024, Jinyan conducted an infill and validation program aimed at upgrading the defined resource categories and validating the historical exploration results, as recommended by SRK. This program included 7 diamond drill holes, 21 underground channels and 2 validation holes (Figure 5.2).

Figure 5.2: Verification drilling and underground channel sampling

Source: SRK, 2024

The plan view of the location for these drill holes and channels is presented in Figure 5.3. Table 5.3 presents the statistics for the 2024 validation program. A total of 218 samples were taken for determination of Al_2O_3, SiO_2, Fe_2O_3 and TiO_2 contents, and LOI analyses.

Figure 5.3: 2024 infill and validation program



Source: SRK, 2025

Table 5.3: 2024 infill and validation program statistics

Type	Drill hole	Length	Sample
	(count)	*(m)*	*(count)*
Drilling (Diamond core)	7	1,154.76	80
Channel sampling	21	58.90	120
Validation hole	2	290.23	18
Total	**30**	**1,503.89**	**218**

Source: SRK, 2025

6 SAMPLE PREPARATION AND ASSAYING

6.1 Historical samples

6.1.1 Sample preparation

Historical samples were prepared according to prevailing Chinese standard protocols. The samples were crushed and subsequently pulverised to a fine particle size of 150 μm. Pulp samples weighing 50 g each were analysed to determine the SiO_2, Al_2O_3, Fe_2O_3 and TiO_2 contents, and LOI. Some aliquots were further tested for CaO, MgO, K_2O and Na_2O contents.

SiO_2 and LOI were determined by gravimetric methods, Al_2O_3 by volumetric methods, Fe_2O_3 by the o-phenanthroline colorimetric method, and TiO_2 by the diantipyrylmethane photometric method. CaO, MgO, K_2O and Na_2O were analysed using atomic absorption spectroscopy (AAS).

6.1.2 Quality assurance and quality control

The quality assurance and quality control (QAQC) protocol adopted historically included laboratory duplicates and inter-laboratory checks. During the 1957-1966 exploration phase, 457 assays were submitted by the Anhui 325 Brigade, which included 33 laboratory duplicates and 23 inter-laboratory checks (Table 6.1 and Table 6.2). The inter-laboratory duplicates were tested at the laboratory of the Anhui Geological Bureau. SRK considers the historical QAQC results to be satisfactory, with no material bias evident.

Table 6.1: Statistics for 1957-1966 exploration phase laboratory duplicates

	Primary			Duplicates				
Compound	Mean	Standard deviation	Median	Mean	Standard deviation	Median	No. of pairs	Correlation coefficient
SiO_2	40.35	5.73	42.69	40.17	5.64	42.54	48	0.997
Al_2O_3	40.48	6.26	38.52	40.53	6.25	38.68	48	0.994
Fe_2O_3	2.49	5.02	1.16	2.48	4.98	1.22	48	1.000
TiO_2	0.74	0.47	0.57	0.72	0.43	0.58	48	0.990

Source: SRK, 2025

Table 6.2: Statistics for 1957-1966 exploration phase inter-laboratory check

	Primary laboratory			Umpire laboratory				
Compound	Mean	Standard deviation	Median	Mean	Standard deviation	Median	No. of pairs	Correlation coefficient
SiO_2	43.03	2.55	43.81	43.07	2.61	44.18	35	0.994
Al_2O_3	39.54	2.46	38.83	39.58	2.46	38.98	35	0.988
Fe_2O_3	1.23	0.94	0.84	1.21	0.93	0.82	35	0.995
TiO_2	0.68	0.42	0.54	0.67	0.43	0.51	35	0.984

Source: SRK, 2025

According to the Supplementary Exploration Geological Report by Anhui 325 Brigade, the laboratory used for the 1970-1986 exploration phase was Anhui 325 Brigade, which is the same laboratory used for the 1957-1966 exploration phase. No laboratory duplicates or QAQC programs were documented. A total of 183 samples were assayed.

In the 1991-2006 exploration phase, 255 assays were conducted at the Laboratory of Anhui Coal Field Geology Institution Third Exploration Team. This phase included 31 laboratory duplicates and 22 inter-laboratory checks (Table 6.3 and Table 6.4). The inter-laboratory checks were performed by the Nanjing Central Laboratory. SRK considers the historical QAQC results to be satisfactory, with no material bias evident.

Table 6.3: Statistics for 1991-2006 exploration phase laboratory duplicates

	Primary			Duplicates				
Compound	Mean	Standard deviation	Median	Mean	Standard deviation	Median	No. of pairs	Correlation coefficient
SiO_2	42.77	1.94	43.04	42.89	1.84	43.28	16	0.982
Al_2O_3	39.48	2.02	39.26	39.68	1.96	39.20	16	0.989
Fe_2O_3	1.19	0.88	0.74	1.16	0.84	0.69	16	0.998
TiO_2	0.49	0.11	0.48	0.51	0.13	0.49	16	0.967

Source: SRK, 2025

Table 6.4: Statistics for 1991-2006 exploration phase inter-laboratory check

	Primary laboratory			Umpire laboratory				
Compound	Mean	Standard deviation	Median	Mean	Standard deviation	Median	No. of pairs	Correlation coefficient
SiO_2	38.68	12.63	42.47	42.68	1.84	42.84	11	0.961
Al_2O_3	36.58	11.93	39.34	40.14	1.56	39.86	11	0.967
Fe_2O_3	0.89	0.62	0.69	0.86	0.64	0.66	11	0.998
TiO_2	0.52	0.18	0.45	0.47	0.08	0.47	11	0.949

Source: SRK, 2025

6.2 2024 infill and validation program

6.2.1 Sample preparation

Samples were prepared at the laboratory of the Henan Second Geological Exploration Institution (Henan Second Institution). Initially, assay samples were crushed into pebbles measuring 30 mm in size and then split using riffle dividers. The split samples were further crushed to a maximum size of 10 mm and thoroughly mixed. A 0.25 kg portion was then ground into a 0.25 mm powder using a disc pulveriser and subsequently split to obtain a 50 g aliquot. This aliquot was further ground in an agate mortar to produce pulps with a size of 150 μm. The prepared pulp samples were analysed to determine the SiO_2, Al_2O_3, Fe_2O_3 and TiO_2 contents, and LOI.

SiO_2 was determined using the gravimetric method. A 0.5 g sample was combined with 4-5 g of anhydrous sodium carbonate. The mixture was dissolved by heating with 50 mL of hydrochloric acid, and the precipitate from solution was placed in a muffle furnace up to 950°C. The fused sample was taken out and weighed. This was followed by addition of 0.5 mL sulfuric acid and 5 mL hydrofluoric acid to dissolve the fused sample. The sample was placed in the furnace and the temperature was increased to 950°C. The sample was then removed from the furnace and weighed again. The difference in weight between the two measurements was taken to be the weight of SiO_2 in the sample.

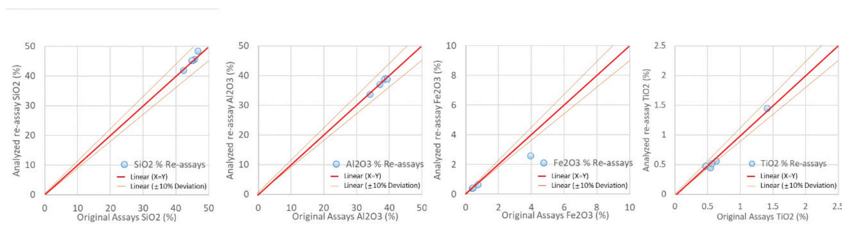
Al_2O_3 was determined using a volumetric method and Fe_2O_3 and TiO_2 were analysed by a colorimetric method. LOI was determined using the gravimetric method.

6.2.2 Quality assurance and quality control

Duplicate

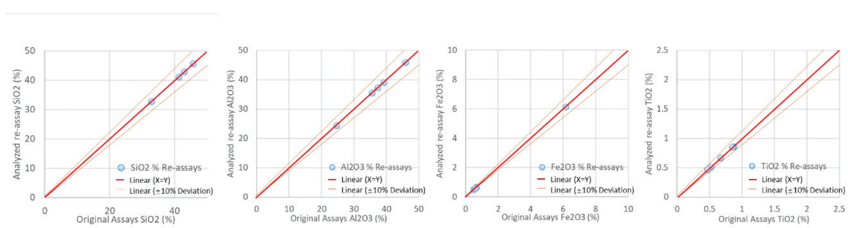
Five field duplicates, five coarse crushed duplicates and 11 pulp duplicates were included, which represented 9.6% of the 218 field samples. The results are shown in Figure 6.1, Figure 6.2 and Figure 6.3. SRK considers the results to be satisfactory, with no material bias evident.

Figure 6.1: Field duplicates



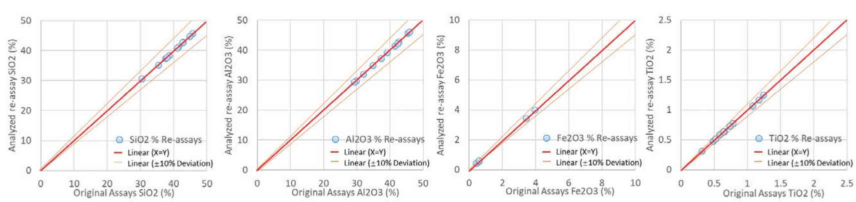
Source: SRK, 2025

Figure 6.2: Coarse crushed duplicates



Source: SRK, 2025

Figure 6.3: Pulp duplicates

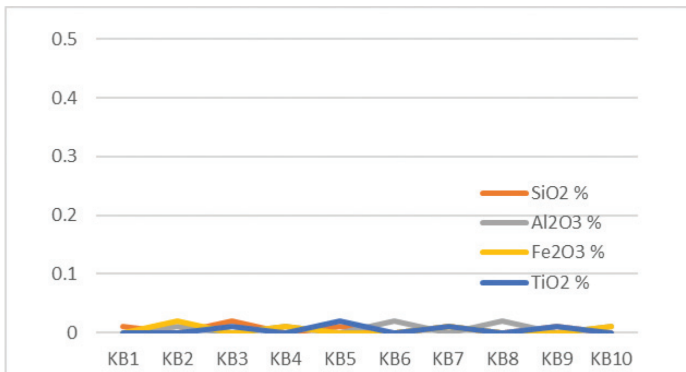


Source: SRK, 2025

Blanks

Ten blank tests were inserted in the sample batches at a frequency of one in every 25 samples. The blank is a test conducted on deionised water, but following the same procedures and conditions as normal sample measurement. The results were returned with values lower than 0.1%, demonstrating there were no contamination issues (Figure 6.4).

Figure 6.4: Blanks



Source: SRK, 2025

Standards

A total of 11 certified reference materials (CRMs) were inserted in the sample batches at a frequency of one in every 25 samples.

The CRM results, as well as the expected mean values and their acceptable limits, are presented in Figure 6.5 and Figure 6.6 and listed in Table 6.5. All results are within the expected values, except three SiO_2 grades of the GBW070025 samples that yielded a value slightly below the expected value (Figure 6.5, upper right). No systemic bias is evident.

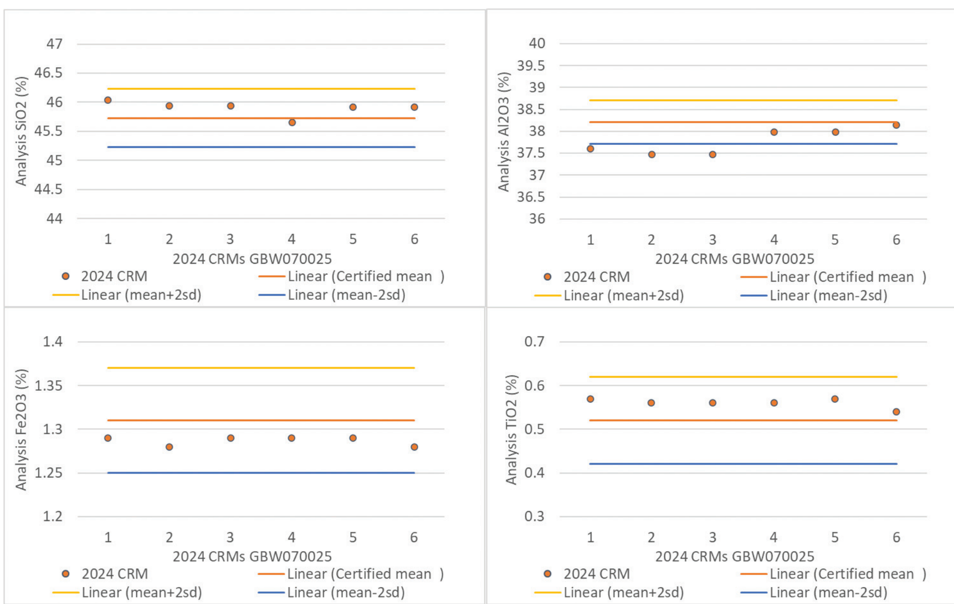
Table 6.5: Standards used in the program

Standard	Compound	Certified mean	Acceptable deviation limit (2 SD)	Unit	Number of samples
GBW070025	SiO_2	45.73	±0.50	%	6
	Al_2O_3	38.21	±0.50	%	6
	Fe_2O_3	1.31	±0.06	%	6
	TiO_2	0.52	±0.10	%	6

Standard	Compound	Certified mean	Acceptable deviation limit	Unit	Number of samples
			(2 SD)		
GBW03121a	SiO_2	43.41	±0.38	%	5
	Al_2O_3	34.77	±0.50	%	5
	Fe_2O_3	0.91	±0.28	%	5
	TiO_2	0.25	±0.04	%	5

Source: SRK, 2025

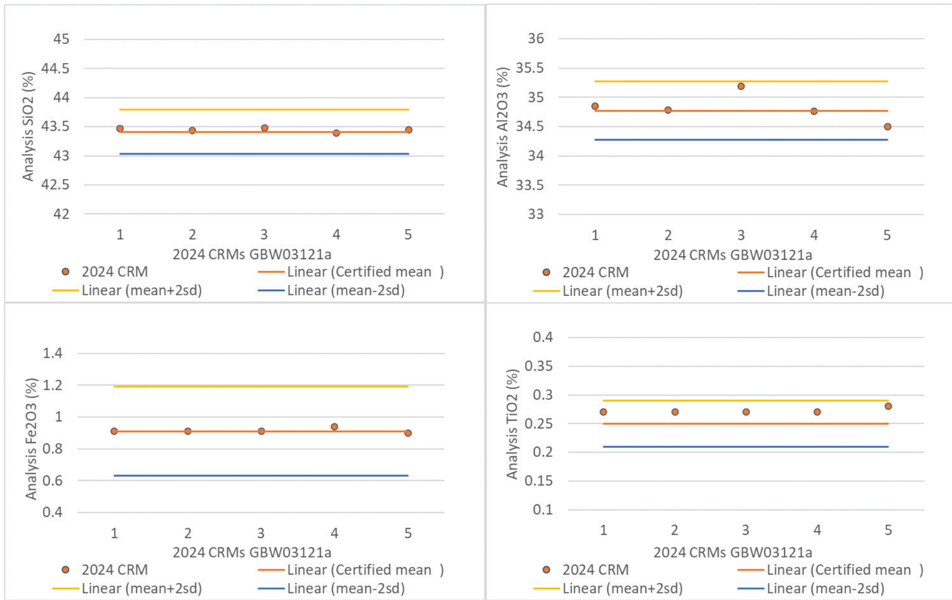
Figure 6.5: CRM GBW070025



Source: SRK, 2025

Note: Solid orange line represents the certified value while the yellow and blue lines indicate the ±2 SD levels.

Figure 6.6: CRM GBW03121a



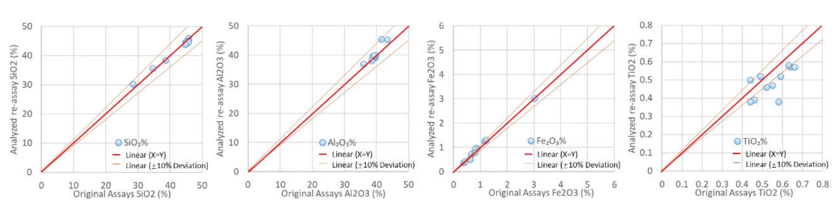
Source: SRK, 2025

Note: Solid orange line represents the certified value while the yellow and blue lines indicate the ±2 SD levels.

Independent laboratory checks

Eleven pulp duplicates were sent to the SGS Laboratory in Tianjin for inter-laboratory checks, which represented 5.0% of the 218 field samples. The results are shown in Figure 6.7.

Figure 6.7: Inter-laboratory checks



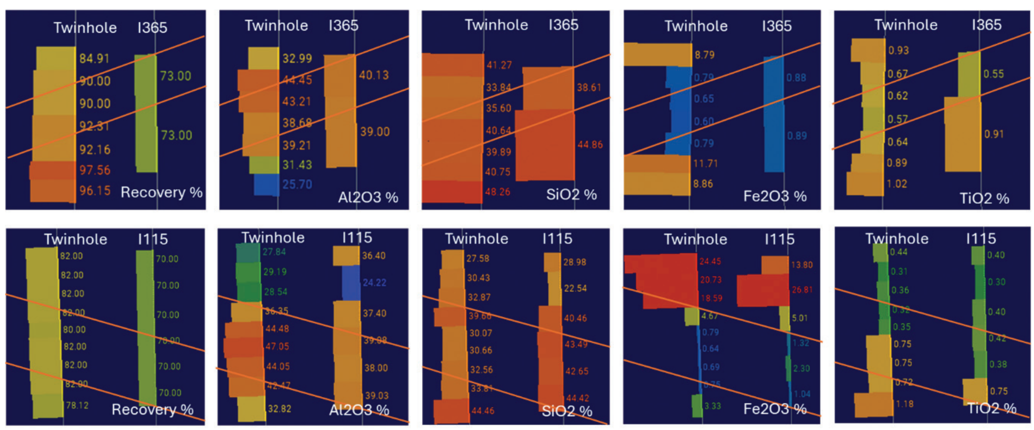
Source: SRK, 2025

SRK considers the results for SiO_2, Al_2O_3 and Fe_2O_3 to be satisfactory, with no significant bias detected. However, the results revealed a low bias in TiO_2 duplicates between the SGS Laboratory and the Henan Second Institution. SRK noticed that the assay method used by the SGS laboratory is X-ray fluorescence (XRF), which differs from wet chemistry methods employed by the Henan Second Institution. SRK recommends further investigation to determine the underlying cause of the bias.

6.2.3 Validation holes

Validation holes denoted as YZ_I365 and YZ_I115 were drilled close to historical drill holes I365 (2 m away) and I115 (14 m away), respectively (Figure 5.3). Core samples were collected from intersections of alumina-rich mudstones for assaying Al_2O_3%, SiO_2%, Fe_2O_3% and TiO_2%. The comparison between assay results from the validation holes results from the original holes is illustrated in Figure 6.8.

Figure 6.8: Validation holes comparison



Source: SRK, 2025

The assay result for validation hole YZ_I365 indicates a 1.02 m-thick mineralised zone, constrained by TiO_2 impurity. It is comparable to the 1 m-thick mineralised interval in I365. In the validation hole YZ_I115, the result indicates a 1.90 m-thick mineralised zone, constrained by Fe_2O_3 and TiO_2 impurities. It is comparable to the 2.09 m-thick mineralised interval in I115. These averaged grades indicated a reasonable consistency, except for a low-grade interval of SiO_2% in I115 (Table 6.6).

Table 6.6: Averaged grades comparison between validation holes and original holes

Compound	Validation hole_YZ_I365	I365	Validation hole_YZ_I115	I115
SiO_2%	38.12	38.61	33.24	43.52
Al_2O_3%	40.95	40.13	42.98	38.70
Fe_2O_3%	0.63	0.88	1.70	1.55
TiO_2%	0.60	0.55	0.54	0.52

Source: SRK, 2025

The results shown in Figure 6.8 demonstrate a good consistency in the interpretation of the mineralised layer between validation and original holes.

6.3 Bulk density

A total of 78 samples were collected for bulk density measurement: 51 from historical exploration phases and 27 from the 2024 validation program. These samples were measured using the water immersion method. The density of the sample is determined by dividing its mass measured in air by the volume of water it displaces when immersed in water. The results are shown in Table 6.7. An average density of 2.60 g/cm^3 is used for kaolin resource estimation purposes.

Table 6.7: Bulk density of kaolin deposit

Program	Sample type	Count	Average density
			(g/cm^3)
Historical exploration	Core	40	2.59
	Channel	11	2.62
2024 validation	Core	6	2.68
	Channel	21	2.60
Total		**78**	**2.60**

Source: SRK, 2025.

6.3.1 Conclusion

For the 1957-1966 phase, a review of the sampling procedures and preparation indicates that there are unlikely to be significant issues with the sample preparation methods. The historical laboratory duplicates and inter-laboratory checks from this phase demonstrated good reproducibility of results. However, core recovery from drill holes completed between 1957 and 1962 was poor, averaging 63%.

In the 1970-1986 phase, the recovery of drill holes completed between 1971 and 1972 was unsatisfactory, averaging 69%. In contrast, drill holes from 1985 to 1986 achieved a better average recovery of 85%.

During the 1991-2006 phase, laboratory duplicates and inter-laboratory checks again showed good reproducibility. Core recoveries from this period were satisfactory, averaging 86%.

In the 2024 infill and validation drilling program, laboratory duplicates and inter-laboratory checks generally showed reasonable reproducibility. Core recoveries from drill holes in this validation program were satisfactory, achieving an average of 90.7%.

SRK considers the intervals collected from the 1957-2006 and 2024 programs were adequate to be used for constraining the mineralised domain modelling. However, SRK considers only the intervals with a nominal recovery exceeding 80% are suitable for estimating block grades in the Mineral Resource block model.

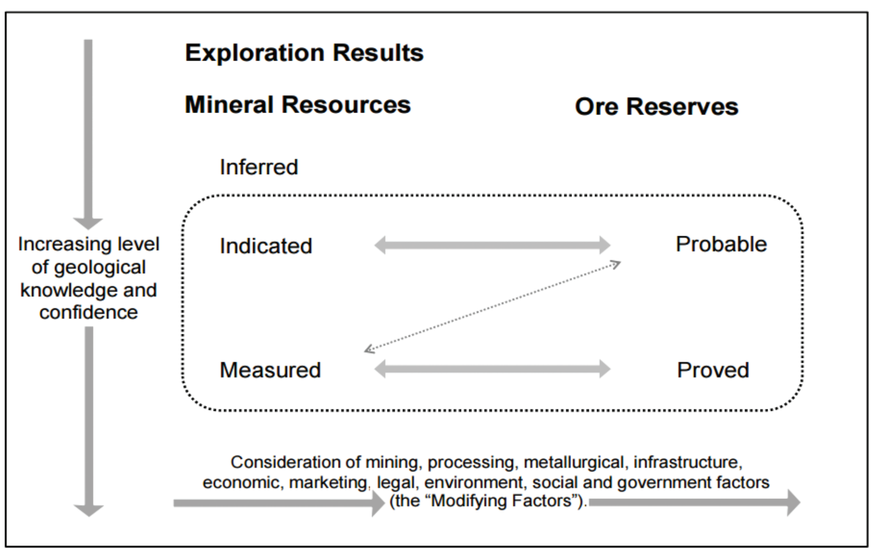
7 MINERAL RESOURCE ESTIMATION

7.1 Introduction

The exploration data collected by Jinyan from the period 1957-2006 vary in quality. However, the results from the 2024 validation program and geostatistical analysis indicate that the historical data are generally reasonable. SRK considers that the historical data can be used for modelling the estimation domains to constrain grade estimation. The drilling data — together with underground channel sampling with reasonable core recovery — are considered suitable for estimating block grades in the Mineral Resource block model.

The JORC Code states that '*A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction*'. Mineral Resources are classified as Measured, Indicated and Inferred according to the degree of geological confidence (Figure 7.1).

Figure 7.1: General relationship between Exploration Results, Mineral Resources and Ore Reserves



Source: JORC Code, 2012

The following sections summarise the key assumptions, parameters and methods used to estimate the Mineral Resources for the deposit.

7.2 Mineral Resource estimation procedures

Leapfrog software (version 2024.1) was used to generate the geological and ore domain models and used to prepare assay data for statistical/geostatistical analysis, construct the block model, estimate Al_2O_3 and SiO_2 grades and tabulate Mineral Resources.

Three-dimensional (3D) block grade estimation is commonly used for Mineral Resource estimation, based on kriging or inverse distance weighting (IDW). However, for reasonably continuous zones that are relatively thin compared to their extents in other directions, practical difficulties with implementing the 3D methods include the change of the sample support due to the variability of the layer thickness, and the use of unrealistically small blocks. Two-dimensional (2D) estimation approaches (which are appropriate for estimating zones with hard contacts and complete intersections through both hanging wall and footwall) have significant advantages over 3D approaches when modelling layer-like geometry.

The 2D estimation approach was applied for this Project's kaolin deposit. For each estimation domain, estimates of 'accumulations' (product of grade and true thickness) and true thickness were made. For the elements of interest, the block grades were then obtained by dividing the corresponding accumulation estimate by the thickness estimate.

The estimation methodology involved the following steps:

- Database compilation, verification as well as adjustment
- Establishment of host rock depositional layer by geological sections
- Definition of a Resources Domain by host rock layer, grade shell, impurities criteria and deposit thickness ($\geq$0.7 m)
- Exploratory data analysis (compositing) and geostatistical analysis using variography
- Block modelling and grade interpolation
- Mineral Resource estimation and validation
- Classification of the Mineral Resources.

7.3 Database compilation and validation

Collar, assay and survey information from exploration campaigns were compiled into an MS Excel spreadsheet and validated using Leapfrog software to search for errors such as missing or overlapping intervals, correct hole or Channel ID, azimuths, dips and duplicated samples. The projection of collars and the geological and resource models generated during this project were in Beijing 1954/3-degree Gauss-Kruger zone 39 datum.

The exploration database statistics are summarised in Table 7.1.

Table 7.1: Summary of database used for Mineral Resource estimation

Method of sampling	Profiles (m)	Assay records
Historical drilling	17,856.52	585
Historical channel	108.37	88
2024 SRK drilling	1,154.76	80
2024 SRK channel	58.90	120

Source: SRK, 2025

7.4 Wireframe modelling

The wireframe models for the deposits were built using Leapfrog software.

For the geological models of Quaternary and Permian sequences, and the domain host rock alumina-rich mudstones, SRK delineated the polylines based on the section and levels interpretation maps outlined in the 2019 Resource and Reserve verification report by Anhui Coal Field Geology Institution Third Exploration Team. From these polylines, the geological model was constructed in Leapfrog.

A criterion that combines the Al_2O_3 cut-off and Fe_2O_3 and TiO_2 impurity limits was then used to define the mineralised intervals (Table 7.2).

The constrained domaining demonstrated a good representation of the geological interpretation of the extents of the kaolinite unit, while being relatively insensitive to the exact thresholds chosen for Al_2O_3, Fe_2O_3 and TiO_2.

Table 7.2: Mineralised intervals determination criteria

Grade	$Al_2O_3 \geq 30\%$
Impurity	$Fe_2O_3 \leq 2\%$
Impurity	$TiO_2 \leq 0.6\%$

Source: SRK, 2025

Intervals were selected on each drill hole or underground channel. Within each drill hole, the average grades of Fe_2O_3 and TiO_2 weighted by interval length were used to determine mineralised intervals. The contact points between mineralisation and host rock were generated using Leapfrog's 'vein selection' function, and the mineralised envelopes were built using the 'vein modelling' and 'domain' functions. Additionally, a minimum mining thickness was employed for domains to conform to the limitations of the longwall mining method. To meet this minimum thickness condition, 16 (out of 138) intersections needed to be extended.

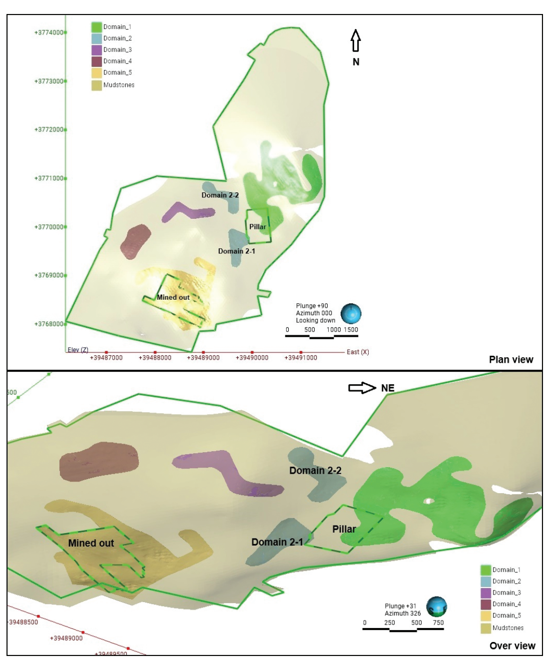
Five domains were defined within the Shuoli Kaolin Mine areas. The domain parameters are listed in Table 7.3. The domain extents are shown in Figure 7.2.

Table 7.3: Interpreted domains — parameters

Domain	Length	Width	Thickness	Azimuth	Dip
	(m)	*(m)*	*(m)*	*(°)*	*(°)*
Domain 1	1,680	1,550	2.1	30	13
Domain 2-1	800	300	2.3	235	8
Domain 2-2	900	180	2.3	235	8
Domain 3	1,100	170	1.2	72	9
Domain 4	740	350	2.2	130	11
Domain 5	1,800	940	2.5	60	5

Source: SRK, 2025

Figure 7.2: Interpreted domains — extents



Source: SRK, 2025

7.5 Exploratory data analysis

All intervals were used in the development of geological models and the interpretation of mineralised domains. To prevent potential inaccuracies, intervals with poor core recovery were excluded from variogram modelling and grade estimation. A nominal core recovery threshold of 80% was established for selecting intervals.

Table 7.4 shows the exploratory data analysis for Al_2O_3 and SiO_2 for all raw samples, samples within the interpreted domains, and samples used for grade estimation.

Table 7.4: Basic statistics for Al_2O_3 and SiO_2 for all raw samples and samples within the domains

Item	All raw data	Within domains	Recovery above threshold
	(Al_2O_3%)	*(Al_2O_3%)*	*(Al_2O_3%)*
Number of samples	863	527	438
Minimum value	13.65	35.16	35.16
Maximum value	55.48	55.48	54.01
Mean	38.32	39.94	40.00
Variance	19.65	8.32	7.99
Standard Deviation	4.43	2.88	2.83
Coefficient of variation	0.12	0.07	0.07

Item	All raw data	Within domains	Recovery above threshold
	(SiO_2%)	*(SiO_2%)*	*(SiO_2%)*
Number of samples	863	527	438
Minimum value	19.28	26.83	26.83
Maximum value	65.35	48.13	48.13
Mean	41.51	42.36	42.30
Variance	20.90	12.44	12.82
Standard Deviation	4.57	3.53	3.58
Coefficient of variation	0.11	0.08	0.08

Source: SRK, 2025

7.5.1 Compositing

The 2D estimation method requires a single composite for each complete intersection through the mineralised zone. Table 7.5 is a summary of composite statistics for mean Al_2O_3/SiO_2 accumulation (Al/Si_accum) and true thickness (TT) for each domain. Figure 7.3 shows the frequency statistics of Al/Si_accum and TT for Domain 5.

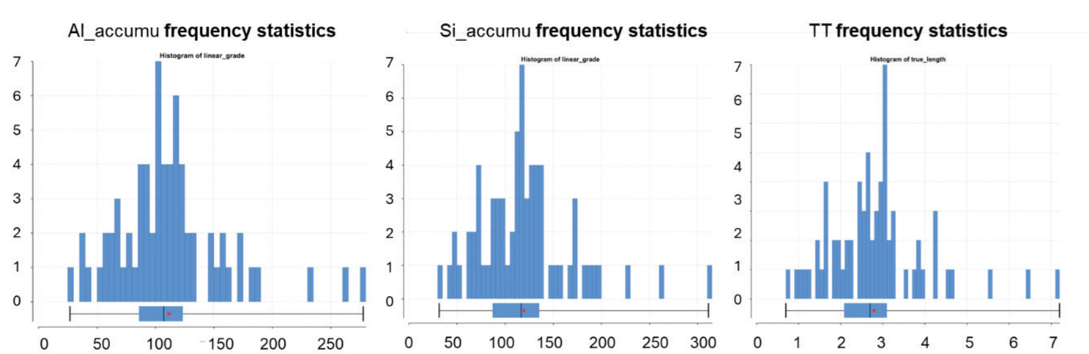
Table 7.5: Basic statistics for composite values for each domain

Domain	Item	Number of samples	Minimum value	Maximum value	Mean	Variance	Standard Deviation	Coefficient of variation
Domain 1 . .	Al_accum (m*%)	30	15.07	174.61	67.85	2,151.39	46.38	0.68
	Si_accum (m*%)	30	12.55	183.36	67.96	1,948.79	44.15	0.65
	TT (m)	30	0.40	4.20	1.68	1.24	1.11	0.66
Domain 2 . .	Al_accum (m*%)	6	68.25	145.81	102.87	719.09	26.82	0.26
	Si_accum (m*%)	6	73.26	171.73	111.98	1,360.38	36.88	0.33
	TT (m)	6	1.72	3.80	2.60	0.56	0.75	0.29
Domain 3 . .	Al_accum (m*%)	2	44.05	94.86	69.45	1,290.87	35.93	0.52
	Si_accum (m*%)	2	46.58	108.25	77.42	1,901.12	43.60	0.56
	TT (m)	2	1.07	2.48	1.77	1.00	1.00	0.56
Domain 4 . .	Al_accum (m*%)	4	56.07	144.97	102.68	1,331.71	36.49	0.36
	Si_accum (m*%)	4	65.57	167.14	101.34	2,142.92	46.29	0.46
	TT (m)	4	1.50	3.83	2.53	0.93	0.97	0.38
Domain 5 . .	Al_accum (m*%)	68	26.96	277.71	111.57	2,192.55	46.82	0.42
	Si_accum (m*%)	68	31.49	311.29	119.57	2,497.79	49.98	0.42
	TT (m)	68	0.70	7.20	2.80	1.37	1.17	0.42

Source: SRK, 2025

Note: TT = true thickness of the domain; accum = mean accumulation.

