
BUSINESS

OVERVIEW

We are a gold mine hazardous waste treatment company based in Shandong province, the PRC, focusing on (i) gold mine hazardous waste treatment; and (ii) recycling and extracting therefrom resources with economic value for sale. According to the F&S Report, we are second and third largest gold mine hazardous waste treatment company in Shandong province and in the PRC, respectively, with a market share of approximately 15% and 10% in terms of revenue in 2020, respectively. We are also ranked first in gold mine hazardous waste treatment volume in Shandong province and the PRC, with actual treatment volume of approximately 1.08 million tonnes, accounting for approximately 26% and 18% of the total actual treatment volume in Shandong province and the PRC, respectively, in 2020. We specialise in gold mine hazardous waste treatment and resource recovery, and comprehensive utilisation of gold mine hazardous wastes. We collect cyanide tailings, which is a kind of gold mine hazardous waste resulted from smelting of gold, from our upstream customers, which we, leveraging on our experience and expertise, detoxify the cyanide tailings and recover therefrom resources with economic value such as pyrite concentrate and gold-bearing pyrite concentrate. We then sell the recycled products to our downstream customers to attain comprehensive utilisation of gold mine hazardous wastes.

Due to rich gold resources and the mature gold mining industry chain, the gold mine production in Shandong province ranked first in the PRC in 2020 according to the F&S Report. Further, our operation is situated in Laizhou city, which is a county-level city within Yantai prefecture-level city in Shandong province, where Laizhou city and Yantai city had proven gold reserves of approximately 2.7 thousand and 3.9 thousand tonnes. Yantai city accounted for approximately 93% of proven gold reserves of Shandong province in 2020, ranking first among prefecture-level cities in the proven gold reserves in the PRC. Such strategic location also led us to rank first and second in terms of treatment volume and revenue in Yantai city, respectively, in 2020, according to the F&S Report.

We have two production facilities strategically located in Laizhou city, Shandong province, where the gold reserves ranked first among the county-level cities in the PRC. The total site area of our production facilities is approximately 228,683 sq.m. and they process the gold mine hazardous wastes from our upstream customers and recycle them into recycled products for sale to our downstream customers. As at the Latest Practicable Date, we are the only company in Laizhou city, Shandong province that has obtained the Hazardous Waste Business Licence issued by Yantai Municipal Ecology and Environment Bureau (煙臺市生態環境局), which we are licensed to treat up to 1.16 million tonnes per year, and our business operation was not restricted from serving upstream customers in cities outside Laizhou city but within Shandong province.

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During the Track Record Period, our upstream customers for gold mine hazardous waste treatment services mainly comprised of gold smelting companies under gold mining companies with mine operations in Shandong province, in particular, in Yantai city, whilst our downstream customers for the sale of recycled products mainly comprised of chemical manufacturing companies and trading companies of chemicals in the PRC. We have developed and maintained strong and stable relationships with industry-renowned customers, such as Shandong Gold Smelting Co., Ltd. (山東黃金冶煉有限公司) (a subsidiary of Shandong Gold Mining Co., Ltd. (山東黃金礦業股份有限公司), whose shares are listed on the Main Board (stock code: 1787) and Shanghai Stock Exchange (stock code: 600547)) (“**Shandong Gold Smelting**”) and Zhongkuang Gold Industry Company Limited (中礦金業股份有限公司) (“**Zhongkuang Gold**”), in the PRC.

We believe that we possess experience and knowledge, research and development capabilities and hazardous waste treatment technologies. Our research and development team is led by Mr. Sheng, our executive Director and chief technical officer, who has more than 29 years of experience in chemical related industry and the qualification of intermediate engineer from Yantai Chemical Engineering and Technical Evaluation Committee (煙臺市化工工程技術職務中級評審委員會). As at the Latest Practicable Date, we had obtained governmental approvals or applied various patents in the PRC, both invention and utility model, for the technologies or devices for expanding our product offerings, upgrading our technologies on comprehensive utilisation and harmless treatment of gold mine hazardous wastes and developing new processing methods.

According to the F&S Report, the gold mine hazardous waste treatment market in the PRC, particularly in Shandong province and in Yantai city, is expected to grow due to increasing output rate of gold mine hazardous waste, increasing utilisation value through technology improvement, more utilise channels and stricter environmental requirements. We believe that by leveraging on the industry expertise and technical know-how that we possess, together with the growth of the gold mining industry and support of favourable government policies, we are well-positioned to capture more business opportunities from gold mining companies, chemical manufacturing companies and trading companies of chemicals in the PRC. For more details on the market drivers relating to our businesses, see “Industry Overview — Drivers of Gold Mine Hazardous Waste Market in China” in this document.

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While the gold mine hazardous waste treatment services and the sale of recycled products were our major business activities during the Track Record Period, we also derived revenue from hazardous waste storage rental services since November 2018.

The following table sets out our revenue by business activities during the Track Record Period:

	2018		Year ended 31 December				Four months ended 30 April			
	RMB'000	%	2019		2020		2020		2021	
			RMB'000	%	RMB'000	%	RMB'000	%	RMB'000	%
Gold mine hazardous waste treatment services	41,014	40.1	61,567	46.1	107,958	52.6	30,212	61.6	34,277	50.5
Sale of recycled products	57,642	56.4	56,413	42.2	82,514	40.2	13,636	27.8	28,805	42.4
Hazardous waste storage rental services	1,083	1.0	14,490	10.8	14,507	7.1	4,836	9.9	4,836	7.1
Others ^(Note)	2,542	2.5	1,194	0.9	413	0.1	346	0.7	—	—
Total	102,281	100.0	133,664	100.0	205,392	100.0	49,030	100.0	67,918	100.0

Note: Others represented revenue from the trading of recycled products, which mainly included desulphurisation gypsum, copper concentrate powders and waste rocks, that we procured from our suppliers during the Track Record Period. However, our Directors confirm that we are not actively pursuing and do not intend to pursue business opportunities in trading of recycled products actively, as these trading activities were conducted only for maintaining good business relationship with our customers and suppliers. See “— Our Business Model — Our Products” below for further details.

For the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, our net profits amounted to approximately RMB30.7 million, RMB48.5 million, RMB72.9 million and RMB17.1 million, respectively.

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COMPETITIVE STRENGTHS

We believe that our success can be attributed to the following competitive strengths:

1. We are one of the leading gold mine hazardous waste treatment companies in Shandong province, the PRC

We are one of the leading gold mine hazardous waste treatment companies in Shandong province, the PRC, focusing on (i) gold mine hazardous waste treatment; and (ii) recycling and extracting therefrom resources with economic value for sale. According to the F&S Report, we are second and third largest gold mine hazardous waste treatment company in Shandong province and the PRC, respectively, with a market share of approximately 15% and 10% in terms of revenue in 2020, respectively. We are also ranked first in gold mine hazardous waste treatment volume in Shandong province and the PRC, with treatment volume of approximately 1.08 million tonnes, accounting for approximately 26% and 18% of the total treatment volume in Shandong province and the PRC, respectively, in 2020.

Strategically located in Laizhou city, a county-level city in Yantai prefecture-level city in Shandong province, we ranked first and second in terms of treatment volume and revenue in Yantai city, respectively, in 2020, according to the F&S Report. Moreover, we are the only company in Laizhou city, Shandong province which has obtained the Hazardous Waste Business Licence issued by Yantai Municipal Ecology and Environment Bureau. In the PRC, there are two companies which ranked higher than our Group in terms of revenue in 2020 but with lower gold mine hazardous waste treatment volume and was mainly attributable to a relatively larger product offerings with higher value and selling price of their products as compared to ours in 2020. Nevertheless, we believe that our proven track record in the PRC is mainly attributable to our Group’s management, experience and capabilities, and has helped differentiate us from our existing competitors and other new market entrants.

Our position in the industry has been enhanced and supported by national and local policies in the PRC in promoting hazardous waste treatment. Pursuant to the “Industrial Structure Adjustment Guidance Catalogue (2019 version)” (《產業結構調整指導目錄(2019年本)》), the PRC government has continued to promote harmless treatment of cyanide tailings and our comprehensive utilisation of gold mine hazardous wastes, such as cyanide tailings, is categorised as the encouraged industry under the category of Environmental Protection and Resource Conservation Comprehensive Utilisation Project (環境保護與資源節約綜合利用項目).

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According to the F&S Report, the increasingly strict requirements on environmental protection drive the growth of the gold mine hazardous waste treatment market, the total revenue of the market in Shandong province increased from RMB59.5 million in 2015 to RMB1,288.8 million in 2020, representing a CAGR of 85.0% from 2015 to 2020. The gold mine hazardous waste treatment market also increased from RMB50.9 million in 2015 to RMB1,118.2 million in 2020 in Yantai city, representing a CAGR of 85.5% from 2015 to 2020. In 2020, the revenue of gold mine hazardous waste treatment market in Yantai city contributed approximately 87% of total revenue in Shandong province. It is also expected that the increasing gold mine hazardous waste output volume and stricter environmental requirements will drive the gold mine hazardous waste treatment market in Shandong province to further increase to RMB2,921.2 million in 2025, representing a CAGR of 17.8% from 2020 to 2025, according to the F&S Report. The gold mine hazardous waste treatment market is also expected to increase from RMB1,118.2 million to RMB2,755.0 million in 2025 in Yantai city, representing a CAGR of 19.8% from 2020 to 2025.

We believe that our Group is able to maintain the leading position in the gold mine hazardous waste treatment market riding on the support from local government and favourable policies in the PRC.

2. We are situated in Yantai city, one of the areas with the largest production of gold in the PRC and in Shandong province with the largest gold reserves among prefecture-level cities in the PRC.

We are strategically located in Laizhou city, a county-level city in Yantai prefecture-level city in Shandong province, to provide us with the proximity to the largest gold production area in the PRC. According to the F&S Report, Laizhou city and Yantai city are also rich in natural resources, among which their gold reserves are ranked first in terms of proven gold reserves among the county-level cities and prefecture-level cities in the PRC, respectively. Such strategic location gives us a geographical advantage for our operations in the highest gold-producing province in the PRC. The gold mine production in Shandong province ranked first in the PRC in 2020 according to the F&S Report. Shandong province is the area with the largest output volume of gold mine hazardous wastes in the PRC which houses the three major gold mining companies that are customers of our Group during the Track Record Period, namely Shandong Gold Smelting, Zhongkuang Gold and a state-owned gold mining company with its headquarter in Shandong province whose shares are listed on the Main Board (“**Customer Z**”). The aggregate annual gold mine production volume of these three major gold mining companies amounted to approximately 66 tonnes, which accounted for approximately 21.8% of total gold mine production in the PRC in 2020.

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In accordance with the “Reply on the Transfer and Disposal of Hazardous Wastes” (《關於危險廢物轉移和處置問題的覆函》) issued by the State Environmental Protection Agency (國家環境保護總局) (the predecessor of the Ministry of Ecology and Environment (生態環境部)), which replaced the “Notice on Strengthening the Management and Supervision of Hazardous Wastes” (《關於加強危險廢物經營監管的通知》) issued by the Department of Environmental Protection of Shandong Province (山東省環保廳), the principle of “close-by disposal”, that is, the principle of gold mines which produce hazardous waste being close to the hazardous waste treatment plants, is adopted. As such, our Group has geographical advantages. We are also the only licensed company in the Laizhou city, Shandong province providing gold mine hazardous waste treatment services during the Track Record Period and up to the Latest Practicable Date. Our Group also accounted for approximately 31% of market share in Yantai city in terms of treatment volume of gold mine hazardous waste in 2020. This allows us to provide close-by upstream services to the gold mining companies around the region. Under the principle of “close-by disposal”, the Department of Environmental Protection of Shandong Province did not specify the level of proximity between gold mines and hazardous waste treatment plants, thereby provides flexibilities to our Group to not only serve our upstream customers within Laizhou city or Yantai city, but to also capture upstream demands outside Laizhou city and in other nearby cities within Shandong province for our gold mine hazardous waste treatment services.

Our Directors believe that by establishing local presence in Yantai city, it gives us a competitive geographical advantage to capture upstream customer demands by being in close proximity to cities nearby. Yantai city had proven gold reserves of approximately 3.9 thousand tonnes, which accounted for approximately 93% of proven gold reserves of Shandong province in 2020, ranking first among prefecture-level cities in the proven gold reserves, and our Group accounted for approximately 31% of market share in Yantai city in terms of treatment volume of gold mine hazardous waste in 2020. Our leading position in the gold mine hazardous waste treatment market in Yantai city signifies our strong competitiveness and our ability to capture upstream demands for our gold mine hazardous waste treatment services not only in Laizhou city, but also in other county-level cities within Yantai city and Shandong province as a whole. During the Track Record Period, we have established stable customer base within Shandong province, and was able to generate significant revenue during the Track Record Period.

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To the best knowledge of our Directors after making reasonable enquiries and based on independent due diligence interviews conducted by the Sole Sponsor, most of our upstream customers during the Track Record Period do not have waste treatment companies affiliated to them located in Yantai city, which, our Directors are of the view that we had a competitive advantage by being in close proximity to the upstream customers situated in Yantai city. Based on the same independent due diligence interviews, these upstream customers had indicated that they also required treatment services provided by us, as the cyanide tailings that they provided to us for treatment did not meet the pre-requisite technical requirements under applicable laws and regulations, including but not limited to, The Technical Specification for Pollution Control of Cyanide Leaching Residue in Gold Industry (HJ943) (《黃金行業氰渣污染控制技術規範》(HJ943)), Environmental Protection Technical Specification for co-processing of Solid Wastes in Cement Kiln (《水泥窯協同處置固體廢物環境保護技術規範》(HJ662)) (if applicable) and Standard for Pollution Control on Co-processing of Solid Wastes in Cement Kiln (《水泥窯協同處置固體廢物污染控制標準》(GB 30485)) (if applicable) which stated that, amongst other things, cyanide tailings would need to demonstrate a relatively low cyanide and/or sulphur contents before being treated under the two specified methods pursuant to the List of Hazardous Wastes Exempted from Management attached to the 2021 Catalogue. Further, these upstream customers confirmed that our treatment service is required as we are the only company in Laizhou city, Shandong province that has obtained the Hazardous Waste Business Licence issued by Yantai Municipal Ecology and Environment Bureau and has the technological and available capacities in treating the cyanide tailings collected from our major upstream customers during the Track Record Period.

The revenue generated from our gold mine hazardous waste treatment services during the Track Record Period were all derived from customers located in Shandong province and in particular, in Yantai city. During the Track Record Period and up to the Latest Practicable Date, none of our upstream customers ceased to send or reduce the amount of cyanide tailings for our treatment since the promulgation of the 2021 Catalogue in November 2020. Based on independent due diligence interviews conducted by the Sole Sponsor, most of our upstream customers only engaged our Group for gold mine hazardous waste treatment service during the Track Record Period. To the best knowledge of our Directors after making reasonable enquiries, these upstream customers also indicated that they would continue engaging our Group for treatment service going forward. Our Directors are of the view that the 2021 Catalogue will not adversely affect our operations going forward. For more details of the breakdown of our revenue from gold mine hazardous waste treatment services by cities in Shandong province during the Track Record Period, see “— Our Business Model — Our Services” below.

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3. We have proven track record with stable relationship and maintain a strong customer base

We have developed and maintained strong and stable relationships with industry-renowned customers in the PRC. We commenced business relationship with Shandong Gold Smelting, Zhongkuang Gold and Customer Z in 2017, 2014 and 2019, respectively. According to the F&S Report, these three customers were the three largest hazardous waste producers in Shandong province, with an aggregate output volume of approximately 1.3 million tonnes in 2020. The actual volume of gold mine hazardous wastes that we treated for these three customers amounted to approximately 1.0 million tonnes for the year ended 31 December 2020.

We believe we have advantages over our existing competitors and new entrants in the industry to obtain new engagements from customers because we are able to capitalise on our accumulated industry reputation, our close proximity to our customers, and stable cooperative relationship with leading industry participants to secure more contracts and expand business opportunities in the future.

4. We possess technical capabilities in the gold mine hazardous waste treatment process and production of recycled products

We believe that we possess experience and knowledge, research and development capabilities and hazardous waste treatment technologies. We have technical capabilities and our technical personnel conducting research and development activities possess the professional expertise and extensive experience in the gold mine hazardous waste treatment and recycling industry and environmental protection in the PRC.

We developed collaborations with renowned universities, such as Shandong University (山東大學), and scientific research institutes, such as Regional Resources and Environmental Development Research Institute of Shandong Province (山東省區域資源與環境發展研究院), in the PRC on research and development of technology for comprehensive utilisation of gold mine hazardous wastes. We have set up HC R&D with the intention to further enhance our technologies in producing high-quality recycled products in 2020. We have also engaged third-party organisations to develop new technologies on gold mine hazardous waste treatment and recycled products development since January 2021. Our Group intends to penetrate the production chain and promote comprehensive utilisation of gold mine hazardous wastes, which we believe could increase our Group’s competitiveness by enhancing the value of our high-quality recycled products. As at the Latest Practicable Date, we had registered or obtained governmental approvals of six patents in the PRC in relation to the invention of a device for dust isolation and recovery in the conveyor belt of gold tailings, a pump-mixing pipeline dosing device for the integrated utilisation of gold cyanide tailings and a side device installed at flotation machine for dust removal, and we are in the progress of applying for various patents in the PRC.

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5. We have an experienced and professional management team

Our executive Directors have extensive in-depth industry experience, namely, Mr. Liu, our founder and executive Director, has over ten years of experience in operation and management business of metal ore waste processing, Mr. Zhan, our executive Director and chief executive officer of our Company, has more than eight years of experience in corporate management in the gold mine hazardous waste treatment industry, and Mr. Sheng, our executive Director and chief technical officer of our Company, has more than 29 years of experience in chemical related industry.

Our senior management team consists of professionals with substantial industry, management and operational experience. A majority of our senior management team have been working in the relevant industries, such as metal processing industry, for more than 20 years.

Their extensive industry knowledge and in-depth understanding of the regulatory environment have enabled them to foresee the development trend of the industry we operate in and the governmental regulations and policies. We believe that our Directors and our senior management team possess the insight, vision and knowledge required to effectively execute our growth strategy in the face of challenging economic conditions.

BUSINESS STRATEGIES

In order to leverage on our aforementioned competitive strengths to capture the growing market demand, we plan to have a series of incremental capacity expansions of our production facilities and enhancement of production capabilities to diversify product offerings to capitalise on the growing demand of gold mine hazardous waste treatment services and recycled products.

We intend to fund our business strategies by utilising net [REDACTED] from the [REDACTED] with details set out below. Any shortfall in relation to our expansion of production capacity and capabilities is intended to be financed by internal resources and/or external borrowings of our Group.

1. Increase our production capacity and capabilities to solidify our market position

According to the F&S Report, the stricter environmental requirements, the treatment demand from increasing annual hazardous waste output and accumulated hazardous waste which has not been treated from historical period are expected to drive the continuous increase in the treatment volume of gold mine hazardous waste in Shandong province from 4.2 million tonnes in 2020 to 5.7 million tonnes in 2025, representing a CAGR of 6.2% from 2020 to 2025. Despite the environmental regulations having already been strictly implemented in Shandong province for the past few years, the treatment volume is expected to increase moderately up to 2025 due to the expected relatively stable gold mine production and gold mine hazardous waste production in Shandong province.

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According to the F&S Report, there has been a large amount of gold mine hazardous waste accumulated in Yantai city and other areas in Shandong province in the past years, which is ready to be provided to us for treatment. Such accumulation of gold mine hazardous waste was mainly because a large amount of cyanide tailings was produced and stored in the area before such wastes were listed as hazardous waste under the Directory of National Hazardous Wastes (國家危廢名錄) in August 2016. The total volume of accumulated gold mine hazardous waste in Yantai city and Shandong province are estimated to be more than 10 million tonnes and 12 million tonnes, respectively, as at the end of 2020. According to the F&S Report, the accumulated gold mine hazardous waste in Yantai city is estimated to be mainly stored in the storage and/or production facilities within the gold mining companies with business operations located in Yantai city. The accumulated gold mine hazardous waste in Yantai city and Shandong province is estimated to be exhausted in at least approximately 20 years, based on the current level of treatment volume of historically accumulated gold mine hazardous waste, which is approximately 0.3 million tonnes to 0.5 million tonnes per annum, according to the F&S Report.