Figure 7.3: Frequency statistics on composites — Domain 5



Source: SRK, 2025

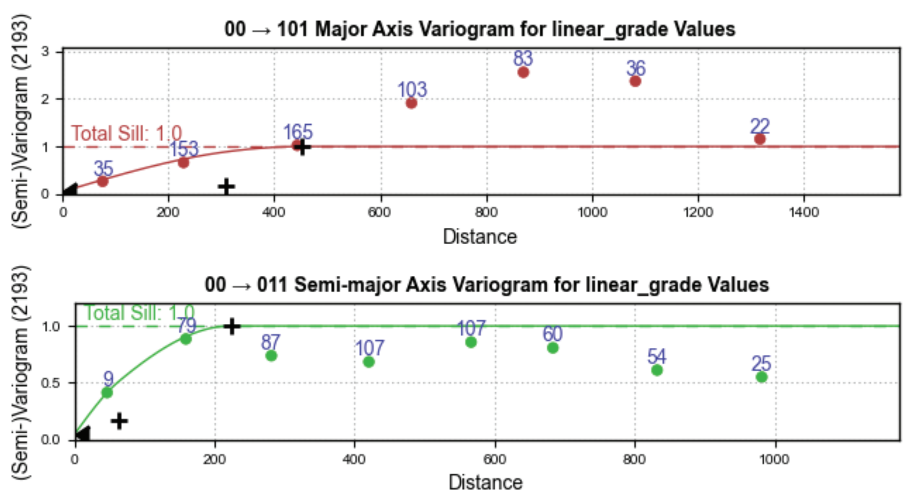
7.5.2 Capping

No grade capping for Al_2O_3 or SiO_2 was applied to the estimates outlined in this Report. Samples with an exceptionally high Al_2O_3 grade (exceeding 48%) account for 1.8% of all intervals, while those with an exceptionally high SiO_2 grade (exceeding 48%) account for 0.18%. These proportions do not materially affect the estimation results.

7.6 Variogram modelling

The variograms for the interpolation of Al_2O_3 and SiO_2 accumulations, and true thickness, were modelled using Leapfrog Edge. SRK assessed that a single variogram model (Figure 7.4) was an adequate representation of the spatial variability for all three attributes in Domain 5.

Figure 7.4: Variogram map and fitted model — Domain 5



Source: SRK, 2025

Due to insufficient samples in Domains 1, 2, 3 and 4 for fitting a meaningful variogram, the variogram model developed for Domain 5 has been applied to these domains. The parameters of the Domain 5 variogram model are shown in Table 7.6 (directions) and Table 7.7 (nugget, sill and ranges).

Table 7.6: Domain 5 variogram model — Directions

	Direction		
Compound	**Dip**	**Dip azimuth**	**Pitch**
	(°)	*(°)*	*(°)*
Al_2O_3	0	0	11
SiO_2	0	0	13

Source: SRK, 2025

Table 7.7: Domain 5 variogram model — nugget, sill and ranges

		Structure 1				Structure 2			
Compound	Nugget	Sill	Major axis range	Semi-major axis range	Minor axis range	Sill	Major axis range	Semi-major axis range	Minor axis range
			(m)	*(m)*	*(m)*		*(m)*	*(m)*	*(m)*
Al_2O_3	0.05	0.12	307	63	9,999	0.83	452	223	9,999
SiO_2	0.05	0.06	160	29	9,999	0.89	446	143	9,999

Source: SRK, 2025

7.7 Block model and grade estimation

7.7.1 Block model parameters

SRK produced the block models for the Resources Domain with dimensions of 100 m × 100 m × variable Z (East × North × Elevation) and sub-blocking with dimensions of 10 m ×10 m × variable Z (East × North × Elevation) in Leapfrog Edge. No rotation has been allowed. A minimum 0.7 m thickness was employed for variable Z of the block model. The block model origin and local dimensions are shown in Table 7.8.

Table 7.8: Summary of block model parameters — Resources Domain

Dimension	Base point	Block size	Boundary size
		(m)	*(m)*
X	39486300	100	5,500
Y	3767500	100	4,600
Z	50	Variable	400

Source: SRK, 2025

7.7.2 Grade estimation

Block accumulation and true thickness values were interpolated using the Ordinary Kriging (OK) method. The variograms for the mean Al_2O_3/SiO_2 accumulation were modelled and used for interpolating true thickness. Due to a lack of sufficient samples in Domains 1, 2, 3 and 4 to fit a meaningful variogram, the variogram model developed for Domain 5 was applied to these domains.

For each block, the Al_2O_3 and SiO_2 grades were obtained by dividing the estimated grade accumulation by the estimated true thickness. The parameters used for the search ellipsoid are shown in Table 7.9.

Table 7.9: Search ellipsoid parameters used for Mineral Resource estimation

Major axis	Semi-major axis	Minor axis	Minimum number of composites	Maximum number of composites
(m)	*(m)*	*(m)*		
450	350	9,999	1	6

Source: SRK, 2025

7.8 Model validation

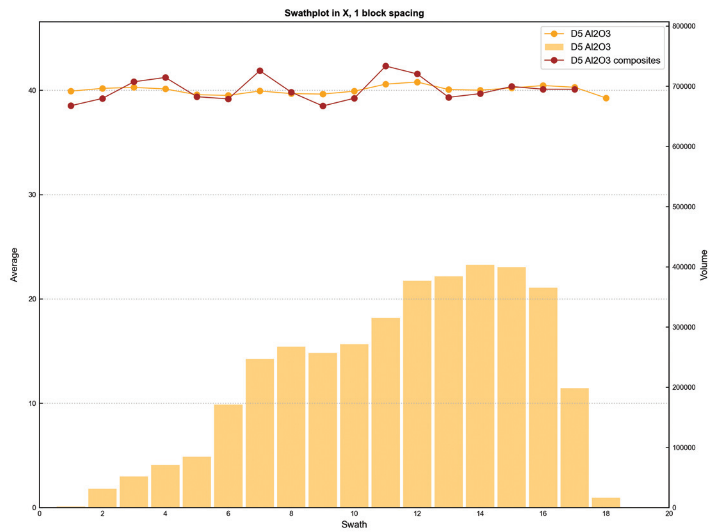
SRK undertook block model validation to confirm the reasonableness of the estimation parameters and estimation results. SRK adopted the following methods for the validation:

- visual validation of block grades against drill hole grades
- trend analysis.

In sectional views, SRK performed visual validation of the sample grades (drill holes and channel samples) against the intersection composites and estimated block model grades. This validation process demonstrated good correlation between local block estimations and nearby samples, without excessive smoothing in the block model.

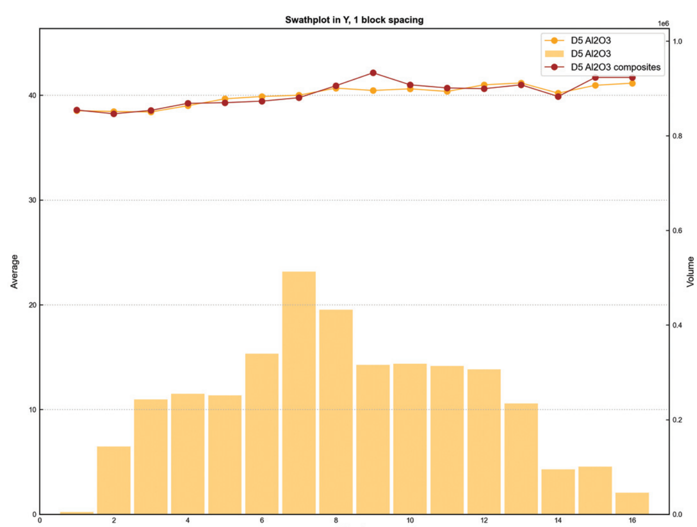
Figure 7.5 and Figure 7.6 show swath plots of Domain 5 in the east-west and north-south directions. Figure 7.7 and Figure 7.8 show swath plots of Domain 1 in the east-west and north-south directions. Figure 7.9 is a 3D view of the 'all domains' (Resources Domain) block model.

Figure 7.5: Swath plot along east-west direction — Domain 5



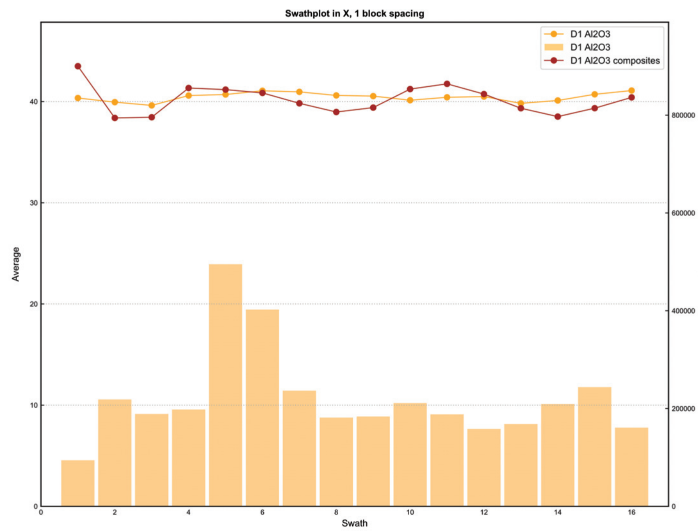
Source: SRK, 2025

Figure 7.6: Swath plot along north-south direction — Domain 5



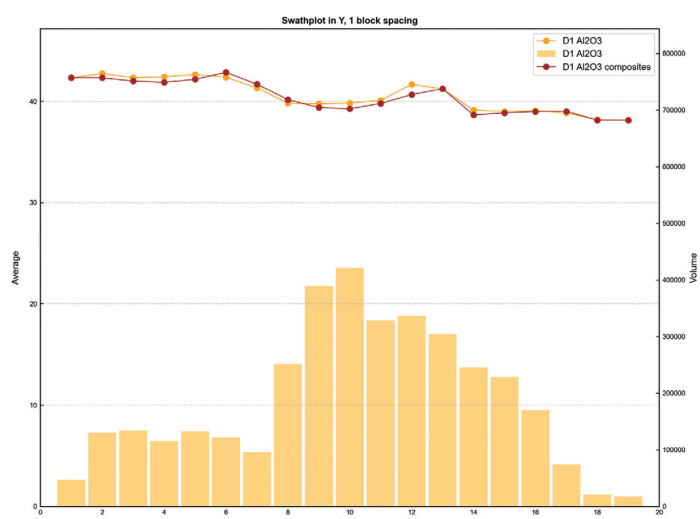
Source: SRK, 2025

Figure 7.7: Swath plot along east-west direction — Domain 1



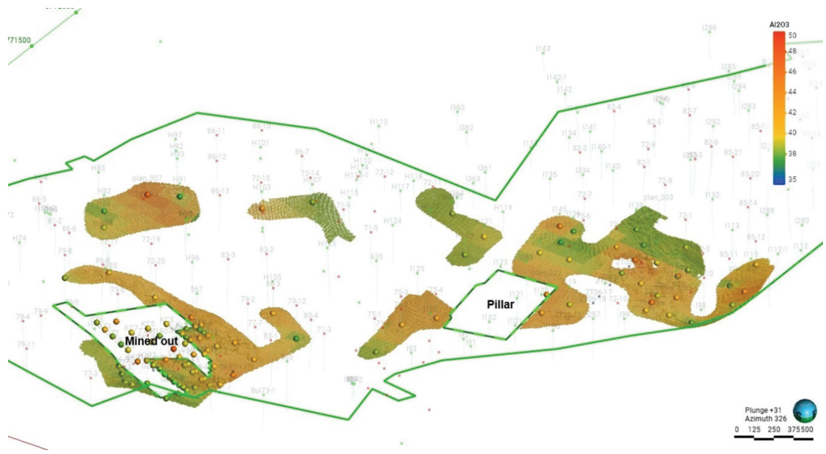
Source: SRK, 2025

Figure 7.8: Swath plot along north-south direction — Domain 1



Source: SRK, 2025

Figure 7.9: 3D view — Al_2O_3 (%) Resources Domain



Source: SRK, 2025

7.9 Mined-out areas

As at 31 May 2025, the mined-out area was surveyed and wireframed as a depletion zone. During the resource estimation process, Mineral Resources within the mined-out area were interpreted and subsequently subtracted to estimate the remaining resource position at the Project.

7.10 Classification

Mineral Resource classification should consider several factors, including the confidence level in the geological continuity of the mineralised structures, the quality and quantity of exploration data supporting the estimates, and the geostatistical confidence in the tonnage and grade estimates. The classification criteria should aim to integrate these concepts to delineate consistent areas with similar Mineral Resource classifications.

The following items have been considered during classification of the Mineral Resources:

- geological continuity and reliability of interpretation
- sample support and exploration workings density
- OK attributes (kriging variance, slope of regression, kriging efficiency).

The classification criteria are shown in Table 7.10.

A 3D view of the Mineral Resource classification is shown in Figure 7.10.

Table 7.10: Mineral Resource classification criteria used in estimation

Category	Mineral Resource classification criteria
Measured	Spacing between drill holes or channel sampling is within 50 m, or slope of regression is greater than 0.85
Indicated	Spacing between drill holes or channel sampling is within 250 m, or slope of regression is greater than 0.4
Inferred	Spacing between drill holes or channel sampling is more than 250 m, or the extension of Indicated Mineral Resources

Source: SRK, 2025

Figure 7.10: Mineral Resource classification in 3D view

Source: SRK, 2025

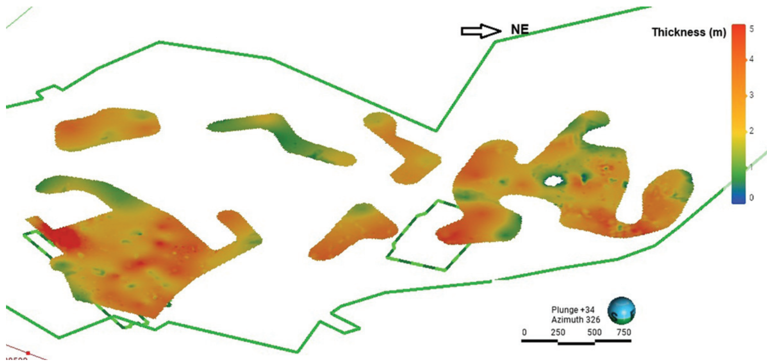
7.11 Mineral Resource Statement

7.11.1 Reasonable prospects for eventual economic extraction

Clause 20 of the JORC Code (2012) requires that all reports relating to Mineral Resource estimates must have reasonable prospects for eventual economic extraction.

Jinyan has been mining kaolin and processed the ore into various products, including precision casting mullite products, refractory mullite products, as well as raw coke and raw powder, catering primarily to the needs of high-temperature manufacturing, particularly in the field of precision casting since 1997. The longwall mining method employed for this kaolin deposit has proven to be appropriate. The minimum mineable thickness for the current longwall mining method is 0.7 m. This thickness has been applied to determine the portion of the block model that can be extracted. Based on the factors discussed above and reported sales to date, SRK considers the declared Mineral Resource has reasonable prospects for eventual economic extraction (Figure 7.11).

Figure 7.11: 3D view of domain thickness



Source: SRK, 2025

7.11.2 Mineral Resource Statement

Table 7.11 shows the Mineral Resource estimates for the remaining mineralisation within the licence area, excluding mined-out and other sterilised areas[1], as at 31 May 2025.

Table 7.11: Shuoli Kaolin Mine Mineral Resource Statement as at 31 May 2025

Category	Domain	Tonnage	Al_2O_3	Al_2O_3 Material	SiO_2	SiO_2 Material
		(kt)	*(%)*	*(kt)*	*(%)*	*(kt)*
Measured	Domain 1	–	–	–	–	–
	Domain 2	–	–	–	–	–
	Domain 3	–	–	–	–	–
	Domain 4	–	–	–	–	–
	Domain 5	2,367	40.35	955	42.83	1,013
	Subtotal	2,367	40.35	955	42.83	1,013
Indicated	Domain 1	7,090	40.22	2,852	40.81	2,894
	Domain 2	–	–	–	–	–
	Domain 3	–	–	–	–	–
	Domain 4	–	–	–	–	–
	Domain 5	1,900	40.50	769	42.34	804
	Subtotal	8,990	40.28	3,621	41.13	3,698
Measured + Indicated	Domain 1	7,090	40.22	2,852	40.81	2,894
	Domain 2	–	–	–	–	–
	Domain 3	–	–	–	–	–
	Domain 4	–	–	–	–	–
	Domain 5	4,267	40.42	1,724	42.61	1,818
	Subtotal	11,357	40.29	4,576	41.49	4,711

[1] Sterilisation refers to mineral resources that cannot be mined due to specific reasons, such as being located under a protected area.

Category	Domain	Tonnage	Al_2O_3	Al_2O_3 Material	SiO_2	SiO_2 Material
		(kt)	*(%)*	*(kt)*	*(%)*	*(kt)*
Inferred	Domain 1	1,039	40.39	419	41.21	428
	Domain 2	2,646	39.93	1,057	42.53	1,125
	Domain 3	492	38.86	191	43.63	215
	Domain 4	1,755	41.06	721	39.34	690
	Domain 5	1,360	40.51	551	42.15	573
	Subtotal	7,292	40.30	2,939	41.58	3,032
Total	Domain 1	8,129	40.24	3,271	40.86	3,322
	Domain 2	2,646	39.93	1,057	42.53	1,125
	Domain 3	492	38.86	191	43.63	215
	Domain 4	1,755	41.06	721	39.34	690
	Domain 5	5,627	40.44	2,275	42.50	2,391
	Total	**18,649**	**40.30**	**7,515**	**41.52**	**7,743**

Notes:

1 Any differences between totals and sum of components are due to rounding.

2 A 0.7 m minimum thickness was applied to the resource block model.

3 The models are reported for domains with a thickness greater than 0.7 m, which is the minimum mineable thickness using the current mining method (longwall mining).

4 Mineral Resources that are not Ore Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

5 Mineral Resources are reported inclusive of Ore Reserves.

6 The Mineral Resources are effective as at 31 May 2025.

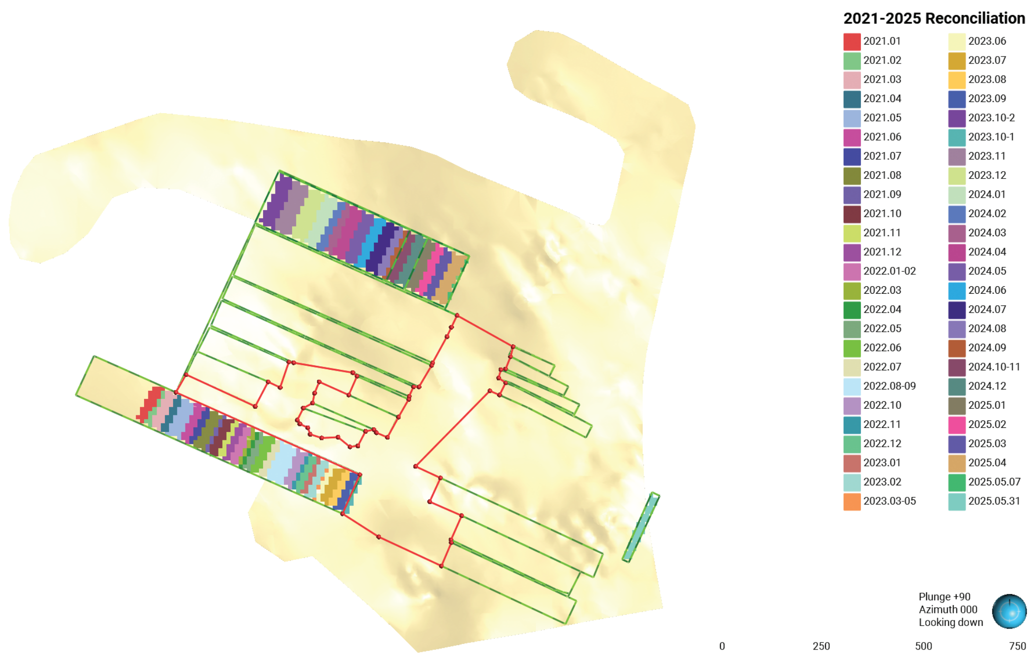
Competent Person's Statement:

The information in this Report that relates to Mineral Resources is based on information compiled by Dr (Tony) Shuangli Tang who is a Member of the AIG and Member of the AusIMM. Dr Tang is a full-time employee of SRK Consulting (Hong Kong) Limited and has sufficient experience that is relevant to the style of mineralisation, type of deposit under consideration and to the activity which he undertakes to qualify as a Competent Person as defined in the 2012 edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code).

7.11.3 Reconciliation

SRK reviewed the 2022-2024 production records from Jinyan and conducted a reconciliation analysis. This analysis compared the actual produced kaolin to the model depletion for three calendar years (Figure 7.12).

Figure 7.12: Model depletion



Source: SRK, 2025

The resources model indicated a total of depletion of 981 kt, which was compared to the 1,141 kt of kaolin materials produced according to the records. The resultant difference is -6.9% (Table 7.12). The reconciliation result showed satisfactory consistency between the model depletion and actual production.

Table 7.12: Reconciliation statistics — 2022-May 2025

Period	Model depletion Volume	Model depletion Tonnes	Actual products Tonnes	Average recovery	Actual depletion	Difference	
	('000 m^3)	*(kt)*	*(kt)*	*(%)*	*(kt)*	*(kt)*	*(%)*
2022	91	237	171	86%	199	38	19%
2023	117	303	296	86%	344	-41	-12%
2024	138	360	343	86%	399	-39	-10%
Jan-May 2025 . .	62	162	171	86%	199	-37	-19%
Total	**408**	**1,062**	**981**	**86%**	**1,141**	**-79**	**-6.9%**

Source: SRK, 2025

Historical depletion and production before 2022 were not recorded in detail. The reconciliation statistics for the period of 1993-2025 are summarised in Table 7.13.

Table 7.13: Reconciliation statistics — 1993-May 2025

Period	Model depletion		Actual products	Average mining recovery	Actual depletion	Difference	
	Volume	Tonnes	Tonnes				
	('000 m^3)	*(kt)*	*(kt)*	*(%)*	*(kt)*	*(kt)*	*(%)*
1993-Dec 2018			1,690	75%	2,252		
Jan 2019-Dec 2023			770	86%	895		
Jan 2024-May 2025	201	522	514	86%	598	-76	-13%
Total	**1,466**	**3,812**	**2,974**	**79%**	**3,745**	**67**	**1.8%**

Source: SRK, 2025

The Mineral Resources within the sterilised areas are retained for protection of the infrastructure and were excluded from the Mineral Resource Statement (Figure 7.12). This amortisation was not included in the reconciliation statistics.

8 ROCK ENGINEERING

SRK conducted a geotechnical review which included a site visit from 3 to 4 October 2024. SRK's review included all aspects of the geotechnical environment, including a review of geological exploration reports and associated drawings, mine designs, safety technical measures for underground roadway excavation and working face operation procedures. The geology of the infill and verification drilling cores was examined, and the support and deformation conditions of the underground main roadways were inspected. The assessment relies on Chinese standards and guidelines for coal mine geology, engineering, hydrological safety, and operations, in addition to other relevant standards and guidelines.

8.1 Technical reports

The following documents were reviewed for the purposes of this review:

- Detailed Geological Report on the Associated Hard Kaolin Mine of Shuoli Coal Mine, Huaibei City, Anhui Province compiled by the 325 Geological Team of Anhui Geological and Mineral Exploration Bureau, September 2006

- Production Geological Report of Shuoli Coal Mine, Huaibei Shuoli Mining Co., Ltd. compiled by the Third Exploration Team of Anhui Coalfield Geological Bureau, 2015

- Production Geological Report of Shuoli Kaolin Mine, Huaibei City compiled by the Third Exploration Team of Anhui Coalfield Geological Bureau, November 2020

- Preliminary Design of the 500,000 tpa Kaolin Mining Project of Huaibei Shuoli Mining Co., Ltd. compiled by Huaibei Mining Group, January 2020.

In addition, SRK's review covered the underground roadway excavation operation procedures, mining operation procedures, geological drilling logs, and results of geotechnical properties testing. It also included an examination of geological data collected during kaolin production.

8.2 Geotechnical environment

The Mine, formerly the Shuoli Coal Mine, is located in the central part of the regional Zhahe Syncline in the Huaibei Coalfield. The eastern and western boundaries are defined by coal seams and kaolin outcrops, the southern boundary by the IF6 fault, and the northern boundary by the IF18 fault (Figure 4.3).

8.2.1 Stratigraphy

The stratigraphy of Mine from top to bottom is as follows (Table 4.1):

- Quaternary sedimentary units with an average thickness of 61 m, mainly composed of yellowish-brown, reddish-brown, or greenish-yellow sandy clay, clayey sand, silt, and gravel.

- Upper Shihezi Formation (Permian) with a thickness of approximately 89 m, mainly consisting of grey to grey-white siltstone to medium-grained sandstone, grey to purple mudstone, and thin coal seams. The rock layers are weathered to a yellowish-brown colour.

- Lower Shihezi Formation (Permian) with an average thickness of 190 m, mainly composed of dark grey to grey-white mudstone, grey to light grey sandstone, and major mineable coal seams. It contains 6 coal seams, with seams No. 3 and No. 5 being the main mining seams of the previous coal mining operation. The basal layer is marked by a well-developed layer of light grey to grey-green aluminous mudstone (kaolin mineralised layer) across the entire mine field, with stable stratigraphy and wide distribution, except for partial absence in the northwest and southwest. The thickness is generally around 5 m, with a maximum of 9.4 m. It is dense, blocky, has a slippery feel, contains purple patches and phosphatic ironstone oolites, and is the host layer for hard kaolin deposits, which is the target layer discussed in this Report.

- Shanxi Formation (Permian) with an average thickness of 138.5 m, mainly consisting of a set of grey to dark grey thick-bedded siltstone to coarse-grained sandstone and grey to dark grey mudstone with thin coal seams.

- Taiyuan Formation (Carboniferous) with an average thickness of 142.69 m, mainly composed of thin-bedded fine sandstone, siltstone, mudstone interbedded with coal seams, and limestone (total of 12 limestone layers).

8.2.2 *Structure*

The overall structure at the site is characterised by an S-shaped syncline with an axial orientation from northeast to northwest. It features well-developed secondary broad and gentle folds. The identified secondary folds include the Liuyuan Anticline, Huangwan Syncline, Wangtanzhuang Syncline, Cuolou Anticline and Gewa Syncline. There are 22 faults recognised across the entire mine site, each with displacements of $\geq$10 m, including one fault with a displacement >100 m; three faults with a displacement between 50 m and 100 m; 10 faults with a displacement between 20 m and 50 m; and eight faults with a displacement between 10 m and 20 m. Based on fault nature, there are 14 normal faults and 8 reverse faults.

Based on orientation, these faults can be categorised into three main groups: east-west, north-south and northern reverse faults. The east-west faults are the largest in scale, longest in extension, widest in the fracture zone, and cause the greatest displacement.

The kaolin mine area has less-developed fault structures. The strata have a relatively gentle dip, with local magmatic intrusions having minimal impact on the geometry of the kaolin orebody (Figure 4.2).

8.2.3 *Kaolin ore*

The aluminous mudstone, which hosts the kaolin orebody, is laterally continuous. The kaolin ore is grey to grey-white or dark grey in colour and has an average thickness of 3.51 m. It is fine grained, blocky and has a greasy texture. Its hardness ranges between 3 and 4 on the Mohs hardness scale. It does not expand or exhibit plasticity when exposed to water. The ore has an average uniaxial compressive strength of 15.6 MPa.

The kaolin has gradational boundaries, with the aluminous mudstone located both above and below this layer. It is characterised by the absence or scarcity of nodular siderite. As the kaolin layer transitions into the aluminous mudstone containing oolitic siderite, there is a noticeable increase in oolitic siderite content.

8.2.4 *Roof and floor conditions*

The roof lithology consists of grey to dark grey blocky mudstone, with a thickness ranging from 2.1 m to 4.4 m, averaging 3.6 m. Above this layer is a light grey to dark grey, blocky, sandy mudstone layer, with a thickness between 3.1 m and 4.6 m, averaging 3.6 m. The floor lithology comprises grey to light grey fine-grained sandstone and sandy mudstone interbeds, with a thickness of 1.3-2.3 m, averaging 1.8 m. Beneath this is a purple-red patchy mudstone, with a thickness ranging from 1.9 m to 2.9 m, averaging 2.4 m.

The compressive strength of the roof and floor lithologies ranges from 11.19 MPa to 26.1 MPa. Previous coal mining activities indicated that the rock engineering conditions were relatively good. However, since the kaolin mine is situated approximately 12-25 m below the previously mined coal seam No. 5, the roof of the kaolin mine may be affected by disturbances from coal seam mining, potentially leading to a negative impact on the rock engineering conditions.

8.3 Underground rock engineering design

The currently active retreating working face is SAL-211, which has a designed strike length of 500 m and a face length of 130 m. It uses anchor bolt mesh cable support, with anchor bolts specified as GM22/2800 mm, high strength, ribless, threaded steel bolts. For roof support, the working face employs ZY6800-19/40 shielded hydraulic supports. The roof is allowed to collapse naturally after retreating.

The working face uses comprehensive mechanised tunnelling for the double roadways. The machine roadway cross section is 4.8 m × 3 m, and the ventilation roadway cross section is 4.4 m × 3 m.

8.3.1 Measures to prevent roof falls

Comprehensive guidelines have been established for preventing roof falls.

For advancing gate road faces:

- Design the support appropriately based on the nature of the surrounding rock to ensure safe and effective support, with targeted support design for each section.
- After comprehensive tunnelling or blasting, clean up hazardous rocks and promptly set up temporary support, prohibiting unsupported operations.
- In fault zones or fracture zones, reduce the working cycle progress and support spacing. Adopt short tunnelling and short support to minimise unsupported areas.
- Ensure that the arrangement of blastholes and the amount of explosives are compatible with the rock properties, support form, and distance to the tunnelling face to prevent roof falls caused by blasting damage to the support.

For retreating working faces:

- Ensure the initial support force of the face support is sufficient to effectively control the roof.
- Retreat the anchors in the two roadways of the face in advance to ensure the roof fully collapses. If necessary, implement forced roof fall measures in the goaf.

- Understand the periodic pressure pattern of the face, anticipate the pressure on the face, and strengthen the support throughout the pressure process.

- Appropriately accelerate the advancement speed of the face.

- Control the roof at the upper and lower ends with hydraulic supports, promptly pull the advance support, and extend the front shrink beam to properly support the roof.

SRK considers these measures are reasonable and sufficient.

8.3.2 Measures for monitoring engineering deformation

The mine system roadways employ the 'cross' roadway deformation observation method to monitor the deformation of the surrounding rock.

The specific observation methods are as follows:

- Deformation observation stations are established every 30-50 m.

- Measurement points are arranged in a 'cross' shape.

- A steel ruler is used as the monitoring equipment.

- The observation frequency is once a day during tunnelling, once a week after tunnelling, and once a month when mine pressure is stable.

Anchor stress monitoring is conducted using anchor cable dynamometers, with sets typically installed every 30-50 m along the roadways. In areas with soft rock, roof fracture zones, or high-stress regions, measurement points are placed closer together. The stress on the anchor cable is indicated by the readings on the dynamometer pressure gauge.

Roof separation monitoring is carried out using the KJ216 roof separation monitoring system, with a deep separation warning threshold set at 120 mm and a shallow separation warning threshold at 100 mm.