Further, the proven gold reserves in Yantai city amounted to approximately 3.9 thousand tonnes, which accounted for approximately 93% of proven gold reserves in Shandong province, situating our Group in Yantai city, therefore provides us with sufficient and sustainable market demand in expanding our production capacity and in providing gold mine hazardous waste treatment services to upstream customers in the market. In 2020, the output volume of gold mine hazardous waste in Yantai city accounted for approximately 78% of total output volume in Shandong province, representing the significance of market size of Yantai city in Shandong province. As at end of 2020, there were around 100 gold mine companies; and around ten and 12 gold producer-affiliated hazardous waste treatment companies and independent hazardous waste treatment companies among the qualified market players which had obtained hazardous waste business licence, were market players with actual treatment volume for gold mine hazardous waste treatment service during the year in 2020 in Yantai city and Shandong province, respectively, according to the F&S Report.

The treatment volume of gold mine hazardous waste in Shandong province and in Yantai city amounted to approximately 4.2 million tonnes and 3.5 million tonnes, respectively in 2020, of which our Group accounted for approximately 31% of the market shares in Yantai prefecture-level city. Yantai city is, and is expected to continue to be the prefecture-level city with the largest gold production volume in the PRC, with continuous development of new gold mines. Specifically, two major gold mines in Haiyu town and Shaling town within the Yantai prefecture-level city area, with proven mineral reserves of approximately 562 tonnes and 309 tonnes, respectively, had been explored in 2020 by Shandong Gold Smelting, one of our major upstream customers during the Track Record Period. Both newly explored gold mines in Yantai city are estimated to commence mass production after 2024 and 2027, respectively, which is expected to bring incremental demand to our Group for gold mine hazardous waste treatment services.

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With the abundance of gold mines in the cities within Shandong province and in particular, Yantai city which are in close proximity to our operation, recently explored gold mines in Shandong province, as well as the availability of accumulated gold mine hazardous waste yet to be treated in the market, our Directors believe that we would be able to capture future development opportunities in Laizhou city and in Yantai city and expand to other nearby cities within Shandong province as a whole by leveraging our proven track record and production capabilities as one of the leading gold mine hazardous waste treatment companies in the PRC. According to the F&S Report, it is an industry practice for gold mine hazardous waste treatment companies to serve their upstream customers in local cities and prefecture-level cities nearby in the province in which they are located.

As at the Latest Practicable Date, our Group possessed the Hazardous Waste Business Licences which allowed our Group to conduct the gold mine hazardous waste treatment business with the permitted annual treatment capacity up to 1.16 million tonnes. For the year ended 31 December 2020, the utilisation rates (representing the percentage of actual annual treatment volume over the permitted annual treatment volume pursuant to the Hazardous Waste Business Licence) of each of our production facility in Jincheng town and Shahe town, Laizhou city was approximately 95% and 92%, respectively. We consider that it is not feasible for us to further capture the market growth of gold mine hazardous waste treatment services by utilising our existing production facilities and existing Hazardous Waste Business Licences as the utilisation rate of our two existing production facilities had reached such a high level.

As such, our Directors consider that we can only capture the business opportunities arising from the growing demand of the gold mine hazardous waste treatment services in the coming years and solidify our leading market position in Shandong province by increasing the annual treatment volume of our Group. Our Group plans to construct a new production facility (the “**New Production Facility**”) and obtain another new Hazardous Waste Business Licence with an additional permitted annual treatment capacity of 600,000 tonnes. For the New Production Facility, it is planned that the acquisition of the land use rights will be done by the first quarter of 2022 and the construction will be completed in two phases, with the first phase (construction of the production compartment for gold mine hazardous waste treatment and the new research and development laboratory) (the “**Phase One Production Compartment**”) and second phase (construction of the production compartment for production of recycled products) planned to be completed within the fourth quarter of 2022 and by the end of the first quarter of 2023 (the “**Phase Two Production Compartment**”), respectively.

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For obtaining the new Hazardous Waste Business Licence, based on our historical experience, we expect that we would commence the trial operation of the production compartment for gold mine hazardous waste treatment within three months after the completion and obtain the new Hazardous Waste Business Licence by the mid 2023 upon the completion of the trial operation of the New Production Facility. Based on our historical experience in obtaining the Hazardous Waste Business Licence, to commence our trial operation of Phase One Production Compartment, we would be granted a temporary permit from Yantai Municipal Ecology and Environment Bureau, stating the Bureau’s permission and approval to commence trial operation. Such approval contains, amongst other things, requirements of environmental protections as required under relevant PRC laws and regulations, as well as the designated business activities of hazardous waste treatment granted under the approval. It is estimated that we would receive the approval to commence trial operation by the end of 2022. According to the F&S Report, the expected timeline in obtaining temporary permit to comment trial operation, and obtaining the new Hazardous Waste Business Licence is reasonable from the industry’s perspective. According to the Measures for the Administration of Permit for Operation of Hazardous Wastes (《危險廢物經營許可證管理辦法》), application for a new Hazardous Waste Business Licence should meet the requirements of environmental protection technicians, transportation tools, packaging tools, storage facilities, pollution prevention facilities, and technology and techniques.

During the design stage of the New Production Facility, we will ensure that the design and construction of the New Production Facility meet the above conditions and legal requirements. It is estimated that once the land use right has been acquired, we will complete the preliminary work of the construction project within three months, including the completion of the report on the construction feasibility studies with respect to the commissioned design works, and the coordination with and grant of approvals from the relevant government authorities with respect to the assessment reports on the environment impact and social stability risks.

The construction works would be expected to be completed within the fourth quarter of 2022. We will then lodge the application to the relevant government authority for inspection and acceptance of construction projects. We estimate that it will take approximately a month for the government authority to grant the acceptance and then we could commence the trial operation for obtaining the new Hazardous Waste Business Licence. With the recent experience of constructing a production facility in Shahe town, Laizhou city of permitted annual treatment capacity of 600,000 tonnes, we are confident that we can establish qualified rules and regulations, pollution prevention and control measures, and accident emergency rescue measures before mid 2023 in order to obtain the licence. Our PRC Legal Advisers advised that as long as we comply with the above conditions and relevant legal requirements, and provided that we take all necessary steps and submit the relevant applications in accordance with the requirements and schedule prescribed by the applicable PRC laws and regulations, there are no substantial legal impediment for our Group to obtain the new Hazardous Waste Business Licence. As such, our Directors consider that the new Hazardous Waste Business Licence will be obtained after completion of all necessary and compulsory regulatory procedures, which is currently estimated to be by mid 2023.

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Our expansion plan will be implemented across two to three years. Our Directors take the view that there will be sufficient market demand to support our expansion plan due to the favourable industry outlook of the gold mine hazardous waste treatment market. According to the F&S Report, the raising of awareness of environmental protection in the gold mining industry, strengthened enforcement under the stringent environmental protection policies, increasing utilisation value through technological improvement, more channels for utilisation of hazardous waste and increasing hazardous waste output rate are key market drivers to the gold mine hazardous waste market in the PRC. For details, see “Industry Overview — Analysis of Gold Mine Hazardous Waste Treatment Market in China and Shandong Province — Drivers of Gold Mine Hazardous Waste Market in China”. Notwithstanding the growth of the gold mine hazardous waste treatment market is slowing down with its CAGR dropping from 85% in Shandong province and 79% in overall China from 2015 to 2020 to 18% in Shandong province and 19% in overall China from 2020 to 2025, according to the F&S Report, the high CAGR of the gold mine hazardous waste treatment market from 2015 to 2020, with the revenue increasing from RMB59.5 million in 2015 to RMB1,288.8 million in Shandong province, and RMB105.1 million in 2015 to RMB1,905.4 million in 2020 in overall China, was mainly because the market was at a relatively primary stage. Especially after the cyanide leaching residue was listed in Directory of National Hazardous Wastes (國家危廢名錄) issued by MEE on 1 August 2016, the market size multiplied afterwards. With the increasing maturity of the market, the market will keep growing at a significant CAGR with a healthy note of growth in market demand. The total revenue of the gold mine hazardous waste treatment market are still expected to grow continuously, from RMB1,288.8 million in 2020 to RMB2,921.2 million in 2025 in Shandong province, and RMB1,905.4 million in 2020 to RMB4,568.9 million in 2025 in overall China. The gold mine hazardous waste treatment market of Yantai city also increased from RMB50.9 million in 2015 to RMB1,118.2 million in 2020, representing a CAGR of 85.5% from 2015 to 2020. The gold mine hazardous waste treatment market is also expected to increase from RMB1,118.2 million to RMB2,755.0 million in 2025 in Yantai city, representing a CAGR of 19.8% from 2020 to 2025. Further, Shandong province, as the largest gold production province in the PRC, has implemented strict environmental regulations earlier, which led to a relatively higher historical growth rate and expected a relatively lower future growth rate of hazardous waste treatment revenue than the rest of the PRC. However, it is expected that there will be a higher growth rate of treatment revenue over volume in Shandong province, which is mainly due to the expected increasing utilisation rate of valuable materials in 2020 to 2025.

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Our Directors also believe, and the Sole Sponsor concurs, that our Group’s business is sustainable based on the following factors:

- (i) ***continuous growth of market size.*** According to the F&S Report, the gold mineral resources reserve in the PRC and Shandong province was 14.7 thousand tonnes and 4.2 thousand tonnes by the end of 2020, respectively. Based on the current level of gold mine production in the PRC, it would not be depleted entirely in the coming 50 years let alone there are continuous discovery of new reserves. It is expected that both the output volume and treatment volume of the gold mine hazardous waste in Shandong province and the PRC, and the total revenue of gold mine hazardous waste treatment market in Shandong province and the PRC will grow continuously from 2021 to 2025. For further detailed analysis of the gold mine hazardous waste treatment market in Shandong province and the PRC, see “Industry Overview — Analysis of Gold Mine Hazardous Waste Treatment Market in China and Shandong Province”;

- (ii) ***future trends in the market.*** Our Directors consider that the future trends in the gold mine hazardous waste treatment market are positive to the sustainable development of our Group’s business. According to the F&S Report, the consolidation of the gold mine hazardous waste production is expected to drive the centralisation of the hazardous waste treatment demand correspondingly, which is expected to increase reliance on hazardous waste treatment companies. Therefore, the leading hazardous waste treatment companies with large treatment capacity are expected to gain more market share. By implementing our business strategies of building a new production facility to increase our production capacity and solidify our market position in the gold mine hazardous waste treatment market in Shandong province, we expect to expand and grow our business. Together, leveraging on the combined effect of the market trend of centralisation of gold mine hazardous waste treatment demand from upstream customers, our Directors believe that this would increase the reliance of our upstream customers for our gold mine hazardous waste treatment services. As such, our revenue and gross profit margin could be maintained. Further, under the dual pressures of government’s encouragement of full utilisation of hazardous waste and profitability, the advantages of professional third-party hazardous waste treatment companies that can maximise resource utilisation have gradually become prominent. Based on the above, we would signify our ability to maintain our profitability and competitiveness for future growth of our business which in turn would attract upstream customers to rely more on our Group for gold mine hazardous waste treatment services, and we could maintain our high gross profit margins going forward. For details, see “Industry Overview — Trends in Gold Mine Hazardous Waste Treatment Market in China”; and

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- (iii) *our ability to grow.* Our Directors consider that we are in a good position to capture the rising demand in the gold mine hazardous waste market to facilitate the sustainable development of our business as we are the only company in Laizhou city, Shandong province which had obtained the Hazardous Waste Business Licence, and there are fairly high entry barriers for gold mine hazardous waste market in the PRC such as qualification barrier, a high requirement on the technology capability, and need of capital investment. Further, our Directors consider, and F&S concurs, that the outlook of the average treatment fee is positive with the average treatment fee charged to our upstream customers is expected to increase at a moderate growth rate with a range from 3% to 5% in the foreseeable future. While the selling price of our recycled products charged to our downstream customers is significantly influenced by the composition of recycled products. It is expected that the selling price of pyrite concentrate of similar composition will grow at a CAGR of around 5% from 2020 to 2025.

In addition, our ability to grow was also proven by our historical financial performance. Our Group’s total revenue increased from approximately RMB102.3 million for the year ended 31 December 2018 to approximately RMB133.7 million for the year ended 31 December 2019, and further increased to approximately RMB205.4 million for the year ended 31 December 2020. Total revenue of our Group has increased from approximately RMB49.0 million for the four months ended 30 April 2020 to approximately RMB67.9 million for the corresponding period in 2021. Our Directors are also confident that we are capable to secure more contracts for the additional permitted annual treatment capacity after taking into account (i) our Group had been successful in diversifying our customer base by entering into contracts with new customers during the Track Record Period, including Customer Z which was one of the leading gold mining companies with its headquarter in Shandong province and commenced business relationship with us in 2019; (ii) our established operating history and proven track record in the industry also enhance our reputation and assist us in securing contracts from both our existing customers and new customers; and (iii) the strong demand of the gold mine hazardous waste services in the Shandong province which we had also experienced a strong demand during the Track Record Period as evinced by our growth in revenue from gold mine hazardous waste treatment services of approximately RMB41.0 million in 2018 to RMB108.0 million in 2020. Further, there has also been an increase in revenue from gold mine hazardous waste treatment services from approximately RMB30.2 million for the four months ended 30 April 2020 to approximately RMB34.3 million for the corresponding period in 2021.

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As one of the leading gold mine hazardous waste treatment companies in the PRC, our Group will continue to develop our focus on gold mine hazardous waste treatment services and the recovery and sale of recycled products upon [REDACTED]. Apart from the plan for increasing the aggregate treatment capacity of gold mine hazardous wastes, leveraged from our expertise and experience in comprehensive utilisation of gold mine hazardous waste and recovery of recycled products, we also intend to further diversify our product offerings in our sale of recycled products business as our goal has always been to continuously improve our research and development capabilities and technical skills and achieve a high utilisation rate of gold mine hazardous wastes. As a result, more resources with economic value can be extracted therefrom. Our Directors consider that it is beneficial to our Group to diversify our product offerings in our sale of recycled products business.

During our operation process, other than the extraction of pyrite concentrate and gold-bearing pyrite concentrate, we also extract high silicon tailings from the gold mine hazardous waste collected from our upstream customers. High silicon tailings can be further processed to construction aggregates for construction works and some other recycled products as by-products for sale. For more details, see “— Operation Process” below.

According to the F&S Report, construction aggregate is a very important construction material, and is widely used in building construction, high-speed railway construction, highway construction and interior decoration. With the further acceleration of the PRC’s urbanisation process, the demand for construction aggregate is expected to continuously increase, leading to a growing market. Construction aggregate can be recovered during gold mine hazardous waste treatment process. Therefore, the construction aggregate market is a major downstream market of gold mine solid waste treatment market, and an important part of circular economy in the mining industry. The average price of construction aggregates in the PRC increased from RMB64.5 per tonne in 2015 to RMB149.9 per tonne in 2020, with the decrease in supply caused by increasingly strict environmental policies of construction aggregates production. The price of construction aggregates is expected to continue to increase to RMB190.5 per tonne in 2025 at a CAGR of 4.9%. As such, our Directors are of the view that the expansion of our recycled product offerings to construction aggregates is a logical organic growth of our business.

During the Track Record Period and up to the Latest Practicable Date, our Group has not produced construction aggregates for sale since we did not have the necessary machinery and equipment for the production. Before deciding to diversify our products offering to construction aggregates extracted from high silicon tailings, we have engaged China Non-ferrous Metals Industry Xian Investigation and Design Research Institute Co., Ltd. (中國有色金屬工業西安勘察設計研究有限公司), an Independent Third Party consultant, to prepare a feasibility report (the “**Feasibility Report**”) on the proposed construction of production compartment for the recovery of recycled products, mainly construction aggregates, from high silicon tailings to evaluate, among others, the market and prospect of sale of construction aggregates recovered from high silicon tailings, analysis on the production technology and method, costs and environmental impact for the construction of such production compartment.

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The Feasibility Report was prepared in accordance with the “Regulations on the Principles for the Preparation of Feasibility Studies for Non-ferrous Metals Industry Projects” (《有色金屬工業項目可行性研究報告編製原則規定》) issued by the China Non-ferrous Metals Industry Association (中國有色金屬工業協會). The Feasibility Report consists of study in various aspect, including but not limited to, (i) the market of cement production in the PRC as construction aggregates are principally used for cement production; (ii) the processing process of silicon tailings to recycled products including construction aggregates; (iii) the layout of the proposed compartment to be constructed; (iv) the ancillary facility and civil works; (v) energy consumption; (vi) environmental protection; (vii) labour safety; (viii) fire safety; and (ix) financial analysis. In particular, the Independent Third Party consultant evaluated the viability of the processing process of high silicon materials proposed by our Group, including the tests of the optimal temperature for processing the high silicon materials, the review of specifications of the major machinery proposed by our Group to ensure they are suitable for the processing process, and the investigation on the components of products after the processing process to verify whether the outputs are suitable for use as construction aggregates. Based on the Feasibility Report and as assessed by the Independent Third Party consultant, it is feasible to construct the Phase Two Production Compartment for the production of construction aggregates. As a result, our Directors believe that we possess the requisite technological capability and expertise for the recovery of construction aggregates for sale from high silicon tailings.

Based on the recommendation of the Feasibility Report in terms of the feasibility on the construction of the production compartment for the recovery of recycled products from high silicon tailings and the customers’ feedback on the potential market, we plan to construct a production compartment in the New Production Facility which will be devoted to the process of recovery of recycled products, mainly construction aggregates, from high silicon tailings.

It is planned that the construction of Phase Two Production Compartment will be completed by the end of the first quarter of 2023. We expect that our annual production capacity of construction aggregates will be approximately 185,000 tonnes upon the commencement of the operation of the production compartment in the New Production Facility. As at the Latest Practicable Date, two new downstream customers (the “**Potential Customers**”) have entered into non-legally binding indicative agreements with us to express their interest in purchasing construction aggregates, with a total volume of 190,000 tonnes per year, should we have the production capabilities to produce construction aggregates. The Potential Customers are based in Laizhou city and are both primarily engaged in the manufacturing and sale of various kinds of construction materials such as concrete related products and fill materials used in constructions. Under the indicative agreements entered into with the Potential Customers, the total aggregate estimated sum is approximately RMB38 million per year.

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The salient terms of our indicative agreements entered into between us and the Potential Customers are as follow:

Indicative purchase quantity	We generally agreed with the Potential Customers and stipulated a fixed indicative purchase quantity on an annual basis when production of construction aggregates commences and supply becomes available.
Price	Our fees are calculated based on construction aggregates per tonne and the indicative amount to be purchased from the Potential Customer, depending on negotiations between the Potential Customers and us.
Logistic arrangement	The Potential Customers generally collect the products at our production facilities.
Payment terms	Full payment generally shall be made by the Potential Customers before the delivery of products.
Dispute resolution	The contract shall be governed by the PRC laws. Any disputes between our Group and the customer shall firstly be resolved through negotiations, failure of which, the parties may resort to litigation proceedings.

Our Directors confirmed that the non-legally binding indicative agreements were entered into based on arm’s length negotiation between parties, with reference to the customer demands for our products, our reputation in the market and our proven track record of our sale of recycled products which has proven our Group’s sustainability in offerings recycled products to downstream customers. Our Directors are of the view that the indicative agreements would likely be realised upon the commencement of the operation of Phase Two Production Compartment in the New Production Facility. As confirmed by the Potential Customers, they are based in Laizhou city and are both primarily engaged in the manufacturing and sale of various kinds of construction materials, such as concrete related products and fill materials used in constructions. Therefore, their demands for construction aggregates are steady and the construction aggregates is one of the key supplies to the Potential Customers’ business operations.

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As confirmed by the Potential Customers, our Group has a competitive advantage amongst their existing suppliers due to the close proximity between us and them. The Potential Customers currently obtain their supplies of construction aggregates delivered from Hebei province, which takes a relatively longer delivery time, and gives rise to significantly higher delivery and transportation costs. The Potential Customers expect that the construction aggregates supplied by us would account for approximately over 30% of their demand per annum, and are confident that they would require the supply of construction aggregates produced by our Group.

The construction aggregates produced from high silicon tailings are categorised as by-product lightweight aggregate. According to the F&S Report, by-product lightweight aggregate, being one of the three kinds of lightweight aggregates, results from by-products produced in other industrial processes which are generally collected and processed by gold mine solid waste treatment enterprises. Lightweight aggregate market is a major downstream market of gold mine solid waste treatment market, and an important part of circular economy in mining industry in the PRC. According to the F&S Report, there is a shortage of natural lightweight aggregate supply in the PRC after decades of extensive mining, by-product lightweight aggregate is expected to continue to expand its market share, leading to growing market demand of the PRC’s gold mine solid waste treatment market. The demand for construction aggregates in the PRC is enormous, which amounts to approximately 20 billion tonnes per year.