Monitoring results from key underground areas in September 2024 show that in the SAL-211 headgate, the measurement point with the largest deformation was point No. 13. This point is located at the intersection of the SAL-211 headgate and the maingate, which has a large cross sectional span and height, leading to significant roadway deformation. The deformation of the surrounding rock at other separation observation points remained stable during the observation period, with no significant changes. In the SAL-211 tailgate, the deformation of the surrounding rock at each separation observation point was stable during the observation period in September 2024, with no significant changes.

8.4 Observations during site visit

During both the former coal and current kaolin mining operations, the Mine did not experience any incidents related to fire, flooding or gas, and continued to maintain a strong safety record. The site is classified as a low gas mine, and ground temperatures are normal. Examination of infill drilling cores indicated that the rock is intact, with structures or fractures being minimally developed. The kaolin ore layer is relatively stable, with little lithological variation in the roof and floor, which mainly consist of mudstone and siltstone.

An underground visit revealed that the roadways, maingate, headgate, tailgate and working face are intact and in good condition. There are no signs of floor heave, roadway displacement, or roof fragmentation and falling blocks. A neat pattern of standardised support was observed.

During previous coal mining, some roadways were placed within the kaolin ore layer, indicating that the lithology of this layer is intact, with undeveloped structural fractures and stable rock layers. The roadway displacement observation system and roof separation observation system within the system roadways and working face roadways are intact, with observation methods, techniques, and data transmission meeting standard requirements.

The underground disaster avoidance routes, roadway names, chamber names, and direction signs comply with relevant regulations. The working face roadways use comprehensive mechanised tunnelling, with mechanical loading and transportation of ore and gangue. The tunnelling construction equipment, machinery and laser directional pointer are intact. The workplace is equipped with the required hanging of roadway layout plans, construction cross section diagrams, blasthole layout diagrams, blasting instructions, cross section cutting trajectory diagrams, regular cycle operation charts, disaster avoidance route maps, and temporary payment diagrams. These materials are complete, with clear and correct text and images being well protected and conveniently positioned for viewing.

8.5 Conclusions

The roadways and working face are considered to meet the relevant safety production quality standards, as confirmed by underground inspections. The sampling, testing, monitoring and evaluation methods for geotechnical engineering comply with the relevant regulations and standards. The measures taken to address geotechnical engineering issues are reasonable, feasible, and meet the relevant requirements, with practice proving their effectiveness.

Deformation monitoring of system roadways and the two roadways of the working face, along with roof separation monitoring results, indicates that the geotechnical engineering conditions of the kaolin mine are relatively good. This aligns with the actual conditions observed during underground inspections.

The geotechnical engineering risks observed during underground inspections are lower than those predicted by theoretical analysis. This is partly because mining of the No. 5 coal seam has been ceased more than 5 years. The compaction of the mined-out area in the No. 5 coal seam likely reduces risk by enhancing the structural integrity and stability of the Mine. This can lead to increased confidence in the safety of ongoing operations.

The measures taken to prevent geotechnical engineering risks are feasible and effective. However, individual sections may still present geotechnical engineering risks, which should be a focus of future kaolin mining safety management. Corresponding measures should continue to be implemented to mitigate these risks.

The provided materials and technical documents meet the relevant regulations and requirements, aligning with information from site inspections and interviews. Overall, SRK considers the geotechnical engineering conditions and risk prevention measures are satisfactory.

9 HYDROGEOLOGY

A hydrogeology review was carried out, including a site visit by SRK from 3 to 4 October 2024. SRK's review included examining hydrogeological data and materials, holding discussions with relevant technical mine personnel, visiting the infill drilling site and inspecting the underground water inflow points, sealing walls, old roadways, drainage systems, and water prevention and control systems. Information related to hydrogeological parameters, related materials, and water hazard risks was evaluated. The assessment relies on Chinese standards and guidelines for coal mine geology, engineering, hydrological safety, and operations, in addition to other relevant standards and guidelines.

9.1 Technical reports

SRK reviewed the following technical documents:

- Detailed Geological Report on the Associated Hard Kaolin Mine of Shuoli Coal Mine, Huaibei City, Anhui Province compiled by the 325 Geological Team of Anhui Geological and Mineral Exploration Bureau, September 2006

- Production Geological Report of Shuoli Coal Mine, Huaibei Shuoli Mining Co., Ltd., compiled by the Third Exploration Team of Anhui Coalfield Geological Bureau, January 2015

- Closure Geological Report of Shuoli Coal Mine, Duji District, Huaibei City, Anhui Province compiled by the Third Exploration Team of Anhui Coalfield Geological Bureau, September 2019

- Hydrogeological Type Report of Jinyan Gaoxin Shuoli Kaolin Mine compiled by Henan Polytechnic University Asset Management Co., Ltd., October 2019

- Production Geological Report of Shuoli Kaolin Mine, Huaibei City compiled by Huaibei Shuoli Mining Co., Ltd., November 2020

- Five-Year Mining Plan for Shuoli Kaolin Mine compiled by Jinyan Gaoxin Company, September 2022

- Hydrogeological Type Report of Jinyan Gaoxin Shuoli Kaolin Mine compiled by Anhui Jinyan Kaolin New Materials Co., Ltd., September 2022

- Investigation and Management Report on Hidden Disaster Factors in Non-coal Underground Mines compiled by Anhui Jinyan Gaoxin Kaolin Mining Branch, November 2023

- Safety Status Evaluation Report of Shuoli Kaolin Mine, Huaibei City compiled by China Inspection Group Public Trust Safety Technology Co., Ltd., February 2023.

- Investigation Report on Hidden Disaster Factors in Non-coal Underground Mines compiled by Anhui Jinyan Gaoxin Kaolin Mining Branch, May 2024

In addition to the above reports, various figures and drawings provided by Jinyan, including mine plans, hydrogeological profiles, historical void distribution maps, surrounding mine distribution, drainage systems, and secondary water hazard prevention systems, were reviewed. In addition, water level observation logs and water inflow observation logs and a large amount of actual underground production data were also reviewed.

9.2 Hydrogeological background

The Mine is located in the eastern central part of the Huaibei Coalfield Hydrogeological Subdivision I (Northern Area).

The hydrogeological boundaries are as follows:

- North: The IF18 reverse fault, which has poor water-bearing properties, forms a water-blocking boundary for the Permian sandstone fissure water and Carboniferous Taiyuan Formation limestone water within the mine field.

- South: Normal faults such as IF6 and IF10, along with the IF9 reverse fault, create a water-blocking boundary for the Permian sandstone fissure water and Carboniferous Taiyuan Formation limestone karst fissure water.

- East and West: The concealed outcrop belt of coal seams and kaolin layers, influenced by the recharge of Quaternary loose layer pore water, acts as a weak water inflow boundary for the Permian sandstone fissure water and Carboniferous Taiyuan Formation limestone karst fissure water.

These faults are unlikely to completely block the ingress of karst fissure water due to the significant thickness of the Ordovician limestone.

There are four closed coal mines in the surrounding area to the Project: the Daihe, Fangzhuang, Shitai and Shuanglong mines (Figure 2.2). Residual water from these former coal mines is expected to flow into the Mine area through designated boreholes and pipelines. By October 2026, it is anticipated that the water level of the closed mines will reach -186 m, allowing the water to flow through the boreholes into the Mine.

9.3 Aquifer characteristics

The aquifers in the Project area are divided from top to bottom as follows:

- Quaternary Pore Aquifer: The thickness of the Quaternary loose layer in this Mine is controlled by the palaeotopography, ranging from 45.2 m to 83.8 m, with an average thickness of 61.6 m. The aquifer has a specific yield of 0.151 to 1.389 L/s.m and a hydraulic conductivity of 2.792~12.81 m, indicating moderate to strong water abundance. During the previous mining of the No. 3 and No. 5 coal seams, there was no intrusion of Quaternary pore water into the Mine. The kaolin ore layer is located 12-25 m below the No. 5 coal seam. The fissures formed by the collapse of the retreating working face did not impact the bottom of the Quaternary aquifer. In addition, the sandy clay and clay interbedded with gravel at the bottom of the Quaternary have good cohesion and strong plasticity. This effectively prevents Quaternary pore water from seeping into the underlying aquifer, thereby impacting the underground mining operation.

- Permian Sandstone Fissure Aquifer: Situated between the kaolin ore layer and the No. 5 coal seam, this aquifer is mainly composed of sandstone, sandy mudstone, and mudstone, with an average thickness of 16.5 m. The sandstone fissure water is the direct water source for coal mine working faces and roadways and is a major component of mine water inflow. The roof sandstone fissure aquifer, with a specific yield of 0.008~0.203 L/s.m, exhibits weak to moderate water abundance. Groundwater is mainly stored within it and the water volume is not large, making it easy to drain. During the long-term mining of the No. 3 and No. 5 coal seams, the roof water has been largely drained. In recent years, no sandstone fissure water was intercepted during kaolin mining.

- Carboniferous Taiyuan Formation Limestone Karst Fissure Aquifer: This aquifer is approximately 150 m thick and is primarily composed of limestone, sandstone, mudstone, and thin coal seams, with water-bearing limestone. It represents a confined aquifer with specific yield ranges from 0.00085 to 0.838 L/s.m and the hydraulic conductivity ranges from 0.00072 to 4.061 m/d, indicating weak to moderate water abundance. The No. 6 coal seam, located approximately 85 m below the kaolin ore layer, has been mined out, and no karst fissure water outflow occurred during roadway tunnelling and coal mining.

9.4 Mine inflows

The largest historical water inflow in this Mine occurred in October 1980, with a flow rate of 125 m^3/h. However, it quickly showed a declining trend, with the outflow gradually decreasing to seepage, dripping, and eventually drying up.

From 2015 to 2024, the annual average water inflow was as follows: 129.9 m^3/h, 132.8 m^3/h, 130.5 m^3/h, 129.1 m^3/h, 99.6 m^3/h, 93.4 m^3/h, 96.7 m^3/h, 95.7 m^3/h, 101 m^3/h and 105 m^3/h. The largest water inflow in the past 3 years was 110 m^3/h, with a normal water inflow of 95.7 m^3/h. The recent actual mine water inflow was 106 m^3/h.

According to the closure reports for the nearby Daihe, Fangzhuang, Shitai and Shuanglong mines, the residual water inflows at these four closed mines are 85 m^3/h, 20 m^3/h, 160 m^3/h and 65 m^3/h, respectively. It is expected that by October 2026, the water level across the surrounding area will rise to -186 m, allowing water to flow into the Mine through designated water pipes in the partition wall, with the water inflow gradually increasing to 330 m^3/h. At that time, the maximum water inflow of the Mine will reach about 440 m^3/h.

9.5 Drainage system

The current drainage system includes the auxiliary shaft bottom water sump, which has a total volume of 2,800 m^3 and comprises a main sump with a volume of 1,650 m^3 and an auxiliary sump with a volume of 1,150 m^3. The system is equipped with five MD280-436 multistage centrifugal pumps, each with a lift of 258 m, providing a combined rated total drainage capacity of 1,400 m^3/h. There are three DN250 drainage pipelines in place. The drainage route begins at the underground water outflow point, channels the water into the central sump, and from there, pumps it to the surface sewage treatment station. The current drainage system capacity is sufficient to handle the current mine water outflow and complies with the relevant standards.

The residual water from the four surrounding coal mines is expected to flow into the Mine by October 2026, resulting in a total water inflow of approximately 440 m^3/h. The current sump volume will not be sufficient to meet the predicted inflow and an upgrade of the drainage system is therefore required.

The upgraded drainage system remains to be implemented but is expected to have a total sump volume of 3,900 m^3, consisting of the main sump 1,650 m^3, the auxiliary sump of 1,150 m^3, and an additional auxiliary sump of 1,100 m^3. It will include five drainage pumps: three MD280 × 43 × 6 pumps with a lift of 285 m and a pump volume of 280 m^3/h, and two MD500-50 × 5 pumps with a pump volume of 500 m^3/h, providing a rated total pump volume of 1,840 m^3/h. The system will also feature three DN250 drainage pipelines. The upgraded drainage system will be sufficient to meet the predicted inflow.

9.6 Conclusion

Previous studies have shown that the location, size, and water accumulation of historical (mined-out) voids have been surveyed and verified. Historical coal mining activities in the surrounding region have shown that poorly sealed boreholes did not have any impacts on current kaolin mining activities. The mining of the No. 6 coal seam which is present below the kaolin ore layer at the Mine has confirmed the absence of collapsed columns or water-conducting structures connecting the Taiyuan and Ordovician limestones. The residual water from the surrounding four closed coal mines is intercepted by the mine field boundary coal pillars and the 1,740 m-long artificial partition wall. When the water level rises, it is expected to enter the central sump of the Mine through boreholes and pipelines and be discharged to the surface, with limited impact on kaolin mining. SRK's review and site inspection show that the current and proposed groundwater controls meet the relevant regulations, standards, and requirements. SRK considers the overall situation to be satisfactory.

10 MINING

10.1 Introduction

This chapter presents an assessment of the Mine's mining system and operations, including the development system, operational processes, mining methodology, auxiliary production systems and the LOM plan. The assessment covers the key project mining studies and current operational data. The purpose of this assessment is to provide a basis for declaring an Ore Reserve in accordance with the JORC Code (2012).

The key technical studies and data for the assessment include:

- The Preliminary Mine Design of the Mining Engineering at 0.5 Mtpa Capacity for the Shuoli Kaolin Mine, dated December 2019, Huaibei Industrial and Architectural Design Institute Co., Ltd. (referred to as 19 Design).

- The Mineral Resources Development and Utilisation Plan Study at 0.5 Mtpa Capacity for the Shuoli Kaolin Mine, dated January 2023, Anhui Jinyan Kaolin New Materials Co., Ltd. (referred to as 23 Design).

- Operation data, including mining plan layouts, production plans and equipment details provided by Jinyan as at May 2025.

- Observations and materials gathered during SRK's site visit in October 2024 and subsequent information provided.

In SRK's opinion, the level of accuracy of the Modifying Factors presented in the 19 Design and 23 Design is equivalent to that of a pre-feasibility study (PFS), as per the JORC Code (2012) guidelines. Based on the reviewed results of the 23 Design and the current operation conditions, SRK has developed a mine design and production schedule using the updated Mineral Resource estimate (Section 7).

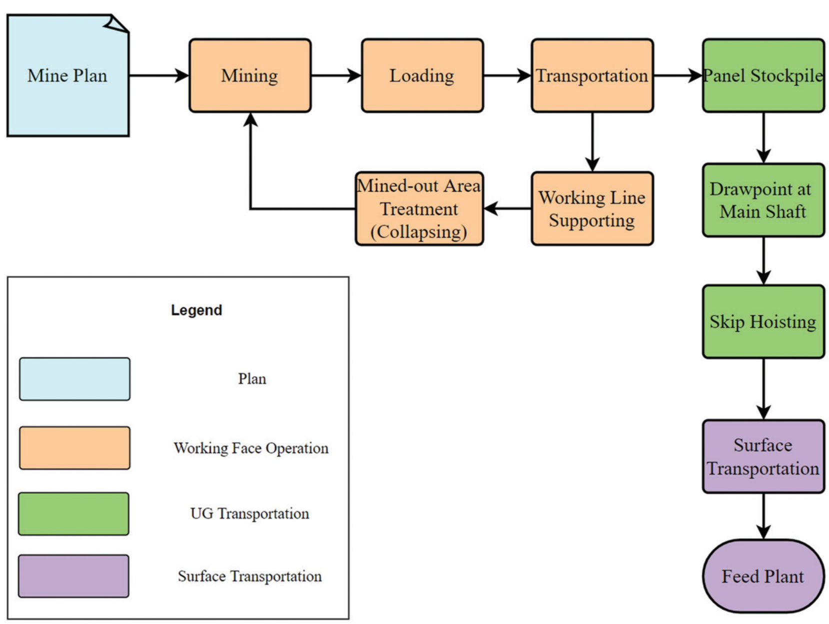
The Mine uses the underground access and mining system from the former Shuoli Coal Mine, which ceased operation in July 2019. Kaolin resources are currently being mined beneath the mined-out coal seam. The mining licence permit covers an area of 17.9955 km^2, with an approved mining capacity of 0.5 Mtpa. However, the actual mining volume is adjusted to meet market demand, which is currently below the approved capacity. The system is capable of reaching the fully approved capacity.

The underground access system uses the main and service shafts from the former coal mine, along with a ventilation shaft. The Mine features a single-level development with an incline drive to the mineralisation. Its infrastructure includes a water drainage system with a pump station, ventilation facilities, water and power supply, a conveyer belt system for ore haulage, and an ore bunker with a draw point and rail car station. During SRK's site visit, all equipment and systems were observed to be well maintained and in use.

The Mine employs a fully mechanised longwall mining method. ROM ore extracted from the longwall panels is conveyed to the ore bunker draw point at the main shaft and then hoisted to the surface via a skip to feed the processing plant.

The flowchart of the mining and operating system is shown in Figure 10.1.

Figure 10.1: Flowchart of mining operation — Shuoli Kaolin Mine



Source: Jinyan, modified by SRK, 2025

10.2 Mine operation

10.2.1 Historical operation

The Mine, formerly known as the Shuoli Coal Mine, was initially designed with a production capacity of 0.6 Mtpa. Construction began in August 1966, and the mine was commissioned in July 1971. Following several expansions, the coal mine's production capacity increased to 1.65 Mtpa by 2011.

Kaolin extraction, which began in 1993, occurred concurrently with the mining of the No. 5 coal seam, and officially commenced operations in 1997. The Shuoli Coal Mine was officially closed at the end of July 2019 due to the depletion of coal resources. Following the cessation of coal mining, all infrastructure was transitioned to the kaolin extraction operations.

10.2.2 Current operation

The relevant mining study and mine design for the Mine, supporting a mining capacity of 0.5 Mtpa, were prepared in December 2019. Table 10.1 summarises the annual ROM mined and delivered to the processing plant.

Table 10.1: Operation statistics — 2019-May 2025

Operation	ROM
	(kt)
2019	174
2020	167
2021	169
2022	171
2023	296
2024	343
January-May 2025	171

Source: Jinyan, 2025

10.3 Mine development

10.3.1 Development system layout

The Mine's access and kaolin layer development system consists of three shafts: a main shaft, an auxiliary service shaft and a ventilation shaft. The main and auxiliary shafts are centrally located within the surface industrial area, while the ventilation shaft is positioned further west. Details of the shafts' locations and dimensions are presented in Table 10.2.

Table 10.2: Key parameters of mine shafts

Shaft	Easting	Northing	Elevation	Depth	Diameter	Ladder way
				(m)	*(m)*	
Main shaft	39,490,166	3,769,976	34.8 m/-243 m	277.8	4.5	No
Auxiliary shaft	39,490,156	3,769,925	34.8 m/-213.2 m	248	6	Yes
#3 West ventilation shaft	39,487,094	3,769,777	34.9 m/-62 m	96.9	4	Yes

Source: 23 Design, 2023

The main shaft is equipped with a single-rope, dual-drum winding hoist that lifts 5-t dual skips. It connects to the -200 m main mine level and is primarily used for hoisting kaolin ore.

The auxiliary shaft, also connected to the -200 m main mine level, features a single-rope, dual-drum winding hoist used to lift a single-deck cage for two 1-ton ore cars. This shaft is mainly used for hoisting waste rock, personnel and materials. It includes a ladder compartment that serves as an emergency exit.

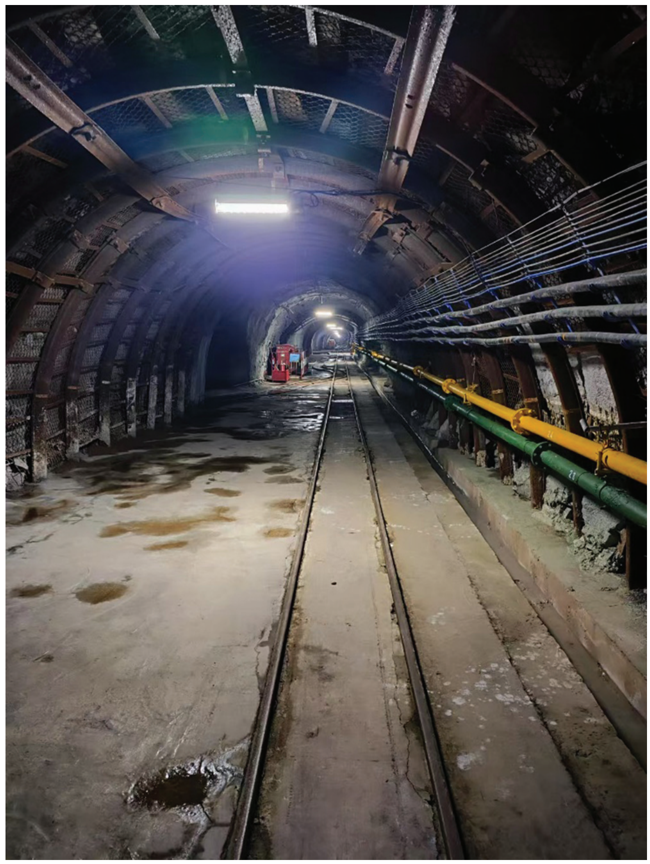
The #3 West ventilation shaft is situated on the west side of the ore body. It is equipped with a fan installed in the fan room at the shaft portal, functioning as a return airway. This shaft also has a ladder compartment that serves as a secondary emergency exit.

The Mine adopts a single-level access system, with the main roadway level situated at an elevation of -200 m. There are three primary roadways:

- North Wing Main Roadway
- West Wing Main Roadway
- South Wing Main Roadway.

These roadways are located on the floor of the No. 5 Coal seam, which is generally 16 m above the kaolin layer. The North Wing Roadway is currently blocked as mining activities occur in the southern area. This roadway will be reopened as mining progresses to that area.

Figure 10.2: Roadway



Source: Jinyan, 2024

The #6-2 Roadway connects the West Wing Main Roadway to the #3 West ventilation shaft. At present, the main roadways, incline drives, and conveyor belt drive are in operation normally. The development system of the Mine is presented in Figure 10.3.

At the -60 m mine level, a main return air roadway is established, corresponding to the crosscut of the #3 West ventilation shaft. Ventilation for all mining areas is managed through return airways, return air inclines, and connecting return air roadways that lead to the main return air roadway at the -60 m level. This system ultimately discharges air to the surface via the #3 West ventilation shaft.

Figure 10.3: Plan view of mine development layout

Source: 23 Design, modified by SRK, 2025

10.3.2 Gates heading

The mining development of the kaolin layer primarily uses the existing workings from the previous coal operation, with new headings driven for the preparation of working panels.

Permanent roadways are supported using bolts, mesh, and cable bolts, while large underground chambers are reinforced with concrete arch supports. All main headings are designed to accommodate personnel and material transport, ventilation, and pipeline installation.

Headings to the working face are developed as needed for new panel preparation. These headings, whether headgate or tailgate, have rectangular cross sections and are supported by split sets, mesh, steel belts, and additional cable bolts.

The longwall entry at the working face also has a rectangular cross section, supported with split sets, mesh, steel belts, and cable bolts for stability.

Table 10.3: Key parameters of headings

Heading type	Rock type	Cross section type	Support method	Width *(m)*	Equipment
Belt Conveyor Drive	Rock	Semi-circular Arch	Split set, mesh and shotcrete	3.0	Belt Conveyor
Railway Roadway	Rock	Semi-circular Arch	Split set, mesh and shotcrete	3.0	30 kg Rail and 45 kW Electric Locomotive
Cross-cut Drive – Dual Lanes	Rock	Semi-circular Arch	Split set, mesh and shotcrete	3.6	30 kg Rail
Cross-cut Drive – Single Lanes	Rock	Semi-circular Arch	Split set, mesh and shotcrete	3.0	30 kg Rail
Return Air Way	Rock	Semi-circular Arch	Split set, mesh and shotcrete	2.6	30 kg Rail
Headgate	Ore Seam	Rectangular	Split set, mesh and shotcrete	4.0	Belt Conveyor
Tailgate	Ore Seam	Rectangular	Split set, mesh and shotcrete	3.6	Continuous Rope Haulage Winch
Longwall Face Entry	Ore Seam	Rectangular	Split set, mesh and shotcrete	6.6	30 kg Rail

Source: 23 Design, 2023

To maintain continuous production at the working face, the Mine is planned with a single development heading based on preparation requirements. The development of these headings is fully mechanised, using a roadheader. Details of the equipment used for development are presented in Table 10.4.

Table 10.4: Main heading equipment

Equipment	Model and Specifications	Unit	In Use	Spare	Subtotal
Roadheader	EBZ-260H	Set	1	0	1
Roadheader	EBZ-260H	Set	1	0	1
Continuous Rope Haulage Winch	SQ-120/75B	Set	2	0	2
Belt Conveyor	DSJ100/2*125	Set	2	0	2
Wet Dust Collector	KCS-500D	Set	2	0	2
Local Fan	FBDN0.6.0	Set	2	2	4
Hydraulic Oil Pump	BRW125/31.5	Set	2	1	3

Source: 23 Design

10.3.3 Mining face preparation and longwall installation

The preparatory work for installing a fully mechanised longwall involves excavating a drift known as the face entry. This drift is excavated from the lower side to the upper side at the starting position of the longwall face, preferably following the dip direction. Once production commences, this drift becomes the initial working face. The final cross sectional dimensions of the cut-through are typically 8.2 m wide by 3.4 m high. Its primary function is to accommodate the shearer, scraper conveyor and hydraulic supports.

10.4 Mining methodology

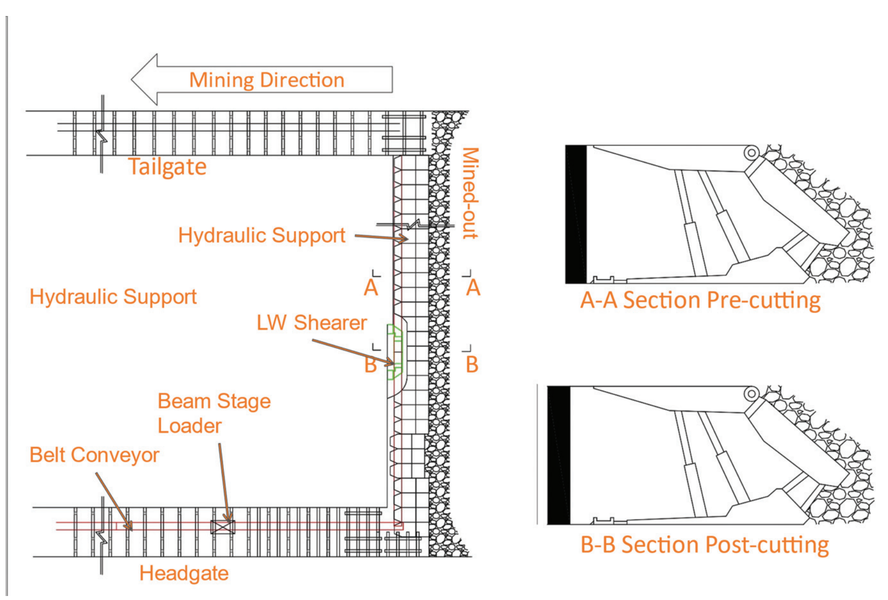
10.4.1 Mining method

The fully mechanised longwall mining method is used to extract the kaolin ore. This method employs a mechanical shearer to cut and load the ore, a flexible armoured face conveyor (AFC) to transport the ore, and hydraulic support shields (or chocks) to provide roof support and manage the caving of the mined-out area (goaf).

The longwall mining method is aligned along the strike of the mineralisation, based on geological conditions. A typical mining panel measures 600 m in length, 120 m in width and has a cutting height ranging from 2 m to 3.8 m.

Figure 10.4 shows a schematic of a fully mechanised longwall mining face, illustrating the directions of ore cutting and mining, and the collapsing of the goaf behind the longwall.

Figure 10.4: Schematic of longwall mining panel



Source: 23 Design and modified by SRK, 2025

10.4.2 Kaolin ore mining

The mining process is cycled as follows: longwall shearer cutting → scraper conveyor transporting → advancing hydraulic support → advancing the scraper conveyor.

- Cutting: The cutting is performed using an MG550/1380-WD shearer with a spiral ϕ2 m drum. The drum has a web width of 0.6 m. The height of cutting ranges from 1.8 m to 4.37 m. Production capacity is 200 t/h.

- Loading: The spiral drum of the shearer is paired with an SGZ800/800 scraper conveyor for ore transportation. The scraper conveyor operates at a chain speed of 1.1 m/s. The transport capacity is 1,500 t/h.

- Transportation:

  – Working face: Ore is loaded and transported by the scraper conveyor.

  – Transportation: Equipped with one SZB830/315 beam stage loader, with a standard length of 60 m, chain speed of 1.54 m/s and a transport capacity of 1,500 t/h; connecting to one DSJ100/2×75 belt conveyor with a transport capacity of 630 t/h and a belt speed of 2 m/s. The conveyor has a transition length of 12 m, with the loader and a storage length of 50 m.

- Support: ZY6800-19/40 hydraulic supports are used to stabilise the roof, with a total of 82 supports arranged along the working face.

  – Support height: 1,800-3,800 mm

  – Working resistance: 6800 kN

  – Support width: 1.5 m.

- Mined-out Area Management: Roof caving on the goaf side is controlled using hydraulic shield (or chock) supports, which facilitate timely roof collapse. Mining must be halted if the roof does not collapse, and the suspended roof distance exceeds the limits specified in the operational procedures. Artificial forced roof collapse or other measures should be employed to address the issue. Sudden roof collapse poses a safety risk, potentially causing wind blasts, equipment failure, and harm to personnel.

10.4.3 Mining equipment

According to the 23 Design and mine operation, a single working face is proposed and permitted at the same time. The mining equipment and their key parameters are presented in Table 10.5.

Table 10.5: Main mining equipment

Equipment	Model and Specification	Unit	Quantity	Key Technical Parameters
Hydraulic Support	ZY6800-19/40	Set	68	Supporting height: 1.8~3.8m, working resistance: 6800 kN, supporting width: 1.5 m
Advanced Hydraulic Support	ZQL2*4000/18/35	Set	8	Height: 1.65-2.63m, working resistance: 2 × 2400 kN, initial supporting force: 2 × 1978 kN, support movement step distance: 800 mm
Scraper Conveyor	SGZ800/800	Set	1	Rated voltage: 3,300 V, power: 2 × 400 kW, chain speed: 1.1 m/s, transport capacity: 1,500 t/h, motor speed: 1,470 rpm
Longwall Shearer	MG550/1380-WD	Set	1	Rated voltage: 3,300 V, power: 2 × 550 kW, drum diameter: 2.0 m, cutting height: 1.8~4.37 m, production capacity: 200 t/h
Beam Stage Loader	SZZ830/315	Set	1	Rated voltage: 3,300 V, power: 315 kW, standard length: 60 m, chain speed: 1.54 m/s, transport capacity: 200 t/h
Hydraulic Emulsion Pump Station	BRW400/31.5	Set	2	Rated voltage: 3,300 V, power: 250 kW, flow rate: 400 L/min, unloading pressure: 25 MPa

Equipment	Model and Specification	Unit	Quantity	Key Technical Parameters
Belt Conveyor	DSJ100/2×75	Set	6	Power: 2 × 75 kW, transport capacity: 630 t/h, re-loader junction length: 12 m, storage length: 50 m, belt speed: 2 m/s
Mobile Substation	KBSGZY1600/6	Set	2	Rated capacity: 2 × 1,600 kVA, low-voltage output: 3 300 V, high-voltage vacuum circuit breaker fuse current: 500 A
Control Console	KCT2	Set	1	Rated capacity: 800 kVA, low-voltage output: 1,140 V, high-voltage vacuum circuit breaker fuse current: 250 A
Mobile Substation	KBSGZY800/6	Set	1	Rated capacity: 800 kVA, low-voltage output: 1,140 V, high-voltage vacuum circuit breaker fuse current: 250 A

Source: 23 Design, 2023

10.5 Service system

10.5.1 Hoisting and transportation

The main shaft has a net diameter of ϕ4.5 m and ore hoisting tasks for the entire mining area are primarily undertaken at the main shaft. The main shaft is equipped with a 2JK3×1.5-11.5E single-rope winding hoist, using twin skip buckets with a load capacity of 5 t each, acting as counterweights to each other. The hoisting system is powered by the JTDK-ZN-O1SP AC hoist control system, with a main motor power of 800 kW and a rotational speed of 593 rpm. A buffer ore bin is installed at the bottom of the shaft, and an automatic ore tipper is used on the surface for unloading.

During the kaolin mining period, the auxiliary shaft is primarily used for the transportation of personnel, equipment and materials. Its hoisting capacity and safety facilities meet the required standards. The auxiliary shaft is equipped with a 2JK3×1.5G-11.5E single-rope winding hoist, using GLG1/6/1/2 cages as counterweights to each other. The hoisting system is powered by the JTDK-ZN-O1SP AC hoist control system, with a main motor power of 630 kW and a rotational speed of 593 rpm.

Currently, the -200 m level roadway primarily uses a rail transport system, with 30 kg/m tracks laid at a 600 mm gauge. Accumulator electric locomotives are used for transporting personnel, waste rock and materials.

This hoisting and underground transportation facility has been in operation for many years and remains reliable.

10.5.2 Ventilation

The recovery of kaolin resources uses the existing coal mine system, and each mining area therefore has a well-developed ventilation system. Based on the distribution of kaolin resources, the Mine adopts a central parallel ventilation system.

Currently, the mine has one AGF606-1.92-1.12-2 fan installed in the fan house at the portal #3 West ventilation shaft. The parameters of the main ventilation fan are shown in Table 10.6. The required airflow as studied in 23 Design is 57.15 m^3/s, and the maximum fan pressure is 1,950 Pa.

Table 10.6: Key parameters of Main Fan at #3 West ventilation shaft

Item	Unit	Key Parameter
Fan model		AGF606-1.92-1.12-2
Airflow volume	m^3/s	48~73
Fan pressure	Pa	400~2608
Motor		YBF450M-8
Motor power	kW	450
Blade angle	°	17.5

Source: 23 Design, 2023

Based on the performance curve of the fan device, the current ventilation shaft can meet the production requirements, with the fan operating at an efficiency of approximately 52.1%.

For the initial mining area in the South-II mining district, a diagonal exhaust ventilation system is used: fresh air flows from the auxiliary shaft into the -200 m main roadway, then through the South Wing Main Roadway and the South Belt Drive to the South-II mining district. After ventilating the working face, the exhaust air is drawn out through the #3 West ventilation shaft.

For the North mining district, fresh air flows from the auxiliary shaft into the -200 m main roadway, then through the North Wing Main Roadway to the North mining district. After ventilating the working face, the exhaust air passes through the North Return Airway, descends to the West Wing Main Roadway, and is finally drawn out through the #62 Return Airway, the -60 m crosscut to the #3 West ventilation shaft.

10.5.3 Power supply

The Mine is equipped with a 35 kV main step-down substation, housing two SF9-8000/35 transformers. Each transformer alone can meet the power demands of the entire Mine. The power supply system consists of two circuits supplying power simultaneously, with the two main transformers operating independently.

Under normal conditions, the Project is powered by the primary power supply circuit. In the event of a power outage or failure in the primary circuit, all loads are supplied by the backup power circuit.

The 35 kV substation at the Mine site is powered by two circuits connected to different bus segments of the 220 kV regional substation at Zonglou. The circuits have no intermediate loads.

The details of the circuits are:

- Circuit 512: Line type LGJ-120, length 6.8 km
- Circuit 517: Line type LGJ-120, length 6.8 km.

The surface facilities include:

- Main shaft hoist substation
- Auxiliary shaft hoist substation
- Compressor station substation
- #3 West ventilation shaft substation.

These substations supply power to respective facilities for hoisting, compression, ventilation and machinery maintenance.

Underground power is supplied by two 6 kV cables from the 35 kV substation at the industrial site through the auxiliary shaft (Figure 10.5).

The cables are:

- MYJV42-3×120 mm^2: Mining uses cross-linked polyethylene insulated, steel-wire armoured, PVC-sheathed cable.

- MYJV42-3×240 mm^2: Mining uses cross-linked polyethylene insulated, steel-wire armoured, PVC-sheathed cable.

The cables feed into the central underground substation, being:

- Central Pump Station Substation (-200 m level): Supplies power for dewatering operations.

- Mining Area Substations: Powers the mining, transportation, and auxiliary facilities.

Power sources for each substation are provided either by the 6 kV high-voltage distribution room at the main substation or the nearest 6 kV distribution room.

The mine is equipped with a comprehensive set of electrical equipment and facilities, all of which is operational. The Mine continues to use the existing infrastructure.

Figure 10.5: Power supply system

Source: Jinyan, 2024

10.5.4 Compressed air supply

Based on the distribution of compressed air demand locations, the main and auxiliary shaft portal air compressor rooms and the #3 West ventilation shaft air compressor room are retained and maintained.

Based on the distribution of air supply locations after production contraction, the main and auxiliary shaft industrial sites' air compressor rooms and the #3 West ventilation shaft air compressor room will be retained.

The industrial site air compressor room is equipped with three sets of screw air compressors manufactured by Shanghai Ingersoll Rand (model MM200-2S).

The specifications per unit are:

– air discharge volume: 38.8 m^3/min

– air discharge pressure: 0.8-0.85 MPa

– rated power: 200 kW.

The #3 West ventilation shaft industrial site air compressor room contains three air compressors:

- Two sets mobile air compressors by Ingersoll Rand, model MLGF20/7.5-110G:

  – air discharge volume per unit: 20 m^3/min

  – air discharge pressure: 0.75 MPa

  – rated power: 110 kW

- One set of screw air compressor by Ingersoll Rand (model R110U-A8):

  – volumetric flow rate: 19.2 m^3/min

  – air discharge pressure: 0.8-0.85 MPa

  – rated power: 110 kW.

The main compressed air pipeline uses Φ219×8 welded pipes, connected from each air compressor station and routed to the underground via the auxiliary shaft or #3 West ventilation shaft.

The compressed air system, based on the Mine's air consumption requirements and the existing air compressor setup, is sufficient to meet the demands of kaolin mining and production. This system serves as the air source for self-rescue during underground emergency.

10.5.5 Mine drainage

The Mine has a normal inflow of 116 m^3/h and a maximum inflow of 143 m^3/h.

The current mining system for the kaolin mine adopts a two-stage relay drainage system at the mining area level.

The #62 pump station serves the declined mining area, where water inflow is pumped from the #62 pump house (-363 m level) to the -200 m level (Figure 10.6). From there, it flows through the main roadway drainage ditch to the auxiliary shaft sump at the -200 m level, and then the auxiliary shaft pumps concentrate to the drainage and discharges it to the surface.

Figure 10.6: Pump station

Source: Jinyan, 2024

For the other mining areas, water inflow flows naturally through the main roadway drainage ditch to the auxiliary shaft sump at the -200 m level, from where it is also pumped to the surface by the auxiliary shaft pumps.

The -200 m level auxiliary shaft main drainage pump house is equipped with a total of 5 pumps: 4 × MD280-43×6 multistage centrifugal pumps with a head of 258 m, a flow rate of 280 m^3/h, and each driven by a 315 kW motor, and 1 × MD200-43×7 multistage centrifugal pump with a head of 301 m, a flow rate of 280 m^3/h, and driven by a 450 kW motor.

Three DN250 pipelines are installed, all of which are routed along the auxiliary shaft. The total capacity of the sump at the shaft bottom is 2,800 m^3.

10.5.6 Mine monitoring and emergency refuge system

The Mine has implemented and perfected the following underground monitoring and emergency refuge system in accordance with the local regulations:

- Monitoring and Surveillance
- Personnel Positioning
- Compressed Air Self-Rescue
- Emergency Water Supply
- Communication and Liaison
- Emergency Refuge.

10.6 Mine and production plan

The Mine was originally designed for a ROM capacity of 0.5 Mtpa. However, due to the market demand, it operates below this capacity. It is projected that the Mine will achieve an output of 0.4 Mtpa from 2025 until the end of its mine life.

The Mine is designed to operate 330 working days per year, with three 8-hour shifts per day. The net hoisting time, considering availability and utilisation, is estimated at 16 hours. During SRK's site visit, it was observed that only two 8-hour shifts are currently in operation. This includes one 8-hour shift dedicated to maintenance. The processing plant is being supplied at a rate of approximately 26,000 t of ore per month.

As described previously, SRK has re-estimated the Mineral Resources in accordance with the JORC Code and developed a mine plan based on the revised Mineral Resource model (MRM), including only the defined Measured and Indicated Mineral Resources. The mining sequence follows the 23 Design plan, with the Northern section scheduled for mining after the Southern section is completed.

10.6.1 Mine design

The mine plan follows the parameters and design described in the 23 Design. Figure 10.7 shows the mine design plan map, which includes the designed mining blocks. The kaolin resources within each of these mining blocks are listed in Table 10.7, which also provides information on the thickness of the kaolin layer and the cutting range of the shearer. This information enables the kaolin layer extraction and recovery rate to be calculated and serves as a basis for scheduling the block/panel extraction sequence and developing the mine production plan.

Figure 10.7: Plan view of mine design and mining blocks

Source: SRK, 2025

Table 10.7: Key parameters and materials per mining block

Mining Block	Measured and Indicated Resources	Minimum thickness	Maximum thickness	Average thickness	Minimum Cutting	Maximum Cutting	Average Cutting	Dilution	Loss	ROM
	(kt)	*(m)*	*(m)*	*(m)*	*(m)*	*(m)*	*(m)*	*(%)*	*(%)*	*(kt)*
1	615	1.13	4.64	3.06	2.00	4.74	3.16	3.6%	5.0%	605
2	460	2.12	5.14	3.47	2.22	5.24	3.57	2.9%	5.0%	450
3	232	1.15	3.68	2.53	2.00	3.78	2.66	6.4%	5.0%	234
4	384	2.21	4.63	3.69	2.31	4.73	3.79	2.8%	5.0%	375
5	229	1.91	4.05	2.85	2.01	4.15	2.95	3.6%	5.0%	225
6	232	1.72	3.95	3.13	2.00	4.05	3.23	3.3%	5.0%	228
7	174	1.91	3.02	2.38	2.01	3.12	2.48	4.2%	5.0%	173
8	324	1.50	3.49	2.52	2.00	3.59	2.63	4.7%	5.0%	322
9	373	0.85	4.01	2.61	2.00	4.11	2.73	5.3%	5.0%	373
10	204	1.02	2.72	1.89	2.00	2.82	2.13	14.9%	5.0%	223
11	426	1.67	4.19	2.70	2.00	4.29	2.80	3.8%	5.0%	420
12	167	0.94	2.63	1.82	2.00	2.73	2.10	18.4%	5.0%	187
13	177	0.97	4.90	3.10	2.00	5.00	3.22	5.2%	5.0%	177
14	539	0.89	4.90	3.11	2.00	5.00	3.22	3.8%	5.0%	531
15	198	0.94	4.47	2.41	2.00	4.57	2.57	8.3%	5.0%	203
16	118	0.74	2.33	1.43	2.00	2.43	2.02	50.6%	5.0%	169
17	332	1.46	4.12	2.89	2.00	4.22	3.00	3.7%	5.0%	327
18	434	1.06	3.55	2.42	2.00	3.65	2.54	5.8%	5.0%	436
19	402	0.73	4.59	2.85	2.00	4.69	2.98	5.8%	5.0%	404
Total/ average . . .	6,018	1.33	4.16	2.81	2.04	4.26	2.94	6.0%	5.0%	6,062

Source: SRK, 2025

Notes:

1 Block numbers are the same as presented in Figure 10.3.

2 #2 mining block, located in the South-II mining zone, is currently being mined.

With the exception of mining blocks #2, #5, #6 and #8, the thickness of the kaolin layer in some areas falls below the minimum cutting height of the shearer used. This results in dilution of the kaolin ore as roof rock is also cut. Conversely, in some blocks, the layer thickness exceeds the maximum cutting height of the shearer, leading to ore loss. Contour maps of kaolin layer thickness, derived from the geological model and computer software, can accurately model kaolin ore loss and dilution for the selected equipment configuration.

Mine management has noted that larger longwall equipment, with a shearer capable of cutting up to 8 m, is available at the Mine. For blocks or panels with thicker sections, switching to this equipment could be considered. Normally, a 0.05 m cut of the floor and roof is factored in when estimating ore dilution if the equipment's cutting height is within the maximum and minimum layer thickness range. The estimated average dilution rate is 6.0%. Mine operation management has stated that mining loss using the longwall method is minimal due to the stability of the mineralised layer and prevailing rock conditions, with a 5% mining loss assumed to account for kaolin extraction loss.

10.6.2 Development, mining and production schedule

The mine plan has been developed based on the following assumptions:

- Mining sections and general mining direction: Mining activities are advancing from the Southern section to the Northern section.

- Panel development: Gate headings for each panel are developed according to the schedule before the actual mining activities begin in the panel.

- Heading development: Only one heading is planned at the same time; the advancing rate is limited to 4 m/day (120 m/month).

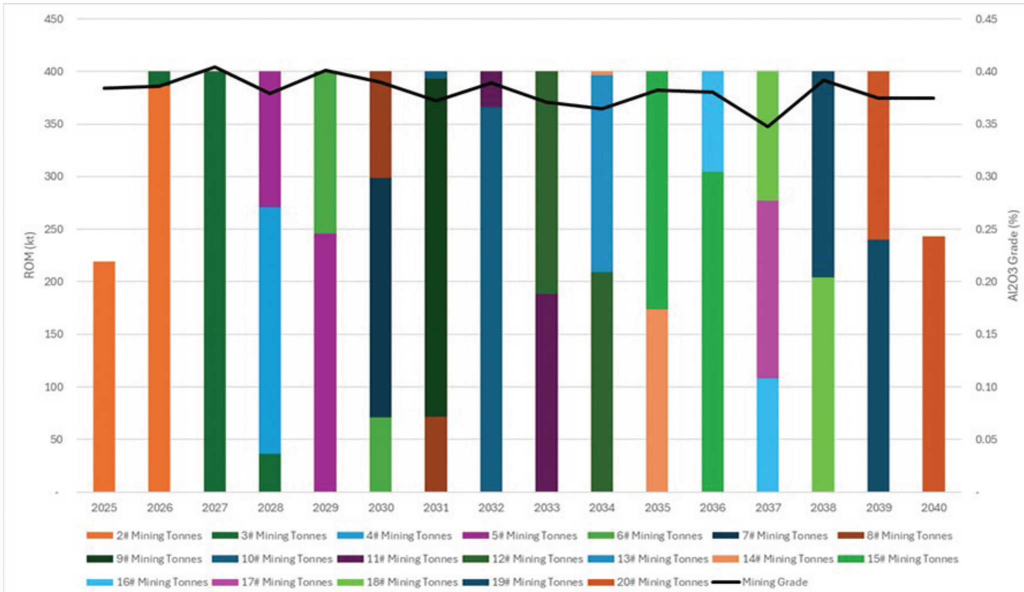
- Working face operations: Only one working face is allowed to operate at any given time.

- Rodway development: The main roadways from the previous coal mine operation have been repurposed for the Mine. Additional roadway development will be undertaken as needed to connect new gate roads and panels to the existing roadway system.

- Production rate: The ROM production rate is 0.4 Mtpa.

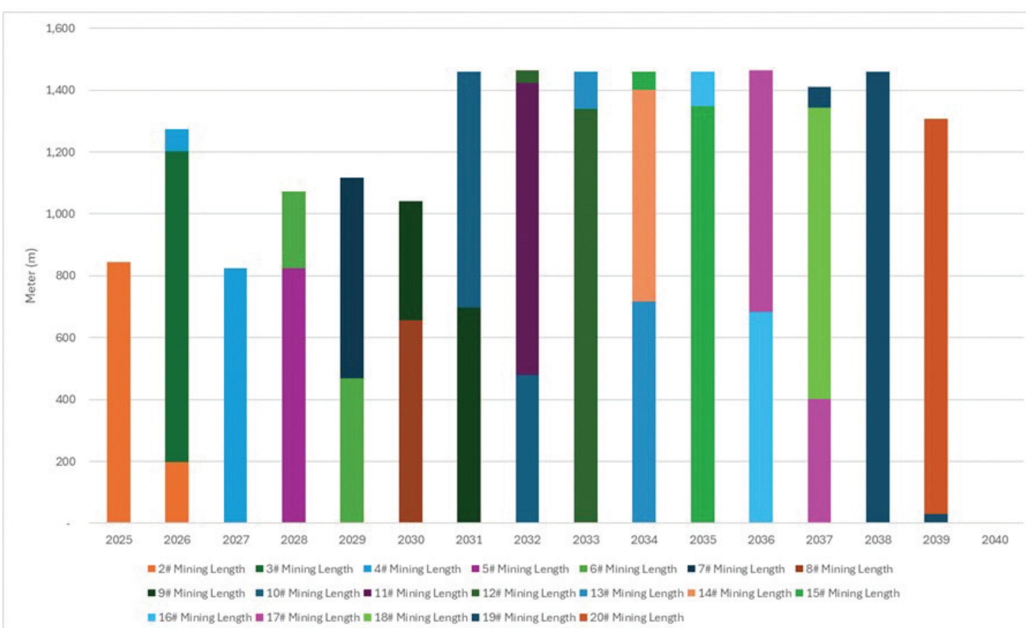
The mining and sequence schedule for each block over LOM is presented in Figure 10.8, and the heading development schedule is shown in Figure 10.9. The integrated mine schedule is detailed tabulated in Table 10.8. The schedule also indicates the ore grade which is achieved on average over the year and the total heading development required. The mining sequencing year by year is presented in Figure 10.10. The remaining LOM is 16 years.

Figure 10.8: ROM mining schedule per block over LOM



Source: SRK, 2025

Figure 10.9: Heading schedule per block over LOM



Source: SRK, 2025

Table 10.8: Summary of Shuoli Kaolin Mine schedule over LOM

Year	ROM	Al_2O_3 Grade	Fe_2O_3 Grade	TiO_2 Grade	Total Heading
	(kt)	*(%)*	*(%)*	*(%)*	*(m)*
June-December 2025	219	38.41	0.71	0.51	843
2026	400	38.59	0.59	0.51	1,273
2027	400	40.46	1.03	0.50	823
2028	400	37.93	0.72	0.51	1,073
2029	400	40.09	0.73	0.51	1,117
2030	400	39.00	0.95	0.48	1,040
2031	400	37.21	1.18	0.48	1,460
2032	400	38.89	1.31	0.50	1,464
2033	400	37.08	1.42	0.48	1,460
2034	400	36.43	1.22	0.47	1,460
2035	400	38.24	1.60	0.51	1,460
2036	400	38.02	1.54	0.45	1,464
2037	400	34.77	0.66	0.47	1,410
2038	400	39.15	0.76	0.52	1,460
2039	400	37.49	0.69	0.51	1,307
2040	243	37.45	0.67	0.49	–
LOM Total	6,062	38.08	1.00	0.49	19,115

Source: SRK, 2025

Notes:

1 The latest mine survey was conducted on 31 May 2025.

2 Approximately 100 kt of kaolin ore is stockpiled on surface, which is excluded from the schedule above.

Figure 10.10: Block and panel mining sequence

Source: SRK, 2025

10.7 Conclusion and recommendations

The Mine is currently in operation with an approved kaolin ore production capacity of 0.5 Mtpa. It employs a fully mechanised longwall mining method, using a shearer for ore cutting, a flexible armoured scraper conveyor for transporting ore from the face to the gateway, and hydraulic support shields for roof support and caving management on the mined-out goaf side. SRK considers this to be a suitable mining method.

The Mine has demonstrated strong operational performance with a well-documented record of kaolin ore production. SRK considers that the management team has the necessary project implementation and operational capabilities to successfully continue mining operations and develop other sections of the Mine.

Beyond the currently designed mining blocks, there are opportunities to expand the kaolin Ore Reserve and extend the LOM by upgrading the current Inferred Mineral Resource to Indicated Mineral Resource through additional infill drilling. Potential areas for Mineral Resource upgrades and Ore Reserve additions include the central and western parts of the currently defined Mineral Resources.

The mine infrastructure, including both underground and surface service facilities, is well maintained and capable of supporting current and future operations.

Overall, SRK considers that the Mine is well designed, equipped and operated, and can safely achieve the scheduled ore production over the remaining LOM. The overall mining risk is considered low.

11 ORE RESERVE ESTIMATION

11.1 Introduction

The definition of Ore Reserves in accordance with the JORC Code (2012) is as follows:

An 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

11.2 Ore Reserve estimation procedures

The Ore Reserve estimate is derived from the latest Mineral Resource estimate by SRK (Section 7) and the ore block model outlined in the mining plan. SRK has also reviewed and incorporated data from the Project's technical studies and the current mine design provided by Jinyan. The block design was refined into a panel design for enhanced accuracy and grade control, and this was superimposed on the Mineral Resource model for Ore Reserve using the Deswik.CAD & SCHED software package. The estimated result is further evaluated by the Modifying Factors in accordance with the JORC Code.

The Ore Reserve evaluation involved the following steps:

- Conduct site inspections.
- Process Mineral Resources Models (MRMs) and import the data required.
- Review the operation, previous studies and designs for the Project.
- Define the ore/waste cut-off.
- Assess, modify and apply the mining factors to the estimation.
- Consider Modifying Factors of other disciplines and resulting limits.
- Review technical economic analysis for the Project.
- Prepare the Ore Reserve Statement.
- Conduct an internal peer review.

11.3 Technical studies

SRK has reviewed the following two technical studies undertaken for the Mine, supporting the current underground operation, for which the current approved production capacity is 0.5 Mtpa (within the mining licence boundaries):

- The Preliminary Mine Design of the Mining Engineering at 0.5 Mtpa Capacity for the Shuoli Kaolin Mine; December 2019, Huaibei Industrial and Architectural Design Institute Co., Ltd. (19 Design)

- The Mineral Resources Development and Utilisation Plan Study at 0.5 Mtpa Capacity for the Shuoli Kaolin Mine; January 2023, Anhui Jinyan Kaolin New Materials Co., Ltd. (23 Design).

These two mining study reports were complemented by the current mining plan and actual operational data. These data, collected by SRK during the site visit in October 2024, have been reviewed to support and validate the findings of the project mining studies. The Project's technical studies are considered by SRK to be at a pre-feasibility study (PFS) level and are sufficient to support for an Ore Reserve estimate in accordance with the JORC Code (2012). SRK has developed the mine design and production schedule based on the technical studies reviewed, operational data and the latest Mineral Resource estimate prepared by SRK.

11.4 Ore definition

The definition of the Ore Reserve is based on the natural composition of the kaolin Mineral Resource, accounting for mining dilution, and aligned with the processing plant's minimum requirements for kaolin feed. The cut-off criteria consider the following impurities and limits for the kaolin Ore Reserve:

- Al_2O_3 ≥30%

- Fe_2O_3 ≤2%

- TiO_2 ≤0.6%

11.5 Modifying Factors

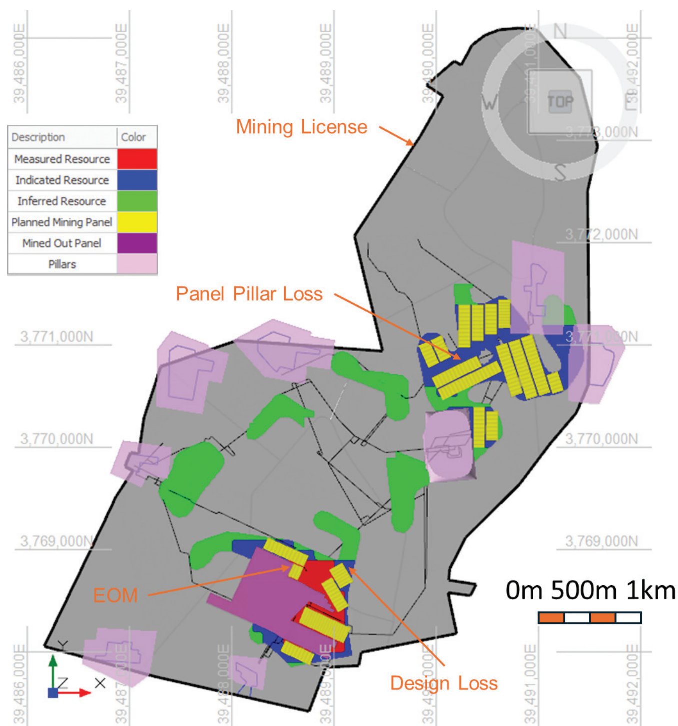
The conversion of Mineral Resource to Ore Reserve (ROM) is achieved by estimating the quantity and applying Modifying Factors. The primary factors considered are mining losses and dilution. Additional considerations include the quality of the Mineral Resource, as well as any environmental, legal or processing constraints, and other factors that could impact the Ore Reserve.

The mining factors applied to the Ore Reserve estimates are:

- Mining panel design (as shown in Figure 11.2):
  - The Ore Reserve is confined within the mining licence boundaries.
  - Only Measured and Indicated Mineral Resources are considered for conversion.
  - The end of month (EOM) underground survey dated 31 May 2025 was used to delineate the Ore Reserve.
- Design loss:
  - Safety pillars are maintained for shafts, surface buildings and other structures.
  - Pannel pillars for the main drive are maintained.
  - Resources in corners that the longwall mining shearers can barely reach are considered.
  - Kaolin layers steeper than 17°, where the longwall mining equipment cannot operate effectively, are considered.
- Mining dilution:
  - The minimum mining width (cutting height) is set at 2 m, considering the width of the longwall shearer used.
  - A 0.05 m dilution applied to both roof and bottom of the kaolin layer if the layer exceeds 1.9 m in height.
  - Additional dilution is considered if the height of the kaolin layer is less than 1.9 m, with an average dilution rate of 5.9% for all designed panels.
  - The quality of the block resource (cut-off grades) is also checked to determine dilution and ore/waste grades.
- Mining loss:
  - The current operation reports the mining loss is minimal due to the stability of the kaolin layer and rock condition; however, a 5% loss is applied to account for overall mining loss.

Figure 11.1 presents a simplified mining map that highlights the areas of the kaolin layer containing classified Mineral Resources. It also shows the designed mining panels (in yellow), which delineate the mineable area with kaolin Ore Reserves.

Figure 11.1: Plan view of Ore Reserve estimate areas



Source: SRK, 2025

11.6 Ore Reserve estimates

The estimated Ore Reserve is based on Mineral Resource estimates and Modifying Factors as summarised in Table 11.1 and shown in waterfall charts in Figure 11.2.

Table 11.1: Ore Reserve estimation sequential table

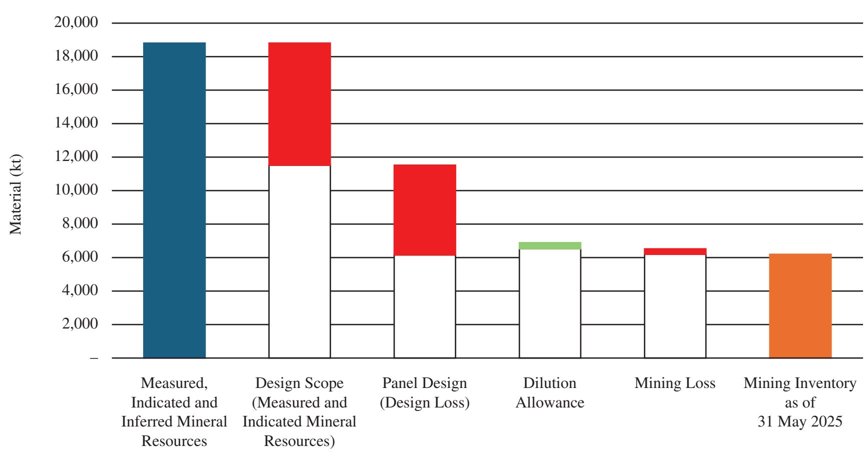
Description	Tonne
	(kt)
Measured, Indicated and Inferred Mineral Resources	18,649
Within design scope Measured and Indicated Mineral Resources	11,357
Within panel design (design loss considered)	5,338
Allowance for dilution	363
Mining ore loss	-319
Kaolin Ore Reserve as at 31 May 2025	6,062

Source: SRK, 2025

Note:

1 Any differences between totals and sum of components are due to rounding.

Figure 11.2: Ore Reserve waterfall chart



Source: SRK, 2025

11.7 Ore Reserve Statement

According to the JORC Code, an Ore Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource and includes losses and dilution, which may occur by mine design and during the mining operation. Besides that, Ore Reserves are usually defined at a reference point. For this Report, the reference point is the ROM material as received at the processing plant.

As at 31 May 2025, SRK estimated Ore Reserves of 6.06 Mt within the mining licence boundaries, reported in accordance with the JORC Code (2012) guidelines. This estimate includes 1.09 Mt of Proved Ore Reserves and 4.97 Mt of Probable Ore Reserves. The overall results of the Ore Reserve estimate is tabulated in Table 11.2.

Table 11.2: Shuoli Kaolin Mine Ore Reserve Statement as at 31 May 2025

Category	Ore Reserve	Al_2O_3	Fe_2O_3	TiO_2
	(kt)	*(%)*	*(%)*	*(%)*
Proved	1,093	38.9	0.66	0.51
Probable	4,969	37.9	1.08	0.49
Total	6,062	38.1	1.00	0.49

Source: SRK, 2025

Notes:

1 Any differences between totals and sum of components are due to rounding.

2 Cut-off quality of ROM is Al_2O_3 ≥30%, Fe_2O_3 ≤2%, and TiO_2 ≤0.6% to define ore/waste.

3 The minimum mining cutting height is 2 m.

4 The Ore Reserves are reported on a metric dry tonnes basis.

5 The reference point for reporting of the Ore Reserves is ore as received at the mine surface processing plant.

6 The Ore Reserves are reported inclusive of Mineral Resources.

7 The Mineral Resources are effective as at 31 May 2025.

JORC Code Statement*: The information in this Report which relates to the Ore Reserve is compiled by Falong Hu. Mr Hu is a full-time employee of SRK Consulting (China) Limited. He is a Fellow of the AusIMM. Mr Hu has sufficient experience that is relevant to the style of mineralisation, type of deposit under consideration, and the activity which he is undertaking to qualify as Competent Person as defined in the JORC Code (2012).*

12 PROCESSING

12.1 Kaolin

Kaolin is an industrial ore mainly composed of kaolinite and containing a small amount of other clay minerals and non-clay minerals. Clay minerals generally include halloysite, montmorillonite, hydromica and chlorite, while non-clay minerals generally include quartz, feldspar, mica, aluminium oxide and hydroxide, iron minerals, titanium oxides, organic peat and coal, etc. The chemical formula of kaolinite is $Al_4(Si_4O_{10})(OH)_8$, and the theoretical chemical composition is Al_2O_3 39.50%, SiO_2 46.54%, H_2O 13.96%, Al_2O_3/SiO_2(A/S)=0.85.

Kaolin contains impurities such as carbon, iron and titanium. Calcination is commonly used to remove organic carbon and other impurities. When kaolinite is calcined at low temperatures, it exhibits high whiteness, low bulk density, large specific surface area and pore volume, high oil absorption capacity, excellent covering power, high wear resistance, and superior insulation and thermal stability. When kaolinite is calcined at high temperatures, it features high bulk density, high refractoriness, good stability, high strength, and strong resistance to acids and alkalis. The high-temperature calcined product of kaolinite, which includes mullite, cristobalite, and a small amount of glass, serves as a high-quality refractory and precision casting material.

The calcination process of kaolinite is as follows:

- Absorbed water and interlayer water is lost at 110~400°C. At 450~750°C, it loses constitution water and transforms into metakaolinite:
  - $Al_2O_3•2SiO_2•2H_2O$ (kaolinite)→$Al_2O_3•2SiO_2$ (metakaolinite)+$2H_2O$
- At 925~980°C, metakaolinite shows spinel structure, and cristobalite is formed:
  - $2(Al_2O_3•2SiO_2)$ (metakaolinite)→$2Al_2O_3•3SiO_2$ (silicon and aluminium spinel)+SiO_2 (cristobalite)
- At 1050~1,500°C, metakaolinite shows mullitisation, first transforming into mullite-like structure, and then transforming into mullite:
  - $3(2Al_2O_3•3SiO_2)$ (silicon and aluminium spinel)→$2(3Al_2O_3•2SiO_2)$ (mullite)+$5SiO_2$ (cristobalite).

Kaolin has different physical and chemical properties and qualities according to the different origins and producing areas of the component minerals. Different applications or uses have diverse quality requirements for kaolin. In terms of chemical composition, industries such as papermaking coatings, high-voltage porcelain, refractory crucibles, and petrochemical carriers demand that the Al_2O_3 and SiO_2 contents in kaolin are closely matched to the theoretical values of kaolinite. For domestic ceramics, construction sanitary ceramics, white cement, and rubber and plastic fillers, the Al_2O_3 content requirements can be slightly lowered. Cable fillers not only require high-purity kaolin, but also have stringent requirements for volume resistivity. There are also specific requirements for deleterious oxides like Fe_2O_3, TiO_2 and SO_3, and the permissible content levels of CaO, MgO, K_2O and Na_2O vary based on the intended use.

Regarding physical properties, there are specific requirements for each application or use. Papermaking coatings and pigments primarily demand high whiteness, low viscosity, and fine particle size. The ceramic industry requires good plasticity, formability, and firing whiteness. The enamel industry needs good suspension properties, while refractory materials require high refractoriness.