Moreover, the application of lightweight construction aggregate has become increasingly popular in downstream construction industries due to its various physical properties and advantages, such as low density and relatively high strength. For example, lightweight aggregate concrete is widely applied in the production of pre-cast concrete unit used in prefabricated buildings, which is an emerging market in the value chain of PRC’s construction industry in recent years. The average price of construction aggregates in China increased from RMB64.5 per tonne in 2015 to RMB149.9 per tonne in 2020, and the price of construction aggregates is expected to continue to increase at a CAGR of 4.9% from 2020 to 2025. Our Group considers that some of our existing downstream customers are also potential customers for the construction aggregates and we have started and will continue to approach them for promoting our plan to diversify our product offerings to construction aggregates and entering into non-legally binding indicative agreements on sale and purchase of construction aggregates as and when appropriate. Further with our continuous efforts in sales and market as detailed in “— Sales and Marketing” below, our Directors consider that we would be able to capture the market opportunities for the supply of construction aggregates. We believe that there will be sufficient demand for construction aggregates.

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The estimated capital expenditure for constructing the New Production Facility

As at the Latest Practicable Date, our Directors intend to participate in the Yinhai Chemical Industrial Park (銀海化工產業園) project, a property development project in Laizhou city, which was the Laizhou government’s plan in integrating various companies engaging in chemical manufacturing, new energy and other related industrial businesses. While target location has been identified, exact pieces of land parcel and details have not been announced by the Laizhou government as at the Latest Practicable Date, and that we had not definitively identified any land parcel for the purpose of constructing the New Production Facility. Given the target location of the New Production Facility would be located in Laizhou city, Shandong province, our Group would be able to enjoy the geographical advantages. In selecting the appropriate geographical location for the New Production Facility, our Directors take into account factors, including but not limited to, environmental preservation concerns, as well as the availability of a reliable electricity, water supply and sewage system. We have ongoing consultations with the local government authorities in Shandong province to discuss the selection of land for constructing the New Production Facility. As at the Latest Practicable Date, we have been invited to tender for such property development project in the Yinhai Chemical Industrial Park, for the construction of the New Production Facility in the land parcels yet to be identified within the said industrial park. To the best knowledge of our Directors after verbal communication with the Laizhou Government, the tendering process for constructing the New Production Facility in Yinhai Chemical Industrial Park had not yet commenced as at the Latest Practicable Date, and is expected to commence in or around the end of November 2021. Result of such is expected to be announced by the end of 2021 and our Directors expect to obtain the land use rights and commence construction of the New Production Facility in the first quarter of 2022.

Our Directors consider that the parcel of land on which the New Production Facility will be constructed is expected to have a site area up to 166,500 sq.m. with an estimated building area of approximately 87,300 sq.m. (being approximately 52.4% of the site area). The estimated building area of approximately 87,300 sq.m. is intended to house the following facilities:

- approximately 23,000 sq.m. will be used for production compartments to place the machinery and equipment that are intended to be used for the gold mine hazardous wastes treatment and production of recycled products;
- approximately 57,000 sq.m. will be used as warehouse to store the gold mine hazardous waste collected from our upstream customers, high silicon tailings and recycled products including pyrite concentrate, gold-bearing pyrite concentrate, and construction aggregates;
- approximately 5,000 sq.m. will be used as the new research and development laboratory; and
- approximately 2,300 sq.m. will be used as office for our administrative staff and dormitory.

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It is expected that major capital expenditure required for constructing the New Production Facility includes (i) the land acquisition cost; (ii) the construction cost; and (iii) the purchase costs of machinery and equipment. The following table sets forth the net [REDACTED] from the [REDACTED] we intend to apply on the major capital expenditure for setting up the New Production Facility:

	Net [REDACTED] from the [REDACTED]		% of the net [REDACTED] from the [REDACTED]
	<i>RMB (million)</i>	<i>HKD (million)</i>	
Land acquisition cost	[REDACTED]	[REDACTED]	[REDACTED]
Construction cost	[REDACTED]	[REDACTED]	[REDACTED]
Purchase costs of machinery and equipment ^(Note)	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]

Note: We intend to partially finance the purchase costs of the machinery and equipment for the production in the New Production Facility by the net [REDACTED] from the [REDACTED] and the remaining purchase costs of approximately [REDACTED] million (equivalent to approximately [REDACTED] million will be financed by our internal resources and external financing (if necessary). For details, see “Future Plan and Use of [REDACTED]” in this document.

Investment payback period and breakeven points

For reference and illustration purpose only, set forth below is a highly hypothetical analysis on the investment payback period and breakeven points and the key assumptions used in calculating the investment payback period and breakeven points in respect of our New Production Facility to be constructed under the two production compartments.

We consider that a new production compartment achieves breakeven when the revenue it generated is able to cover its costs and expenses arising in the same year on an accounting basis. The production scale required to achieve breakeven varies depending on various factors, including but not limited to general economic and market conditions, market demands, utilisation rate of our production compartments, market competition, labour costs and price of raw materials and transportation costs. We consider that a new production compartment achieves investment payback when the total future net cash flow generated from operating activities since the commencement of business operation is able to cover the total investment amount. The time required to achieve investment payback varies depending on various factors, including those mentioned above and the capital expenditure including land acquisition and construction costs and purchase costs of relevant machinery and equipment.

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Our key assumptions used in calculating the investment payback period and breakeven points in respect of our New Production Facility mainly include: (i) the Phase One Production Compartment will commence operation in the first quarter of 2023 with 50% capacity during the first nine months under trial operation period and become fully operational by the end of the fourth quarter of 2023; and (ii) the Phase Two Production Compartment will commence operation by the end of the second quarter of 2023 to achieve approximately 70% of annual capacity with the first eight months under trial operation period and become fully operational by the end of the first quarter of 2024.

Upon completion of the Phase One Production Compartment, our permitted treatment capacity would be an additional 600,000 tonnes per annum. It is estimated that, based on our Directors’ knowledge and experience, the investment payback period for the Phase One Production Compartment will be approximately 3.7 years and that breakeven could be achieved upon reaching the breakeven period of approximately one month. Our existing production facility in Jincheng town, Laizhou city achieved investment payback period and breakeven point at approximately 4.8 years and 3.5 years, respectively, which is relatively longer than our current estimation for Phase One Production Compartment and it is mainly because we were operating losses in prior years and we started generating operating profit from 2018, mainly attributable to the increasingly stricter environmental protection policies imposed by the PRC government leading to a significant growth of the gold mine hazardous waste treatment market. For details, see “Financial Information — Accumulated Losses as at 1 January 2018”. We estimated to achieve the investment payback for our existing production facility in Shahe town, Laizhou city in approximately 2.8 years which is expected to be in July 2022 and that breakeven point achieved at approximately one month.

Upon completion of the Phase Two Production Compartment, we will have production capacity of construction aggregates of approximately 185,000 tonnes per annum. It is estimated that, based on our Directors’ knowledge and experience, the investment payback period will be approximately 3.2 years and that breakeven could be achieved upon reaching the breakeven period of approximately three months.

Expansion of our production team

We also need to expand our operation team for the operation of the New Production Facility. We intend to utilise approximately [REDACTED] (equivalent to approximately [REDACTED]) of the net [REDACTED] from the [REDACTED], representing [REDACTED]% of the net [REDACTED] of the [REDACTED], for the payment of wages of the production team for the operation of the New Production Facility from the commencement of trial operation of the New Production Facility up to the mid of 2023.

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2. Strengthen our research and development capabilities to improve our efficiency on treatment services and diversify our product offerings

We will continue to strengthen our research and development capabilities, commit to the quality assurance of our services and products, and continue to increase our competitiveness as a gold mine hazardous waste treatment company with a dominant position in the PRC. With the aim of improving our treatment and recycling techniques, reducing production cost, and diversifying our product offerings, we will devote more resources to enhance our research and development capabilities by establishing a new research and development laboratory in the New Production Facility as well as expanding our research and development team.

Establish a new research and development laboratory

To solidify our market position by strengthening our technical expertise on hazardous waste treatment and resource utilisation and further expand our product offerings, our Directors consider that we need a new research and development laboratory. As such, our Group intends to establish a new research and development laboratory with an estimated building area of approximately 5,000 sq.m. in the New Production Facility. The construction of the new research and development laboratory is planned to be completed by the end of the second quarter of 2022. Further, our Group intends to utilise approximately [REDACTED] (equivalent to approximately [REDACTED]), representing [REDACTED] of the net [REDACTED] from the [REDACTED], to purchase the machinery and equipment for the research and development purpose. Our Directors also consider that establishing a new research and development laboratory can facilitate our research and development activities and avoid disruption on production process of the existing production facilities as our staff can conduct trials and testing of new formula or method of gold mine hazardous waste treatment by using the machinery and equipment in the new research and development laboratory, instead of those in the production facilities.

Expand our research and development team

To cater for the increasing demand of our research and development function, we need to expand our research and development team to strengthen our research and development capabilities. We intend to utilise approximately [REDACTED] million (equivalent to approximately [REDACTED]) from the net [REDACTED] of the [REDACTED], representing approximately [REDACTED]% of the net [REDACTED] of the [REDACTED] for the hiring of nine staffs from January 2022 to June 2022.

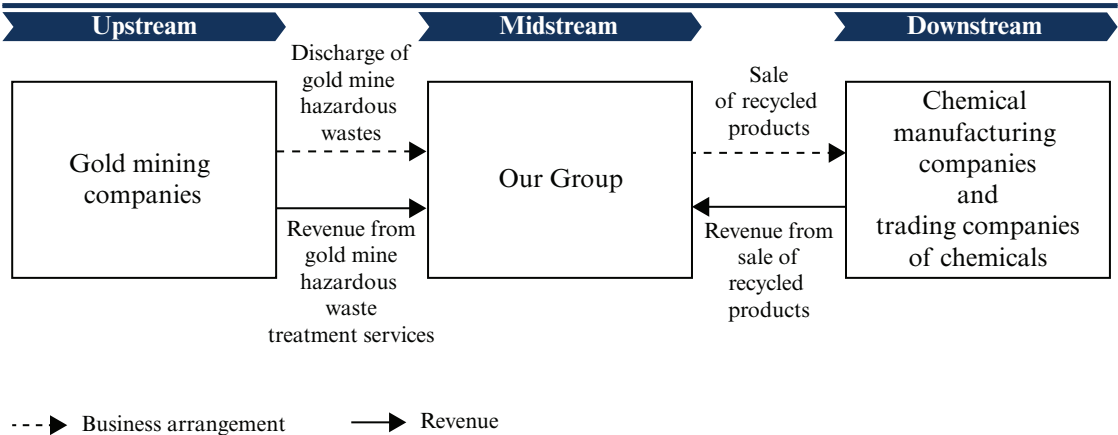
For the detailed discussion of the use of net [REDACTED] from the [REDACTED], see “Future Plans and Use of [REDACTED] — Use of [REDACTED]” in this document.

BUSINESS

OUR BUSINESS MODEL

We are one of the leading gold mine hazardous waste treatment companies in the PRC focusing on (i) gold mine hazardous waste treatment; and (ii) recycling and extracting therefrom resources with economic value for sale. We are specialised in resource recovery and comprehensive utilisation of gold mine hazardous wastes. We provide gold mine hazardous waste treatment services to our upstream customers which are mainly gold smelting companies under gold mining companies with mine operations in Shandong province, in particular, in Yantai city. We collect cyanide tailings, which is a kind of gold mine hazardous waste resulted from smelting of gold, from our upstream customers, which we, leveraging on our experience and expertise, detoxify the cyanide tailings and recover therefrom resources with economic value, such as pyrite concentrate and gold-bearing pyrite concentrate. We then sell the recycled products to our downstream customers, which are mainly chemical manufacturing companies and trading companies of chemicals, to attain comprehensive utilisation of gold mine hazardous wastes.

The following diagram shows our business activities in gold mine hazardous waste treatment services and sale of recycled products during the Track Record Period:



During the Track Record Period, our upstream customers mainly engaged us to provide treatment services for cyanide tailings, which is a kind of gold mine hazardous waste resulted from smelting of gold. These cyanide tailings consist of cyanide, which is one of only a few chemical reagents that will dissolve gold in water. For both technical and economic reasons, cyanide is the chemical of choice for the recovery of gold and silver from ores. Cyanide is a toxic substance and can be lethal if ingested or inhaled in sufficient amounts. Gold mining companies employ stringent risk managements systems to prevent injury or damage from the use of cyanide. Cyanide in mining solutions is collected, either be recycled or disposed, after gold is removed. Due to the restrictions on technical expertise and cost consideration, gold smelting companies engage gold mine hazardous waste treatment companies, like us, to collect the cyanide tailings from them and pay the corresponding treatment fees.

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In our operation process, we are capable of detoxifying the gold mine hazardous wastes. Further, we are able to extract resources with economic value from the gold mine hazardous wastes. Pyrite concentrate and gold-bearing pyrite concentrate are the major recycled products extracted and it can be used for the production of sulphur and sulphuric acid which can be applied in various industrial process. We usually sell them to our downstream customers which are chemical manufacturing companies and trading companies of chemicals.

According to the F&S Report, the business growth of waste treatment companies from waste treatment fee is partly influenced by the geographical constraint mainly with potential increase in the cost of collecting gold mine hazardous waste; and the business growth of our sales of recycled products is generally not negatively influenced by geographical constraints because the transportation costs for delivery are generally borne by customers purchasing recycled products, and such costs generally only make up a relatively small portion of the total contract sums for the whole purchase. Based on the business coverage of major gold mine hazardous waste treatment companies in the PRC, it is an industry practice for hazardous waste treatment companies to serve upstream customers in the province in which they are located, according to the F&S Report.

Moreover, in accordance with the “Reply on the Transfer and Disposal of Hazardous Wastes” (《關於危險廢物轉移和處置問題的覆函》) issued by the State Environmental Protection Agency (國家環境保護總局) (the predecessor of the Ministry of Ecology and Environment (生態環境部)), the principle of “close-by disposal” has been adopted by our Group in its operation. Such policy emphasises the principle of gold mines which produce hazardous waste being close to the hazardous waste treatment plants to avoid the risk of pollution during the transfer of hazardous waste, and such principle is without statutory specification of the level of proximity between gold mines and hazardous waste treatment plants. Therefore, based on commercial considerations and arm’s length negotiations between upstream gold mining companies and hazardous waste treatment companies, the market operating under the “close-by disposal” principle allowed flexibilities for hazardous waste treatment companies to not only serve their upstream customers within their locality in the same city, but to capture upstream demands outside their locality while bearing the principal in mind. According to the F&S Report, a majority of gold mining companies are located in Yantai prefecture-level city within Shandong province. Yantai city accounted for approximately 93% of proven gold reserves of Shandong province in 2020, ranking first among prefecture-level cities in the proven gold reserves in the PRC, and our Group in turn accounted for market shares of approximately 31% in Yantai city in terms of treatment volume of gold mine hazardous waste in 2020. Our high market share in Yantai city signifies our strong competitiveness, demonstrating our abilities to capture upstream demands for gold mine hazardous waste treatment services not only in Yantai city, but also in other cities within Shandong province such as Qingdao city, where some of our upstream customers are located during the Track Record Period.

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According to the F&S Report, the total output volume of mine solid waste in the PRC increased from 3,001.2 million tonnes in 2015 to 3,145.1 million tonnes in 2020, representing a CAGR of 0.9% from 2015 to 2020. With further development and industrial upgrading of mining industry, total output volume of mine solid waste in the PRC is expected to reach 3,696.8 million tonnes in 2025 with a CAGR of 3.3% from 2020 to 2025, with the total output volume expected to be greater than the total treatment volume for each year from 2020 to 2025. For gold mine hazardous waste, there has been a large amount of cyanide tailings stored in Yantai city and in Shandong province before such waste was listed as hazardous waste in August 2016 under the Directory of National Hazardous Wastes. The total volume of accumulated gold mine hazardous waste in Yantai city and Shandong province are estimated to be more than 10 million tonnes and 12 million tonnes, respectively, as at the end of 2020.

With this abundance of gold mines in the cities within Shandong province which are in close proximity to our operations, the availability of accumulated gold mine hazardous waste yet to be treated in the market, and the continuous growth of gold mine waste output volume in the market, F&S is of the view, and our Directors concur, that we would be able to capture future development opportunities brought about by the new gold mines in nearby areas within Yantai prefecture-level city.

Our recycled products, mainly namely pyrite concentrates is one of the three main raw materials for producing sulphuric acid in China. As more and more companies prefer to use pyrite concentrate for sulphuric acid production, the demand for pyrite concentrate in the PRC has remained steady and is expected to grow steadily from 2020 to 2025, according to the F&S Report. The business operation and downstream demand for our sale of recycled products is generally not negatively influenced by geographical constraints.

Pursuant to the increase in demand for gold mine hazardous waste treatment services from our new and existing customers and the increase in the permitted annual treatment capacity of our Group, the revenue from gold mine hazardous waste treatment services increased from approximately RMB41.0 million in 2018 to approximately RMB108.0 million in 2020 and we also recorded an increase of upstream customers from three to eight during the same period. For our sale of recycled products, the increase in revenue was contributed by both new and existing customers.

While gold mine hazardous waste treatment services and sale of recycled products were our major business activities for revenue generation during the Track Record Period, we also derived revenue from the hazardous waste storage rental services since November 2018. For further details of our hazardous waste storage rental service, see “— Our Production Facilities — Our Warehouses” below.

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BUSINESS

The following table sets forth our revenue by business activities during the Track Record Period:

	2018		Year ended 31 December				Four months ended 30 April			
	RMB'000	%	2019		2020		2020		2021	
			RMB'000	%	RMB'000	%	RMB'000	%	RMB'000	%
Gold mine hazardous waste treatment services	41,014	40.1	61,567	46.1	107,958	52.6	30,212	61.6	34,277	50.5
Sale of recycled products	57,642	56.4	56,413	42.2	82,514	40.2	13,636	27.8	28,805	42.4
Hazardous waste storage rental services	1,083	1.0	14,490	10.8	14,507	7.1	4,836	9.9	4,836	7.1
Others ^(Note)	2,542	2.5	1,194	0.9	413	0.1	346	0.7	—	—
Total	102,281	100.0	133,664	100.0	205,392	100.0	49,030	100.0	67,918	100.0

Note: Others represented revenue from the trading of recycled products, which mainly included desulphurisation gypsum, copper concentrate powders and waste rocks, that we procured from our suppliers during the Track Record Period. See “— Our Products” below for further details.

Our services

During the Track Record Period, we are engaged by gold smelting companies under gold mining companies with mine operations in Shandong province, in particular, in Yantai city, to provide gold mine hazardous waste treatment services. For the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, revenue generated from the gold mine hazardous waste treatment services was approximately RMB41.0 million, RMB61.6 million, RMB108.0 million and RMB34.3 million, respectively, representing approximately 40.1%, 46.1%, 52.6% and 50.5% of our total revenue for the same periods, respectively.

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The following table sets out the number of customers and breakdown of our revenue from gold mine hazardous waste treatment services by cities in Shandong province, in which our customers are located, during the Track Record Period:

	Year ended 31 December				Four months ended 30 April					
	2018		2019		2020		2020		2021	
	No. of customers	RMB'000	No. of customers	RMB'000	No. of customers	RMB'000	No. of customers	RMB'000	No. of customers	RMB'000
(unaudited)										
Yantai city										
Laizhou	1	15,048	1	28,569	1	56,074	1	18,857	1	16,392
Zhaoyuan	2	25,966	3	32,725	3	46,514	3	11,287	1	14,900
Fushan	—	—	—	—	1	1,744	1	21	1	2,216
Penglai	—	—	—	—	1	1,436	—	—	—	—
Qingdao city										
Pingdu	—	—	1	273	2	2,190	1	47	1	769
Total	3	41,014	5	61,567	8	107,958	6	30,212	4	34,277

During the Track Record Period, we mainly transacted with upstream customers with mining operations located in Yantai city, Shandong province. Our Group transacted with three, five, eight and four upstream customers for our gold mine hazardous waste treatment services for the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, respectively. For the year ended 31 December 2018, we had three recurring customers who had transacted with us prior to the year with revenue generated of approximately RMB41.0 million or 40.1% of the total revenue for the year, respectively. For the year ended 31 December 2019, we had three recurring customers and two new customers with revenue generated of approximately RMB58.5 million or 43.8% and approximately RMB3.1 million or 2.3% of our total revenue for the year, respectively. For the year ended 31 December 2020, we had five recurring customers and three new customers with revenue generated of approximately RMB104.7 million or 51.0% and approximately RMB3.2 million or 1.6% of our total revenue for the year, respectively. For the four months ended 30 April 2021, we had four recurring customers with revenue generated of approximately RMB34.3 million or 50.5% of our total revenue for the period, respectively.

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The table below sets out the treatment volumes in tonnes, the treatment fee ranges and average treatment fee per tonne of our gold mine hazardous wastes treatment services during the Track Record Period:

	Year ended 31 December		Four months ended 30 April	
	2018	2019	2020	2021
Total treatment volume in tonnes	560,067 ⁽¹⁾	805,811	1,082,913	354,774
<i>High grade cyanide tailings</i> ⁽³⁾	293,241	512,551	254,530	102,310
<i>Low grade cyanide tailings</i> ⁽⁴⁾	266,827	293,260	797,578	220,208
<i>Gold-bearing cyanide tailings</i>	—	—	30,805	32,256
Average treatment fee (<i>per tonne</i>) ⁽²⁾				
— exclusive of VAT				
<i>High grade cyanide tailings</i> ⁽³⁾	RMB38	RMB53	RMB39	RMB38
<i>Low grade cyanide tailings</i> ⁽⁴⁾	RMB110	RMB117	RMB120	RMB129
<i>Gold-bearing cyanide tailings</i>	N/A	N/A	RMB57	RMB65
Overall average treatment fee (<i>per tonne</i>)	RMB73	RMB76	RMB100	RMB97
Treatment fee range (<i>per tonne</i>) ⁽²⁾				
— exclusive of VAT				
<i>High grade cyanide tailings</i> ⁽³⁾	RMB0–57	RMB38–61	RMB38–47	RMB38
<i>Low grade cyanide tailings</i> ⁽⁴⁾	RMB46–168	RMB104–165	RMB104–165	RMB104–160
<i>Gold-bearing cyanide tailings</i>	N/A	N/A	RMB57	RMB65

Notes:

- (1) The treatment volume includes gold mine hazardous wastes of approximately 54,587 tonnes which our Group did not charge any treatment fee to our upstream customers pursuant to service agreements entered into before the first quarter of 2018.
- (2) The fluctuation of treatment fee per tonne was mainly attributable to the composition of gold mine hazardous wastes. In general, treatment fee of gold mine hazardous wastes with higher sulphur content will be lower.
- (3) High grade cyanide tailings refer to cyanide tailings containing higher sulphur content. During the Track Record Period, the high grade cyanide tailings treated by us had a sulphur content at a range of approximately 33%–45%.
- (4) Low grade cyanide tailings refer to cyanide tailings containing lower sulphur content. During the Track Record Period, the low grade cyanide tailings treated by us had a sulphur content at a range of approximately 23%–27%.

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According to the F&S Report, gold mine hazardous waste treatment fees are mainly determined by the grade of cyanide tailings, which commonly refers to the sulphur content in the cyanide tailings, and the fees would also be adjusted based on the volume of cyanide tailings which is subject to the level of stability and scale of the demand for gold mine hazardous waste treatment services during the negotiation between an upstream customer and a gold mine hazardous waste treatment company. In general, the cyanide tailings can be categorised into two types by sulphur content, high grade cyanide tailings with sulphur content of or above 30% and low grade cyanide tailings with sulphur content of or below 30%. The treatment fee of high grade cyanide tailings ranged from RMB40 to RMB60 per tonne; and the treatment fee of low grade cyanide tailings ranged from RMB95 to RMB180 per tonne, according to the F&S Report. Gold mine hazardous waste treatment companies generally charge a relatively lower treatment fee for relatively higher grade of gold mine hazardous waste, as more valuable and recyclable elements could be extracted and hence, more recycled products could be produced and sold, and vice versa.

Apart from the grade of cyanide tailings which is the main contributing factor of gold mine hazardous waste treatment fees, the fees would also be affected by the volume of the cyanide tailings provided by upstream customers for treatment, subject to the level of stability and scale of the demand for gold mine hazardous waste treatment services depending on (i) the scale of operation of our upstream customers which would in turn determine the volume of gold mine hazardous waste produced from their gold productions; (ii) our annual permitted treatment capacity which may determine the volume of gold mine hazardous waste we are able to treat during the year; and (iii) the business relationship and mutual reliance between our upstream customers and us. Based on the F&S Report, our Group’s treatment fees for gold mine hazardous waste services were negotiated with consideration of same basis with other major gold mine hazardous waste treatment companies which treated gold mine hazardous waste of similar grade in Shandong province during the Track Record Period, and our Directors are therefore of the view that the treatment fees charged by our Group during the Track Record Period were in line with industry practice and were comparable with other major market players in Shandong province.

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During the year ended 31 December 2018, our Group has provided gold mine hazardous waste treatment services of approximately 54,587 tonnes free of charge to Shandong Gold Smelting and Zhongkuang Gold pursuant to service agreements entered into before the first quarter of 2018. According to the F&S Report, the gold mine hazardous waste treatment market in prior years was relatively small due to the lack of attention before the implementation of environmental protection policies by the PRC government, therefore there were less incentives for the gold mining companies to pay for the gold mine hazardous waste treatment services. See “Industry Overview — Market Size of Gold Mine Hazardous Waste Market in China and Shandong Province” in this document for further details. Hence, our Group negotiated with our upstream customers on case-by-case basis to collect gold mine hazardous wastes free of charge or at a low fee and we extracted therefrom resources with economic value for sale as recycled products. In the event if our Group did charge the respective customers treatment fee for these gold mine hazardous wastes, our Directors believe that we could have a relatively higher revenue and gross profit for the year ended 31 December 2018. With the raising awareness of environmental protection in the gold mining industry and strengthened enforcement under the stringent environmental protection policies which gave rise to significant demand of our gold mine hazardous waste treatment services, we charged all of our upstream customers treatment fee for our gold mine hazardous wastes treatment services for the years ended 31 December 2019 and 2020 and the four months ended 30 April 2021.

We recorded an increase of treatment volume from approximately 560,067 tonnes for the year ended 31 December 2018 to approximately 1,082,913 tonnes for the year ended 31 December 2020, which was mainly due to the increasing demand of our gold mine hazardous waste treatment services and the increase of our production capacity upon the commencement of operation of our second production facility in Shahe town, Laizhou city in October 2019. The treatment fee range was relatively stable during the Track Record Period. Our Group’s pricing during the Track Record Period is in line with major market players of gold mine hazardous waste treatment industry in Shandong province and the PRC, according to the F&S Report. In general, treatment fee of gold mine hazardous wastes with higher sulphur content will generally be lower, and vice versa. The treatment fee for cyanide tailings generally remained stable for treating cyanide tailings of same grades and contracted treatment volume.

As such, the fluctuation of our overall average treatment fee per tonne was mainly attributable to the changes in the proportions of high and low grade cyanide tailings provided by upstream customers for treatment during the corresponding years/period, as the treatment fees vary between high and low grade cyanide tailings. Our overall average treatment fee per tonne increased slightly from approximately RMB73 for the year ended 31 December 2018 to approximately RMB76 for the year ended 31 December 2019, and was mainly because our Group has provided gold mine hazardous waste treatment services of approximately 54,587 tonnes free of charge as abovementioned for the year ended 31 December 2018 and no such free-of-charge treatment services were provided for the year ended 31 December 2019. The overall average treatment fee per tonne further increased to approximately RMB100 for the year ended 31 December 2020, which was mainly attributable to the change of proportion of high and low grade cyanide tailings we treated during the year. During the year ended 31 December 2020, approximately 74% of

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the gold mine hazardous waste received and treated by us were low grade cyanide tailings which contained lower sulphur content and charged at higher treatment fee, as compare to approximately 36% in the corresponding period in 2019, which give rise to a relatively higher overall average treatment fee in 2020.

For the four months ended 30 April 2021, the treatment volume remained relatively stable at approximately 354,774 tonnes, as compared to approximately 357,705 tonnes for the same period in 2020. The treatment fee range remained relatively stable for the four months ended 30 April 2021 as compared to that for the year ended 31 December 2020. For the four months ended 30 April 2021, the overall average treatment fee per tonne decreased slightly to approximately RMB97, mainly because more high grade cyanide tailings were collected from our upstream customers and treated during the period. The treatment fee for high grade cyanide tailings is generally lower than that of low grade.

For further details, see “Financial Information — Description of Selected Items in the Consolidated Statements of Comprehensive Income — Revenue — Gold mine hazardous waste treatment services” in this document.

Our rental services for storage of hazardous wastes

Since November 2018, we also derived revenue from the hazardous waste storage rental services. Certain hazardous wastes were abandoned by a chemical company in Laizhou city, Shandong province, and the storage and treatment of these hazardous wastes was not able to be arranged. Laizhou City Municipal Government then become responsible for the safe transfer and treatment of these hazardous wastes. In October 2018, Laizhou City Municipal Government resolved the situation by arranging a state-owned company to lease the storage facilities of HC Environmental to store these abandoned hazardous wastes to address the imminent environmental issue. Given HC Environmental was the only company in Laizhou city, Shandong province, at that time which had obtained the Hazardous Waste Business Licence issued by Yantai Municipal Ecology and Environment Bureau (煙臺市生態環境局), the management of HC Environmental considered that it was an opportunity for HC Environmental to deliver its social responsibility and therefore decided to cooperate with the Laizhou City Municipal Government.

Subsequently in the fourth quarter of 2018, HC Environmental entered into two hazardous waste storage rental agreements (the “**Rental Agreements**”) with Laizhou City State-owned Assets Management Company Limited (萊州市國有資產經營有限公司) (“**LZ Assets**”), a state-owned enterprise which is an Independent Third Party, pursuant to which HC Environmental leased certain hazardous waste storage facilities, inclusive of two warehouses with an aggregate gross floor area of approximately 74,500 sq.m. and ancillary facilities, such as rainwater-harvesting pools, roads and passages to LZ Assets, for storage of hazardous wastes. In return, LZ Assets agreed with HC Environmental for an annual rental fee of RMB8.0 million and advanced RMB160.0 million in total to HC Environmental. The Rental Agreements, of which each became effective in November 2018 and January 2019, had a minimum term of the lease period of five years and up to 20 years. Both parties agreed that the minimum term of the Rental Agreements would be five years, with a condition that the lease term will terminate when the hazardous wastes in the

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warehouses are put for tender through public bidding for detoxing treatment during the five year term and HC Environmental wins the tender, which the treatment fee would then first be deducted from the remaining amount of the advanced payment. It is also stipulated in the Rental Agreements that from the sixth year since the respective signing date of the Rental Agreements, either LZ Assets or HC Environmental has the right to terminate the Rental Agreements by paying an amount equivalent to the annual rental fee, being RMB8 million as compensation, and HC Environmental will be required to repay the remaining balance of advances to LZ Assets, within three years from the 30th day after the receipt of the notice of termination of the Rental Agreements, being 20% for the first year, 30% for the second year and full repayment in the third year. Our Directors are of the view that it is likely for LZ Assets to exercise the right to terminate the lease agreements after the five years fixed term, mainly due to the following reasons:

- (i) based on the prior discussions with Laizhou City Municipal Government and as confirmed by LZ Assets, it is, and has been, the intention of the Laizhou City Municipal Government to authorise a qualified treatment company to treat the abandoned cyanide tailings hazardous waste to ensure adherence to the environmental policies in the PRC. Given that this was a request of the Laizhou City Municipal Government for the storage of hazardous waste to resolve the imminent environmental issues brought by the abandonment of hazardous waste in 2018 and that HC Environmental was the only company in Laizhou city which had obtained the Hazardous Waste Business Licence issued by Yantai Municipal Ecology and Environment Bureau (煙臺市生態環境局), the minimum five-year fixed lease term was considered to be mutually beneficial to LZ Assets and us based on arm's length negotiation. Based on the discussions between LZ Assets and us, and as confirmed by our Directors, the minimum five-year fixed lease term was deemed appropriate at the time when the Rental Agreements were entered into, mainly because (a) LZ Assets expected that the Laizhou City Municipal Government would have sufficient time to select a qualified treatment company with capacity for further treatment of the abandoned cyanide tailings hazardous waste; and (b) the five-year fixed lease term would provide stability of storage of hazardous waste at all material time, so as to avoid such hazardous waste being relocated or transported to various storage facilities frequently which may potentially bring safety and operational risks when handling the cyanide tailings hazardous waste; and
- (ii) based on the arm's length negotiation between LZ Assets and us at the time of entering into the Rental Agreements, our Directors believe it was commercially desirable to have a five-year fixed lease term, mainly because of (a) our Group's willingness to cooperate upon the request of the Laizhou City Municipal Government, given HC Environmental was the only company in Laizhou city which had obtained the Hazardous Waste Business Licence issued by Yantai Municipal Ecology and Environment Bureau (煙臺市生態環境局); and (b) the construction of the warehouses was at our own costs, which our Directors were of the view that such five-year fixed lease term with stable rental income for our Group was reasonable while delivering social responsibility.

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Our Directors consider, and the Sole Sponsor concurs, that rental of warehouse is common in Laizhou city, Shandong province, but the circumstances leading to the rental arrangements were not common as the governmental authorities were seldom required to handle the hazardous wastes left behind by private enterprises, and the Rental Agreements were commercial arrangements after arms-length negotiation with LZ Assets, which the advances were used to finance the costs of construction of the two warehouses as required in the Rental Agreements. The following factors were taken into account:

- (i) at the material time, HC Environmental was the only company in Laizhou city, Shandong province, which had obtained the Hazardous Waste Business Licence, and Laizhou City Municipal Government had an imminent need to resolve the environmental issue of the abandoned hazardous waste, the bargaining power of Laizhou City Municipal Government was relatively low;
- (ii) HC Environmental was principally engaged in (a) gold mine hazardous waste treatment; and (b) recycling and extracting therefrom resources with economic value for sale. Provision of hazardous waste storage rental service was not part of the business plan for HC Environmental. In consideration of the fact the HC Environmental was able to generate operating profit from 2018 onwards because of the increasingly stricter environmental protection policies, it was not attractive to the management of HC Environmental to commit and construct new warehouses for developing the rental services. Given that this was a request of the Laizhou City Municipal Government for the storage of hazardous waste and the warehouses would be solely for the use of storing their hazardous wastes, and we did not have the intention to construct the new warehouses without acceptable commercial incentives, under arms-length negotiation with LZ Assets, it was decided that an advance of RMB160 million to our Group would be made to induce HC Environmental to enter into the Rental Agreements. However, as it was the Laizhou City Municipal Government’s plan to put the treatment services of hazardous wastes for public tender, the parties also agreed with a pay-back mechanism for the partial refund of the advance when the Rental Agreements were to be terminated;
- (iii) before entering into the Rental Agreements, Laizhou City Finance Bureau (萊州市財政局) commissioned an independent valuer to conduct a valuation of the present value of the construction of each of the warehouses. Pursuant to the valuation reports, the valuations were used as a basis for Laizhou City Finance Bureau to understand the costs of such construction; and
- (iv) the rental fees per sq.m. under the Rental Agreements were considered as market rent after making references to the rental fees per sq.m. of other warehouses under rental arrangement in the region.

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With the consideration of the amortisation of the balance of advances, for the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, we recognised revenue of approximately RMB1.1 million, RMB14.5 million, RMB14.5 million and RMB4.8 million from the rental services, respectively, representing approximately 1.0%, 10.8%, 7.1% and 7.1% of our total revenue for the same period, respectively. For further details, see Notes 5 and 30 to the historical financial information set out in the Accountant’s Report in Appendix I to this document.

To the best knowledge of our Directors after making reasonable enquiries, the tendering process for the hazardous waste treatment services had not yet commenced as at the Latest Practicable Date. In the event HC Environmental could not win the tender or LZ Assets terminates the Rental Agreements early, our Directors consider that the constructed storage facilities can be used for our internal storage purpose for future expansion of our Group.

Our products

During our operation process, we are able to recycle and extract from gold mine hazardous wastes resources with economic value, such as pyrite concentrate and gold-bearing pyrite concentrate, for sale. For the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, revenue generated from the sale of recycled products was approximately RMB57.6 million, RMB56.4 million, RMB82.5 million and RMB28.8 million, respectively, representing approximately 56.4%, 42.2%, 40.2% and 42.4% of our total revenue for the same periods, respectively.

The following sets out the sales volumes in tonnes, the selling price ranges and average selling prices per tonne of recycled products sold during the Track Record Period:

	Year ended 31 December			Four months
	2018	2019	2020	ended 30 April 2021
Pyrite concentrate				
Sales volume in tonnes	280,641	316,137	463,740	162,727
Selling price range (per tonne) ⁽¹⁾				
— exclusive of VAT	RMB195–319	RMB159–265	RMB150–248	RMB150–257
Average selling price (per tonne) ⁽¹⁾				
— exclusive of VAT	RMB205	RMB178	RMB166	RMB177
Gold-bearing pyrite concentrate⁽²⁾				
Sales volume in tonnes	—	—	16,601	—
Selling price range (per tonne) ⁽¹⁾				
— exclusive of VAT	—	—	RMB296–363	—
Average selling price (per tonne) ⁽¹⁾				
— exclusive of VAT	—	—	RMB331	—

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Notes:

- (1) The fluctuation of selling price per tonne was mainly attributable to the composition of recycled products. In general, selling price of recycled products can be higher when (i) they have higher bearing ratios of gold or sulphur content; and/or (ii) the market demand of sulphuric acid is higher.
- (2) During the year ended 31 December 2020, we commenced our business relationship with an upstream customer, which is a gold smelting company with a gold mining company with mine operations in Yantai city, who engaged us to detoxify gold mine hazardous waste with relatively higher bearing ratios of gold. Through the same production process of pyrite concentrate, we then recovered gold-bearing pyrite concentrate from the gold mine hazardous wastes collected from this upstream customer. As such, we commenced to sell gold-bearing pyrite concentrate to our downstream customers during the year ended 31 December 2020. According to the F&S Report, due to the high content of gold with higher recovery value, the gold-bearing pyrite concentrate is usually sold at higher price and higher profit margin than pyrite concentrate. It is also confirmed by F&S that our selling price of gold-bearing pyrite concentrate is at the prevailing market price.

The following table sets out the breakdown of our revenue from sale of recycled products by provinces in the PRC during the Track Record Period:

	Year ended 31 December						Four months ended 30 April			
	2018		2019		2020		2020		2021	
	RMB'000	%	RMB'000	%	RMB'000	%	RMB'000	%	RMB'000	%
Anhui province	—	—	—	—	885	1.2	—	—	16,618	57.7
Hubei province	3,730	6.5	3,607	6.4	5,554	6.7	—	—	6,614	23.0
Shandong province	19,381	33.6	32,154	57.0	45,166	54.7	6,853	50.3	3,703	12.9
Henan province	10,597	18.4	11,806	20.9	7,843	9.5	3,727	27.3	1,862	6.4
Hebei province	22,900	39.7	6,372	11.3	22,048	26.7	2,880	21.1	—	—
Others ⁽¹⁾	1,034	1.8	2,474	4.4	1,018	1.2	176	1.3	8	— ⁽²⁾
Total	57,642	100.0	56,413	100.0	82,514	100.0	13,636	100.0	28,805	100.0

Notes:

- (1) Others represented Inner Mongolia, Jiangsu province, Liaoning province and Jiangxi province.
- (2) The figure is less than 0.1.

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During the Track Record Period, our Group transacted with 18, 16, 20 and 12 downstream customers in total for the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, respectively. For the year ended 31 December 2018, we had 12 recurring customers who had transacted with us prior to the year and six new customers with revenue generated of approximately RMB52.0 million or 50.8% and approximately RMB5.7 million or 5.6% of the total revenue for the year respectively. For the year ended 31 December 2019, we had eight recurring customers and eight new customers with revenue generated of approximately RMB39.7 million or 29.7% and approximately RMB16.7 million or 12.5% of our total revenue for the year respectively. For the year ended 31 December 2020, we had nine recurring customers and 11 new customers with revenue generated of approximately RMB66.8 million or 32.5% and approximately RMB15.7 million or 7.6% of our total revenue for the year respectively. For the four months ended 30 April 2021, we had five recurring customers and seven new customers with revenue generated of approximately RMB5.4 million or 7.9% and approximately RMB23.4 million or 34.5% of our total revenue for the period respectively.