12.2 Shuoli kaolin and its products

The Shouli kaolin resource is stable, with an alumina-silica ratio close to the theoretical value and over 95% kaolinite content and good crystal orderliness. When used for precision casting shell moulds, its calcined kaolin exhibits high refractoriness, low expansion, excellent thermal and chemical stability, and high collapsibility. These properties facilitate the casting process, allowing for easy demoulding, minimal deformation, low shrinkage, a high-quality finish, and a high yield of finished products. As refractory materials, Jinyan's calcined kaolin products provide high strength, purity and excellent thermal shock resistance.

Jinyan began developing Shuoli kaolin in the late 1980s. Initially, ultrafine kaolin powder for industrial fillers was the primary product but due to high production costs and lack of competitiveness, production ceased in 2013. Over the years, Jinyan has built technical expertise and market recognition in producing various products, including crushed and screened kaolin ores, which are commercially referred to as raw coke and powder, as well as calcined kaolin ores. The calcined kaolin ore is further processed into precision casting mullite sand and powder, and refractory mullite, commercially known as chamotte. Jinyan, formerly the Huaibei Kaolin Shuoli Mining Co., Ltd., assisted in drafting the Chinese industry standard 'Calcined Kaolin Sand and Powder for Precision Casting' (JB/T 11733-2013). Jinyan recently developed a new ceramic fibre product, with commercial production expected to commence in the first quarter of 2025. In addition to all the products, waste generated during processing is used to produce non-fired bricks.

The Chamotte Plant (Figure 12.1) includes a calcined kaolin workshop, a kaolin ceramic fibre workshop and a non-fired brick workshop. The calcined kaolin workshop comprises four rotary kiln production lines and two shaft kiln production lines, with a total production volume of 0.34 Mtpa. Kaolin ores are calcined at high temperatures, with the rotary kilns producing precision mullite products and the shaft kiln producing refractory mullite products (chamotte).

In the ceramic fibre workshop, calcined kaolin is further processed into fibre products, which are characterised by their good thermal insulation properties. These fibres are used as insulation materials for industrial furnaces and pipelines, as well as fillers for desulfurisation and denitrification equipment.

In the Mullite Precision Casting Sand and Powder Plant at the Longhu Industrial Park, calcined kaolin from the rotary kilns is further processed into different precision casting sand and powder products (Figure 12.2).

Waste generated during these processes is used as material for making non-fired bricks.

Figure 12.1: Chamotte Plant

Source: SRK site visit, October 2024

Figure 12.2: Mullite Precision Casting Sand and Powder Plant

Sources: Jinyan, 2024

12.3 Ore properties

12.3.1 Mineral composition

The ore has microscale-like structure under the microscope, and part of it has pelitic texture. It is dominated by kaolinite, followed by boehmite (AlO(OH)). There are also small amounts of zoblitzite, siderite, montmorillonite, chlorite, halloysite, sulfate and phosphate.

12.3.2 Physical properties

The ore primarily exhibits a light grey to black-grey colour, with some appearing piebald and dark red-yellow-green. It has a gelatinous, dense, massive structure and is characterised by being fine, hard and brittle.

The ore's Mohs hardness ranges from 3 to 4, and its specific gravity is between 2.56 and 2.74 g/cm^3, with an average of 2.62 g/cm^3. It has a dull, greasy lustre and a natural whiteness ranging from 50.5% to 64.6%, averaging 53.98%. The coloration of the ore is mainly attributed to the presence of organic carbon, which ranges from 0.024% to 0.069%, with an average content of 0.041%.

12.3.3 Chemical composition

The results of the chemical analysis of Jinyan kaolin are shown in Table 12.1.

Table 12.1: Kaolin chemical composition

Chemical Composition	Content *(%)*	Remarks
SiO_2	37.62-45.13	Generally 43.5%
Al_2O_3	37-44	Generally about 40%
Fe_2O_3	0.4-1.0	Generally ≤0.71%
TiO_2	0.49-0.69	Generally ≤0.64%
CaO	0.10-0.38	Averaging 0.20%
MgO	0.04-0.40	Averaging 0.10%
K_2O	0.03-0.12	Averaging 0.06%
Na_2O	0.08-0.24	Averaging 0.13%
SO_3	0.03	
P_2O_5	0.25	
MnO	0.002	
Organic Carbon Content	0.041	
Ignition Loss	14.5	
pH Value	6~8	

Source: Anhui Jinyan Kaolin Technology Co., Ltd., Feasibility Study Report on the Expansion Project of 62,000 tpa Calcined Kaolin Raw Material Base, March 2014

The chemical composition of the ore has the following characteristics:

- The kaolinite content is high, greater than 95%.
- For high-temperature calcined products, the composition includes more than 55% mullite phase, 10% to 20% cristobalite phase, with the remainder being glass phase. The presence of cristobalite phase contributes to the material's high refractoriness and makes the shell easy to collapse, making it an excellent casting material.
- The content of beneficial component Al_2O_3 is high, ranging from 37.62% to 45.13%, with an average of 40%. This is higher than the theoretical value of kaolinite, which is 39.5%. It is classified as high-aluminium ore due to the presence of a small amount of boehmite.
- The content of SiO_2 is low, ranging from 37.62% to 45.13%, with an average of 42.9%.
- The content of TiO_2 is 0.49% to 0.69%, averaging 0.60%. It is the feature of sedimentary deposit.
- The content of H_2O is approximately 14%, which is close to the theoretical value of 13.9%.
- The content of organic carbon is low, generally 0.024% to 0.06%, with an average of 0.041%. It is an important feature of sedimentary kaolin deposits associated with coal measures. Its colour is generally grey-black.
- There is an inverse relationship between Al_2O_3 and Fe_2O_3.

12.4 Kaolin calcination

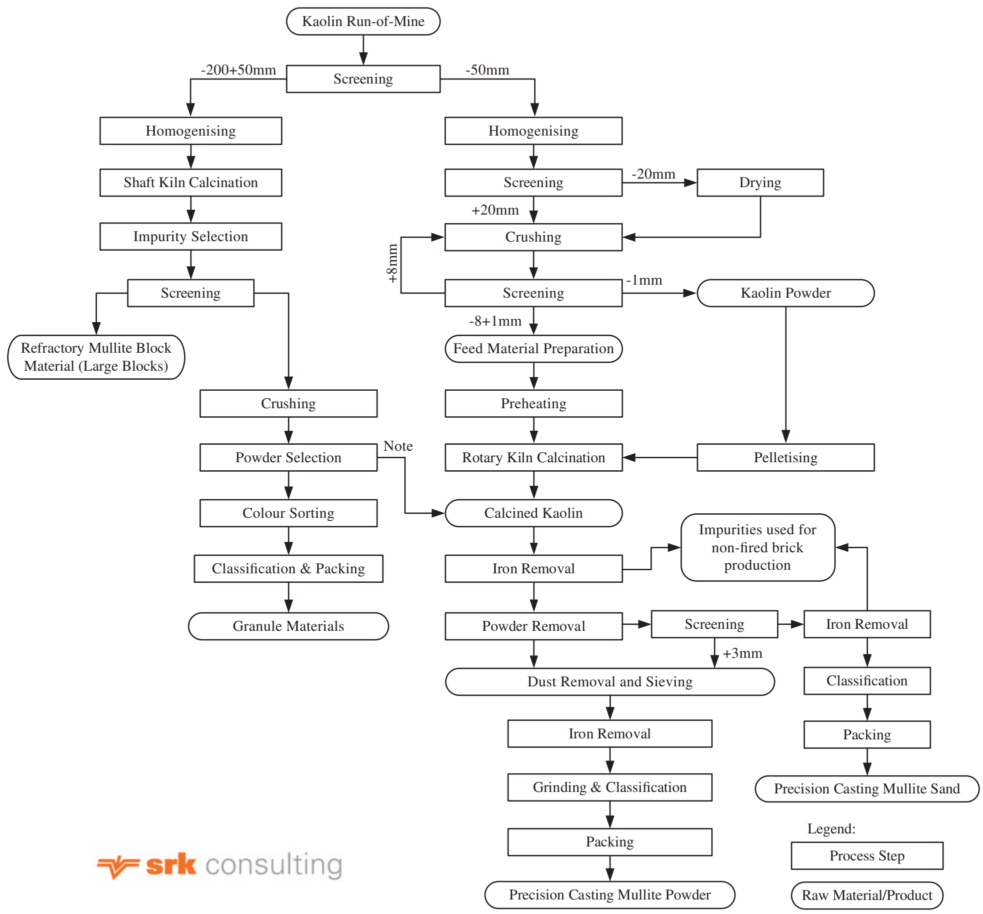
12.4.1 Production process

Calcination is one of the important processing techniques of kaolin. Through calcination, constituent water, carbon and other volatile substances are removed and calcined kaolin is produced.

Jinyan employs two types of high-temperature calcination equipment — rotary kilns and shaft kilns — to calcine kaolin ore of varying particle sizes, achieving mullitisation. The calcined material is then further processed into mullite products for different applications. The products for refractory use are known as refractory mullite block and granule materials. The products for precision casting are referred to as precision casting mullite sand and powder. These are Jinyan's main products.

Figure 12.3 shows the production flow of calcined kaolin at the Jinyan processing plant, which includes three circuits: material preparation, calcination and post-treatment.

Figure 12.3: Calcined kaolin processing flowsheet



Source: SRK, 2025

Note: Adjust process steps as needed.

Material preparation

The material preparation circuit includes crushing, classification and homogenising.

Kaolin ore is lifted from the underground mine to the surface stock bin, which has a maximum block size of 200 mm. It is then conveyed to the processing plant via a belt conveyor. In the screening workshop, the ore is sorted into two categories: particles larger than 50 mm and those smaller than 50 mm. Blocks larger than 50 mm are conveyed to a bulk material storage bin for homogenisation and used as feed for the shaft kiln. Materials sized 0-50 mm are transported to the cobbing storage bin and further separated by a vibrating screen into materials larger than 20 mm and those smaller than 20 mm. The materials smaller than 20 mm are preheated and dried using rotary kiln tail gas, then mixed with the larger materials. This mixture is crushed to a size of less than 8 mm and sent to a powder storage warehouse for homogenisation, serving as feed for the rotary kiln.

Homogenisation is the mixing process involved in calcination. Its purpose is to maintain consistent particle size and chemical composition of the materials fed into the furnace, ensuring the stability of the calcination process and the quality of the final product. The homogenisation process consists of two steps. First, materials are evenly unloaded into a rectangular warehouse using a belt discharging carrier. Second, the materials are fed from the discharge outlets at the bottom of the warehouse into the calcining furnace, which includes both shaft kilns and rotary kilns.

Calcination by shaft kiln

Bulk materials larger than 50 mm are fed into the shaft kiln via a belt conveyor for calcination, using natural gas as the heat source. The materials move continuously downward from the preheating zone at the top of the shaft kiln, passing through various temperature zones, and complete mullitisation at the bottom of the furnace. The calcined kaolin is then cooled in the cooling zone and transported to the post-treatment workshop (refractory mullite processing workshop) by a belt conveyor after passing through the discharging machine.

Chamotte classification, impurity removal and crushing

The calcined kaolin products from the shaft kiln are primarily used as refractory mullite, commercially known as chamotte. Over-calcined and under-calcined products are manually removed. The remaining material is sorted into large and small pieces using a vibrating screen. Large pieces, sized 50-200 mm, are stored as the final product for sale. Small pieces, with a particle size of 0-50 mm, are processed further. Under-calcined, over-calcined products and impurities are separated using a colour sorter and used as waste materials for brickmaking. The pure products, after colour sorting, are sent to a clinker bin and crushed to less than 8 mm in a closed circuit. Impurities are further removed using an iron remover and colour sorter. The material is then classified into different particle sizes (0-1 mm, 1-3 mm, 3-5 mm, 5-8 mm) using a multi-layer linear vibrating screen, resulting in the final granule product of chamotte. These are sent to the product storage warehouse, packaged, and stored for sale.

Calcination by rotary kiln

Materials stored in the powder homogenisation warehouse of the material preparation workshop are delivered to the buffer bin at the kiln's tail via a belt conveyor. They are measured by an electronic belt scale and then sent to the rotary kiln's preheater using a bucket elevator. The waste heat from the kiln's tail is used for preheating. The materials are then fed into the rotary kiln for calcination. As the rotary kiln rotates, the materials move from the kiln tail to the kiln head, passing through various temperature zones, gradually completing mullitisation. Finally, the qualified calcined kaolin is cooled — Lines 1, 2 and 3 use cooling rotary kilns, while Line 4 uses a grate cooler — and then transported to the clinker bin by belt conveyor and bucket elevator for further processing.

At the processing plant, four rotary kiln lines have been constructed. Lines 1, 2 and 3 are powered by pulverised coal, with production volumes of 30,000 tpa, 30,000 tpa and 60,000 tpa, respectively. Line 4 is powered by natural gas and has a production volume of 200,000 tpa.

The calcined kaolin is transported to the Mullite Precision Casting Sand and Powder Plant. In the milling workshop, iron is initially removed from fine-grained calcined products using a roll-type high-intensity magnetic separator. The products are then sent to a cleaning and blowing machine, where strong airflow separates fine powder and fine sand at approximately 120 mesh. The fine sand undergoes a second iron removal process using a dry-type high-intensity magnetic separator. It is then classified by a high-efficiency air classifier into products with different particle sizes ranging from 120 mesh to 16 mesh. These products are transported to storage tanks and the packaging workshop via pneumatic transmission. After packaging, they are stored and sold as precision casting mullite sand.

'The Production Method of Coal Kaolin Calcined Mullite Precision Casting Sand Powder' invented by Jinyan is notable for its approach to processing, as the hardness of mullite is significantly higher than that of kaolin. The production process involves the fine crushing of ore material in advance, feeding fine grains into the kiln, and employing a rapid calcination speed. This technique is energy efficient and conserves materials, reducing energy consumption in subsequent milling stages. This innovative method complements the process of removing iron from fine-grained calcined products, as described earlier, ensuring the production of high-quality mullite sand for precision casting.

12.4.2 Production facilities and equipment

The calcined kaolin production facilities comprise several key components, including an ore belt conveyor corridor, a screening workshop, a bulk material homogenisation silo, a powder preparation workshop, a shaft kiln workshop, a chamotte processing workshop, a rotary kiln workshop with four production lines, a mullite processing workshop, product storage tanks, a packaging workshop, and a product warehouse.

Table 12.2 lists the primary calcination equipment, while Table 12.3 presents the equipment used for finishing and packaging the calcined products. Figure 12.4 is a series of photographs of the calcined kaolin plant.

Table 12.2: Main equipment of kaolin calcination

No	Equipment Type	Equipment	Specification	Power (kW)	Quantity
I . . .	**Feeding Preparation**				
1 . . .	Screening Machine	Trommel Screen	HS152035-1500/2000 ×3500mm	11	2
2 . . .		Linear Screen	WFPS-G-1850	22	2
3 . . .		Vibrating Screen	3WFPS-L-2565	15	1
4 . . .		Vibrating Screen	2WFPS-X-1842	15	1
5 . . .	Dryer	High-Efficiency Energy-Saving Dryer	ϕ2.4*18.3m	56.15	1
6 . . .	Crusher	Impact Crusher	PF1214	320	2
7 . . .		Vertical Impact Crusher	VSI1150	500	1
8 . . .		Hammer Crusher	PCX	45	1
9 . . .		Crusher	PCZ	30	1
10 . .		Reversible Hammer Crusher	PFCK1212	200	1
11 . .		Impact Crusher	PFCK1208	132	1
12 . .		Jaw Crusher	PE900×600	75	1
13 . .		Jaw Crusher	PE500	45	2
14 . .	Fan	Fan	Y4-73 No14D	200	1
15 . .		Centrifugal Induced Draft Fan	Y5-48-10	45	1
16 . .		Centrifugal Induced Draft Fan	Y9-38-9D	55	1
17 . .	Bucket Elevator	Bucket Elevator	NE150-28.3m	30	1
18 . .		Bucket Elevator	NE300-28.3m	50.5	1
19 . .		Bucket Elevator	NE50-22m	11	1
20 . .		Bucket Elevator	NE30-22.7m	5.5	1
21 . .		Bucket Elevator	NE30-21.3m	5.5	2
22 . .		Bucket Elevator	NE30-18.5M	7.5	1
23 . .		Bucket Elevator	NE50-23.5M	11	1
24 . .	Powder Separator	Powder Separator	ZFX1200	18.5	1
25 . .		Powder Separator	NHX-500	11	1
26 . .		Powder Separator	NHX-400	7.5	1

No	Equipment Type	Equipment	Specification	Power *(kW)*	Quantity
27 . .	Screw Conveyor	Screw Conveyor	LSS315×7755	7.5	2
28 . .		Screw Conveyor	LSS315×3045	5.5	1
29 . .		Screw Conveyor	LS-250	3	11
30 . .	Belt Conveyor	Belt Conveyor	B650		9
31 . .		Belt Conveyor	B500	5.5	1
32 . .		Belt Conveyor	B800		9
33 . .		Belt Conveyor	B1000		5
34 . .		Belt Conveyor	TD75-5050	2.2	8
35 . .		Belt Conveyor	TDY75 Type	2.2	2
36 . .		Inclined Belt Conveyor	TDY	2.2	2
II . . .	**Calcination**				
37 . .	Rotary Kiln	Rotary Kiln (Shuoli)	ϕ2.2*44m	45	1
38 . .		Rotary Kiln (with Cooling Kiln)	ϕ2.2*44m	45	1
39 . .		Rotary Kiln Equipment for Sintering and Coal Grinding Workshop	ϕ3*60m	132	1
40 . .		4th Rotary Kiln	ϕ4.2*82m	325	1
41 . .	Cooling Kiln	1# Kiln Cooling Kiln	ϕ2.2*19.5m	30	1
42 . .		Cooling Kiln Equipment for Sintering and Coal Grinding Workshop	ϕ2.8*28m	75	1
43 . .	Grate Cooler	Grate Cooler	RC2121-SM	220	1
44 . .	Shaft Kiln	Shaft Kiln	$50m^3$		2

Source: Jinyan, 2025

Table 12.3: Mullite sand powder processing and product packaging equipment

No	Equipment Type	Equipment	Specification	Power (kW)	Quantity
1 . . .	Iron Remover	Three-Roll Dry Magnetic Separator	CTG-40-120III	5.2	2
2 . . .		Three-Roll Dry Magnetic Separator	CTG20-120III	4	8
3 . . .		Double-Roll Dry Magnetic Separator	CTG-40-120II-00	3	12
4 . . .		Dry Magnetic Separator (Iron Remover)	RCT120	1.5	4
5 . . .		Three Magnetic Roll Iron Remover	TY-3-1000	0.37	2
6 . . .		High Gradient Magnetic Separator	ZL025	0.5	3
7 . . .		Magnetic Separator	GYC-2×60	1.1	7
8 . . .		Iron Remover			6
9 . . .	Crusher	Vertical Impact Crusher	PL-700	75	1
10 . .		Crusher	PC4012-75	75	1
11 . .		Crusher	PE250*400	45	1
12 . .		Hydraulic Double-Roll Crusher	750*500 Type	2*22	1
13 . .	Ball Mill	Dry Ball Mill	ϕ3.6*10m	1000	2
14 . .		Ball Mill	Φ2.4*7M	300	2
15 . .	Powder Separator	Powder Separator	TAS1600	45	2
16 . .		Powder Separator	FLS400	18.5	1
17 . .		Powder Separator	TS-CX	15	2

No	Equipment Type	Equipment	Specification	Power (kW)	Quantity
18 . .	Bucket Elevator	Bucket Elevator	NE50-41.5M	22	1
19 . .		Bucket Elevator	NE50-22.5m-40m3-h-Left Load	15	1
20 . .		Bucket Elevator	NE30-16.5m-22m3-h-Left Load	7.5	1
21 . .		Bucket Elevator	NE30-30m-22m3-h-Left Load	11	1
22 . .		Bucket Elevator	NE50	11	1
23 . .		Bucket Elevator	NE15	5.5	5
24 . .		Bucket Elevator	HL250	4	3
25 . .		Plate Chain Bucket Elevator	NE30	4	2
26 . .		Chain Plate Elevator	NE50	15	1
27 . .		Chain Plate Elevator	NE30	7.5	2
28 . .		Chain Plate Elevator	NE15	5.5	10
29 . .		Bucket Elevator	Model: NE50-41M	22	1
30 . .		Bucket Elevator (Including Civil Installation)	NE30	4	3
31 . .		Bucket Elevator	NE30-21.5m-30t-Right Load	11	1
32 . .		Bucket Elevator	NE30		12

No	Equipment Type	Equipment	Specification	Power (kW)	Quantity
36 . .	Screening Machine	Swing Screen	YX-2000-1S	4	1
3 . . .		Circular Vibrating Screen	2YAH1848	1.5	2
38 . .		Four-Layer Rotary Vibrating Screen	S49-1600	3	4
39 . .		Sieve		1.8	1
40 . .		Direct Screen	SZF-1050	1.8	7
			S49-1600	3	1
			S49-1600	3	3
			SZF-1030 Type-3S	3.6	2
41 . .		Drum Screen	Φ1000×2500	7.5	2
42 . .		Circular Vibrating Screen	S49-1600	3	1
43 . .		Roller Screen	Φ1500×2500 HS40	3	1
44 . .		Roller Screen	Φ1000×2500	7.5	1
33 . .		Probability Screen	GLS2040	22	2
34 . .		Square Swing Screen	FY-2040-2×5S	7.5	3
37 . .		Linear Screening Machine	ZXS-1020-1	2	1
35 . .		Linear Screening Machine	ZXS-1540-2	2	1
46 . .		Linear Screen	ZXS-1530-2	5.5	3
47 . .	Air Slide	Air Slide	B650×17.394M	3	2
48 . .		Bottom Air Slide	Specification: XZ200-19.7m	7.5	1
49 . .	Belt Conveyor	Belt Conveyor	B650		26
50 . .		Belt Conveyor	B650		10
51 . .	Conveyor	Chain Conveyor	Conveying Speed=12m/min	0.75	75
52 . .		Roller Conveyor	Conveying Speed=12m/min	0.55	45

No	Equipment Type	Equipment	Specification	Power (kW)	Quantity
53 . .	Fan	Dust Collection Fan	9-28 No7.5D	18.5	3
54 . .		Centrifugal Induced Draft Fan	9-26-9D	45	1
55 . .		Dust Removal Fan	4-68-8C	45	2
56 . .		Fan	9-26-10	55	1
57 . .		Fan	9-26-10D	75	1
58 . .		Fan	9-38-9C	45	2
59 . .	Wrapping Machine	Wrapping Machine		1.84	2
60 . .		Wrapping Machine	Little Bee	3.75	2
61 . .	Packaging Line	Packaging Line		58.8	3
62 . .	Packaging Machine	Single Nozzle Packaging Machine	DGYQ		2
63 . .		Automatic Packaging Machine	H3CM-5		1
		Packaging Machine			6
64 . .		Packaging Machine	Zhengyuan Automatic Packaging Machine		2
65 . .	Pelletising Machine	Robot Packaging Pelletising Production Line	DCS50P CBT-90		1
66 . .		Intelligent Pelletising Equipment	ABB		2
67 . .		Manipulator	ABB	15.9	3
68 . .	Loading System	Loading System	Processing Capacity; 150t/h (Total)	43.2	

Source: Jinyan, 2025

Figure 12.4: Jinyan calcination kaolin plant

Source: SRK site visit, 2024

12.4.3 Product quality

The chemical test results for precision casting mullite sand and powder products are detailed in Table 12.4. When compared to the standards set by the China Foundry Association, the product quality satisfies the requirements for Grade II calcined kaolin for casting. The Huaibei Shuoli Mining Co., Ltd. drafted the industry standard 'Calcined Kaolin Sand and Powder for Investment Casting' (JB/T 11733-2013) and the group standard (T/CFA 0202044-2021) was drafted by Anhui Jinyan Kaolin Technology Co., Ltd., both of which are predecessors of Jinyan.

Table 12.4 lists the relevant quality standards for calcined kaolin sand and powder for precision casting as specified in T/CFA 0202044-2021.

Table 12.4: Test results of precision casting mullite sand and power

Item	16-30 mesh[2]	30-60 mesh[1]	200 mesh[1]	200 mesh[2]	Sand/ Powder[1]	Sand/ Powder[1]	T/CFA[3]
Al_2O_3	46.88	47.56	47.05	47.47	45.40	46.90	45.0~51.0
SiO_2	51.2	49.82	50.19	50.09	51.63	50.92	47.0~52.0
Fe_2O_3	0.61	0.70	0.85	0.76	0.95	0.66	≤1.0
TiO_2	0.60	0.66	0.63	0.59	0.66	0.60	≤0.7
CaO	0.14	0.26	0.27	0.29	0.31	0.17	≤0.6
MgO	<0.01	0.15	0.15	0.03	0.16	<0.01	
K_2O	0.14	0.14	0.13	0.14	0.14	0.13	≤0.4
Na_2O	0.18	0.21	0.23	0.17	0.21	0.17	
LOI (1,025°C)	<0.05			<0.05		<0.05	≤0.3
Report Date	2024/9/10	2024/5/29	2024/6/24	2024/9/10	2024/5/30	2024/9/2	

Source: Jinyan, 2024

Notes:

1 National Quality Supervision & Inspection Center for Refractories

2 Foshan Ceramics Research Institute Co., Ltd.

3 Foshan Ceramic Research Institute Testing Co., Ltd.

4 Group standard (T/CFA 0202044-2021) of China Foundry Association

5 Grade I calcined kaolin sand and powder for investment casting

The phase test results are presented in Table 12.5, and the density test results are shown in Table 12.6.

Table 12.5: Phase test results of Jinyan calcined kaolin products

		XRD Analysis Results (Phase %)		
Sample ID	Samples	Mullite Phase	Cristobalite Phase	Glass Phase
2023-3707#	2# chamotte particles	55~60	10~20	The rest
2023-3708#	3# chamotte particles	55~60	10~20	The rest
2024-0012#	Precision casting mullite sand	~60	10~20	The rest
2024-0013#	Precision casting mullite sand	~60	10~20	The rest

Source: Jinyan, 2024

Note: Test unit and date: Sinosteel Luoyang Institute of Refractories Research Co., Ltd, May 2023 and January 2024

Table 12.6: Density test results of calcined kaolin products

Sample	1	2	Average
	(g/cm^3)	*(g/cm^3)*	*(g/cm^3)*
Precision Casting Mullite Sand	2.52	2.53	2.52
Precision Casting Mullite Sand	2.52	2.52	2.52

Source: Jinyan, 2024

Note: Testing Unit and Date: National Refractory Material Quality Inspection and Testing Center, January 2024

Particle size composition is processed in accordance with industry standards or tailored to customer-specific requirements. Testing is typically conducted as part of the internal quality control process and is not conducted at an external laboratory. Table 12.7 presents the particle size test results for a batch of products.

Table 12.7: Particle size test results of precision casting mullite sand and powder

		Physical Properties	
Product	Batch Number	Sieve Residue	Whiteness
		(%)	*(%)*
200 Mesh Precision Casting Mullite Powder	D0707A152	12.5	62.3
		Mesh	Content (%)
10-16 Mesh Precision Casting Mullite Sand	D0707B33	+10	4.2
		-10+16	94.95
		-16+100	0.8
		-100	0.05
10-16 Mesh Precision Casting Mullite Sand	D0707B32	+12	1
		-12+14	18.4
		-14+25	78.45
		-25+100	2.1
		-100	0.05

Source: Jinyan, 2024

Chamotte Blocks: These blocks have physical properties characterised by a mullite phase exceeding 55%, a bulk density of at least 2.55 g/cm^3, water absorption of 3% or less, and apparent porosity of 6% or less. They have a clean appearance, free from visible impurities or black spots.

Chamotte Regular Blocks: These blocks are produced by selecting high-grade blocks and removing impurities from general calcined bauxite material. They also achieve a mullite phase greater than 55%, a bulk density of at least 2.55 g/cm^3, water absorption of 3% or less, and apparent porosity of 6% or less.

12.5 Kaolin ceramic fibre

12.5.1 Overview

Kaolin ceramic fibre products are known for their high whiteness, low fineness, minimal impurities, low slag ball content and exceptional refractoriness, offering properties such as fire resistance, thermal insulation, and heat retention. These fibres are suitable for high-end applications, including engineering ceramic environmental filter tubes and automotive liners, and are used in desulfurisation and denitrification processes across industries such as metallurgy, power generation, thermal kilns, petrochemicals, and construction. They also serve as insulation materials for industrial furnaces and thermal pipelines.

The kaolin fiber production workshop uses calcined kaolin, quartz sand, and alumina powder as raw materials, employing blowing and spinning processes to manufacture engineered ceramic fibers, with a designed annual capacity of 1,000 tpa.

During SRK's site visit in October 2024, the construction of the workshop had been completed, but it was not yet operational. Jinyan plans to commence commercial production in the first quarter of 2025.

12.5.2 Processes

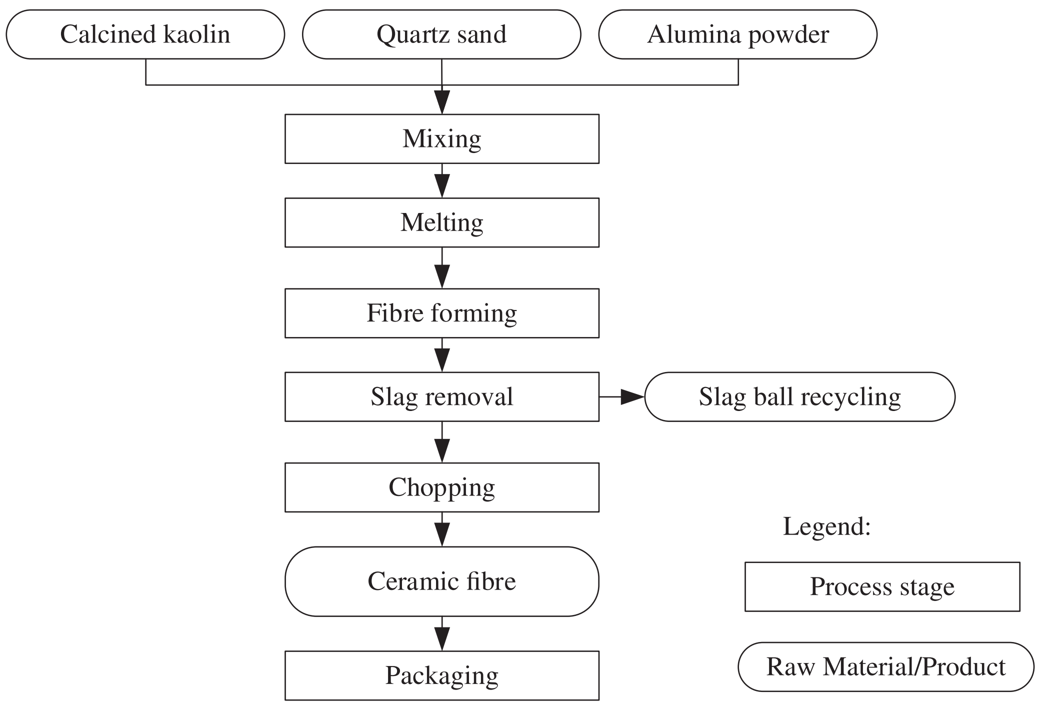
The production process of kaolin ceramic fibre involves: raw materials mixing, melting, fibre formation, collection, slag removal, chopping, and packaging (Figure 12.5).

Calcined kaolin, quartz sand, and alumina powder are mixed in specific ratios and stored in a feeding bin. The mixture is fed into an electric melting furnace at a controlled rate, where it is heated and melted. The melt flows continuously from the bottom of the furnace to the fibre-forming equipment.

In the fibre formation process, molten material is transformed into fibres through two primary methods. In the blowing process, the molten material flows through a high-temperature-resistant metal nozzle to form a liquid column, which is then solidified into a mixture of fibres and slag balls using compressed air. Alternatively, in the spinning process, the molten stream is directed onto a high-speed rotating centrifugal roller, where centrifugal force disperses and stretches the material into fibres. Once formed, the fibres are collected in a chamber using a fibre collector. To enhance fibre purity, a dry slag removal system is employed to separate slag balls from the fibres by exploiting differences in density, with airflow aiding in the separation during collection. The fibre products are fed into adjustable chopping equipment, where they are processed into different lengths and shapes according to various uses or market requirements, and then packaged as saleable commodities.

The design specifies that producing 1 t of finished fibre requires 800 kg of calcined kaolin, 130 kg of alumina powder and 110 kg quartz sand.

Figure 12.5: Ceramic fibre production process



12.5.3 *Production equipment*

Table 12.8 lists the main production facilities at the kaolin fibre workshop. Figure 12.6 provides images of these production facilities.