Sale volume and average selling price per tonne

According to the F&S Report, more companies prefer to use pyrite concentrate for sulfuric acid production as it can generate high value by-products and could have a lot of synergy with steel, chemical and other downstream industries to achieve cleaner production and circular economy of mining resources. Following the increase of our production capacity upon the commencement of operation of our second production facility in Shahe town, Laizhou city, in October 2019, the commencement of business relationship with new downstream customers, and the increase in sales to certain recurring downstream customers, we recorded an increase of sale volume of our recycled products from approximately 280,641 tonnes for the year ended 31 December 2018 to approximately 480,341 tonnes for the year ended 31 December 2020. Nevertheless, we recorded a decrease of selling price range and average selling price per tonne from 2018 to 2020. This was in line with the fluctuation of market price of sulphuric acid in the PRC which was influenced by various factors, mainly including the price of raw material, demand from downstream industries and the imported from oversea market, according to the F&S Report. Further impacted by the COVID-19 outbreak in 2020, downstream demand of sulphuric acid has plummeted and prices decreased significantly and so has the selling price of our pyrite concentrate. During 2018 to 2020, the price of sulphuric acid fluctuated with the highest reaching RMB510.0 per tonne and the lowest reaching RMB105.0 per tonne. Details of price analysis of pyrite concentrate in the PRC, please refer to “Industry Overview — Price Analysis of Pyrite Concentrate and Gold-bearing Pyrite Concentrate in China” to this document.

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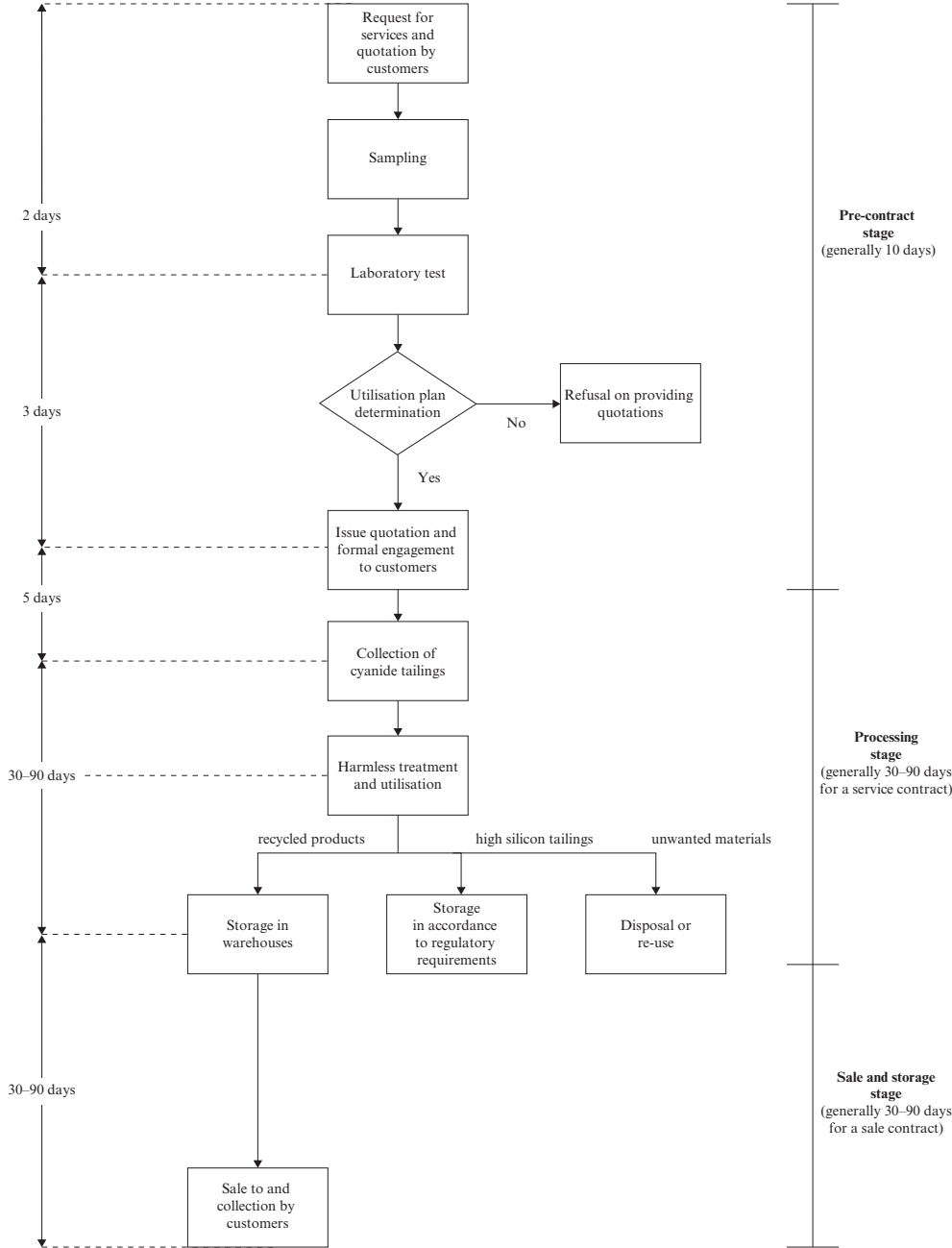
For the four months ended 30 April 2021, we recorded an increase in sale of recycled products, with sale volume of approximately 162,727 tonnes from approximately 80,385 tonnes for the four months ended 30 April 2020. Such increase was primarily driven by the increase in sale orders from our downstream customers among different provinces in the PRC and a more stabilised COVID-19 situation in 2021 in the PRC as compared to the pandemic outbreak in early 2020. Our average selling price per tonne of pyrite concentrate increased from approximately RMB166 for the year ended 31 December 2020 to approximately RMB177 for the four months ended 30 April 2021, which was mainly because the influence of COVID-19 outbreak wore off in 2021. Our average selling price in 2020 had been negatively affected by the decrease in downstream demand and market price of sulphuric acid due to the COVID-19 outbreak in early 2020. According to the F&S Report, based on the latest market situation in 2021, the price of sulphuric acid is increasingly significantly driven by the increasing domestic demand from downstream industries, mainly including chemical fertiliser industry, increasing export demand for sulphuric acid and increasing price of raw material. Therefore, it is expected that the selling price of pyrite concentrate will restore to pre-COVID-19 price level with stable growth in coming years considering the continuous recovery of sulphuric acid industry and the increasing usage of pyrite concentrate for sulphuric acid production in the PRC. For further details, see “Financial Information — Description of Selected Items in the Consolidated Statements of Comprehensive Income — Revenue — Sale of Recycled Products” in this document.

During the Track Record Period, we also generated revenue from trading of recycled products such as desulphurisation gypsum, copper concentration powders and waste rocks. Occasionally, we purchased recycled products from our suppliers and sold to our downstream customers with certain mark-up, which was mainly determined based on (i) the type of recycled products involved and the prevailing market price of that recycled product; (ii) the size of the order; and (iii) the business relationship with the customers. During the Track Record Period, we traded recycled products with mark-ups ranging from approximately 3% to 18%. However, our Directors confirm that we are not actively pursuing and do not intend to pursue business opportunities in trading of recycled products actively, as these trading activities were conducted only for maintaining good business relationship with our customers and suppliers. During the Track Record Period, the total revenue from the trading of recycled products was approximately RMB2.5 million, RMB1.2 million, RMB0.4 million and nil, respectively, representing approximately 2.5%, 0.9%, 0.1% and nil of our total revenue for the same periods, respectively. Certain downstream customers of our trading of recycled products during the Track Record Period were connected persons of Mr. Liu, for further details, see “Financial Information — Related Parties Transactions” in this document.

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OPERATION PROCESS

The following diagram sets out the key operating stages of for our gold mine hazardous waste treatment services and our sale of recycled products as:



Note: The timeframe is calculated on an approximate basis and may vary from time to time depending on various factors including the quality of the gold mine hazardous wastes and our agreement with the customer on the timeframe for the material stages.

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Generally, our gold mine hazardous waste treatment services consist of three major stages, namely (i) pre-contract stage; (ii) processing stage; and (iii) sale and storage stage. Before entering into formal engagement with our customers, we assess the quality of the gold mine hazardous wastes to be collected from the potential upstream customers to decide whether to proceed with quotation negotiation. We also conduct sampling and testing to formulate an utilisation plan. When engagement is formalised, our procurement team then engages a transportation company for the transportation of gold mine hazardous wastes to our production facilities, and we subsequently employ a series of processing procedures in our production stage, to detoxify and to extract resources with economic value from the gold mine hazardous wastes for sale. After processing, our recycled products are stored in our warehouse pending for sale and collection by our downstream customers.

Details of key operating stages as illustrated in the diagram above are set forth as the following:

Pre-contract stage

We maintain long-standing business relationships and regular contacts with our upstream customers who are mainly gold smelting companies under gold mining companies with mine operations in Shandong province, in particular, Yantai city. Our sales team also takes initiatives to approach new customers to obtain contracts for the gold mine hazardous waste treatment services. Typically, our customers do not conduct open tenders for the gold mine hazardous waste treatment services. According to the F&S Report, it is in line with the market practice.

Before the formal engagement, we need to assess the quality of the cyanide tailings such as the bearing ratio of gold and sulphur content of the batch of cyanide tailings to be collected to decide whether to proceed with quotation negotiation. We first obtain certain sampling of gold mine hazardous waste from the potential customers and conduct a series of laboratory testings to assess the composition of the batch of gold mine hazardous wastes.

Our production team is responsible for formulating an utilisation plan. We also assess our prevailing capacity to allocate sufficient labour and resources to that batch of gold mine hazardous wastes and our ability to recover resources with economic value to see if there can be an adequate profit margin for us. We then prepare budgets based on the information provided by our potential customers, such as quantity to be collected, arrangement of transportation and time constraints. We only take up the engagement when we consider that it will be profitable to process and treat the batch of gold mine hazardous waste.

If we decide that we will turn down the potential customers.

For the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, we had three, five, eight and four customers who we provided gold mine hazardous wastes treatment services, respectively, which were mainly gold smelting companies under gold mining companies with mining operations in Shandong province.

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Processing stage

Upon receipt of the internal approval and communication with customers on key contract terms, we will commence preparation of the contract. Our procurement team then engage, a transportation company for the transportation of gold mine hazardous wastes from our upstream customers to our production facilities.

Once the gold mine hazardous wastes arrive at our production facilities, we place gold mine hazardous wastes to be processed at the warehouse for the first step of detoxification, namely airing. Gold mine hazardous wastes stored in the warehouse are flipped and rolled from time to time, as the process of airing of tailings, in order to speed up the volatilisation of free cyanide ion and other materials. Major steps of our processing procedures employed at our production facilities include:

Hydration – water is added to the gold mine hazardous wastes to turn them from solid status to slurry form to facilitate the forth coming processes.

Screening – the slurry then passes through the screening plant to screen out unwanted sands and rocks. Those unwanted sands and rocks will then be used for road construction within the production facilities or landfill.

Activation and flotation – keep stirring the slurry and then the slurry is shipped to the activation tank. After the process of activation, flotation method is used. We add consumables such as xanthate into the slurry for various chemical reactions to separate the pyrite concentrate from other chemicals. We generally use xanthate as the flotation agent to induce the pyrite concentrate to adhere to the froth and float while other materials, such as high silicon tailings, sink. The froth with resources with economic value for sale such as pyrite concentrate or gold-bearing pyrite concentrate, and the high silicon tailings will then be passed to different filter press plants.

Neutralisation – during the activation and flotation processes, exhaust fumes due to chemical reactions will be generated. We need to add consumables including chemical agents to absorb these unwanted by-products. Those unwanted fumes will then be neutralised and solidified as chemical wastes.

Filter and dewatering – filter press plant is used to separate solid products from the liquid and to dry them. We then collect the respective pyrite concentrate and gold-bearing pyrite concentrate for sale or high silicon tailings for storage, and the unwanted liquid can be recycled for the hydration process.

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After these processes, the gold mine hazardous wastes will be turned to (i) recycled products such as pyrite concentrate and gold-bearing pyrite concentrate; (ii) high silicon tailings for further processing to construction aggregates and some other recycled products as by-products; and (iii) unwanted materials such as sands and rocks at the screening stage and solidified chemical wastes at the neutralisation stage. For recycled products and high silicon tailings which are useful to our Group, we will continue to the sale and storage stage. For those unwanted materials, we generally re-use those sands and rocks on road construction within our production facilities. For the solidified chemical waste, we generally engage a specialised third party to dispose them. The quantity of these wastes was minimal and our cost incurred for disposing them was less than RMB25,000 per year during the Track Record Period.

The following table sets out the quantities and the respective conversion rates of gold mine hazardous wastes into (i) recycled products; (ii) high silicon tailings; and (iii) unwanted materials, during the Track Record Period:

	Year ended 31 December				Four months ended 30 April			
	2018		2019		2020		2021	
	Production volume <i>(tonne)</i>	Conversion rate ⁽¹⁾ <i>(tonne/ tonne)</i>	Production volume <i>(tonne)</i>	Conversion rate ⁽¹⁾ <i>(tonne/ tonne)</i>	Production volume <i>(tonne)</i>	Conversion rate ⁽¹⁾ <i>(tonne/ tonne)</i>	Production volume <i>(tonne)</i>	Conversion rate ⁽¹⁾ <i>(tonne/ tonne)</i>
Recycled products	310,837	0.56	424,662	0.53	560,949	0.52	187,061	0.53
High silicon tailings	248,698	0.44	380,396	0.47	520,908	0.48	167,377	0.47
Unwanted materials	<u>532</u>	— ⁽²⁾	<u>753</u>	— ⁽²⁾	<u>1,056</u>	— ⁽²⁾	<u>336</u>	— ⁽²⁾
Actual treatment volume <i>(tonne)</i>	<u><u>560,067</u></u>		<u><u>805,811</u></u>		<u><u>1,082,913</u></u>		<u><u>354,774</u></u>	

Notes:

- (1) Conversion rates are calculated by dividing the production volume for the year by the actual treatment volume of gold mine hazardous wastes for the year.
- (2) The figure is less than 0.1.

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During the Track Record Period, the high silicon tailings extracted from the gold mine hazardous waste were mainly stored at our production facility at Jincheng town, Laizhou city in accordance with the applicable PRC laws and regulations. As at 30 April 2021, we had accumulated high silicon tailings of approximately 1.3 million tonnes. Our Directors considered that the high silicon tailings are residue generated during our production process, of which the economic benefits to our Group are uncertain at this moment. Hence, such amounts were not accounted for as assets in our financial information as at the respective year/period end. We expect that the accumulated high silicon tailings would be able to fully convert into construction aggregates upon the implementation of our future plans upon [REDACTED]. During the Track Record Period, the conversion rates of gold mine hazardous wastes into recycled products slightly decreased while the conversion rates of gold mine hazardous wastes into high silicon tailings slightly increased. Our Directors considered that this decreasing trend of conversion rate of gold mine hazardous wastes into recycled products and this increasing trend of conversion rate of gold mine hazardous wastes into high silicon tailings are consistent to the industry trend as overall there are decreasing grade of gold ores in the PRC. According to the F&S Report, the decreasing grading of incoming cyanide tailings was mainly due to the naturally declining gold grade in the gold ores in Shandong province and the PRC, which lead to relatively lower unit value of recyclable elements in the gold mine hazardous wastes as could be extracted therefrom and hence less recycled products can be produced and sold and vice versa. This also in line with our increasing gold mine hazardous treatment fee during the Track Record Period. As confirmed by our Directors, we did not incur higher costs to treat the cyanide tailings of lower grade during the Track Record Period.

Sale and storage stage

Recycled products

After processing the gold mine hazardous wastes, recycled products are stored in our warehouses pending for sale and collection by customers.

For the sale of recycled products, we negotiate and enter into framework sales contracts with our customers of sale of recycled products which set out, amongst others, the approximate price range which is subject to market fluctuation, recycled products specifications and the agreed transportation arrangement which our customers. Generally, our customers would not commit a minimum purchase amount of our recycled products in the framework sales contracts. They will place purchase orders to us by batch from time to time. Our customers generally collect the recycled products from our production facilitates at their own costs.

During the Track Record Period, we had over 45 customers purchasing our pyrite concentrate and gold-bearing pyrite concentrate. These customers located at nine provinces in the PRC and are mainly chemical manufacturing companies and trading companies of chemicals.

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High silicon tailings

From our operation process, we also extract high silicon tailings from the gold mine hazardous wastes. High silicon tailings can be further processed for recycling to construction aggregates for concrete-mixing in construction works with relevant technological skills and machinery. According to the F&S Report, the construction aggregate market is a major downstream market of gold mine solid waste treatment market, and an important part of circular economy in the mining industry. As such, we plan to expand our recycled product offerings to construction aggregate. For details, see “— Business Strategies — 1. Increase Our Production Capacity and Capabilities to Solidify Our Market Position” above.

OUR PRODUCTION FACILITIES

Our two production facilities with a total site area of approximately 228,683 sq.m. are located in Laizhou city, Shandong province, the PRC. Our production facilities are located in Jincheng town and Shahe town in Laizhou city, with aggregate gross floor areas of approximately 15,407 sq.m. and 143,607 sq.m., respectively. For details, see “— Properties” below. Our production facilities comprised warehouses, production compartments, office buildings and dormitory. As at the Latest Practicable Date, our production facilities are equipped with our major production machinery and equipment, including but not limited to ore feeders, scrapers, rotary screening machine, activities tanks, flotation tanks and excavators.



Above is our production facility located in Jincheng town, Laizhou city, Shandong province, the PRC.



Above is our production facility located in Shahe town, Laizhou city, Shandong province, the PRC.

Production capacity and utilisation rate

According to the Measures for the Administration of Permit for Operation of Hazardous Wastes (《危險廢物經營許可證管理辦法》) issued by the State Council (the “Measures”), companies engaging in hazardous waste collection, storage and treatment in the PRC shall obtain the Hazardous Waste Business Licence while there is an permitted annual treatment volume pursuant to such licence. In order to get the license, the relevant government authorities examine and approve the treatment facilities and equipment, as well

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as establish qualified rules and regulations, pollution prevention and control measures, and accident emergency rescue measures for such companies. As such, the annual production capacity of our Group was limited by our Hazardous Waste Business Licences.

As at 1 January 2018, the commencement of the Track Record Period, we possessed a Hazardous Waste Business Licence for our production facility in Jincheng town, Laizhou city with a permitted annual treatment capacity of 560,000 tonnes. In order to expand our business operation and increase our annual treatment capacity, we constructed our second production facility in Shahe town, Laizhou city, which we obtained a temporary permit with permitted treatment capacity of 300,000 tonnes to commence trial operation in October 2019. Since July 2020, we also possessed an additional Hazardous Waste Business Licence for our production facility in Shahe town, Laizhou city with a permitted annual treatment capacity of 600,000 tonnes. As at the Latest Practicable Date, the aggregate permitted annual treatment capacity of the two Hazardous Waste Business Licences possessed by our Group was 1.16 million tonnes. Our Group intends to further increase our permitted annual treatment capacity by establishing the New Production Facility. See “— Business Strategies” above for further details.

The following table sets out the permitted annual treatment capacity of our two production facilities and the actual annual treatment volume during the years/periods indicated:

	Year ended 31 December			Four months ended	Eight months ended
	2018	2019	2020	30 April 2021	31 August 2021
Production facility in Jincheng town, Laizhou city					
Permitted annual treatment capacity (tonnes) ⁽¹⁾	560,000	560,000	560,000	186,667 ⁽⁵⁾	373,333 ⁽⁵⁾
Actual annual treatment volume (tonnes)	560,067	592,778	530,906	188,363	296,628
Utilisation rate ⁽²⁾	100% ⁽³⁾	106% ⁽³⁾	95%	101%	80% ⁽⁶⁾
Production facility in Shahe town, Laizhou city					
Permitted annual treatment capacity (tonnes) ⁽¹⁾	— ⁽⁴⁾	300,000 ⁽⁴⁾	600,000 ⁽⁴⁾	200,000 ^(4, 5)	400,000 ^(4, 5)
Actual annual treatment volume (tonnes)	—	213,033	552,007	166,411	352,894
Utilisation rate ⁽²⁾	—	71%	92%	83%	88%

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Notes:

- (1) The permitted annual treatment capacity refers to the permitted annual treatment capacity as stated in the respective Hazardous Waste Business Licence of the production facilities.
- (2) Utilisation rate is calculated by dividing the actual annual treatment volume by the permitted annual treatment capacity.
- (3) As advised by our PRC Legal Advisers, according to the Measures, the holder of Hazardous Waste Business Licence shall re-apply for the licence if the hazardous wastes that it manages exceed 20% of the originally permitted annual treatment capacity. Accordingly, our Group does not need to re-apply for a new Hazardous Waste Business Licence as the actual annual treatment volume in both 2018 and 2019 of production facility in Jincheng town, Laizhou city were still within the allowed range. Our Group has obtained written confirmations from Laizhou Branch of Yantai Municipal Ecology and Environment Bureau (煙臺市生態環境局萊州分局) confirming that we were in compliance with PRC laws and regulations regarding the hazardous waste treatment volume during the Track Record Period. As advised by our PRC Legal Advisers, Laizhou Branch of Yantai Municipal Ecology and Environment Bureau is the competent authority to give confirmations in this regard. For illustrative purpose only, our Group has performed an assessment on the impact of the additional treatment volume to our financial performance and operating cash flow, our Directors are of the view that the additional treatment volume of approximately 67 tonnes for the year ended 31 December 2018 did not have any significant impact on our financial performance and operating cash flow given its minimal amount; and the additional treatment volume of approximately 32,778 tonnes for the year ended 31 December 2019 would increase our gross profit and operating cash flow for the same year by approximately RMB1.9 million and RMB1.9 million, respectively.
- (4) The production facility in Shahe town, Laizhou city is operated and managed by HC Mining. HC Mining obtained a temporary permit with permitted treatment capacity of 300,000 tonnes to commence trial operation in October 2019. Subsequently in July 2020, Yantai Municipal Ecology and Environment Bureau granted HC Mining the Hazardous Waste Business Licence with the permitted annual treatment capacity of 600,000 tonnes.
- (5) For illustrative purpose, the permitted treatment capacity for the production facilities in Jincheng town and Shahe town, Laizhou city for the four months ended 30 April 2021 and the eight months ended 31 August 2021 are illustrated on pro-rata basis.
- (6) The decrease in utilisation rate for production facility in Jincheng town, Laizhou city for the eight months ended 31 August 2021 was mainly attributable to the temporary suspension of operation from 1 July 2021 to 26 July 2021. See “— Repair and Maintenance” below for details.

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Our production machinery and equipment

During the Track Record Period, our production machinery and equipment were purchased in the PRC.

The table below sets forth information on our major machinery and equipment as at 30 April 2021:

Type of major machinery and equipment	Principal functions	Unit	Approximate average age (years) ⁽¹⁾	Approximate average remaining useful lives (years) ⁽²⁾
Ore feeder	Transport cyanide tailings to scrapers	2	3.0	7.0
Dissolving plant	Water is added to cyanide tailings to form a slurry	3	2.9	7.1
Rotary screening machine	Remove larger solid impurities such as sand and stones from the slurry	2	4.2	5.8
Activation tank	Provide sufficient retention time after chemical solutions and frothing agents are added to the slurry for the pyrite concentrate and gold-bearing pyrite concentrate leaching process	14	5.3	4.7
Flotation tank	Separate pyrite concentrate and gold-bearing pyrite concentrate from other materials by creating a froth which adheres to the pyrite concentrate	78	3.7	6.3

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Type of major machinery and equipment	Principal functions	Unit	Approximate average age (years) ⁽¹⁾	Approximate average remaining useful lives (years) ⁽²⁾
Filter press machines	Separate the solid products from liquids by drying the froth with pyrite concentrate or gold-bearing pyrite concentrate or high silicon tailings from the flotation tank	11	3.2	6.8
Excavators	Dig and move various materials at the production facilities, such as cyanide tailings, pyrite concentrates and gold-bearing pyrite concentrates	6	2.5	7.5

Notes:

- (1) The average age of the machinery and equipment is calculated based on the aggregate age of the machinery divided by the number of units of the machinery.
- (2) The remaining useful life of the machinery is calculated based on the estimated useful life deducted the average age of the machinery.

We adopt the straight line method to recognise the depreciation of our machinery and equipment. For the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, our capital expenditures in relation to property, plant and equipment amounted to approximately RMB16.1 million, RMB103.3 million, RMB9.3 million and RMB5.1 million, respectively.

Finance lease

As at 31 December 2020, one unit of excavator was financed by finance lease arrangements between our Group and a financial institution in the PRC whereby the ownership of the excavator remain with such financial institution until the total rental set out in the lease agreement has been paid up in full and whereupon our Group has exercised or deemed to have exercised the option to purchase the relevant excavator. For the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, we have entered into finance lease of various machinery with financial institutions, and our interest expense on lease liabilities were approximately RMB0.1 million, RMB60,000, RMB70,000 and RMB17,000, respectively.

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Repair and maintenance

We have adopted a preventive maintenance system for our machinery, including standardised inspection and maintenance procedures which require our production team to schedule regular downtime for maintenance and repairs, and regular inspection of our production machinery in order to ensure our production lines run smoothly and operate at optimal levels. Our production compartments are subject to on-going maintenance checks. Regular maintenance of our production facilities is generally performed on a monthly basis and is scheduled to rotate among different machinery and equipment to avoid complete shutdown of our operation. The standardised inspections and maintenance procedures include daily physical checks and inspections of major production machinery and equipment to ensure smooth production processes for the day-to-day operation and they are scheduled to rotate to avoid a complete shutdown of production operation of our production facilities. Detailed assessments and inspections as well as cleaning of major production machinery and equipment would be conducted quarterly when needed. As part of our Group’s preventive maintenance system for machinery, comprehensive inspections and checks are conducted on an annual basis, generally closer to Chinese New Year holidays in the PRC. In-depth and comprehensive repairs and maintenance works for production machinery and equipment would be conducted when there are notable and significant wear and tear, or deteriorating in conditions are noted during the inspections and maintenance procedures.

Our Group temporarily suspended the production operation of our production facility in Jincheng town, Laizhou city from 13 November 2019 to 19 January 2020, and from 1 July 2021 to 26 July 2021. Considered that our production facility in Jincheng town, Laizhou city commenced operation in 2014, an in-depth and comprehensive repair and maintenance for the machinery and equipment and the principal processing processes, involving a temporary suspension of operation, could enhance our overall production efficiency, and our Directors believed that it was a good timing for conducting such comprehensive check and repair after the commencement of our second production facility in Shahe town, Laizhou city in late 2019. In June 2021, during the on-going daily inspection of production compartment at production facility at Jincheng town, Laizhou city, the production team has noted wear and tear of the ceiling and wall panelling in the production compartment. Our production team further performed detailed assessment and inspection, and has found corrosions and other signs of deteriorations which our Directors considered as a risk to occupational safety. Our Directors therefore believed it was necessary to commence a comprehensive renovation and maintenance of the production compartment at the earliest convenience, which involved a temporary suspension of operations.

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Our Directors consider that temporary suspension of our production facility in Jincheng town, Laizhou city in 2019 and 2020 did not have any material impact on our business operations and financial performance during the Track Record Period as (i) our production facility in Shahe town, Laizhou city was in operation at the material time; (ii) the overall utilisation rates of our production facility in Jincheng town, Laizhou city in 2019 and 2020 were maintained at a high level; and (iii) we had maintained a growth in our revenue and net profit for the years ended 31 December 2019 and 2020. As to the temporary suspension in our production facility in Jincheng town, Laizhou city in July 2021, although such suspension resulted in a slight decrease in treatment volume in July 2021, our Group’s revenue generated from gold mine hazardous wastes treatment services for the eight months ended 31 August 2021 has increased as compared to the corresponding period in 2020. Our Directors believe that the temporary suspension of one of our production facilities would not have a material adverse impact on our Group’s financial performance and we had fully resumed our production operation in both of our production facilities, with sufficient demand from our upstream customers for our gold mine hazardous waste treatment services. During the Track Record Period, we had not experienced any material or prolonged interruption of our production processes due to machinery failure, which had significant impact on our financial conditions.

For the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, our total repair and maintenance costs were approximately RMB2.8 million, RMB3.4 million, RMB3.1 million and RMB0.7 million, respectively.

Our warehouses

Our business activities also require certain amount of space for storage purpose. As at the Latest Practicable Date, we had gross floor area of approximately 113,000 sq.m. for our warehouses. Our warehouses are mainly used for (i) storing cyanide tailings from our upstream customers, which we will store them at our production facilities before commencement of processing procedure; (ii) storing our recycled products from the process of gold mine hazardous waste treatment as we need time to arrange transportation of the recycled products with our downstream customers, mainly collection by them at our production facilities; (iii) storing high silicon tailings as we plan to commence the recycling of these high silicon tailings to construction aggregates and some other recycled products with economic value for sale; and (iv) certain areas within our production facilities are designated and leased to LZ Assets for the storage of cyanide tailing handled by the Laizhou City Municipal Government (萊州市人民政府). For warehouses used for storing cyanide tailings, we strictly followed the Technical Specification for Pollution Control of Cyanide Tailings in Gold Industry (《黃金行業氰渣污染控制技術規範》) issued by the Ministry of Ecology and Environmental (生態環境部) for the design and construction to prevent any seepage.

Our Directors confirm that, as advised by our PRC Legal Advisers, during the Track Record Period and up to the Latest Practicable Date, the warehouses of our Group complies with the relevant applicable PRC laws and regulations in all material respects.

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Inventory Management

Our inventory comprises mainly raw materials, work-in-progress and finished goods of recycled products available for sale.

Our raw materials inventories mainly include gold mine hazardous wastes collected from customers but yet to be treated and consumables to be used in our operations such as xanthate and sodium sulphide. We continuously monitor our inventory level by conducting regular checks on quality and quantity. In addition, our production team monitors closely and formulate our procurement plan and budget. As at 31 December 2018, 2019 and 2020 and 30 April 2021, our raw materials inventories amounted to approximately RMB0.9 million, RMB2.0 million, RMB2.6 million and RMB2.4 million, respectively.

We generally produce recycled products on a continuous basis as our utilisation rates on the permitted annual treatment capacity of hazardous wastes were close to fully utilised. We stored the finished goods in our warehouses pending for sales to our downstream customers. As at 31 December 2018, 2019, 2020 and 30 April 2021, our finished goods amounted to approximately RMB3.1 million, RMB13.8 million, RMB20.1 million and RMB23.3 million, respectively. This increase was in line with our revenue growth during the Track Record Period and for our anticipation of the increase in production to meet the demand for our recycled products in 2021 based on purchase orders we received from our customers and the production forecast.

There is no material obsolete stock in our Group’s inventory due to the characteristic of the raw materials and products. For further analysis of our inventories during the Track Record Period, see “Financial Information — Description of Certain Items of Consolidated Statements of Financial Position — Inventories” in this document.

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CUSTOMERS

The following table sets forth our revenue breakdown by customer types during the Track Record Period:

	2018		Year ended 31 December				Four months ended 30 April			
	RMB'000	%	2019		2020		2020		2021	
			RMB'000	%	RMB'000	%	RMB'000	%	RMB'000	%
Gold mining companies	41,014	40.1	61,567	46.1	107,958	52.6	30,212	61.6	34,277	50.5
Chemical manufacturing companies	45,466	44.4	36,428	27.3	42,463	20.7	8,470	17.3	1,221	1.8
Trading companies	14,718	14.4	21,177	15.8	40,459	19.6	5,507	11.2	27,584	40.6
Others ^(Note)	1,083	1.0	14,492	10.8	14,512	7.1	4,841	9.9	4,836	7.1
Total	102,281	100.00	133,664	100.00	205,392	100.00	49,030	100.00	67,918	100.00

Note: Others mainly represented the revenue from LZ Assets during the Track Record Period.

Our customers for the gold mine hazardous waste treatment services are mainly gold smelting companies under gold mining companies with mine operations in Shandong province and in particular, in Yantai city while our customers for the sale of recycled products are mainly chemical manufacturing companies and trading companies of chemicals over nine provinces in the PRC. Our trading company customers are generally engaged in the trading and sale of mining related products such as pyrite concentrates, construction materials, as well as other metals and/or chemical products in the PRC, who, to our Directors' best knowledge, on-sell our products to its customers which are chemical manufacturers in the PRC. For the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, our five largest customers accounted for approximately 69.8%, 67.3%, 71.8% and 82.1% of our total revenue, respectively. During the same periods, our largest customer accounted for approximately 22.6%, 21.4%, 27.3% and 24.1% of our total revenue, respectively.

During the Track Record Period, we had eight upstream customers who have engaged our Group for the gold mine hazardous waste treatment services, and over 45 downstream customers who have purchased recycled products from our Group. According to the F&S Report, it is normal in the industry for a gold mine hazardous waste treatment service provider to transact with only a few gold smelting companies. It is also an industry practice that chemical manufacturers may choose to purchase or source recycled products from trading company customers.

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Our five largest customers

The following table sets forth the details of our five largest customers for the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021:

For the year ended 31 December 2018

Rank	Customer	Year of commencement of business relationship	Principal service provided/product sold	Approximate amount of revenue <i>RMB' 000</i>	Approximate percentage of our total revenue %	Credit term(s)	Settlement method(s)
1	Zhongkuang Gold	2014	Gold mine hazardous waste treatment services	23,136	22.6	Within 30 days	Bank transfer
2	Qinhuangdao Hefengxiang Chemical Co., Ltd. (秦皇島鶴鳳翔化工有限公司) (“Qinhuangdao Hefengxiang”) ⁽²⁾	2015	Sale of recycled products	18,060	17.7	Within 60 days	Bank transfer/ bank acceptance notes
3	Shandong Gold Smelting ⁽³⁾	2017	Gold mine hazardous waste treatment services	15,049	14.7	Within 60 days	Bank transfer
4	Shandong Lianmeng Phosphate & Compound Fertilisers Co., Ltd. (山東聯盟磷複肥有限公司) (“Shandong Lianmeng”) ⁽⁴⁾	2014	Sale of recycled products	10,245	10.0	Within 60 days	Bank transfer/ bank acceptance notes
5	Customer A ⁽⁵⁾	2017	Sale of recycled products	4,903	4.8	Within 60 days	Bank acceptance notes
				71,393	69.8		

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For the year ended 31 December 2019

Rank	Customer	Year of commencement of business relationship	Principal service provided/product sold	Approximate amount of revenue <i>RMB' 000</i>	Approximate percentage of our total revenue %	Credit term(s)	Settlement method(s)
1	Shandong Gold Smelting ⁽³⁾	2017	Gold mine hazardous waste treatment services	28,569	21.4	Within 60 days	Bank transfer
2	Zhongkuang Gold ⁽¹⁾	2014	Gold mine hazardous waste treatment services	20,566	15.4	Within 30 days	Bank transfer
3	Shandong Lianmeng ⁽⁴⁾	2014	Sale of recycled products	17,021	12.7	Within 60 days	Bank transfer
4	LZ Assets ⁽⁶⁾	2018	Storage of hazardous waste rental services	14,490	10.8	Payment in advance	Bank transfer
5	Zhaoyuan Hexi Gold Mine (招遠市河西金礦) ⁽⁷⁾	2017	Gold mine hazardous waste treatment services	9,369	7.0	Within 30 days	Bank transfer/ bank acceptance notes
				90,015	67.3		

For the year ended 31 December 2020

Rank	Customer	Year of commencement of business relationship	Principal service provided/product sold	Approximate amount of revenue <i>RMB' 000</i>	Approximate percentage of our total revenue %	Credit term(s)	Settlement method(s)
1	Shandong Gold Smelting ⁽³⁾	2017	Gold mine hazardous waste treatment services	56,074	27.3	Within 60 days	Bank transfer
2	Zhongkuang Gold ⁽¹⁾	2014	Gold mine hazardous waste treatment services	34,822	17.0	Within 30 days	Bank transfer
3	Shandong Lianmeng ⁽⁴⁾	2014	Sales of recycled products	20,852	10.2	Within 60 days	Bank transfer
4	Qinhuangdao Hefengxiang ⁽²⁾	2015	Sales of recycled products	20,409	9.9	Within 60 days	Bank transfer
5	Customer B ⁽⁸⁾	2019	Sales of recycled products	15,314	7.4	Within 60 days	Bank transfer/ bank acceptance notes
				147,471	71.8		

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For the four months ended 30 April 2021

Rank	Customer	Year of commencement of business relationship	Principal service provided/product sold	Approximate amount of revenue RMB'000	Approximate percentage of our total revenue %	Credit term(s)	Settlement method(s)
1	Shandong Gold Smelting ⁽³⁾	2017	Gold mine hazardous waste treatment services	16,392	24.1	Within 60 days	Bank transfer
2	Tongling City Xingtian Huarui Industrial Co., Ltd. (銅陵市興天華瑞實業有限公司) (“Tongling Xingtian Huarui”) ⁽⁹⁾	2020	Sales of recycled products	15,822	23.3	Payment in advance	Bank transfer/bank acceptance notes
3	Zhongkuang Gold ⁽¹⁾	2014	Gold mine hazardous waste treatment services	14,901	21.9	Within 30 days	Bank transfer
4	LZ Assets ⁽⁶⁾	2018	Storage of hazardous waste rental services	4,836	7.1	Payment in advance	Bank transfer
5	Ezhou Wendefu Trade Co., Ltd. (鄂州穩德福貿易有限公司) (“Ezhou Wendefu”) ⁽¹⁰⁾	2021	Sales of recycled products	3,858	5.7	Payment in advance	Bank transfer
				<u>55,809</u>	<u>82.1</u>		

Notes:

- (1) Zhongkuang Gold is a subsidiary of a Chinese state-owned enterprise, mainly engaged in gold production business in the PRC.
- (2) Qinhuangdao Hefengxiang is a privately-owned PRC company, which is located in Qinhuangdao city, Hebei province, mainly engaged in the production and sale of chemical products in the PRC with over 100 employees and with a registered capital of RMB50 million as at the Latest Practicable Date.
- (3) Shandong Gold Smelting is a subsidiary of Shandong Gold Mining Co., Ltd. whose shares are listed on the Stock Exchange (stock code: 1787) and Shanghai Stock Exchange (stock code: 600547), mainly engaged in precious metal smelting business in the PRC.
- (4) Shandong Lianmeng is a privately-owned PRC company, which is located in Shouguang city, Shandong province, mainly engaged in the production of chemical fertilisers in the PRC with over 700 employees.
- (5) Customer A is a privately-owned PRC company, which is located in Xinxiang city, Henan province, mainly engaged in the trading of chemical products in the PRC and with a registered capital of RMB0.6 million as at the Latest Practicable Date.
- (6) LZ Assets is a Chinese state-owned enterprise, which is located in Laizhou city, Shandong province, mainly engaged in the investment and operation of state-owned assets in the PRC.
- (7) Zhaoyuan Hexi Gold Mine is a collectively-owned PRC enterprise, which is located in Laizhou city, Shandong province, mainly engaged in gold mining and processing in the PRC with over 600 employees.

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- (8) Customer B is a privately-owned PRC company, which is located in Xintai city, Shandong province, mainly engaged in the trading of coal, steel pipe and pyrite concentrate in the PRC and with a registered capital of RMB30 million as at the Latest Practicable Date.
- (9) Tongling Xingtian Huarui is a privately-owned PRC company, which is located in Tongling city, Anhui province, mainly engaged in the trading and sale of mining related products, construction materials and metals, with its business coverage based in the PRC. Tongling Xingtian Huarui was established on 28 March 2017 with a registered and paid-up capital of RMB5 million and around 13 employees as at the Latest Practicable Date. To the best knowledge of our Directors after reasonable enquiries, its revenue amounted to approximately RMB57 million and RMB13 million for the years ended 31 December 2019 and 2020, respectively.
- (10) Ezhou Wendefu is a privately-owned PRC company, which is located in Ezhou city, Hubei province, mainly engaged in the trading of mining related products, with its business coverage based in the PRC. Ezhou Wendefu was established on 29 August 2019 with a registered and paid-up capital of RMB5 million and around eight employees as at the Latest Practicable Date. To the best knowledge of our Directors after reasonable enquiries, its revenue amounted to approximately RMB40 million for the year ended 31 December 2020.