Table 12.8: Major equipment for Jinyan kaolin fibre

No.	Equipment	Specifications	Power (kW)	Quantity
1	Mixing systems	ZCHL/20	17.5	1
2	Resistance furnace	ZCDZL-3200	950	1
3	Spinner	ZCSSJ-205	22.5	2
4	Condenser	ZCJMQ/1400	160	1
5	Needling machine	ZCZCJ/2	15	1
6	Curing annealing furnace	ZCHL-30/1600	420	1
7	Skiving	ZCDQ/1500	70	1

Source: Feasibility Study Report for High-Grade Synthetic Ceramic Fiber Project, Anhui Jinyan Kaolin New Materials Co., Ltd., February 2023.

Figure 12.6: Part of the production equipment for the Jinyan kaolin fibre

Source: SRK site visit, 2024

Kaolin fibre is a type of engineering ceramic fibre and a deep-processed product of calcined kaolin. Currently, there are no uniform national or industry quality standards.

The Feasibility Study Report for the High-Grade Synthetic Ceramic Fiber Project did not specify the product technical indicators. It only noted that fibre diameter, fibre length, fibre index, Bickel value and other appliable parameters are important. There are no specific testing standards for fibre length, fibre index and Bickel value. The testing methods vary among different companies.

There are no national standards yet and the proposed technical indicators for ceramic fibre are based on those determined by environmental protection companies.

12.6 Raw coke and powder

Raw coke refers to kaolin ore, while raw powder (less than 1 mm) is the fine kaolin powder obtained from ore through crushing and fine grinding. Both the lumpiness of raw coke and the fineness of raw powder can be adjusted according to market demands.

Raw powder is primarily used in the papermaking, coating, and rubber and plastic industries. Besides whiteness and purity, the fineness and particle size distribution of kaolin are critical quality indicators for kaolin fine powder.

Raw coke products are classified according to particle size and impurity content. Blocks measuring 50 mm or more are categorised as raw coke blocks, those between 30 mm and 50 mm as medium raw coke, and those 30 mm or less as raw coke fragments. Raw coke with an Fe_2O_3 content of 1.5% or less is classified as first grade, 1.5% to 2.0% as second grade, and more than 2.0% as raw coke waste (waste ore). Table 12.9 details the classification of raw coke products based on particle size and Fe_2O_3 content.

The processing technology for raw coke is relatively straightforward. A double-deck vibrating screen (75 kW) is used to screen the ore from the mine, classifying it into three particle size categories: more than 50 mm, 30-50 mm, and less than 30 mm. The quality grade is then determined based on appearance and iron content test results. Within each particle size category, ore with an Fe_2O_3 content greater than 2.5% or significantly more non-kaolin impurities is considered unqualified (raw coke waste). These ores are mixed together to form the raw coke mixture, which is used as the raw material for manufacturing non-fired bricks.

Table 12.9: Raw coke product classification

Particle Size *(mm)*	Fe_2O_3 Content *(%)*	Product Grades
>50	<1.2	Raw coke primary lumps
	1.2~1.5	Raw coke secondary lumps
	>1.5	Raw coke waste
30~35	<1.2	Raw coke secondary pellets
	1.2~1.5	Raw coke primary pellets
	>1.5	Raw coke waste
<30	<1.2	Raw coke primary crushed
	1.2~1.5	Raw coke secondary crushed
	>1.5	Raw coke waste

Source: Jinyan, 2025

12.7 Non-fired bricks

12.7.1 Raw material sources

Non-fired bricks are solid concrete bricks produced using various waste materials and semi-coke waste (unqualified kaolin ore) generated during the kaolin processing and production process, with cement serving as a binder.

During the production of calcined kaolin, three types of solid waste are generated:

- Dust: Dust generated during operations such as crushing, screening, calcining, fine grinding, classification, transportation, and packaging is collected by dust collectors.

- Flue gas waste: Flue gas denitrification waste residue from kilns is handled by specialised hazardous waste treatment agencies.

- Other waste: Unqualified materials and iron-containing materials selected through hand sorting, colour sorting, and magnetic separation of kaolin are all transported to the comprehensive utilisation workshop.

12.7.2 *Production process*

The process to produce non-fired bricks comprises:

- Crushing and preparation: Materials are crushed using a jaw crusher and a hammer crusher, then screened to achieve a particle size of less than 5 mm.
- Mixing: Waste ore (semi-coke waste), calcined kaolin tailings from iron removal and impurity removal and cement are mixed in a 50:35:15 ratio to form brick making material. This mixture is transferred to a mixer, where water is added and thoroughly mixed.
- Moulding and stacking: The mixed material is conveyed to the hopper of a brick press, where it is pressed into brick blanks by the main machine. These blanks are then stacked in five layers by a stacker.
- Curing and hardening: The stacked brick blanks are sprayed with water for curing after 24 hours and allowed to cure for 28 days. Once fully hardened, they are ready for sale or used internally as construction bricks.

12.7.3 *Production equipment*

Table 12.10 lists the main equipment of the non-fired brick factory. Figure 12.7 is a series of photographs showing the various equipment.

Table 12.10: Main equipment of non-fired brick factory

No.	Equipment Name	Specification/Model	Power *(kW)*	Quantity
1 . . .	Raw Material Silo	Φ3.6×2.7m		1
2 . . .	Feeder	K-2	4	1
3 . . .	Jaw Crusher	PE250×400	30	1
4 . . .	Hammer Crusher	30t/h	132	1
5 . . .	Bucket Elevator	NE30, h6000	5.5	1
6 . . .	Rotary Screen	Φ2.2×3	15	1
7 . . .	Three-bin Batching Machine	$1.2m^3$	12	1
8 . . .	Mixer		28.1	1
9 . . .	Brickmaking Machine		31.5	1
10 . .	High-level Stacker		4	1

Source: Jinyan, 2025

Figure 12.7: Non-fired brick production equipment

Source: Jinyan, 2024

12.7.4 Product quality

In February 2023, Jinyan commissioned Huaibei Jinfang Construction Engineering Testing Co., Ltd. to test a batch of non-fired samples. The results are shown in Table 12.11. The compressive strength of the samples met the requirements specified in the strength grade MU25 of the Chinese national standard GB/T21144-2023 'Concrete Solid Bricks' (Table 12.11).

Table 12.11: Compressive strength test results of Jinyan non-fired bricks

MU25 Standard Requirement	Test Result
Average ≥25 MPa	26.4 MPa
Minimum of a single block ≥21 MPa	23.8 MPa

Source: Jinyan, 2025

Note: Testing Unit: Huaibei Jinfang Construction Engineering Testing Co., Ltd., Standard Executed: GB/T21144-2007 'Concrete Solid Bricks' Report Date: February 2023

Other important quality specifications for concrete solid bricks, such as water absorption rate, drying shrinkage rate, relative moisture content, frost resistance, carbonation coefficient, softening coefficient, and limits of radioactive nuclides, were unavailable for SRK's review. It is recommended that Jinyan conduct additional testing to assess these parameters.

12.8 Historical and planned production

Table 12.12 presents the historical and planned production figures for various products.

Table 12.12: Historical and planned production volume

		History					Plan		
Ore and products	**Unit**	**2022**	**2023**	**Jan-Sept 2024**	**Oct-Dec 2024**	**2025**	**2026**	**2027**	**2028**
ROM	kt	171	296	264	96	400	400	400	400
Precision casting mullite products	kt	119	109	92	37	229	230	230	230
Refractory mullite products	kt	5	20	39	13	54	49	49	49
Raw coke and raw powder	kt	–	39	41	46	52	62	62	62
Ceramic fibre	t	–	–	–	300	700	800	800	800

Source: Jinyan, 2025

Qualified kaolin ore will experience an LOI of 13.5% after calcination, accounting for constitution water, organic matter, and other components in the ore. The loss during the iron removal and impurity selection of calcined material is approximately 4.5%, resulting in an 82% yield of qualified calcined kaolin products. About 30% of the qualified chamotte products from the shaft kiln production line are high-grade chamotte blocks, while the remainder are regular chamotte blocks. Both high-grade and regular blocks can be crushed and processed into granular products. All qualified calcined kaolin products from the rotary kiln are processed into precision casting mullite sand and powder products, with the sand-to-powder ratio adjustable based on market demand.

Producing 1 million non-fired bricks consumes approximately 2,723 t of waste kaolin ore, 1,915 t of calcined kaolin waste, and 819 t of cement. The typical size of non-fired bricks is 240 × 120 × 50 mm, resulting in a total volume of 1,440 m^3 for 1 million bricks. These bricks can also be manufactured in different sizes according to user requirements.

12.9 Processing plant service facilities

12.9.1 Laboratory

The processing plant has a laboratory that conducts daily tests on the following items to manage the production process and ensure stable product quality:

1. Iron content, moisture, LOI, calcination point, bulk density, and chemical composition of the ore

2. Volume density, whiteness, and iron content of 1–8 mm material from several rotary kilns

3. Iron content, volume density, bulk density, volume density, and water absorption rate of chamotte blocks

4. Particle size, whiteness, iron content, impurity content, volume density, water absorption rate, and porosity of chamotte sands

5. Particle size, whiteness, iron content, impurity content, and moisture of precision casting mullite sand

6. Particle size, sieve residue, whiteness, and iron content of precision casting mullite powder.

12.9.2 Mechanical maintenance

The processing plant has a mechanical maintenance workshop equipped with cutting machines, electric welding machines, and other equipment and tools. There are currently 10 maintenance personnel responsible for the daily maintenance and periodic inspection of all plant equipment, including cleaning, lubrication, adjustment, and troubleshooting. They are also responsible for major repairs and modifications of all plant equipment.

12.9.3 Water supply

All water used at the processing plant is derived from mine drainage and is primarily used for equipment cooling, plant area greening, and the production and curing of non-fired bricks, with no wastewater discharge.

Jinyan has built a water treatment plant that uses aeration, flocculation sedimentation, and sand filtration processes to specifically treat mine water for kaolin processing and compliant discharge.

The Mullite Precision Casting Sand and Powder Plant at the Longhu Industrial Park is connected to the urban water supply system.

12.9.4 *Natural gas supply*

Rotary kilns #1 and #2 use coal and gas as energy sources and #3 use coal power as an energy source, with sufficient supply. Rotary kiln #4 and the shaft kiln use natural gas as an energy source, with consumption of approximately 23 million m^3/year. The natural gas used is supplied from the 'West-East Gas Pipeline' project, providing ample supply and security of supply in future.

12.9.5 *Electricity*

Replacing the old 35 kV substation, the newly constructed 35 kV substation became fully operational by the end of June 2024, supplying sufficient power to the Chamotte Plant and underground operations. It is equipped with two SZ11-10000/35/6.3 type main transformers. Once the voltage is reduced, power is distributed through 48 KYN28-12(Z) type 6 kV high-voltage switchgear units.

12.10 Conclusions and recommendations

Jinyan uses its kaolin resources to produce a series of kaolin products. High-quality kaolin ore (Fe_2O_3 <1.0%) is used to produce mullite sand powder for precision casting mullite and refractory chamotte. Medium-grade kaolin ore (Fe_2O_3 <2.0%) is directly sold as raw coke, while low-grade ore (Fe_2O_3 >2.0%) is combined with calcined kaolin waste to manufacture non-fired bricks, ensuring the comprehensive use of the mined kaolin ore. Apart from a small amount of solid waste from kiln flue gas denitrification, there is no other solid waste.

Mullite sand powder for precision casting is Jinyan's flagship product, recognised by the market for its stable quality. The kaolin ceramic fibre workshop has been built but production has not yet started and its product quality and market competitiveness therefore remain to be tested by the market. Non-fired bricks are produced to comprehensively use the general solid waste generated during kaolin processing.

The production processes for chamotte and precision casting mullite sand and powder are relatively straightforward and present very low technical risks. Quality control is essential in the comprehensive processing of kaolin.

SRK recommends maintaining its feed ore quality through appropriate grade control and mining processes, managing ore homogenisation during the pre-calcination preparation stage, maintaining precise temperature control during calcination, and implementing effective impurity removal processes in the post-calcination treatment stage. These measures are crucial to producing high-quality, stable, calcined kaolin products.

13 KAOLIN QUALITY AND MARKET

The review of product and market is based on a market report prepared by Frost & Sullivan (March 2025) and commissioned by the Company. Additional material was sourced from relevant chapters in *Verification report on the reserves of the symbiotic hard kaolin mine in Shuoli kaolin mine, Huaibei City, Anhui Province* (Henan Nieyuan Geological Exploration Co., Ltd, 2024). SRK completed further checks using publicly available data.

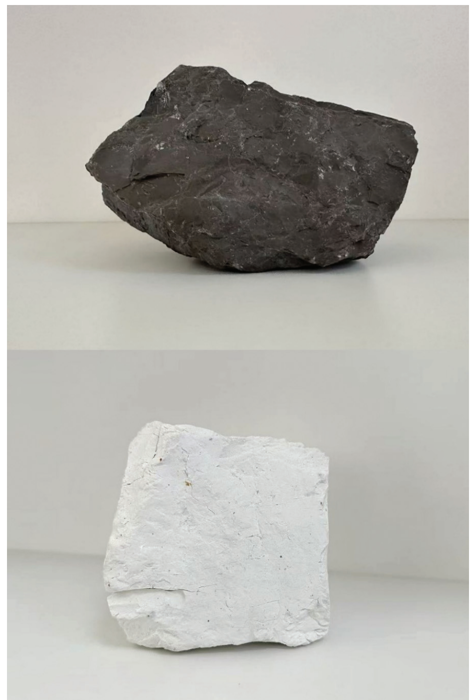
13.1 Product

Clay rock dominated by the mineral kaolinite is called kaolin, with an ideal composition $Al_2Si_2O_5(OH)_4$. Kaolin typically contains small amounts of other clays and iron (Fe), magnesium (Mg), potassium (K) titanium (Ti) and calcium (Ca) and some other elements. Traditionally, soft kaolin clay has been used in the paper, paint, filler and ceramic industries, but heat treatment of hard kaolin to produce calcined kaolin further increases its usability and creates an engineered product that can target specific end uses. Traditional markets for kaolin are undergoing change and calcined kaolin is now widely used in various high-technology industries.

The kaolin ore (Figure 13.1) is crushed and heat-treated to 1,300°C to produce the mullite ($3Al_2O_3•2SiO_2$). The heating process burns off any impurities and produces a white refractory product (Figure 13.1) that can be further crushed and sized to client specification. Mullite materials can withstand temperatures exceeding 1,800°C, which is critical for high-temperature casting processes and other qualities include thermal shock resistance, low thermal expansion, chemical stability and wear resistance (Figure 13.2 and Figure 13.3). The main products of the Project are calcined kaolin producing a mullite product. This is used in precision casting of metallic components for various industries, including high-technology industries.

Refractory products are used in high-temperature kilns. An example is a lightweight ceramic fibre made by streaming molten kaolin through an air jet (Figure 13.4).

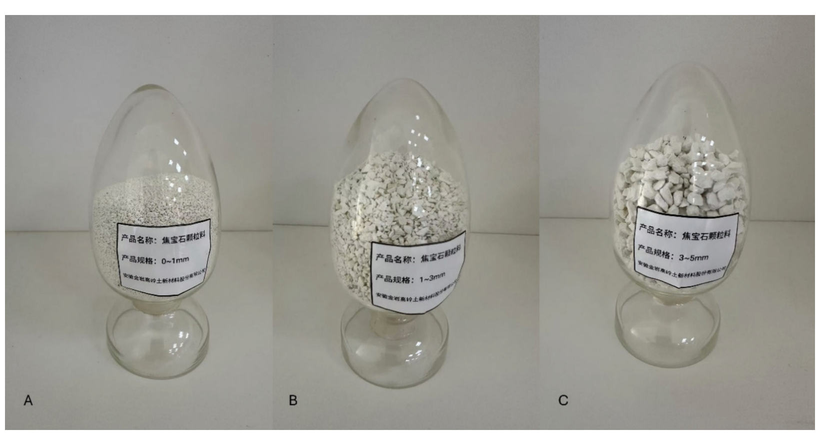
Figure 13.1: Kaolin ore and calcined kaolin ore



Source: Jinyan

Note: Above: kaolin ore and below: calcined kaolin.

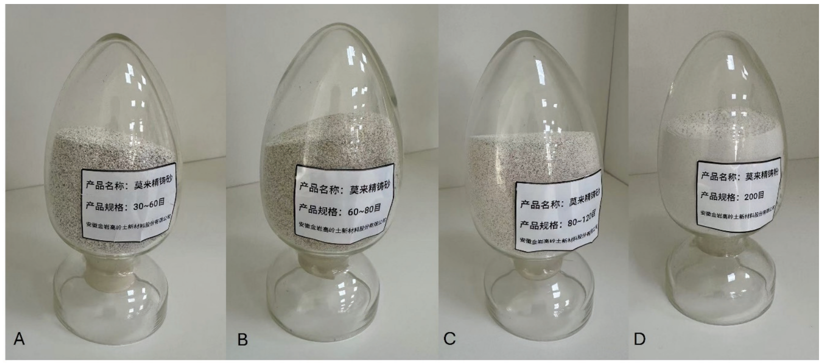
Figure 13.2: Refractory mullite (chamotte) products



Source: Jinyan

Note: A: 0-1 mm, B: 1-3 mm and C: 3-5 mm

Figure 13.3: Precision casting mullite products



Source: Jinyan

Note: Precision casting mullite sand A: 30-40 mesh, B: 60-80 mesh, C: 80-120 mesh and D: Precision casting mullite powder, 200 mesh

Figure 13.4: Ceramic fibre

Source: Jinyan

Note: A: ceramic fibre and B: ceramic tube

These uses of calcined kaolin are relatively new product categories in the broader kaolin market and specialised materials generally achieve a higher price than the traditional soft clay kaolin market materials.

13.2 China's kaolin markets

China is a globally significant producer of kaolin, with 2020 production estimated at 6.5 Mt, increasing to 8.0 Mt in 2024 (Frost & Sullivan, 2025). Production is estimated to increase to 10.4 Mt by 2029, based on a compound annual growth rate (CAGR) of 5.4% from 2024 to 2029 (Frost & Sullivan, 2025). China holds approximately 11% of the world kaolin reserves and is currently responsible for approximately 15% of the world's total production. China consumes a portion of its production, with imports of kaolin relied on for specific high-volume production industries. In the past 8 years, overall export quantities have exceeded the quantity of imported kaolin (Frost & Sullivan, 2025).

The Company produces a calcined kaolin product from hard-rock kaolin (a mudstone) associated with coal deposits, a relatively new source of kaolin that commenced production in the 1990s (Henan Nieyuan Geological Exploration Co., Ltd, 2024). Within the Company's market area, general kaolin demand is forecast to increase in 2024-2029 with a CAGR of 7.1%. This is based on a predicted increase in demand for kaolin products suitable for high-end manufacturing and refractory uses, as well as continuing demand for tradition kaolin uses (Frost & Sullivan, 2025).

As reported by Frost & Sullivan (2025), in 2024 the ceramics industry was the largest single user of kaolin in China, comprising approximately 56% of the total market. Other traditional uses (paper, coatings, filler for plastics and rubber and refractory uses, etc.) comprise 33% of the total market. Precision casting is one of the emerging and developing uses of kaolin/mullite and accounts for approximately half of the 16% of the calcined kaolin/mullite market share. This specialised market is forecast to increase as the calcined kaolin/mullite is used in applications in developing high-technology industries and manufacturing. Calcined kaolin products such as those produced by the Company are predicted to have a CAGR of 6.6% in 2024-2029.

Current markets

The Company is reported to be the largest producer of calcined kaolin mullite in Anhui Province, China. Current sales include of a range of products predominantly in the precision casting and refractory industries. Sales target direct users of the product or traders. Most sales have targeted direct users.

Sales records demonstrate the Company showed resilience in maintaining sales value and volume in 2020-2024, despite increasing competition.

Competition

The geology and formation of commercial kaolin deposits has led to clusters of commercial deposits in nearby coal mining areas. In these areas, similar hard kaolin resources are not uncommon, although they may not be currently extracted. This geological setting leads to a generally competitive market: hard-rock kaolin deposits are known elsewhere in China, such as in Datong, Shanxi Province, Jungar, Inner Mongolia Province and Shaanxi Province.

The southern Anhui area, where the Project is located, is well known for its existing kaolin resources. In contrast, the Inner Mongolia deposits have similar geological characteristics and host the nearest main group of competing producers outside Anhui.

Within regions producing hard kaolin, competition for market share is acute. The kaolin industry in China is highly competitive with ore transportation being a major component of costs (nearly 60%). Like most other industrial minerals, transportation cost is a major limiting factor.

The Chinese government is concerned about the proliferation of smaller inefficient mining enterprises and is therefore imposing stricter conditions on new mining enterprises and encouraging mergers and acquisitions (M&A) among mining enterprises. These policies favour the larger established producers, including Jinyan.

Jinyan is typical of most kaolin producers in China in that it has a local or regional in outlook. Jinyan has potential to expand its markets by maintaining market share in an increasing market for its specialty high-end products, and some potential to increase market share by strong competition on price and quality, but this may not be easy. The Company has potential to export its products to developing countries in South East Asia, Japan and Korea, which may extend the viable distribution area.

Jinyan may grow by acquisition and development of similar kaolin assets held by other coal mining companies.

13.3 Market outlook

Resource quality

Jinyan has demonstrated its ability to produce products that meet or exceed market expectations. The operation is currently market limited rather than resource limited, as Ore Reserves defined at the site are considered to be adequate for over 16 years' LOM production at current rates of up to 400,000 tpa.

SRK has not found evidence of any significant change in quality parameters across the Ore Reserves areas and anticipates that the Shuoli kaolin deposit will continue to be a reliable source of calcined kaolin/mullite and refractory products.

Sales volumes

The Company's kaolin product is used in sophisticated industries, and Frost & Sullivan (2025) forecasts growth in these markets to increase steadily over the coming years to 2029. A CAGR 7.0% increase in sales revenue for 2024-2029 is forecast due to increased demand for precision casting mullite products.

The Company currently has opportunities to increase its sales of the precision casting grade mullite products and is likely to be able to maintain its market share as a minimum.

Prices

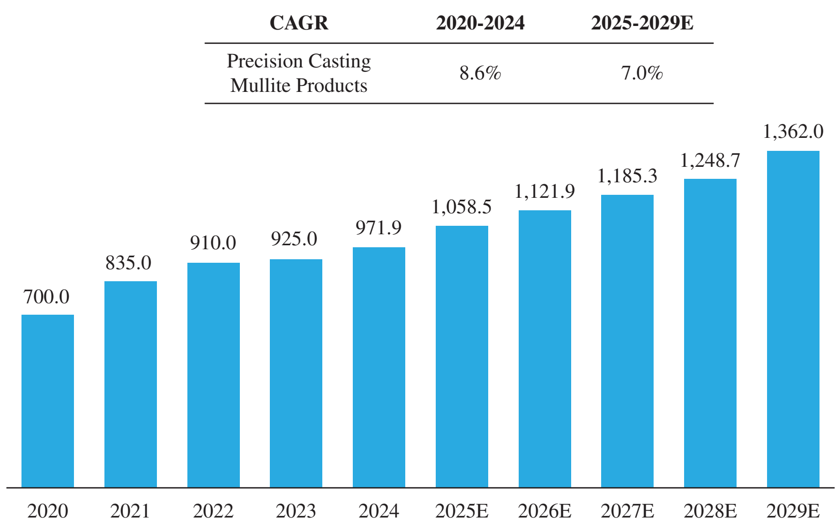
World traded kaolin prices are dependent on the end-product usage, which ranges from basic ceramics to high-end technology manufacturing. The traditional markets for high quality kaolin were in paper, fillers and high-end ceramics. The kaolin paper market is generally declining due to use of cheaper calcium carbonate products and declining demand for paper. The average price for general hard kaolin ore is RMB/t 320 for the 5-year period from 2020 to 2024 (Frost & Sullivan, 2025).

This represents a 6% to 7% fluctuation in prices for mullite product over the 5 years. In general, there is no evidence of significant changes in world trade prices of kaolin ores over the last 5 years (Frost & Sullivan, 2025), but the fragmented and opaque markets make this difficult to determine in detail, so some grades of kaolin may have experienced price variation. Conservatively, the average price increase estimated to 2029 is approximately 7%.

For the precision casting mullite market, a CAGR of 7.0% is predicted for the years 2025-2029 (Figure 13.5). A summary of average prices achieved for Company products and sales record is presented in Table 13.1. In general, these prices reflect 'at gate' prices where the client is responsible for transport costs.

Publicly available free-on-board (FOB) prices range from RMB/t 1,000 to over RMB/t 3,000 for Chinese-sourced high-specification precision casting mullite product. These price estimates are only broadly indicative of market prices, as no contract information was presented. However, based on its review of prices achieved by Jinyan, SRK notes that these fall within this range.

Figure 13.5: China's market size for mullite for precision casting, by sales revenue, to 2029



Source: Frost & Sullivan (2025)

Table 13.1: Company sales record summary

	2022		2023		2024		January-May 2025	
	Sales volume	**Average Price**	**Sales volume**	**Average Price**	**Sales volume**	**Average Price**	**Sales volume**	**Average Price**
	(kt)	*(RMB/t)*	*(kt)*	*(RMB/t)*	*(kt)*	*(RMB/t)*	*(kt)*	*(RMB/t)*
Precision Casting Mullite Sand products	118.5	1,554	109.0	1,522	133.1	1,394	52.1	1,307
Refractory mullite products	5.2	1,187	19.6	1,200	52.2	997	24.9	992
Raw coke and powder	–	–	39.4	387	86.9	306	37.9	246
Ceramic fiber	–	–	–	–	0.3	9,910	0.3	9,190

Source: Jinyan, 2025

The Company provided SRK with a price forecast based on current prices and the rate of increase for various products, as researched by Frost & Sullivan (2025) (Table 13.2). All prices are VAT-exclusive and given in nominal terms. The weighted average of precision casting mullite sand and powder products is expected to remain stable in 2025-2026. Between 2027 and 2029, the rate of increase will span 1.9-2.0%. For refractory mullite products (chamotte), the weighted average price is forecast to rise steadily of 1.9-2.0% in 2027-2029. The weighted average price for raw coke and powder are projected to increase 1.5% annually from 2026 to 2029. As it is a relatively new product from the Company, the Company anticipates that the market will pay RMB/t 9,912 in 2025 and 2026. Frost & Sullivan anticipates the price of ceramic fibre will increase 2.5% in 2027, 2.1% in 2028 and 2.5% in 2029. SRK considers this forecast reasonable and consistent with China's macroeconomic forecast. The forecast does not include long-term pricing, and SRK has assumed that prices will remain stable from 2029 onwards.

Table 13.2: Forecast prices

	2025	2026	2027	2028	2029	Long Term Price
Precision Casting Mullite Sand and Powder	1,304	1,304	1,328	1,355	1,381	1,381
Refractory mullite (Chamotte)	1,048	1,127	1,149	1,172	1,196	1,196
Raw coke and powder	336	346	352	357	362	362
Ceramic Fibre	9,912	9,912	10,160	10,373	10,632	10,632

Source: Jinyan, 2025

Note: VAT exclusive, nominal prices

Market outlook

The market outlook to 2029 for the typical precision casting mullite product is optimistic but the actual market depends on ongoing development of high-technology industries and manufacturing within China.

Frost & Sullivan (2025) also forecast the demand for calcined kaolin products to grow, apart from the foundry industry usage, which is likely to remain steady or only slowly increase. Jinyan notes that the bulk of foundry industry calcined kaolin is at a relatively stable price and considers it a good target market for the calcined kaolin (after the precision casting mullite product).

The high-technology market sections are forecast to grow significantly. The Company may have the opportunity to continue to expand into these product lines as part of its general active product development.

Broad-scale industry developments that have may a positive effect on volumes and sales price for the main mullite products include:

- automotive industry developing precision cast light weight and high strength components
- biomedical industry movement towards development and precision casting of compatible implants and surgical instruments
- use of mullite in high temperature (>1,800°C) casting of components for the aerospace industry
- 3D printing innovation resulting in rapid precision casting using mullite materials.

Mullite has low thermal conductivity and is thermally stable, so energy costs are potentially minimised. Development in East Asian manufacturing is increasingly looking to use refractory materials with mullite properties.

Frost & Sullivan (2025) identified the following factors that the industry is particularly sensitive to:

- raw material supply
- energy costs due to the high temperatures required for calcining
- production costs.

Of the three outlined, energy costs are the most likely to impact the Project in the near term, as the ore resource has been quantified, the production processes were recently developed and upgraded, and production costs (other than energy) are considered likely to remain stable.

14 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

14.1 Environmental, permitting, and social or community review objective

The objective of this review is to identify and/or verify the existing and potential environmental, permitting, and social or community liabilities and risks, and assess any associated proposed remediation measures for the Project. The Project comprises the Shuoli Kaolin Mine, Chamotte Plant, and Mullite Precision Casting Sand and Powder Plant.

14.2 Environmental, permitting, and social or community review process, scope, and standards

The process for verifying the environmental permitting and licensing compliance and operational conformance for the Project comprised a review and inspection of the Project's environmental management performance against:

- Chinese national environmental regulatory requirements
- World Bank/International Finance Corporation (IFC) environmental standards and guidelines, and internationally recognised environmental management practices.

The methodology applied for this environmental review of the Project consisted of documentation review, site visit, and interviews with Company technical representatives. The site visit was undertaken on 24-25 October 2024.

14.3 Permitting

According to relevant Chinese laws and regulations, additional environment-related operating permits are required for project construction and production. These primarily include a Safety Production Permit, Water Extraction Permit and Pollutant Discharge Permit.

14.3.1 Safety Production Permit

According to the Production Safety Law of the People's Republic of China, the State implements a safety production permit system for mining enterprises. Before a mine can commence production, the enterprise must apply to the relevant authority for a Safety Production Permit. This involves the facilities being inspected and approved as being safe.

Details of the Safety Production Permit for the Project are presented in Table 14.1.

Table 14.1: Details of the Safety Production Permit for the Project

Areas	Kaolin Mine
Safety Production Permit No.	2023 G039
Issued To	Anhui Jinyan Kaolin New Materials Co., Ltd.
Issued By	Anhui Province Emergency Management Bureau
Licensed Activity	Kaolin Underground Mining
Issue Date	8 November 2023
Expiry Date	29 March 2026

Source: Jinyan, 2025

14.3.2 Water Extraction Permit

As per the Water Law of the PRC and the Regulations on Water Extraction Permits, any unit directly drawing water resources from rivers, lakes, or underground must apply to the water administration department or the relevant river basin management agency for a Water Extraction Permit and pay fees to obtain the rights to extract water. For construction projects requiring water extraction, the applicant should commission a qualified agency to prepare a Water Resource Augmentation Report for the Project.

Details of the Water Extraction Permit for the Project are presented in Table 14.2.

Table 14.2: Details of the Water Extraction Permit for the Project

Water Extraction Permit No.	C340602G2022-0001
Issued To	Anhui Jinyan Kaolin New Materials Co., Ltd.
Issued By	Huaibei City Water Resources Bureau
Issue Date	29 April 2022
Expiry Date	31 December 2025
Water Supply Source	Groundwater
Water Use Allocation	1,088,400 m^3/year

Source: Jinyan, 2025

14.3.3 Pollutant Discharge Permit

According to the Regulations on the Administration of Pollutant Discharge Permits and the Measures for the Administration of Pollutant Discharge Permits, operators must apply for a Pollutant Discharge Permit from the approval authority before starting production facilities or engaging in actual pollutant discharge activities. Applications for the Pollutant Discharge Permit can be submitted through the National Pollutant Discharge Permit Management Information Platform or by mail. The Pollutant Discharge Permit is valid for 5 years.

The Project's Pollutant Discharge Permit number is 91340600057006980K002Q, issued by the Huaibei Municipal Bureau of Ecology and Environment on 9 May 2024 and valid until 8 May 2029. The primary permitted pollutant categories covered by this permit are waste gas and wastewater. The main atmospheric pollutants include particulate matter, sulfur dioxide, nitrogen oxides, Ringelmann blackness, and ammonia (NH_3). The main wastewater pollutants include chemical oxygen demand (COD), ammonia nitrogen (NH_3-N), pH, suspended solids, five-day biochemical oxygen demand (BOD_5), total phosphorus (measured as P), and total nitrogen (measured as N).

Additionally, the Project has applied for a fixed pollution source emission registration with registration number 91340600057006980K001X, valid from 9 June 2020 to 8 June 2025. The permitted emissions include exhaust gases, wastewater, and industrial solid waste.

14.4 Status of environmental approvals

The basis of environmental policy in China is contained in the 2018 Constitution of the People's Republic of China. Pursuant to Article 26 of the Constitution, the State protects and improves the environment in which people live and the ecological environment. It prevents and controls pollution and other public hazards. The State organises and encourages afforestation and the protection of forests.