Our sale transactions with Tongling Xingtian Huarui and Ezhou Wendefu

Our Group became acquainted with Tongling Xingtian Huarui and Ezhou Wendefu in late 2020 and early 2021, respectively, through the introduction of our two existing downstream customers. For the four months ended 30 April 2021, we recorded sale of pyrite concentrate to Tongling Xingtian Huarui of approximately 88,760 tonnes and recognised revenue of approximately RMB15.8 million, and sale of pyrite concentrate to Ezhou Wendefu of approximately 21,800 tonnes and recognised revenue of approximately RMB3.9 million. As at the Latest Practicable Date, all of the recycled products of Tongling Xingtian Huarui and Ezhou Wendefu purchased from us during the four months ended 30 April 2021 was subsequently sold to their customers, who are mainly manufacturers of sulfuric acid in the PRC.

To the best knowledge of our Directors, Tongling Xingtian Huarui and Ezhou Wendefu generally source pyrite concentrate from various provinces in the PRC and their demands for pyrite concentrate are steady. Since our first acquaintance, Tongling Xingtian Huarui and Ezhou Wendefu have gradually increased their purchase volume for our recycled products and they have become two of our five largest customers for the four months ended 30 April 2021, which our Directors believe was mainly attributable to (i) the increasing demand of pyrite concentrate from Tongling Xingtian Huarui and Ezhou Wendefu as they increasingly recognised our stable supply; and (ii) the decrease in the sale of recycled products to our certain existing major downstream customers, namely Shandong Lianmeng and Qinhuangdao Hefengxiang, which is because they have accumulated adequate inventories which were yet to be fully utilised during the four months ended 30 April 2021.

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To the best knowledge of our Directors, and as confirmed by Tongling Xingtian Huarui and Ezhou Wendefu, save for being our customers, there are no other past or present relationships (family, business, employment, financing, trust, shareholding or otherwise) between our Group (including our Directors, Controlling Shareholders, senior management or any of their respective associates) and Tongling Xingtian Huarui and/or Ezhou Wendefu and their respective ultimate beneficial owners.

None of our Directors or their close associates, or any Shareholders, who, (to the best knowledge of our Directors) are beneficially interested in 5% or more of the issued share capital of our Company, have had any interest in any of our five largest customers during the Track Record Period. All of the five largest customers during the Track Record Period are Independent Third Parties. During the Track Record Period and up to the Latest Practicable Date, there were no litigations or arbitration or disputes between us and our major customers which have a material and adverse impact on our business operation or financial condition.

Major contract terms with our customers

The terms of each contract entered into between us and our customers may vary, but the salient terms of a typical contract for each of our business segments are as follows.

Salient terms of service contracts for gold mine hazardous waste treatment services

- ***Scope of work.*** Gold mine hazardous waste treatment services provided by us.
- ***Duration of service and treatment volume.*** The term of our service contracts varies depending on commercial negotiations with each customer, generally ranging from three to 12 months and with option of renewal, based on negotiation with our customers. Our service contracts with certain customers specify the expected volume of gold mine hazardous waste to be treated by us.
- ***Fee and payment terms.*** Our fees are determined based on the type and volume of the gold mine hazardous wastes we treat and payable by our customers upon their receipt of our invoices. In general, our fees are calculated based on a fixed fee per tonne and the actual amount of waste we receive from the customer per month pursuant to the service contracts. Depending on negotiations between our customers and us, we generally request prepayments at the commencement of service contracts and we also allow credit terms of 30 to 60 days after taking into account various factors including the years of business relationships and credit profiles of our customers.

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- ***Logistic arrangement.*** Generally, our customers are responsible for loading the gold mine hazardous wastes that they request us to treat. We are responsible for collecting the gold mine hazardous wastes from our customers directly upon notice from our customers. We typically engage transportation companies to collect the gold mine hazardous wastes from our customers to our production facilities. The transportation companies are liable for any leakage or pollution during the course of transportation.
- ***Environmental protection.*** We are responsible for overseeing the gold mine hazardous waste treatment process is in compliance with relevant environmental protection laws and regulations of the PRC.
- ***Jurisdiction.*** The contract shall be governed by the PRC laws. Any disputes between our Group and the customer shall firstly be resolved through negotiations, failure of which, the parties may resort to litigation proceedings.

Salient terms of sales contracts for recycled products

- ***Product type.*** Product type and specification are stipulated in the contracts. For example, our sales contracts generally stipulate the minimum percentage of sulphur and iron and the maximum percentage of water in the pyrite concentrate and/or gold-bearing pyrite concentrate as agreed by both parties.
- ***Quantity.*** We generally agreed with the customers and stipulate a fixed quantity of purchase.
- ***Price.*** Our fees are calculated based on recycled products per tonne and the actual amount purchased from the customer pursuant to the respective sales contracts. Depending on negotiations between our customers and us, we generally request prepayments at the commencement of sales contracts and we also allow credit terms of 30 to 60 days after taking into account various factors including the years of business relationships and credit profiles of our customers.
- ***Quality and acceptance.*** Our sales contracts stipulate certain recycled products standards agreed by both parties to measure the quality of the products. Both parties have the right to sample and assess the quality of the products. There is no terms for the return of recycled products. Our Directors confirmed that there was no returned products during the Track Record Period.

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- **Logistic arrangement.** Our customers generally pick up the products at our production facilities. The customers can deploy representatives to witness the loading process of the recycled products at our production facilities and they are responsible for the transportation costs.
- **Payment terms.** Payment generally shall be made before the recycled products are delivered to the customer.
- **Jurisdiction.** The sales contract shall be governed by the PRC laws. Any disputes between our Group and the customer shall firstly be resolved through negotiations, failure of which, the parties may resort to litigation proceedings.

Pricing policy

Our PRC Legal Advisers are of the view that our Group’s provision of services and sale of products are not subject to price control or regulations issued by the PRC government authorities.

For our gold mine hazardous waste treatment services, we adopt a cost-plus model where we determine the treatment fee by taking into account various factors such as the grading and type of the gold mine hazardous waste to be treated, the estimated transportation costs, customer relationships, competitive landscape, market circumstances and our business strategies adopted from time to time.

For our recycled products we generally adopt a cost-plus model where we determine the price of our recycled products by taking into account various factors such as the cost of raw materials, transportation costs, customer relationships, competitive landscape, market circumstances (including the prevailing market price of sulphur, iron and sulphuric acid) and our business strategies adopted from time to time.

Credit policy

We generally negotiate credit terms with our customers on a case-by-case basis. Depending on negotiations between our customers and us, we generally would also receive advance payment from customers for our gold mine hazardous waste treatment services and sale of recycled products. While credit payment terms are not granted to some of our customers, our Directors confirmed that our Group generally grants certain credit terms to customers after taking into account various factors including the years of business relationships and credit profiles of our customers. As at 31 December 2018, 2019 and 2020 and 30 April 2021, our net trade receivables amounted to approximately RMB18.9 million, RMB348,000, RMB22.8 million and RMB14.7 million, respectively, while our average trade receivables turnover days were approximately 75.4 days, 26.3 days, 20.6 days and 33.2 days, respectively. See “Financial Information — Description of Certain Items of Consolidated Statements of Financial Position — Trade Receivables” in this document for further details of our trade receivables. Please also refer to Note 3.1(b) to the historical financial information in the Accountant’s Report set out in Appendix I to this document for further details of our credit risks.

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SALES AND MARKETING

During the Track Record Period, we have been putting effort in enhancing visibility in the industry, in order to explore new business opportunities, maintain our relationship with our customers and potential customers, and to keep up with the relevant development trends of our industry.

In regards to our gold mine hazardous waste treatment service business, as our customer base is relatively stable, we mainly focus on maintaining good customer relationship to ensure our existing customers continue to engage us for gold mine hazardous waste treatment services. In regards to our sale of recycled products business, we generally promote our products by participating in various industry marketing events of different business associations in order to further explore new business opportunities and to allow our staff to be informed of the relevant industry developments.

As at the Latest Practicable Date, we have two employees responsible for sales and marketing of our products and services. Our sales managers are primarily responsible for exploring new business opportunities, securing new contracts, maintaining customer relationships and market development.

PURCHASES OF SERVICES AND GOODS

During the Track Record Period, suppliers of goods and services to our Group mainly included: (i) transportation companies; (ii) suppliers of consumables such as xanthate and sodium sulphide; (iii) supplier of electricity and water; and (iv) suppliers for other services such as laboratory testing. For details of the breakdown of our costs of sales during the Track Record Period, see “Financial information — Description of Selected Items in the Consolidated Statements of Comprehensive Income — Costs of Sale” in this document.

All of our suppliers during the Track Record Period were located in the PRC. Our Directors believe that a stable supply of our major consumables and transportation services can be secured. Our Directors also believe that the fluctuation of the prices of transportation services and consumables during the Track Record Period was influenced by a number of factors, including regulations and policies of the PRC government, and the supply of and demand for such services and consumables in the PRC. For details relating to the impact on the price fluctuations in our cost of sales, see “Financial Information — Key Factors Affecting Our Results of Operations — Transportation Costs and Price of Consumables” in this document. To manage such price fluctuation, we would adjust the selling prices of our products and our treatment fees from time to time according to the movements in our costs of sale with a view to pass the additional costs to our customers to an extent that is commercially practicable.

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For the years ended 31 December 2018, 2019, 2020 and the four months ended 30 April 2021, three, two, two and two of our five largest suppliers had commenced business relationship with us for five years or more, respectively. Our suppliers generally grant us a credit period of 30 to 90 days. During the Track Record Period, we settled payments with our suppliers in RMB mainly by bank transfer and bank acceptance notes. We adopt strict procedures in selecting our suppliers. We review their background information, including their scale of operation, quality control system, prices, financial position and reputation in the industry. We maintain a list of approved suppliers which a supplier will become our approved supplier only after they have met our selection criteria. We also conduct evaluation of our approved suppliers from time to time, which include the stability and schedule of supply, their production facilities (if applicable) and the quality control system. During the Track Record Period, we had not experienced any material return of consumables or in dispute with our suppliers, nor any disruption, shortage or delay in the supply of consumables and services, which may materially and adversely affect our operations and financial conditions.

Our five largest suppliers

For the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, our five largest suppliers accounted for approximately 50.2%, 66.2%, 54.1% and 51.5% of our total cost of sales, respectively. During the same periods, our largest supplier accounted for approximately 18.1%, 25.3%, 18.9% and 15.4% of our total cost of sales, respectively.

The tables below set forth a summary of our five largest suppliers for the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021:

For the year ended 31 December 2018

Rank	Supplier	Year of commencement of business relationship	Principal goods/services purchased	Approximate amount of purchase <i>RMB' 000</i>	Approximate percentage of our total cost of sales %	Credit term(s)	Settlement method(s)
1	Supplier A ⁽¹⁾	2016	Transportation services	8,049	18.1	Within 90 days	Bank acceptance notes
2	Laizhou Electricity Generating Company of State Grid Shandong Electric Power Company (國網山東省電力公司萊州市供電公司) (“Laizhou Electricity Generating Company”) ⁽²⁾	2016	Electricity supply	4,837	10.9	Payment in advance	Bank transfer
3	Supplier B ⁽³⁾	2017	Transportation services	3,496	7.8	Within 90 days	Bank acceptance notes
4	Supplier C ⁽⁴⁾	2015	Transportation services	3,418	7.7	Within 90 days	Bank acceptance notes
5	Supplier D ⁽⁵⁾	2018	Transportation services	2,542	5.7	Within 90 days	Bank acceptance notes
				22,342	50.2		

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For the year ended 31 December 2019

Rank	Supplier	Year of commencement of business relationship	Principal goods/services purchased	Approximate amount of purchase <i>RMB' 000</i>	Approximate percentage of our total cost of sales %	Credit term(s)	Settlement method(s)
1	Supplier D ⁽⁵⁾	2018	Transportation services	13,013	25.3	Within 90 days	Bank acceptance notes
2	Supplier C ⁽⁴⁾	2015	Transportation services	10,373	20.1	Within 90 days	Bank acceptance notes
3	Supplier E ⁽⁶⁾	2019	Transportation services	3,868	7.5	Within 90 days	Bank acceptance notes
4	Laizhou Electricity Generating Company	2016	Electricity supply	3,708	7.2	Payment in advance	Bank transfer
5	Supplier F ⁽⁷⁾	2019	Transportation services	3,138	6.1	Within 90 days	Bank transfer
				34,100	66.2		

For the year ended 31 December 2020

Rank	Supplier	Year of commencement of business relationship	Principal goods/services purchased	Approximate amount of purchase <i>RMB' 000</i>	Approximate percentage of our total cost of sales %	Credit term(s)	Settlement method(s)
1	Supplier D ⁽⁵⁾	2018	Transportation services	15,436	18.9	Within 90 days	Bank transfer/ bank acceptance notes
2	Supplier C ⁽⁴⁾	2015	Transportation services	12,899	15.8	Within 90 days	Bank transfer
3	Supplier G ⁽⁸⁾	2019	Electricity and water supply	7,288	8.9	Within 30 days	Bank transfer
4	Laizhou Electricity Generating Company ⁽²⁾	2016	Electricity supply	5,443	6.7	Payment in advance	Bank transfer
5	Supplier E ⁽⁶⁾	2019	Transportation services	3,065	3.8	Within 90 days	Bank transfer
				44,131	54.1		

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For the four months ended 30 April 2021

Rank	Supplier	Year of commencement of business relationship	Principal goods/services purchased	Approximate amount of purchase RMB'000	Approximate percentage of our total cost of sales %	Credit term(s)	Settlement method(s)
1	Supplier C ⁽⁴⁾	2015	Transportation services	4,186	15.4	Within 90 days	Bank transfer
2	Supplier D ⁽⁵⁾	2018	Transportation services	3,699	13.6	Within 90 days	Bank transfer/ bank acceptance notes
3	Qingdao Yiyun Transportation Co., Ltd. (青島益運運輸有限公司) ("Qingdao Yiyun") ⁽⁹⁾	2021	Transportation services	2,653	9.8	Within 30 days	Bank transfer
4	Supplier G ⁽⁸⁾	2019	Electricity and water supply	1,946	7.2	Within 30 days	Bank transfer
5	Laizhou Electricity Generating Company ⁽²⁾	2016	Electricity supply	1,495	5.5	Payment in advance	Bank transfer
				13,979	51.5		

Notes:

- (1) Supplier A is a privately-owned PRC company, which is located in Yantai city, Shandong province, mainly engaged in road transportation services for goods in the PRC.
- (2) Laizhou Electricity Generating Company is a branch institution of a collectively-owned PRC enterprise, which is located in Laizhou city, Shandong province, mainly engaged in power supply in the PRC.
- (3) Supplier B is a privately-owned PRC company, which is located in Laiyang city, Shandong province, mainly engaged in road transportation services for goods in the PRC.
- (4) Supplier C is a privately-owned PRC company, which is located in Zhaoyuan city, Shandong province, mainly engaged in road transportation services for goods in the PRC.
- (5) Supplier D is a privately-owned PRC company, which is located in Zhaoyuan city, Shandong province, mainly engaged in road transportation services for goods in the PRC.
- (6) Supplier E is a privately-owned PRC company, which is located in Laizhou city, Shandong province, mainly engaged in road transportation services for goods in the PRC, with around ten employees as at the Latest Practicable Date. Its customer base consists of approximately over ten customers, including but not limited to, PRC-based companies which are principally engaged in trading of construction materials, mining materials and gold mining companies.

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- (7) Supplier F is a privately-owned PRC company, which was located in Laizhou city, Shandong province, mainly engaged in road transportation services for goods in the PRC. It was deregistered on 15 June 2020.
- (8) Supplier G is a privately-owned PRC company, which is located in Laizhou city, Shandong province, mainly engaged in the production of industrial salt in the PRC. It is also engaged in the supply of water and electricity.
- (9) Qingdao Yiyun is a privately-owned PRC company, which is located in Qingdao city, Shandong province, mainly engaged in road transportation for goods in the PRC as a qualified service provider.

None of our Directors or their close associates, or any, Shareholders who (to the best knowledge of our Directors are beneficially interested in 5% or more of the issued share capital of our Company) or their respective close associates had any interest in any of our five largest suppliers during the Track Record Period. All of the five largest suppliers are Independent Third Parties. During the Track Record Period and up to the Latest Practicable Date, our Group had not experienced any major disruption in business due to material delays or defaulting payments.

Major contract terms with our suppliers

During the Track Record Period and up to the Latest Practicable Date, we generally enter into framework agreements which do not have any minimum purchase or procurement commitment with a contract term ranging from five to 12 months with our suppliers for purchase of consumables and transportation companies for transportation services, whereas the terms and conditions of an individual transaction (such as quantity and delivery schedule) will be set out in the relevant purchase order of the transaction. Our Directors consider it is in line with normal practice in the industry. Set out below is a summary of typical key terms of our purchase contracts with suppliers:

Transportation services

Terms or duration. We generally enter into a one-year framework agreement with the suppliers provide transportation services.

Obligations. The suppliers provide transportation services with their own vehicles. Suppliers should follow instructions from us including the delivery date and time, delivery method and delivery route (if any), to deliver the goods or products to places designated by us. Suppliers cannot subcontract the transportation services to any third parties without our prior consent.

Price and payment terms. Parties agree to follow the prevailing market price at the time of purchase order. There is no minimum annual transaction amount required pursuant to the framework agreements. Suppliers should issue an invoice to us at the end of each month in respect of the services they rendered in that month for settlement.

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Purchase of consumables

Product type. Description and specification of the consumables are specified in the framework agreements.

Contract period. We generally enter into framework agreements which do not have any minimum purchase commitment with the suppliers of raw materials and consumables with a contract term ranging from five to 12 months or a framework agreement does not contain any standard fixed duration.

Price. In general, unit price of the consumables are not stated in the framework agreements. Instead, parties agree to follow the prevailing market price at the time of purchase order. There is no minimum annual transaction amount required pursuant to the framework agreements.

Delivery. Delivery method are specified in the contract and we generally required the suppliers to be responsible for the transportation costs.

Payment terms. Payment terms are subject to negotiation with suppliers. For some of the suppliers, the amounts payable by us shall be settled on a monthly basis while some of the suppliers require payment upon delivery or grant us a credit period of 30 days.

Logistics and Transportation

Our upstream customers are typically responsible for sorting and packaging the gold mine hazardous waste that they request us to treat. We are typically required to designate transportation companies for gold mine hazardous waste transportation to transport the gold mine hazardous waste from the location of our upstream customers to our production facilities. The transportation companies are liable for any leakage or pollution during the course of transportation. We collect gold mine hazardous waste from our upstream customers upon their notices. According to the Safety Management of Dangerous Goods in Road Transport (《危險貨物道路運輸安全管理辦法》), the carriers of dangerous goods shall carry dangerous goods within the business scope as permitted by competent departments of transport, and shall use vehicles and equipment whose safety technical conditions meet the requirements of the national standards and which match the nature and weight of the dangerous goods carried. During the Track Record Period up to April 2021, we experienced a non-compliance incident in relation to the failure to engage transportation companies with permits for transporting cyanide tailings. For further details, see “— Regulatory Compliance — (ii) Transportation of Cyanide Tailings” below.

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In general, our downstream customers do not request us to deliver our recycled products from our production facilities to their designated locations. Further, we also engage transportation companies to assist us on the transportation within our production facilities for our daily operation needs including the transition of high silicon tailings and flipping and airing of gold mine hazardous wastes in our production facilities before further processing procedures. During the Track Record Period, transportation companies engaged by us for transportation within our production facilities were principally involved in the process of airing of gold mine hazardous wastes collected from our upstream customers, which was the first step of detoxification conducted within our warehouses. We deployed those transportation companies to assist on flipping and rolling the gold mine hazardous wastes stored in the warehouses in order to speed up the volatilisation of free cyanide ion and other materials.

Our logistic arrangements with third-party transportation companies allow us to devote less capital investment than we would have to devote to developing and maintaining our own large-scale logistics system. Outsourcing the transportation services also allows us to transfer most of the risks relating to transportation of gold mine hazardous wastes to them. During the Track Record Period and as at the Latest Practicable Date, we had not experienced any significant delay in logistics that would materially and adversely affect our business operations and we did not encounter any shortage of supply of transportation services. Furthermore, the current market for provision of transportation services provides us with sufficient alternative options of transportation companies who could offer similar terms as our existing transportation companies.