In order of priority, other Chinese laws that provide environmental legislative support to the Mineral Resources Law of the People's Republic of China (2019) and the Environmental Protection Law of the People's Republic of China (2014) comprise:

- Environmental Impact Assessment (EIA) Law (2018)
- Law on Prevention & Control of Atmospheric Pollution (2018)
- Law on Prevention & Control of Noise Pollution (2021)
- Law on Prevention & Control of Water Pollution (2017)
- Law on Prevention & Control Environmental Pollution by Solid Waste (2020)
- Forestry Law (2021)
- Water Law (2016)
- Land Administration Law (2019)
- Protection of Wildlife Law (2023)
- Regulations on the Administration of Construction Project Environmental Protection (2017).

The Environmental Impact Assessment Law of the People's Republic of China and the Regulations on the Administration of Environmental Protection for Construction Projects require that an Environmental Impact Report be prepared for any project with potentially significant environmental impacts, which must comprehensively evaluate the pollution generated by that project and its impact on the environment.

Before construction begins, the construction team must submit the Environmental Impact Report or Environmental Impact Statement to the relevant environmental protection authority for approval. The Company provided SRK with the environmental impact assessment (EIA) reports and approvals for the Project. Details of the EIA reports and approvals relating to the Project are outlined in Table 14.3.

Table 14.3: Details of the EIA reports and approvals for the Project

Project	Produced by	Production date	Approved by	Approval date
Kaolin Mining Project (0.5 Mtpa)	Sinosteel Ma'anshan Institute of Mining Research Co., Ltd.	October 2019	Huaibei City Ecology and Environment Bureau	31 October 2019
Deep Processing Production Line of Calcined Kaolin Project (0.062 Mtpa)	Huaibei Institute of Environmental Science	December 2014	Huaibei City Environmental Protection Bureau	21 May 2015
Calcined Kaolin Raw Material Base Renovation and Expansion Project (0.062 Mtpa)	Huaibei Institute of Environmental Science	December 2014	Huaibei City Environmental Protection Bureau	21 May 2015
Calcined Kaolin Project (0.03 Mtpa)	Ningxia Zhicheng Anhuan Technology Consulting Co., Ltd.	October 2018	Huaibei City Duji District Environmental Protection Bureau	25 December 2018
High-Quality and Diversified Comprehensive Utilisation Project for Coal-Series Associated Kaolinite	Anhui Huacheng Environmental Technology Limited	May 2022	Huaibei City Duji District Ecology and Environment Bureau	18 May 2022
Construction Project of Silicon-Aluminum New Materials Engineering Technology Research Center	Anhui Bisheng Environmental Protection Technology Co., Ltd.	December 2023	Huaibei City Duji District Ecology and Environment Bureau	26 January 2024
Mullite-based Aluminum-Silicon Materials Deep Processing Project	Anhui Bisheng Environmental Protection Technology Co., Ltd.	January 2024	Huaibei City Duji District Ecology and Environment Bureau	26 January 2024
High-End Synthetic Ceramic Fiber Project	Anhui Lvzhiling Environmental Technology Co., Ltd.	May 2023	Huaibei City Ecology and Environment Bureau	15 August 2023

Source: Jinyan, 2025

Under the Soil and Water Conservation Law of the People's Republic of China, owners of construction projects in mountainous areas, hilly areas, desert areas, and other regions prone to soil erosion, as identified in soil and water conservation planning, must prepare a Water and Soil Conservation Plan (WSCP).

The Company provided SRK with its WSCP reports and approvals for the Project. Details are outlined in Table 14.4.

Table 14.4: Details of the WSCP reports and approvals for the Project

Project	Produced by	Production date	Approved by	Approval date
High-Quality and Diversified Comprehensive Utilisation Project for Coal-Series Associated Kaolinite	Zhejiang Zhongye Survey and Design Co., Ltd.	December 2022	Huaibei City Water Bureau	29 December 2022
Kaolin Mining Project (0.5 Mtpa)	Sinosteel Ma'anshan Institute of Mining Research Engineering Survey and design Co., Ltd.	October 2019	Huaibei City Water Bureau	23 December 2019

Source: Jinyan, 2025

SRK has reviewed the EIA reports and WSCP reports and concluded that the EIA and WSCP cover the main production facilities, including mine site and plants.

SRK considers that Jinyan has prepared the EIA reports and WSCP reports in accordance with relevant Chinese legal requirements and obtained corresponding government approvals.

14.5 Environmental and social aspects

14.5.1 Flora and fauna

The city of Huaibei falls within the Huaibei Plain vegetation zone, characterised by the warm temperate deciduous forest belt. The main vegetation includes willow, pine, poplar, camphor, horsetail, cogon grass and reeds. The main crops grown are dryland crops, such as wheat, corn and soybeans.

The Project area and its surroundings primarily contain common local plant species; no ecologically sensitive species have been identified.

Previous coal mining at the Project site resulted in large collapsed waterlogged areas due to mining subsidence, which has severely damaged the original ecosystem. Vast tracts of fertile farmland have turned into subsidence basins and mudflats, with destruction to surface features. In recent years, Jinyan has made efforts to restore and rebuild the subsided areas, promoting aquaculture and tourism based on the local subsidence characteristics.

The Project is located within a developed area. Most of the land is already designated for industrial and mining purposes, with surface vegetation long since destroyed.

The Project's surrounding area mainly consists of farmland, ponds and residential zones, with little natural vegetation or wildlife remaining. Most plants are artificially cultivated.

On this basis, it is considered the Project will not cause serious harm to surface vegetation or biodiversity in the area.

According to Huaibei's ecological protection red line zoning, the Project is located outside the ecological red line protection area, and its construction complies with the requirements of the ecological red line protection plan. There are no nature reserves, forest parks, or other environmentally sensitive sites in the Project area that require special protection.

14.5.2 Water management

The surface water system within the Project mining area includes the Long River to the east and the Zengchan River to the north, as well as numerous artificial ditches and ponds. Subsidence areas are prominent following the completion of previous coal seam mining, with most of these areas reclaimed for land use, while others retain standing water year-round.

The Shuoxi Lake Scenic Area, which formed as a result of subsidence, lies to the west of the Project's industrial site. Water levels in the channels and surface water within the mine vary seasonally, with higher levels during the flood season and lower or even dry conditions during the dry season.

The Project's production water and non-drinking domestic water requirements are sourced from purified mine dewatering water. The discharge of production and domestic wastewater without treatment may have negative impacts on surface water and groundwater; in addition, mining activities may lead to changes in the groundwater table.

According to the feasibility study on the Shuoli Mine dated September 2019, a uniform 35 m-thick clay aquitard layer is widely developed under the surface water and Quaternary pore aquifers, effectively isolating surface water from the bedrock aquifers. Currently, the mine dewatering water is approximately 1,800-2,400 tpd, all of which is directed to the wastewater treatment station for processing. The treatment station has a capacity of 5,000 tpd and uses a coagulation sedimentation treatment process. Jinyan has informed SRK that the treated mine dewatering water is re-used for underground mining and industrial production on the surface.

The Project's industrial site implements a rainwater-sewage separation system. The Company has two rainwater discharge outlets: rainwater from the eastern workers' village discharges through the east outlet into the Long River, while rainwater from the western workers' village discharges through the west outlet into Shuoxi Lake. Industrial and domestic sewage from the Shuoli Kaolin Mine and Chamotte Plant is treated through septic tanks and then discharged via the mine and plant sewage outlets into the workers' village urban sewage network, which ultimately leads to the Longhu Industrial Park wastewater treatment plant for centralised treatment.

A third-party testing agency is contracted quarterly to sample and test the mine water and sewage outlets from the mine and plant. Jinyan provided the wastewater monitoring reports for the first and second quarters in 2024, showing that the concentrations of heavy metals such as manganese, lead and cadmium in the treated mine inflow comply with the Class I discharge standards of the Integrated Wastewater Discharge Standard (GB8978-1996).

14.5.3 Waste rock and solid waste management

Currently, kaolin extraction is conducted using the existing production system of the former coal mine. According to the requirements in the EIA approval for the Kaolin Mining Project (0.5 Mtpa), waste rock from mining operations is used for underground backfill and is not brought to the surface.

During the site visit, SRK learned that the underground mining process currently generates almost no waste rock. Other major industrial solid wastes from the Project include iron removal residues from the Chamotte Plant, dust collected by baghouse filters, ash from furnace exhaust treatment, and slag waste from desulfurisation towers.

All of these wastes are either comprehensively used or recycled into production.

14.5.4 Air emissions

The primary air pollutants from kaolin mining consist of dust from underground ventilation during mining, and transportation dust. The Project uses wet underground operations, including water spraying and other dust suppression measures to control underground dust. Surface dust control measures include enclosing the conveyor belt corridors for ore transport, fully enclosing transfer and discharge points with spray systems, and regularly spraying water on storage yards and roads in the plant area to suppress dust.

The main air pollutants currently produced by the plant include particulate matter, sulfur dioxide (SO_2) and nitrogen oxides (NO_x), originating from production processes such as kilns, rotary kilns, feeding, crushing and screening. Jinyan has six kilns, with exhaust from four kilns treated individually by an integrated CFB (circulating fluidised bed) desulfurisation ceramic fibre filter tube for removal of dust, sulfur and nitrogen, which are then discharged through kiln exhaust stacks. Exhaust from the existing kilns is treated with SCR (selective catalytic reduction) denitrification bag filter equipment and discharged through kiln exhaust stacks. Online monitoring systems are installed on all kiln exhaust stacks, monitoring SO_2, NO_x and particulate matter. Dust control measures such as bag filters and enclosed belt conveyors are implemented in the primary crushing, secondary crushing, powder production, sand production, raw material workshops, and finished product warehouses to suppress dust.

The emission of particulate matter, SO_2 and NO_x from the industrial kilns must comply with the standards set by the Huaibei City Bureau of Ecology and Environment, specified in the document Huaihuanhan (2020) No. 45, which limits particulate matter, SO_2 and NO_x to 30 mg/m^3, 50 mg/m^3 and 100 mg/m^3, respectively. Jinyan provided SRK with several monitoring reports from the first and second quarters of 2024, showing that emissions of particulate matter, SO_2 and NO_x from the vertical and rotary kilns met the specified standards.

Jinyan recognises that reducing greenhouse gas emissions is an important measure to mitigate climate change, and has planned several mitigation measures which remain to be implemented. These include actively promoting the use of clean energy, constructing solar power generation facilities on Company premises to reduce fossil fuel consumption, enhancing technical upgrades to improve equipment efficiency and reduce energy consumption, and promoting tree planting and greening to increase carbon sequestration.

14.5.5 Noise emissions

Noise-generating equipment used in the mining process, such as loading machinery, water pumps, and underground transport vehicles, operates below ground, resulting in minimal impact on the surface. Surface noise sources include air compressors, fans, crushers, screening equipment, ball mills, hoists, and vehicles used for mining and processing.

Noise control measures include prioritising low-noise, environmentally friendly equipment. For standard production equipment like water pumps, noise reduction is achieved primarily through vibration damping and sound insulation. Sound-proof enclosures are used for equipment motors, and silencers are installed on pneumatic noise-generating devices such as air compressors and dust collector fans. Noise-generating equipment is housed indoors, and horn sounding, braking, and other occasional noises from vehicles are regulated, with transportation times carefully scheduled.

According to the noise monitoring report provided by Jinyan for the second quarter of 2024, the boundary noise levels of the plants meet the Class 2 standard limits of the Emission Standard for Industrial Enterprises Noise at Boundary (GB12348-2008).

14.5.6 Hazardous substances management

Hazardous materials have the characteristics of corrosive, reactive, explosive, toxic, flammable and potentially biologically infectious, which pose a potential risk to human and/or environmental health. The hazardous materials will be generated mainly by the Project's construction, mining and processing operations and include hydrocarbons (i.e. fuels, waste oils, and lubricants) and oil containers, batteries and reagents. The leaks, spills or other types of accidental releases of hazardous materials may have a negative impact on soils, surface water and groundwater resources.

The main hazardous wastes generated by the Project include waste denitrification catalysts, waste oil, and waste oil drums. These hazardous wastes are temporarily stored in the hazardous waste storage facility and are regularly disposed of by qualified contractors.

The hazardous waste storage area covers approximately 50 m^2, with an effective storage capacity of 45 m^3. It complies with the relevant requirements set out in the Standards for Pollution Control on Hazardous Waste Storage (GB 18597-2023), with measures in place for wind, rain and sun protection, as well as seepage prevention, and is equipped with drainage channels and liquid collection troughs.

During the site inspection, SRK also noted that the ammonia storage tank is housed in a secondary containment facility, which is well maintained.

14.5.7 Occupational health and safety

A well-developed and comprehensive safety management system comprises site inductions, site policies, safe work procedures, training, risk/hazard management (including signage), use of personal protective equipment (PPE), emergency response process, incident/accident reporting, an on-site first aid/medical centre, designated safety responsibilities for site personnel, regular safety meetings and a work permit/tagging system.

Jinyan stated that there has not been a fatal accident in the last 3 years.

SRK reviewed the Shuoli Kaolin Mine's safety production procedure and emergency response plan for the safety incidents, and concluded that the development of these plans complies with relevant Chinese requirements.

14.5.8 Mine closure and rehabilitation

The Chinese national requirements for mine closure are covered under Article 21 of the Mineral Resources Law of People's Republic of China (2023), the Rules for Implementation of the Mineral Resources Law of the People's Republic of China, the Mine Site Geological Environment Protection Regulations (2019), and the Land Rehabilitation Regulation (2011) issued by the State Council. In summary, these legislative requirements cover the need to conduct land rehabilitation, and to prepare and submit a Geological Environmental Protection and Land Reclamation Plan for assessment and approval. In addition, Jinyan must establish a mine geological environment treatment and restoration fund account for the Shuoli Kaolin Mine.

SRK has sighted the Geological Environmental Protection and Land Reclamation Plan for the Shuoli Kaolin Mine, which was prepared in January 2024.

Huaibei Shuoli Mining Co., Ltd. and Anhui Jinyan Kaolin New Materials Co., Ltd. have reasonably divided the reclamation obligations stipulated in the Mine's Geological Environmental Protection and Land Reclamation Plan, and both parties have signed a relevant agreement with Huaibei Mining Group Co., Ltd. According to this agreement, the reclamation obligations originally undertaken by the Shuoli Coal Mine (excluding the overlapping areas with the kaolin subsidence zones) shall be fulfilled by Huaibei Shuoli Mining Co., Ltd. The reclamation obligations related to kaolin mining (including areas overlapping with coal mining subsidence zones) shall be fulfilled by Jinyan.

The reclamation area for the Shuoli Kaolin Mine includes all land damaged by kaolin mining activities, covering a total area of 411.0319 hectares, which consists of 364.1620 hectares of subsidence-damaged land and 46.8699 hectares of land damaged by surface construction (industrial sites and the #3 West ventilation shaft). The reclamation responsibility area is determined by subtracting areas that are exempt from reclamation obligations from the total reclamation area. These exempted areas include:

- 46.8699 hectares of permanent construction land
- 0.0372 hectares of overlapping areas affected by adjacent mining rights
- 138.3260 hectares of land already restored through completed reclamation projects.

Thus, the reclamation responsibility area for the Shuoli Kaolin Mine amounts to 225.7988 hectares.

The static total investment[1] for the Geological Environmental Protection and Land Reclamation Plan of the Shuoli Kaolin Mine is RMB32.53 million, while the dynamic total investment[2] is RMB44.34 million.

1 The static investment consists of construction and installation costs, equipment and tool procurement costs, other engineering construction fees, and basic contingency fees.

2 The dynamic investment refers to the increase in construction investment during the construction period due to construction period interest and changes in newly approved taxes, fees, exchange rates, interest rates by the state, as well as price changes during the construction period. It includes price difference contingency fees, construction period interest, etc.

Specifically:

- The static investment for mine geological environment management projects is estimated at RMB5.04 million, and the dynamic total investment is RMB6.09 million.

- The static investment for land reclamation projects is estimated at RMB27.49 million, and the dynamic total investment is RMB38.25 million.

14.5.9 Social considerations

The Mine and Chamotte Plant are located in Shuoli Town, 16 km northeast of Huaibei City, within the jurisdiction of Shuoli Township, Duji District, Huaibei City. The Mullite Precision Casting Sand and Powder Plant is constructed within the Longhu Industrial Park, which is located 11 km south of the Chamotte Plant. The Project does not involve any environmentally sensitive areas requiring special protection, such as nature reserves or cultural heritage sites.

The local population living near the mining area primarily engages in agriculture, with a few residents involved in commerce and transportation, achieving self-sufficiency in income. The agricultural economy includes the cultivation of wheat, rapeseed, sesame, soybeans, and other crops. To the east and south of the mine site are residential areas, including Xingfu village, Shuoli mine low-rent housing, and Shuoli mine workers' village. The construction and operation of this Project do not impact any historical or cultural relics or sites.

The EIA report for the Calcined Kaolin Raw Material Base Renovation and Expansion Project (0.062 Mtpa) includes statements of public participation. The result of public participation is that 98% of the respondents support the construction of the Project and no survey respondents opposed the construction of the Project. Jinyan stated that the responsibility of the management of nearby community has been handed over to the local government.

15 CAPITAL AND OPERATING COSTS

15.1 Capital cost

Table 15.1 presents the actual and forecast capital costs of the Project from 2022 to 2040. The Project has been operational for some time, requiring regular replacement and refurbishment of certain property, plant, and equipment as well as the addition of new production lines and facilities to support the Company's growth. Between 2022 and May 2025, Jinyan spent RMB441.9 million on these activities.

These expenditures comprised upgrading and renovating various facilities within the underground mining operations, construction of new buildings and structures, as well as the replacement of machinery and equipment. On the surface, the Company constructed a new comprehensive kaolin processing plant system, a new non-fired brick plant, and a ceramic fibre workshop. Additionally, the vertical shaft kiln and burner system were renovated. Some equipment was replaced, and a new rotary kiln desulfurisation and denitrification system, along with a 35 kV substation was established.

Jinyan has forecast that the fan and substation systems as well as the ventilation fan of the ventilation shaft will require upgrades and renovations in 2025 for a total cost of approximately RMB3.8 million. In the same year, a resource upgrade drilling program will be initiated to increase the quantity and improve the resource classification for resources located between Domain 1 and Domain 5. This program is expected to incur costs of approximately RMB9.6 million. For the surface processing plant operations, a budget of RMB4.0 million has been allocated for equipment replacement and RMB1.5 million has been allocated to upgrade the vertical shaft dust control system.

In addition to the planned capital expenditure program, an annual allocation of RMB8.0 million has been designated for ongoing replacement and refurbishment. SRK considers the proposed capital cost budget to be reasonable.

A capital expenditure program for the construction of a comprehensive processing system for mullite aluminium-silicon materials and an aluminium-silicon new material engineering technology research centre. The total budget for these two projects amounts to RMB103.5 million.

Table 15.1: Actual and forecast capital cost (RMB million)

Cost Centre	2022	2023	2024	Jan-May 2025	Jun-Dec 2025	2026	2027	2028	2029	2030	2031-2040
Underground operation											
Buildings	15.4	–	–	–	–	–	–	–	–	–	–
Machinery and equipment	13.0	0.3	4.1	–	–	–	–	–	–	–	–
Ventilation shaft fan renovation	–	–	–	–	1.0	–	–	–	–	–	–
Ventilation shaft substation upgrade	–	–	–	–	0.9	–	–	–	–	–	–
Main shaft gate control system upgrade	–	–	–	–	1.9	–	–	–	–	–	–
Resource upgrade drilling program	–	–	–	–	9.6	–	–	–	–	–	–
Roadway construction	–	–	–	–	0.1	0.1	0.0	0.1	0.1	0.1	1.6

Cost Centre	2022	2023	2024	Jan-May 2025	Jun-Dec 2025	2026	2027	2028	2029	2030	2031-2040
Surface processing plant operation											
Kaolin processing plant system	20.5	183.0	113.8	–	–	–	–	–	–	–	–
Non-fired brick system	5.7	1.5	–	–	–	–	–	–	–	–	–
Vertical shaft renovation	0.8	–	–	–	–	–	–	–	–	–	–
Burner system renovation	0.8	–	–	–	–	–	–	–	–	–	–
Equipment replacement	3.0	4.0	4.8	0.7	3.3	–	–	–	–	–	–
Rotary kiln desulfurisation and denitrification	–	19.6	9.0	–	–	–	–	–	–	–	–
35 kV substation	–	6.4	1.1	–	–	–	–	–	–	–	–
Ceramic fibre plant	–	13.3	7.4	–	–	–	–	–	–	–	–
Mullite aluminium-silicon material comprehensive processing	–	–	0.3	4.9	12.4	62.9	–	–	–	–	–
Silicon-aluminium new material engineering technology research centre	–	–	0.1	–	–	9.3	14.0	–	–	–	–
Raw materials warehouse	–	–	8.3	–	–	–	–	–	–	–	–
Vertical shaft dust control system upgrade	–	–	–	–	1.5	–	–	–	–	–	–
Sustaining	–	–	–	–	–	8.0	8.0	8.0	8.0	8.0	40.0
Total	59.3	228.1	148.9	5.6	30.7	80.3	22.0	8.1	8.0	8.2	41.6

Source: Jinyan

15.2 Operating cost

Table 15.2 outlines the historical operating cash cost profile from 2022 to May 2025. During this timeframe, the annual cash operating costs were RMB151.2 million in 2022, RMB152.5 million in 2023, RMB179.0 million in 2024 and RMB81.5 million in the period of January-May 2025.

The primary cost components are fuel, electricity, water, and other services. These are followed by expenses for consumables, workforce employment, and both on-site and off-site administration. Employment costs cover salaries and benefits for workers at the mining and processing plants. Government royalty charges encompass resource tax, city maintenance and construction levy, education levy, stamp duty, environmental tax, and property tax. Additional costs are attributed to research and development, as well as other maintenance expenses.

Table 15.2: 2022 to May 2025 operating cost

Operating Cash Cost by Activities		2022	2023	2024	Jan-May 2025
Workforce employment	RMB million	50.2	54.9	60.1	23.3
Consumables	RMB million	25.4	19.6	27.5	8.7
Fuel electricity, water and other services	RMB million	51.3	55.1	51.1	37.1
On-site and off-site administration	RMB million	14.2	9.3	25.3	6.0
Environmental protection and monitoring	RMB million	0.8	2.0	2.9	1.4
Transportation of workforce	RMB million	–	–	–	–
Product marketing and transport	RMB million	8.0	10.3	10.9	4.3
Non-income taxes, royalties and other governmental charges	RMB million	3.0	3.3	3.7	0.7
Total	RMB million	152.9	154.5	181.5	81.5

Source: Jinyan, 2025

Table 15.3 presents the forecast operating cash costs from June 2025 to 2040. The Company's forecast is based on actual operating costs and plant performance from 2022 to May 2025, existing contracts with suppliers, royalty and government charges, and the technical studies referred to in this Report.

The processing plant produces various products, including precision casting mullite products, refractory mullite products, and raw coke and raw powder. Starting in 2025, ceramic fibre has been produced. The annual operating cash cost is expected to be RMB185.8 million in the period of June-December 2025 and RMB260.7 million in 2026, as the target annual mining capacity reaches 0.4 Mt and various products, including ceramic fibre, are produced. Similar to historical operating costs, the major cost components are fuel and electricity, followed by consumables and workforce employment.

Regarding operating cash costs by product, precision casting mullite products are projected to reach RMB208.4 million per year, while refractory mullite products are expected to account for RMB38.3 million in 2026. The unit cash operating cost over the LOM is RMB/t 979 for precision casting mullite products and RMB/t 847 for refractory mullite products. The unit cash operating costs are RMB/t 156 for raw coke and raw powder and RMB/t 7,124 for ceramic fibre.

In SRK's opinion, the Project has a proven track record of production, and the forecast operating costs used in the LOM model are reasonable and supported by historical data. The operating cost of ceramic fibre is expected to stabilise once commercial production is reached.

Table 15.3: Forecast operating cost (nominal)

Production Profile	Unit	Total LoM	Jun-Dec 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Mining																		
Kaolin ore	kt	5,985	219	400	400	400	400	400	400	400	400	400	400	400	400	400	400	166
Loss on Ignition	%	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Products																		
Precision casting mullite products	kt	3,518	164	230	230	230	230	230	230	230	230	230	230	230	230	230	230	131
Refractory mullite products	kt	750	36	49	49	49	49	49	49	49	49	49	49	49	49	49	49	28
Raw coke and raw powder	kt	946	52	62	62	62	62	62	62	62	62	62	62	62	62	62	62	36
Ceramic fibre	t	11,639	390	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750
Operating Cash Cost by Activities																		
Workforce employment	RMB million	794.2	34.3	48.3	49.0	49.6	50.1	50.7	51.2	51.8	52.3	52.9	53.5	54.1	54.7	55.3	55.9	30.6
Consumables	RMB million	888.5	38.3	54.0	54.8	55.4	56.1	56.7	57.3	57.9	58.6	59.2	59.9	60.5	61.2	61.9	62.5	34.2
Fuel electricity, water and other services	RMB million	1,781.6	76.9	108.3	110.0	111.2	112.4	113.6	114.9	116.2	117.4	118.7	120.0	121.4	122.7	124.0	125.4	68.6
On-site and off-site administration	RMB million	429.4	18.5	26.1	26.5	26.8	27.1	27.4	27.7	28.0	28.3	28.6	28.9	29.2	29.6	29.9	30.2	16.5
Environmental protection and monitoring	RMB million	60.0	2.6	3.6	3.7	3.7	3.8	3.8	3.9	3.9	4.0	4.0	4.0	4.1	4.1	4.2	4.2	2.3
Transportation of workforce	RMB million	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Product marketing and transport	RMB million	285.9	12.5	17.6	17.9	18.1	18.3	18.5	18.7	18.9	19.1	19.3	19.5	19.7	20.0	20.2	20.4	11.1

Production Profile	Unit	Total LoM	Jun-Dec 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Non-income taxes, royalites and other governmental charges	RMB million	66.3	2.7	2.9	4.0	4.3	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.6	4.6	4.6	4.6	2.5
Contingency allowances	RMB million	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	RMB million	4,309.4	185.8	260.7	265.9	269.1	272.2	275.1	278.1	281.1	284.2	287.3	290.4	293.6	296.8	300.0	303.3	165.7
Operating Cash Cost by Products																		
Precision casting mullite products	RMB million	3,443.4	147.6	208.4	212.5	215.1	217.6	219.9	222.3	224.7	227.1	229.6	232.1	234.7	237.2	239.8	242.4	132.5
Refractory mullite products	RMB million	635.6	29.6	38.3	39.1	39.6	40.0	40.4	40.9	41.3	41.8	42.2	42.7	43.1	43.6	44.1	44.6	24.4
Raw coke and raw powder	RMB million	147.4	5.4	9.0	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0	10.1	10.2	10.3	10.4	5.7
Ceramic fibre	RMB million	82.9	3.2	5.0	5.1	5.2	5.3	5.3	5.4	5.4	5.5	5.6	5.6	5.7	5.7	5.8	5.9	3.2
Total	RMB million	4,309.4	185.8	260.7	265.9	269.1	272.2	275.1	278.1	281.1	284.2	287.3	290.4	293.6	296.8	300.0	303.3	165.7
Operating Cash Unit Cost by Products																		
Precision casting mullite products	RMB/t	979	900	905	923	934	945	955	966	976	987	997	1,008	1,019	1,030	1,042	1,053	1,013
Refractory mullite products	RMB/t	847	819	782	797	807	816	825	834	843	852	861	871	881	890	900	909	873
Raw coke and raw powder	RMB/t	156	103	145	148	150	151	153	155	156	158	160	161	163	165	167	168	221
Ceramic fibre	RMB/t	7,124	8,114	6,724	6,857	6,941	7,020	7,096	7,173	7,250	7,329	7,408	7,488	7,572	7,654	7,737	7,821	4,274

Sources: Jinyan and SRK analysis

Notes:

1. All projected costs are in nominal terms.
2. Stockpiles of 78,500 t of raw ore and 64,500 t of calcined ore have been included in the production schedule.

15.3 Economic analysis

An analysis of the Project's economic viability has been conducted, taking into account capital and operating costs, the production schedule (as detailed in Table 15.1 and Table 15.3) and the price forecast presented in this Report. SRK developed a base case scenario for the Project, from 31 May 2025 to the end of the LOM. It is important to note that the purpose of the analysis is only to demonstrate the Project's economic viability. The calculated net present values (NPVs) do not reflect the fair market values or profitability of the Project. In the base case analysis, a discount rate of 10% was used. The discount rate was based on considerations of the real, risk-free, long-term interest rate (1.69% for the 10-year PRC Government Bond Rate), mining project risk (2% to 4%) and country risk (2% to 4%).

The analysis indicates that, as of 31 May 2025, the after-tax NPV, calculated with a 15% corporate income tax and a 10% discount rate, is positive. This analysis does not consider any finance costs or company debt. The breakeven analysis reveals that the NPV will reach zero if the weighted average sales price of all products decreases by 30%.

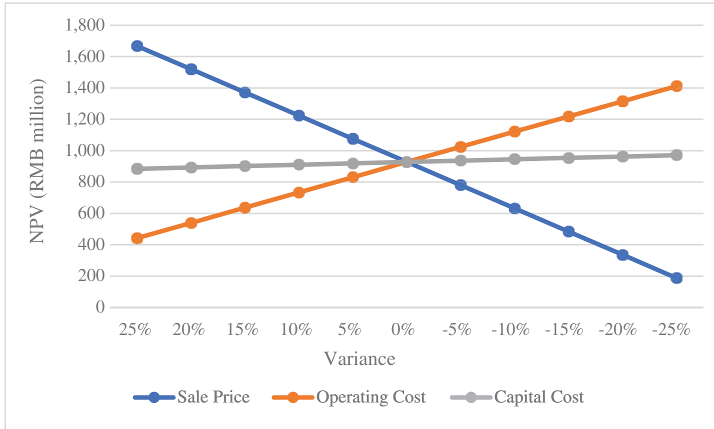
A post-tax sensitivity analysis has also been undertaken with respect to the capital and operating costs and sales revenue (Figure 15.1 and Table 15.5). The analysis shows that:

- A 1% increase in operating cost will result in a negative 2.17% change in NPV.
- A 1% increase in capital cost will result in a negative 0.22% change in NPV.
- A 1% increase in sales price will result in a positive 3.29% change in NPV.

The post-tax NPVs at various discount rates are tabulated in Table 15.5.

The economic analysis of the Project, together with the sensitivity analysis, have demonstrated that the Project is economically viable and justified the reporting of Ore Reserves determined in Section 11. At the forecast production rates, it will take approximately 17 years to exhaust the Ore Reserves.

Figure 15.1: Post-tax NPV sensitivity analysis



Source: SRK, 2025

Table 15.4: Post tax NPV sensitivity analysis (RMB million)

	Sale Price	Operating Cost	Capital Cost
25%	1,328	333	687
20%	1,208	412	696
15%	1,088	491	704
10%	968	570	712
5%	848	649	720
0%	728	728	728
-5%	608	807	736
-10%	488	886	744
-15%	368	964	752
-20%	248	1,043	761
-25%	129	1,121	769

Source: SRK, 2025

Table 15.5: Post-tax NPV sensitivity analysis at different discount rates (RMB million)

6%	8%	10%	12%	14%
928	819	728	652	589

Source: SRK, 2025

16 CONCLUSION

Since 1997, the Jinyan Kaolin Project has been in continuous operation, selling precision casting calcined kaolin (mullite) products to various high-technology industries. It has positioned itself in the market as a leading supplier of these materials and is actively developing new products and building market share. Other calcined products include refractory mullite (chamotte). A new product is a ceramic fibre with good thermal insulation properties that can also be used as a filter material. This new product is scheduled to begin commercial production in 2025 and has not previously been tested in the market. Other lower-value products able to be produced from Shuoli include crushed and screened kaolin ores, which are commercially referred to as raw coke and raw powder. Waste ore and other waste materials are used for concrete bricks, minimising the amount of unused mined ore.

The Jinyan Kaolin Project currently consists of the mining operation and existing processing plants (Chamotte Plant and Mullite Precision Casting Sand and Powder Plant). The Project inherited the infrastructure and equipment from the former Shuoli Coal Mine and is using the same longwall mining method and equipment to extract the kaolin ore. The kaolin mining operation has a design mining capacity of 0.5 Mtpa, but only approximately 0.3 Mt was achieved in 2023, reflecting the market demand. The Chamotte Plant has been undergoing upgrading and now consists of four rotary kiln production lines and two shaft kiln production lines, with a total annual production volume of 0.34 Mt.

The Project team has developed a good understanding of the distribution and physical and chemical characteristics of the K2 mudstone, and the kaolin ore contained within it. Although the K2 mudstone is continuous throughout the Project area, the kaolin ore is divided into five domains. The domains are based on impurity contents, specifically Fe_2O_3 <2%, TiO_2 <0.6% and minimum Al_2O_3 content >30%. High-quality kaolin ore (Fe_2O_3 <1.0%) is used to produce the mullite sand powder for precision casting mullite and refractory chamotte. Medium-grade kaolin ore (Fe_2O_3 <2.0%) is directly sold as raw coke, while low-grade ore (Fe_2O_3 >2.0%) is combined with calcined kaolin tailings to manufacture non-fired bricks, ensuring the comprehensive use of the mined kaolin ore. Current kaolin mining operations have focused on Domain 5, located in the southern part of the mining licence area.

Geological modelling was undertaken using Leapfrog software to define the five domains based on the impurities and Al_2O_3 content. The block model grade estimation was interpolated using the Ordinary Kriging (OK) method. This resulted in the definition of 18.6 Mt of Mineral Resources at an average grade of 40.30% Al_2O_3, including 11.4 Mt Measured and Indicated Mineral Resources at an average grade of 40.29% Al_2O_3 in accordance with the JORC Code (2012).

The Project hosts 6.1 Mt of Proved and Probable Ore Reserves at an average grade of 38.10% Al_2O_3 in accordance with the JORC Code (2012) and has a 16-year LOM at a production rate of 400,000 tpa.

SRK has reviewed the Safety Assessment Reports and Safety Operation Procedure provided by the Company, and considers the documentation covers items that are generally in line with the relevant industry practices and safety regulations.

Risks associated with the Project are generally considered unlikely in terms of likelihood but may be of low or high consequence and therefore rated *Low* overall. No *High* risk issues have been identified. Hydrogeology issues are assigned a *Medium* rating with a range of mitigation measures recommended to reduce the possible consequences. Overall, the legacy experience and equipment from the Shuoli Coal Mine are considered to reduce the risks associated with the Project compared to those typically faced by a start-up mine.

17 RISK ASSESSMENT

This section presents risks that were identified and described in sections above. Risks have been classified from major to minor, defined as follows:

- **Major risk**: The factor poses an immediate danger of a failure which, if uncorrected, will have a material effect (>15% to 20%) on the project cashflow and performance and could potentially lead to project failure.

- **Moderate risk:** The factor, if uncorrected, could have a significant effect (10% to 15-20%) on the project cashflow and performance unless mitigated by some corrective action.

- **Minor risk:** The factor, if uncorrected, will have little or no effect (<10%) on project cashflow and performance.

In addition to the risk factor, the likelihood of risk must also be considered. Likelihood of occurrence within a 7-year timeframe can be considered as:

- likely: will probably occur

- possible: may occur

- unlikely: unlikely to occur.

Table 17.1: Risk assessment matrix

	Consequence		
Likelihood	Minor	Moderate	Major
Likely	Medium	High	High
Possible	Low	Medium	High
Unlikely	Low	Low	Medium

The results of the risk assessment rating are presented in Table 17.2. The rating of the risks is presented before implementation of control recommendations.

Table 17.2: Risk assessment on the Project

# Risk	Description	Control Recommendations	Likelihood	Consequence	Rating
		Mineral Resource and Ore Reserve			
Locally high Fe_2O_3 content occurs in certain bedding of the estimated domains . . .	The 2D estimation method requires one composite for each complete intersection through the mineralised zone. Fe_2O_3 was assessed based on the average grade of the entire intersection of the mineralised zone.	Impose a more intensive grade control protocol to better identify Fe_2O_3 content and mix the low Fe_2O_3 ore with high Fe_2O_3 ore.	Possible	Minor	Low
		Mining			
Production plan	Failure to meet production targets due to delay or failure of underground development and mining block preparation development; low operating time and equipment utilisation.	Ensure that short-term planning is capable of identifying and resolving issues that could cause production delays, improve operation planning and equipment maintenance, and ensure sufficient capacity of equipment and system.	Unlikely	Moderate	Low
Equipment shortage or shutdown	Insufficient quantity or inefficient mining equipment; low equipment capacity due to unexpected conditions; equipment failure due to overload.	Ensure the maintenance schedule is implemented.	Possible	Moderate	Medium
Adverse micro-geological conditions (faults and disturbances)	Conditions changed significantly, leading to mine plan failure.	Impose practical mapping procedures to study changes in the mining conditions during drilling and heading development; change of equipment from longwall to shortwall.	Unlikely	Moderate	Low
Spontaneous combustion/mine fire/dust explosion . . .	Safety hazards caused by the previously mined and remaining coal seams.	Implement monitoring and set alarms in the mined-out area, and block the gates to the coal seam area.	Unlikely	Moderate	Low
Coal gas explosion/seam gas outbursts	Safety hazards caused by methane from the previously mined and remaining coal seams.	Implement monitoring and set alarms to the seam gas level, and block the gates to the coal seam area. Install an efficient ventilation system.	Unlikely	Moderate	Low

# Risk	Description	Control Recommendations	Likelihood	Consequence	Rating
Lack of skilled labour and operation management .	Lack of labour leading to mine plan failure.	Provide training for local employees and maintain the skilled labour and operation management.	Unlikely	Minor	Low
		Processing			
Compatibility of equipment and processes..	If the equipment and processes are not compatible, the result will be lower product quality and higher production costs.	Regularly conduct process inspections to evaluate the tasks and adaptability of each piece of equipment, and update them as necessary.	Possible	Moderate	Medium
Ceramic fibre workshop production plant	Failure to meet the annual production target of 750 tpa.	The production plan for the ceramic fibre workshop may be conservatively reduced to 75% of the target.	Unlikely	Moderate	Low
		Geotechnical			
No. 5 coal seam mined-out area may increase the difficulty of roof management during kaolin mining.	The No. 5 coal seam above certain working faces of the kaolin mine has already been mined, compromising the stability of the roof. This may increase the difficulty of roof management during kaolin mining and could potentially lead to roof fall accidents.	First, use ∮200 mm × 2,000 mm semicircular wood beams for roof management in fractured roof sections, strictly prohibiting unsupported sides, unsupported roofs, and rib spalling roof falls. Second, if rib spalling roof falls occur on the working face, employ advance support by erecting advance supports and using wooden stacks to secure the roof.	Unlikely	Moderate	Low

# Risk	Description	Control Recommendations	Likelihood	Consequence	Rating
Roadway deformation caused by upper and lower coal seams depletion	Due to the mining of the upper and lower coal seams, some sections of the surrounding rock have been damaged, leading to roadway deformation and damage, making support challenging.	First, change the design concept and optimise the roadway layout level. Second, for fractured, easily weathered, water-bearing rock, implement targeted sealing and reinforcement measures. Third, promote mutual reinforcement between primary and secondary support to enhance the load-bearing function of the surrounding rock. Fourth, focus on the later maintenance and reinforcement of the roadway by taking targeted reinforcement measures based on dynamic monitoring of the deformation and strength weakening process of the surrounding rock.	Unlikely	Moderate	Low
Rib spalling and floor heave	The mine may have stress concentration areas where mining activities could lead to rib spalling and floor heave, posing safety risks.	Based on the layout of the working face and geological structure conditions, analyse and delineate the stress concentration range, and formulate special technical measures for mining in stress concentration areas.	Unlikely	Moderate	Low
		Hydrology			
Undrained water in historical voids, leading to groundwater accidents	If management is inadequate, there may be risk of accidentally penetrating historical voids, roadways, chambers, or encountering undrained water in historical voids, leading to groundwater accidents.	Mitigation measures include further clarifying the location, size and water accumulation in historical voids, and strictly adhering to national and Anhui Province technical regulations, standards and measures for preventing water ingress from historical voids.	Possible	Moderate	Medium

# Risk	Description	Control Recommendations	Likelihood	Consequence	Rating
Residual water inflow from the four closed adjacent mines	Once residual water from the four closed mines around the Shuoli Kaolin Mine enters, the existing sump volume will not meet the *Coal Mine Water Prevention and Control Regulations*, posing a significant risk.	The mitigation measure is to complete the underground drainage system upgrade by the end of December 2025.	Unlikely	Major	Medium
Seepage on the mine field boundary coal pillars and artificial partition walls	After the closure of the four surrounding mines, the residual water will raise the water level, exerting pressure on the mine field boundary coal pillars and artificial partition walls, posing a risk of seepage.	Conduct monitoring and control, and reinforce protection of the artificial partition walls.	Possible	Moderate	Medium
		Environment and Social			
Water pollution to the environment.	The potential risks of the project to surface water and groundwater are due to the indiscriminate discharge of untreated production and domestic wastewater.	Dispose the mine dewatering water and domestic wastewater properly. Conduct regular surface and groundwater monitoring.	Unlikely	Moderate	Low
Air emissions management.	Air pollutants come from production processes such as vertical kilns, rotary kilns, feeding, crushing, and screening. Particulate matter, sulfur dioxide and nitrogen oxides are the main air pollutants of the Project.	Undertake maintenance of the desulfurisation and denitrification facilities. Conduct regular air monitoring.	Possible	Moderate	Medium
Stakeholder engagement and social aspects.	No stakeholder engagement plan has been developed for the Project.	Develop and implement a stakeholder engagement plan. A grievance mechanism is also recommended to mitigate social risks.	Unlikely	Moderate	Low
		Market			
Product price	Price reduction due to decline in demand or increased competition.	Active marketing and promotion; active ongoing product development focusing on high-value and innovative products.	Possible	Moderate	Medium

# Risk	Description	Control Recommendations	Likelihood	Consequence	Rating
Product specifications . . .	Clients request new specifications for products.	Incorporate flexible processing lines in the plant that can respond to change.	Unlikely	Low	Low
Client loss	Established clients purchase product from competitors.	Actively seek new clients and maintain good relations with existing clients.	Possible	Moderate	Medium
Insufficient product	Production is capped below quantity required to maintain or expand market share.	Investigate possible increase in production licence quantity if warranted by increased demand.	Unlikely	Low	Low
Restricted/limited market .	Sales currently only in China may be subject to local fluctuations in high-technology industry.	Broaden client base and consider overseas clients.	Unlikely	Low	Low

Source: SRK

CLOSURE

This report, Independent Technical Report on the Jinyan Kaolin Project, was prepared by

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This signature has been scanned. The author has given permission to its use for this document. The original signature is held on file

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All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

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TABLE 1 — JORC CODE 2012

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques. .	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done, this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	The analytical results used to derive the Mineral Resource estimate at the Shuoli Kaolin Mine were collected from various exploration phases: the historical exploration (1957-1966 phase, 1970-1986 phase and 1991-2006 phase), and the 2024 validation. • In the 1957-1966 and 1970-1986 phases: All drill holes were completed from the surface for coal resource exploration. Kaolin core samples were collected as associated deposits. Unfortunately, the types of drill rigs and core diameters were not recorded. Sample intervals were generally 0.5 m. • In the 1991-2006 phase: Underground diamond core drilling and channel sampling was carried out. Mineralised drill core intervals were entirely sampled. Core samples were extracted at 75 mm diameters. The type of drill rigs used was not documented. Sample intervals were generally 0.5 m. • In the 1991-2006 phase and 2024 validation: Channel samples collected in drives were all continuous channel intervals of consistent width, depth and length of approximately 10 cm × 5 cm × 3 m, channelled either by chisels or saws. • In 2024 validation: Surface drill holes were drilled using XY-4 drill rigs. Core samples were extracted at PQ and HQ size. Diamond core samples were collected by sawing in half, lengthwise, and were considered representative. Sample intervals were generally 0.5 m.
Drilling techniques . .	• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	• In the 1957-1966 and 1970-1986 phases: Details of drilling techniques were not recorded. • In the 1991-2006 phase: Core samples were extracted at 75 mm diameters. Core was not oriented. • In the 2024 validation: Drilling was conducted by PQ and HQ standard tube diamond core. Core was not oriented. Core boxes were marked.

Criteria	JORC Code explanation	Commentary
Drill sample recovery .	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• In the 1957-1966 phase: The kaolin core recovery from drilling ranged from 60% to 98%, with an average recovery of 81%. • In the 1970-1986 phase: The kaolin core recovery during these phases varied between 35% and 92.5%, averaging 74%. • In the 1991-2006 phase: The kaolin core recovery from the underground drilling ranged from 75% to 100%, with an average of 82%. • In the 2024 validation: The kaolin core recovery from the surface drilling ranged from 68% to 100%, with an average of 91%. • 138 drill holes and channels from 1957-2024 explorations were used for resource estimation, with core recoveries exceeding 80%.
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. • The total length and percentage of the relevant intersections logged.	• In the 1957-1966, 1970-1986 and 1991-2006 phases: The cores were logged with geological information. The lithology and stratigraphy features were interpreted and logged using downhole gamma and acoustic survey. • In the 2024 validation: The kaolin cores were logged with geological information and photographed for documentation. The non-cored sections were interpreted and logged using downhole gamma and acoustic survey.
Sub-sampling techniques and sample preparation .	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	In the 1957-1966, 1970-1986 and 1991-2006 phases: • The cores were sampled entirely without cutting or sawing. • In the 1957-1966 and 1970-1986 phases: Samples were sent to the laboratory of Anhui Province Geology Bureau 325 Brigade (Anhui 325 Brigade); the 1991-2006 samples were sent to the laboratory of Anhui Third Exploration Team (Anhui Third Team). • Historical samples were prepared according to Chinese standard protocol using a Qeqott formula ($Q=Kd^2$, K was designated to 0.2) as a reference for sample splitting weight. Prepared pulp samples were analysed to determine the SiO_2, Al_2O_3, Fe_2O_3 and TiO_2 contents, and Loss on Ignition (LOI). Some aliquots were further tested for CaO, MgO, K_2O and Na_2O content. SiO_2 and LOI were determined by gravimetric methods, Al_2O_3 by volumetric methods, Fe_2O_3 by the o-phenanthroline colorimetric method, and TiO_2 by the diantipyrylmethane photometric method. CaO, MgO, K_2O, and Na_2O were analysed using atomic absorption spectroscopy.

Criteria	JORC Code explanation	Commentary
		• Approximately 8.99% of pulp duplicates were inserted as internal quality control measures; approximately 6.46% duplicates were sent for inter-laboratory checks. In the 2024 validation: • The primary drill samples were half-core cut by diamond saw, along the longitudinal axis. • Field duplicates were inserted at a rate of 1 in 40 samples; roughly crushed duplicates were inserted at a rate of 1 in 40 samples; pulp duplicates, blanks, and certified reference material (CRM) standard samples were inserted at a rate of 1 in 20 samples. • Samples were labelled, securely bagged and shipped to the laboratory of Henan Second Geological Exploration Institution (Henan Second Institution) for sample preparation. • Samples were prepared in accordance with the Chinese GBT 14563-2020 protocol at the laboratory of the Henan Second Geological Exploration Institution (Henan Second Institution). Initially, the samples were crushed into pebbles measuring 30 mm in size and then split using riffle dividers. The split samples were further crushed to a maximum size of 10 mm and thoroughly mixed. A 0.25 kg portion was then ground into a 0.25 mm powder using a disc pulveriser and subsequently split to obtain a 50 g aliquot. This aliquot was further ground in an agate mortar to produce pulps with a size of 150 μm. The prepared pulp samples were analysed to determine the SiO_2, Al_2O_3, Fe_2O_3, and TiO_2 contents, and LOI. SiO_2 and LOI were determined by gravimetric methods, Al_2O_3 by volumetric methods, Fe_2O_3 and TiO_2 by the colorimetric method.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests .	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	In the 1957-1966, 1970-1986 and 1991-2006 phases: • Samples were analysed for SiO_2, Al_2O_3, Fe_2O_3 and TiO_2 contents, and LOI, in the laboratories of Anhui 325 Brigade and Anhui Third Team; inter-laboratory duplicates checks were sent to the laboratories of Anhui Geological Bureau and Nanjing Central Laboratory. • Results from internal duplicates and inter-laboratory checks showed good correlation. In the 2024 validation: • All samples were analysed for SiO_2, Al_2O_3, Fe_2O_3 and TiO_2 contents, and LOI, at the laboratory of Henan Second Institution; inter-laboratory duplicates were sent to the SGS laboratory in Tianjin. • QAQC indicated the data were of high standard.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	For the 1957-1966, 1970-1986 and 1991-2006 phases, no core or pulp sample were retained; for verification of the results from these campaigns, SRK has relied on information from validation hole drilling and channel sampling. In the 2024 validation, samples were assayed with QAQC protocol in Henan Second Institution. Eleven pulp duplicates of 218 samples were sent to SGS laboratory in Tianjin for inter-laboratory checking. Laboratory duplicates and inter-laboratory checks again showed reasonable reproducibility.
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• Unless otherwise specified, all coordinates in this report were in Beijing 1954 zone 39 datum. In the 1957-1966, 1970-1986, and 1991-2006 phases: • All drill holes and channel samples were surveyed using traditional optical surveying instruments or a total station. • Downhole surveys to measure dip and azimuth were conducted at 50 m intervals using JJX 1 or JJX 3 type inclinometers. In 2024 validation: • Collar positions were established using real-time kinematic (RTK) technology. • Downhole surveys to measure dip and azimuth were conducted at 50 m intervals.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• In 1957-2006 historical exploration: The general drilling spacing of the Project was approximately 300 m × 350-400 m; in the central area of Domain 5 spacing is locally 150 m, and at the margin of Domain 5 spacing widens to 350 m. • The infill drill holes and channel sampling completed in 2024 reduced the Domain 1 drill spacing to a nominal 250 m × 250 m, and reduced the Domain 5 sampling spacing to a nominal 100 m × 100 m, with the central part drilled to 100 m × 50 m. • The combined spacing of the historical and 2024 programs is deemed adequate for the Mineral Resource estimate.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Drill core was not oriented, and not required due to essentially low angle of orientation. • Core structural measurement was not performed. • Folds and faults were identified from observations in the underground drives.
Sample security	• The measures taken to ensure sample security.	• None of the 1957-2006 historical exploration samples were preserved. • The halved drill cores and pulp rejects in the 2024 program were stored in a warehouse in Jinyan.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• SRK undertook an audit of the assays, including standards, blanks and QAQC of laboratory reporting.

Section 2 Reporting of Exploration Results

(Criteria listed in section 1 also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status . .	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• The Shuoli Kaolin Mine mining licence (C3400002019117120148949) was granted to Jinyan on 20 November 2024 and is valid until 20 November 2039. The mining licence covers an area of 17.9955 km^2 and allows exploitation between -50 m asl and -240 m aasl. The approved production capacity under the mining licence is 0.5 Mtpa.
Exploration done by other parties.	• Acknowledgment and appraisal of exploration by other parties.	• An initial coal resource exploration phase was carried out from 1957 to 1966 by the Anhui Province Geology Bureau 325 Brigade (Anhui 325 Brigade).
Geology	• Deposit type, geological setting and style of mineralisation.	• The kaolin deposit is hosted by the aluminous mudstone within the basal unit of the Permian Lower Shihezi Formation known as the K2 index layer. This aluminous mudstone unit is located 12-24 m beneath the No. 5 coal seam. Although the kaolin layer is continuous, it has been divided into five distinct domains based on impurity content, specifically where Fe_2O_3 is less than 2% and TiO_2 is less than 0.6%, as well as a minimum thickness of 0.7 m. • The mineralisation layer is buried at depths ranging from -50 m to -240 m, with a thickness ranging from 0.77 m to 4.76 m. The entire layer exhibits a gentle dip angle, ranging from approximately 5° to 13°.

Criteria	JORC Code explanation	Commentary
Drill hole Information .	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: – easting and northing of the drill hole collar – elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar – dip and azimuth of the hole – downhole length and interception depth – hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	• Details of individual drill holes are not considered Material to the overall Mineral Resource estimation presented in this Report; therefore, a tabulation of drill hole information is omitted. • All surface drill holes were drilled vertically, with depths ranging from 40.1 m to 470.3 m, nearly perpendicular to the sub-horizontal kaolin deposits. Underground drill holes were drilled in drives at dip angles between 50° and 90°. Channel samples were collected vertically on the drives walls from top to bottom. • All intervals were used in the development of geological models and the interpretation of mineralised domains. However, to avoid potential inaccuracies, intervals with poor core recovery were excluded from variogram modelling and grade estimation. A nominal core recovery threshold of 80% was set for selecting intervals.
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• To define the extents of the kaolinite estimation domain, the conditions Al_2O_3 grade above 30%, impurity Fe_2O_3 less than 2%, and impurity TiO_2 less than 0.6% were applied. • No capping was applied.
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	• The sub-horizontal mineralised domains have a tabular shape, with gentle dips ranging from approximately 5° to 13°. Consequently, the intersections from drill holes and channels approximately correspond to the true widths of the mineralisation.

Criteria	JORC Code explanation	Commentary
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• Appropriate maps and sections were reported in this Report.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• Details of individual drill holes are not considered Material to the overall Mineral Resource estimation presented in this Report and are omitted.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• No other exploration activities have been carried out.
Further work	• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• No further exploration programs of infill or extension drilling are planned.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used.	• SRK conducted spot checks of the database against historical exploration program tables and maps, as well as the 2024 program assay certificates, and found no flaws in the data. • During the process of uploading the database into Leapfrog software, various checks for internal inconsistencies (such as overlapping intervals and missing collars) are automatically performed. Visual checks of the different generations and types of sampling data against each other also ensure database integrity.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• SRK consultants and associates visited the Jinyan Kaolin Project on 3-4 October, 11-12 October and 24-25 October 2024.
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• A total of 168 drill holes and underground channels were completed, resulting in the collection of 891 samples. This dataset provides a good definition of the dimensions for resource estimation. • SRK has high confidence in the geological interpretation. The overall interpretation of the continuity, extent, and orientation of the kaolinite layer and host sediments, based on the various phases of exploration, has been confirmed by extraction of kaolin since 1997, and additional knowledge of the geology gained from over 50 years of coal mining. • For the interpolation of attributes into the Mineral Resource block model, the anisotropies of the variogram models and search neighbourhoods were aligned to follow the approximately flat-lying geology.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The dimensions of the mineralised domains are presented as length (m) × width (m) × thickness (m) as: – Domain 1 1,680 × 1,550 × 2.1 – Domain 2-1 800 × 300 × 2.3 – Domain 2-2 900 × 180 × 2.3 – Domain 3 1,100 × 170 × 1.2 – Domain 4 740 × 350 × 2.2 – Domain 5 1,800 × 940 × 2.5.

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen, include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• The Anhui Coal Field Geology Institution Third Exploration Team (Anhui Third Team) and Henan Nieyuan Geological Exploration Co., Ltd. reported Mineral Resource estimates using datasets from the 1957-2006 program in 2019 and 2024, respectively. However, neither of these Mineral Resource estimates complied with the reporting standards and definitions of the JORC Code. • SRK's 3D block modelling and estimation was undertaken in Leapfrog Edge software (version 2024.1). • The estimation domains for the Project were built using kaolin intervals in Leapfrog Edge software. Thresholds of Al_2O_3 grade above 30%, impurity Fe_2O_3 less than 2%, and impurity TiO_2 less than 0.6% were applied for modelling this domain. • The 2D estimation approach was applied for the Project's kaolin deposit. For each estimation domain, estimates were made of 'accumulations' (product of grade and true thickness), and true thickness. For the elements of interest, the block grades were then obtained by dividing the corresponding accumulation estimate by the thickness estimate. • No capping was applied. • No assumptions were made regarding correlation between variables. • The block models for all domains with dimensions of 100 m × 100 m × variable Z (East × North × Elevation) and sub-blocking with dimensions of 10 m ×10 m × variable Z (East × North × Elevation) were employed, and no rotation has been allowed. • Block accumulation and true thickness values were interpolated using the Ordinary Kriging (OK) method. • A discretisation grid of 5 × 5 × 1 has been used within each block during the estimation. • SRK conducted visual validation of the longitudinal views and cross section view of the drill holes or channel grades and block model grades, which demonstrated good correlation between local block estimations and nearby samples, without excessive smoothing in the block model. • SRK compared recent (last 3 years) production records and historical depletion against the estimated model for reconciliation.

Criteria	JORC Code explanation	Commentary
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are estimated on a dry basis.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• Thresholds of Al_2O_3 grade above 30%, impurity Fe_2O_3 less than 2% and impurity TiO_2 less than 0.6% were applied in accordance with processing requirements. • Additionally, a minimum mining thickness was employed to accommodate the limitations of the longwall mining method.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• The Shuoli Kaolin Mine uses the longwall mining method with fully mechanised mining technology. • The development system is a mixed system of three shafts (main shaft, service shaft and ventilation shaft) and a single main roadway level at -200 m. • The typical mining block has a length of 600 m, a mining width of 120 m and a cutting height of 2 m to ~3.8 m.
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• The mineralisation is assumed to be principally kaolin. The ore undergoes calcination, followed by crushing and grinding, to be used as refractory and casting materials. • The entire K2 layer horizon is considered ore, allowing for bulk extraction without generating any waste during the mining operation.

Criteria	JORC Code explanation	Commentary
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• No specific environmental factors or assumptions are made.
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• Bulk density and specific gravity measurements were completed in the historical and 2024 programs and the density of ore rock was determined at 2.60 g/cm^3.
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• SRK considered the following factors in Mineral Resource classification: – Geological continuity and reliability of interpretation – Density of sample support and exploration workings – OK attributes (kriging variance, slope of regression, kriging efficiency). • Measured Mineral Resource is classified as the area defined by sampling spacing within 50 m, or slope of regression greater than 0.85. • Indicated Mineral Resource is classified as the area defined by sampling spacing within 250 m, or slope of regression greater than 0.4. • Inferred Mineral Resource is classified as areas defined only by sampling spacing more than 250 m, or the extension of Indicated Mineral Resources.

Criteria	JORC Code explanation	Commentary
Audits or reviews . . .	• The results of any audits or reviews of Mineral Resource estimates.	• No external audits or reviews of the Mineral Resource have been taken place. • SRK carried out an internal peer review on the Mineral Resource estimate.
Discussion of relative accuracy/confidence .	• Where appropriate, a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The relative accuracy of the Mineral Resource estimate is reflected in the Mineral Resource classification categories applied. • The Mineral Resource statement reflects the global estimates of in situ tonnes and grade.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in section 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. • Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	• A Mineral Resource estimate was completed by SRK, with an effective date of 14 February 2025. • The reported Mineral Resource is inclusive of Ore Reserve.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken, indicate why this is the case.	• SRK consultants and associates visited the Jinyan Kaolin Project on 3-4 October, 11-12 October and 24-25 October 2024.
Study status	• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. • The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	Two technical studies and operation data are available to review: • The Preliminary Mine Design of the Mining Engineering at 0.5 Mtpa Capacity for the Shuoli Kaolin Mine; December 2019, Huaibei Industrial and Architectural Design Institute Co., Ltd. • The Mineral Resources Development and Utilization Plan Study at 0.5 Mtpa Capacity for the Shuoli Kaolin Mine; January 2023, Anhui Jinyan Kaolin Technology Co., Ltd. • SRK considers the level of accuracy of the Modifying Factors described in the abovementioned technical studies in conjunction with the operation data since 2019 to be similar to a pre-feasibility study (PFS), prepared in accordance with the JORC Code (2012) guidelines.

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). • The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. • The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling. • The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). • The mining dilution factors used. • The mining recovery factors used. • Any minimum mining widths used. • The manner in which Inferred Mineral Resources are used in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods.	• The Shuoli Kaolin Mine uses the longwall mining method with fully mechanised mining technology. • The development system is a mixed system of three shafts (main shaft, service shaft and ventilation shaft) and a single main roadway level at -200 m. • The typical mining block has a length of 600 m, a mining width of 120 m and a cutting height of 2 to ~3.8 m. • Inferred Mineral Resources were not considered during the mine design. • Mining panel design scope: 1. The design is constrained within the mining licence limit. 2. End-of-month survey data from 31 May 2025 are the last available survey data for as-built consideration. • Design loss: 1. Safety pillars for the shafts, surface buildings and others are considered loss. 2. Panel pillars for the main drive are left. 3. The corner resources which the longwall mining shearer barely reaches are considered loss. 4. Kaolin layers steeper than 17°, where the longwall mining equipment cannot operate effectively, are considered. • Mining dilution: 1. The minimum mining width (cutting height) is 2 m. 2. 0.05 m dilution is applied to both roof and bottom of the kaolinite seam, if the seam is more than 1.9 m height. 3. The Mineral Resource is diluted up to 2 m if the seam is less than 1.9 m. • Mining loss: 1. 5% is applied to cover the loss from workface handover of the stockpile during transportation. • The mine design takes into account the use of existing infrastructure, including access, transportation, ventilation, power supply, water supply, and dewatering systems, which were employed during previous operations.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical testwork undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale testwork and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	• Kaolin ore is classified into three types according to its iron content: • Fe_2O_3 <1.0% is used as raw material for calcined kaolin; ore with Fe_2O_3 = 1.0~2.0% is screened into different particle sizes for sale; and ore with Fe_2O_3 >2.0% is used as raw material for manufacturing non-fired bricks. • During the calcination process, calcined kaolin loses constitution water and volatile substances, resulting in a weight loss of 14.5%. The impurity removal rate of the calcined product is approximately 5%, so the yield of qualified calcined kaolin products relative to the ore fed into the furnace is about 80.5%. The production volume for calcined kaolin is 340,000 t per year. • Producing 1 t of kaolin ceramic fibre consumes 0.9 t of calcined kaolin. The kaolin fibre workshop is designed for a production capacity of 1,000 t per year, with a planned production of 750 t per year. • Impurities and auxiliary waste generated during the processing of unqualified kaolin ore and calcined products are all used to manufacture non-fired bricks.
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	• The Project has obtained the required environmental protection related permits for operation, including safety production permit, water extraction permit, pollution discharge permit. • Environmental impact assessment reports on the key facilities of the Project have also been prepared and approved by the relevant authorities.
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	• The mine and processing plant is connected to the grid with sufficient power supply. • The rotary kiln and shaft kilns are heated by coal or natural gas. • Access to the mine and processing plant is via paved roads.

Criteria	JORC Code explanation	Commentary
Costs	• The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private.	• The Project is an existing mine, with the majority of the projected capital expenditure related to equipment refurbishment and replacement as well as facility upgrades. The cost estimate is based on quotations or Company's recent experience. • The operating cost is estimate based on actual operating costs and plant performance, existing contracts with suppliers, royalty and government charges, and the technical studies. • A resource tax of 2% is applied to the revenue generated from the sales of ore.
Revenue factors	• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. • The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	• 80.5% Loss on Ignition. • The commodity price forecast is based on the Company's current sales figures and the projected rate of increase provided by Frost & Sullivan, an independent market research company.
Market assessment	• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. • A customer and competitor analysis along with the identification of likely market windows for the product. • Price and volume forecasts and the basis for these forecasts. • For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	• A number of existing contracts dated 2024 have been sighted, outlining the specifications of the purchased products and prices. • Production for 2023 was 300,000 t with an annual extraction limit of 500,000 t. • A market assessment report was prepared by Frost & Sullivan (2025), covering the general kaolin market and also the market for calcined kaolin precision casting mullite and refractory uses. • Sales volumes have been conservatively forecast to be similar tonnages to recent annual sales.
Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs.	• The actual and forecast capital and operating costs were reviewed by SRK and found to be reasonable. • An analysis of economic viability indicates that, after applying a 15% corporate tax and a 10% discount rate, the net present value (NPV) is positive. This suggests that the defined Ore Reserves are economically viable

Criteria	JORC Code explanation	Commentary
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	• Residential areas are located to the east and south of the mine site. • The EIA report for the Calcined Kaolin Raw Material shows strong public support, with 98% of respondents in favour. The management of the nearby community is the responsibility of the local government.
Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: • Any identified material naturally occurring risks. • The status of material legal agreements and marketing arrangements. • The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	• No material risks have been identified that would materially affect the Ore Reserve estimation. • SRK is not aware of outstanding permits or licences that would materially affect the current operation.
Classification	• The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the Competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	• Measured Mineral Resources in the mine blocks are classified as Proved Ore Reserves. Indicated Mineral Resources in the mine blocks are classified as Probable Ore Reserves. • The classification of Ore Reserves appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	• The results of any audits or reviews of Ore Reserve estimates.	• An internal peer review was undertaken as part of SRK's internal quality control and quality assurance procedures.

Criteria	JORC Code explanation	Commentary
Discussion of relative accuracy/confidence .	• Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The Ore Reserves estimates are based on the technical study in 2023 and ongoing operations. • All modifying factors have been applied for Ore Reserves estimates at a PFS level of confidence. • As is the case for most mining projects, the extent to which the estimate of Ore Reserves may be affected by mining, metallurgical, infrastructure, permitting, market and other factors could vary from major gains to total loss of Ore Reserves. There are no issues known to the Competent Person of this section that are expected to materially affect the Ore Reserve estimates.