OVERLAPPING OF MAJOR CUSTOMER AND SUPPLIER

Based on our experience in the gold mine solid waste and hazardous waste treatment market in the PRC and also according to the F&S Report, our Directors note that it is normal practice that gold mine hazardous waste treatment companies purchase consumables from gold mining and production companies in the PRC. However, it is not our common practice to purchase from our customers or sell to our suppliers.

During the Track Record Period, among our five largest customers, Shandong Gold Smelting is our overlapping customer and supplier. To the best knowledge and belief of our Directors, Shandong Gold Smelting and its ultimate beneficial owner are Independent Third Parties.

For the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, we provided gold mine hazardous waste treatment services to Shandong Gold Smelting while we also purchased consumables, namely gold-bearing mineral powder, from Shandong Gold Smelting for the trial use as an agent during the flotation process. Our Directors confirm that all of our sales to and purchases from Shandong Gold Smelting were incidental transactions, which were not inter-conditional, inter-related or otherwise considered as one transaction.

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The table below sets out the total sales and total purchases attributable to/from Shandong Gold Smelting for the years/periods indicated:

	Years ended 31 December			Four months ended 30 April
	2018	2019	2020	2021
Sales				
Revenue (<i>RMB'000</i>)	15,049	28,569	56,074	16,392
As a percentage of our total revenue	14.7%	21.4%	27.3%	24.1
Related cost (<i>RMB'000</i>)	7,077	8,838	20,218	6,522
Gross profit margin	53.0%	69.1%	63.9%	60.2%
Purchases				
Cost (<i>RMB'000</i>)	571	28	180	267
As a percentage of our total amount of purchase	1.8%	0.1%	0.3%	1.4%

Our Directors are of the view that there are no unusual benefits to our Group or the overlapping customer and supplier other than the profit and loss derived from the arm's length transaction with the overlapping customer and supplier as disclosed above.

SEASONALITY

Our Directors consider that there is no material seasonal fluctuations of the business of our Group.

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RESEARCH AND DEVELOPMENT

Our research and development efforts primarily focus on expanding our product offerings, upgrading our technologies on comprehensive utilisation and harmless treatment of gold mine hazardous wastes processing and developing new methods. We continue and further explore our technological advantage by means of various research and development projects ourselves, invite external industry experts to review of specific issues as the case may require and technological exchange and cooperation with university research and development centre.

We developed collaborations with Shandong University (山東大學), and scientific research institutes in the PRC on research and development of technology for comprehensive utilisation of gold mine hazardous wastes. We also conducted an electric furnace smelting research with Chaoyang NEU Minerals and Metallurgy Institute (朝陽東大礦業研究院) in 2020 for gold tailings processing technology. We have also set up HC R&D with the intention to further enhance our technologies in producing high-quality recycled products. As at the Latest Practicable Date, we had registered or obtained governmental approvals of six patents in the PRC relating to our inventions, and we are in the progress of applying for three patents in the PRC. Since January 2021, we have also engaged a third-party to develop a new production line or provide consultancy services to our Group on research and development. Depending on the terms of individual agreements, the intellectual property rights of the research and development outcomes shall be owned either solely by us or jointly by us and our research partners.

Our research and development team comprises four members and three of them received tertiary education including Mr. Sheng, our executive Director and chief technical officer of our Company, who has more than 29 years of experience in chemical related industry. For details on the experience and qualifications of Mr. Sheng, see “Directors and Senior Management” in this document. Our research and development expenses incurred during the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021 were approximately RMB2,400, RMB0.2 million, RMB1.6 million and RMB0.3 million, respectively.

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QUALITY ASSURANCE

Our Directors believe that high quality and standards are crucial to our Group’s success. HC Environmental, one of our major operating subsidiary, has obtained the accreditation of ISO 9001 since October 2018. The application for ISO 9001 certification was initiated by us to maintain a well-established quality management system for our Group. The major objective for adopting ISO 9001 is to demonstrate our ability to consistently provide quality services to our customers and we aim to enhance customer satisfaction through effective application of the quality management system. We have a quality control team who directly reports to our executive Directors. For qualification and experience of our Directors, see “Directors and Senior Management” in this document. The quality control team is responsible for the quality assurance of our recycled products, including the formulation of quality standards and control. Our Group’s recycled products have undergone internal production control, quality assurance control and rigorous testing. We are dedicated to ensuring the high standard of safety and quality of (i) the recycled products extracted by us; (ii) the consumables used for our production of recycled products procured from our suppliers; and (iii) suppliers of services for our core business activities, such as transportation companies.

We have adopted a stringent quality and management control system which oversees the entire treatment and production process as in order to ensure the quality of our products is up to standard. Our quality control procedures are performed continuously at various stages of our processing and storage to ensure the quality of our products. We have internal rules governing work procedures for various stages of operations and works performed by us, such as outlining the responsibilities of personnel of different levels, setting up general procedures for planning, management, repair and maintenance, accident reporting, communications with customers, procurement of goods and service, to ensure our operations are carried out in a safe and timely manner to the satisfaction of our customers.

During the Track Record Period and up to the Latest Practicable Date, we had not received any material complaint or request for any kind of compensation from our customers due to or in relation to the quality of the recycled products sold by us and the services provided by us.

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MARKET AND COMPETITION

According to the F&S Report, the gold mine hazardous waste treatment market in the PRC and Shandong province is concentrated. In 2020, the top five market participants in the PRC took up a market share of approximately 67% in terms of revenue, and we are ranked third in terms of revenue representing a market share of approximately 10%. Due to its rich gold resources and mature gold mining industry chain, the gold mine production in Shandong province reached approximately 57.6 tonnes in 2020, ranking first in the PRC and accounting for approximately 19.1% of the total gold mine production in the PRC according to the F&S Report. Laizhou city of Shandong province is also rich in natural resources, among which its gold reserves ranked first among the county-level cities in the PRC with proven gold reserves of around 2.7 thousand tonnes by the end of 2020. Laizhou city, being a county-level city in Yantai city of Shandong province, also benefits from the high level of gold resources in Yantai city. According to the F&S Report, Yantai city had proven gold reserves of approximately 3.9 thousand tonnes, which accounted for approximately 93% of proven gold reserves of Shandong province in 2020, ranking first among prefecture-level cities in the proven gold reserves in the PRC, Yantai city is the prefecture-level city with the largest gold production in the PRC, with approximately 50 tonnes of gold production volume in 2020, accounting for approximately 17% and 83% of total gold production volume in the PRC and Shandong province, respectively.

The distribution of gold mine hazardous waste treatment company follows the gold producers and has a strong regional characteristics. As a gold mine hazardous waste treatment company located in Laizhou city, Shandong province, according to the F&S Report, we are ranked first in gold mine hazardous waste treatment volume in Shandong province and the PRC, with treatment volume of approximately 1.08 million tonnes, accounting for approximately 26% and 18% of the total treatment volume in Shandong province and the PRC, respectively, in 2020. Further, the treatment volume of gold mine hazardous waste in Yantai city amounted to approximately 3.5 million tonnes in 2020, and our Group accounted for approximately 31% of market share in Yantai city in terms of treatment volume of gold mine hazardous waste in 2020, ranking first in terms of treatment volume in Yantai city in 2020.

According to the F&S Report, considering that cyanide leaching residue was listed in Directory of National Hazardous Wastes (國家危廢名錄) issued by the Ministry of Ecology and Environment (生態環境部) on 1 August 2016, the gold mine hazardous waste treatment market was relatively small due to the lack of attention before 2017. The increasingly stricter requirements on environmental protection drive the growth of the market after the implementation of policies, with the total revenue increasing at a CAGR of 78.5% in the PRC and 85.0% in Shandong province, respectively from 2015 to 2020. The respective revenue of gold mine hazardous waste treatment market in China and in Shandong province are expected to grow at a CAGR of 19.1% and 17.8%, respectively from 2020 to 2025. In 2020, the revenue of gold mine hazardous waste treatment market in Yantai city contributed approximately 87% of total revenue in Shandong province, and we ranked second in terms of revenue in gold mine hazardous waste treatment market in Yantai city in 2020, according to the F&S Report. The gold mine hazardous waste treatment market also increased from RMB50.9 million in 2015 to RMB118.2 million in 2020 in Yantai city,

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representing a CAGR of 85.5% from 2015 to 2020; the market in Yantai city is also expected to increase to RMB2755.0 million in 2025, representing a CAGR of 19.8% from 2020 to 2025.

The gold mine hazardous waste treatment market has a high entry barrier for potential market players. According to the F&S Report, companies engaged in gold mine hazardous waste collection, storage and treatment in the PRC shall obtain hazardous waste business licences. In order to get the licence, a company must own qualified transportation, packaging, storage, and treatment facilities and equipment, as well as establish qualified rules and regulations, pollution prevention and control measures, and accident emergency rescue measures. It takes time and effort to get familiar with the requirements and eventually meet all the required standards for new entrants of the mine solid waste treatment market in the PRC. Moreover, mine solid waste treatment business in China requires experts in chemistry, mechanics, environmental engineering design and other industries. It is also a highly specialised industry, which has a high requirement on the technology capability of companies in the industry and requires years of technology accumulation to formulate a whole set of efficient, energy-saving and environmentally-friendly gold mine hazardous waste treatment technology system. High equipment and land expenditure and daily maintenance by technical personnel are also required to ensure the production and environmental protection requirements are met, are also required by this industry according to the F&S Report, which requires massive amount of capital investment and will bring heavy financial burden to start-ups, especially to small and medium ones. See “Industry Overview” in this document for an analysis of the PRC’s hazardous waste treatment market. Subject to increasingly strict environmental policies and initiatives in the PRC, including gold extraction with more environmentally-friendly methods, it is considered that gold extraction by cyanidation is a mature, low-cost, high-recovery gold extraction process, and is the most widely used process in gold production in the PRC and worldwide. More environmentally-friendly gold extraction method generally does not change the process of gold extraction by cyanidation, but uses low-toxic beneficiation agents to replace traditional sodium cyanate. The penetration rate of these low-toxic beneficiation agents is lower than 5% in gold production market. The application of these beneficiation agents are not mature yet, and are still at the stage of market introduction and customer cultivation. According to the F&S Report, gold extraction by cyanidation will not be eliminated in the foreseeable future.

We believe that we are well-positioned to compete with other market players, and that our strengths and strategies will differentiate us from our competitors. See “— Competitive Strengths” above for a discussion of our competitive strengths.

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LICENCES AND PERMITS

According to the relevant PRC laws and regulations, we are required to obtain certain licences, approvals and permits for our business operation. As confirmed by our Directors and as advised by our PRC Legal Advisers, (i) we have obtained all material licences, approvals and permits required in the course of our business operation during the Track Record Period and up to the Latest Practicable Date; (ii) all such licences, approvals and permits remain valid as at the Latest Practicable Date; and (iii) there were no major legal obstacles for us to continue to hold such licences, approvals and permits as at the Latest Practicable Date.

Our Group is required to obtain the following key licences and permits to carry out our business and operation:

Licence/permit	Licence/ permit holder	Issuing Authority	Grant date	Expiry date
Hazardous Waste Business Licence ⁽¹⁾	HC Mining	Yantai Municipal Ecology and Environment Bureau	20 July 2020	20 July 2025
Hazardous Waste Business Licence ⁽²⁾	HC Environmental	Yantai Municipal Ecology and Environment Bureau	9 March 2020	9 March 2025

Notes:

- (1) The permitted modes of operation include collection, storage and utilisation of hazardous waste and the permitted annual treatment capacity is 600,000 tonnes.
- (2) The permitted modes of operation include collection, storage and utilisation of hazardous waste and the permitted annual treatment capacity is 560,000 tonnes.

According to the Hazardous Waste Business Licence and confirmations from the Laizhou Branch of Yantai Municipal Ecology and Environment Bureau (煙臺市生態環境局萊州分局), which is the competent authority for environmental protection as confirmed by our PRC Legal Advisers, our Group may undertake the collection, storage and utilisation of hazardous wastes and is not required to obtain licence or permit for hazardous waste for storage rental services. Therefore, our PRC Legal Advisers are of the view that our Group do not require any other licenses or permits for our hazardous waste storage rental services.

The aforesaid licences are subject to renewal for every five years. As such, we will renew all existing licences, approvals and permits before their expiry. Our Directors confirm that there were no foreseeable major obstacles for us to renew such licences, approvals and permits as at the Latest Practicable Date.

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AWARDS AND CERTIFICATES

After years of development, our operations have accomplished a number of milestones and we have obtained a number of awards and certificates, a summary of which is set out below:

Awards/Certificates	Award/Issuing Organisation	Recipient	Date of Issue	Expiry Date
Environmental management system accreditation (ISO 14001)	Shandong Seatone Certification Co., Ltd. (currently known as Shandong Seatone International Certification Co. Ltd.) (“Seatone”)	HC Environmental	21 October 2021	28 October 2024 <i>(Note)</i>
Occupational health and safety management system accreditation (OHS MS45001)	Seatone	HC Environmental	21 October 2021	28 October 2024 <i>(Note)</i>
Quality management system accreditation (ISO 9001)	Seatone	HC Environmental	21 October 2021	28 October 2024 <i>(Note)</i>
Enterprise Progress Award (企業進步獎)	Laizhou City Municipal Government	HC Environmental	February 2019	Not applicable
Advanced Unit for Comprehensive Utilisation of Resources in Shandong Province (山東省資源綜合利用先進單位)	People’s Government of Shandong Province	HC Mining	25 December 2019	Not applicable
Executive Director of Units (常務理事單位)	All-China Environment Federation (中華環保聯合會)	HC Mining	September 2020	September 2025

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Awards/Certificates	Award/Issuing Organisation	Recipient	Date of Issue	Expiry Date
2020 Shandong Top Ten Innovation Achievements Award of Circular Economy (2020年度山東省循環經濟十大創新成果獎)	Shandong Provincial Circular Economy Association (山東省循環經濟協會)	HC Mining	December 2020	Not applicable
2021 Shandong Province “Specialised, and innovative” Small and Medium-sized Enterprises (2021年度山東省“專精特新”中小企業)	Department of Industry and Information Technology of Shandong Province (山東省工業和信息化廳)	HC Mining, HC Environmental	3 August 2021	Not applicable

Note: Each of ISO 9001, ISO 14001, and OHSMS 45001 accreditation currently carries a duration of three years, within which period surveillance audit is conducted by the accreditation body every year to review the implementation of the relevant systems for compliance. After this three year period, each of the ISO 9001, ISO 14001, OHSMS 45001 accreditation is to be further accredited and certified subject to successful implementation of a renewal audit by the accreditation body.

EMPLOYEES

As at the Latest Practicable Date, we had 190 full-time employees who were directly employed by us in Shandong province, the PRC. The table below sets out a breakdown of our employees by department as at the Latest Practicable Date:

Department	Total number of employees
Management	3
Production	99
Quality control, research and development and engineering	14
Procurement, sales and marketing	5
Finance, human resources and administration	52
Logistics	17
Total	190

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The remuneration packages for our employees include salary, bonuses and allowances. As required by the PRC regulations, we participate in social insurance schemes operated by the relevant local government authorities and maintain mandatory pension contribution plans, medical insurance, work-related injury insurance, unemployment insurance and maternity insurance for some of our employees. We also contribute to housing accumulation funds for some of our employees.

We are committed to recruiting, training and retaining skilled and experienced people throughout our operations. When we make hiring decisions, we take into account factors such as our business strategies, our development plans, industry trends and the competitive environment. We recruit our employees based on a number of factors such as their work experience, educational background and vacancy needs. We endeavour to attract and retain appropriate and suitable personnel to serve our Group. According to the F&S Report, one of the entry barriers of gold mine hazardous waste treatment market in the PRC is to maintain experts in chemistry, mechanics, environment, engineering design and other industries, and more specifically, professionals which are of adequate academic qualification and experience. We consider that one of our competitive strengths is our ability to attract and maintain high quality professionals in the industry, and we have an experienced and professional management team leading our Group’s business operations. We are one of the important market players in the industry in the PRC and our senior management team consists of professionals with substantial industry, management and operational experience, where a majority of our senior management team have been working in the relevant industries, such as metal processing industry, for more than 20 years. See “Director and Senior Management” of this document for further details of the biographies of our senior management team. We therefore do not foresee any material difficulties with our recruitment due to the insufficiency of high quality professionals in the mine solid waste treatment industry in the PRC. According to the F&S Report, it is expected that there will be an increase in average wages of employees in mining and environmental protection industries in the PRC. However, taking in account that (i) such increase in average wages of employees in mining and environmental protection industries in the PRC are based on the statistics from the National Bureau of Statistics (國家統計局) and these statistics are country-level statistics and it is possible that companies are facing different situations due to different segments, regions and operating conditions; and (ii) adopting our cost-plus pricing policy, we may be able to pass such increase in direct labour costs to our customers, our Directors are of the view that our Group’s profitability going forward will not be adversely affected by such expected increase in direct labour costs.

We provide continuing education and training programmes to our employees to improve their skills and develop their potential. We also adopt evaluation programmes through which our employees can receive feedback. We foster strong employee relations by offering various staff benefits and personal development support. Our Directors considered that our Group have maintained good relationship with our employees. During the Track Record Period and up to the Latest Practicable Date, we had not experienced any material difficulties in the recruitment or any disruption to our operations due to labour disputes or claims.

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ENVIRONMENTAL PROTECTION

We are subject to the PRC national and local environmental laws and regulations, including but not limited to the Environmental Protection Law of the PRC (《中華人民共和國環境保護法》), Law of the PRC on the Prevention and Control of Environment Pollution Caused by Solid Wastes (《中華人民共和國固體廢物污染環境防治法》), the Law of the PRC on Prevention and Control of Atmospheric Pollution (《中華人民共和國大氣污染防治法》) and the Law of the PRC on the Prevention and Control of Water Pollution (《中華人民共和國水污染防治法》). For details, see “Regulatory Overview — PRC Laws and Regulations Relating to Environmental Protection” in this document. The hazardous waste treatment business is highly regulated in China. Failure to comply with applicable PRC environmental protection laws and regulations may result in significant consequences, including administrative, civil and criminal penalties, liability for damages and negative publicity. Further, such failure to comply, or allege on failure to comply, with the relevant PRC laws, regulations or government policies on environmental protection, may lead to costly litigation or penalty imposed by the relevant judicial or governmental authorities.

During the Track Record Period, we are also subject to annual assessments relating to the Hazardous Waste Standardised Management Index System (《危險廢物規範化管理指標體系》) (the “**Index System**”) as issued by the Ministry of Ecology and Environment, which were conducted by the assessors representing Yantai Municipal Ecology and Environment Bureau, with each inspection involving at least two persons with environmental supervision and law enforcement qualifications, while experts may also be invited to participate in the inspection. The Index System, containing a summary of major applicable environmental protection regulatory requirements in the PRC (which include but not limited to the Law of the People’s Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste (《中華人民共和國固體廢物污染環境防治法》), the Measures for the Administration of Hazardous Waste Transfer Manifests (《危險廢物轉移聯單管理辦法》), and the Measures for the Administration of Permit for Operation of Hazardous Wastes (《危險廢物經營許可證管理辦法》) as set out in “Regulatory Overview” of this document), gives assessors a regulatory guideline during their inspection in assessing the level of compliance with the major regulatory requirements stipulated under the Index System. During the inspection, assessors would assess all applicable regulatory requirements stipulated under the Index System as their scope of assessment. Subsequent to the inspection, assessors generally issue a written report to us on the same day, which generally contains, among other things, materials which were inspected by the assessors and an overall result indicating whether we have achieved the compliance standard as set out in the Index System.

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As confirmed by our Directors, we have complied with the relevant standards under the Index System, and there had been no issues raised by Yantai Municipal Ecology and Environment Bureau regarding our Group’s compliance with all material standards and requirements stipulated under the Index System during the Track Record Period. During the Track Record Period, we have adopted and implemented various regular measures to ensure compliance with the regulatory requirements under the Index System, which include but not limited to our repair and maintenance policies and environmental, social and governance policies. See” — Our Production Facilities — Repair and Maintenance” above, and paragraphs below for details.

We emphasise on environmental protection and strive to minimise the environmental impact brought by our business operations. We have adopted and implemented various environmental protection policies and measures to ensure compliance with all relevant regulatory requirements under applicable PRC laws and regulations. We have promulgated various internal policies on environmental compliance matters, and have been supervising and managing our subsidiaries to ensure that they operate in compliance with relevant environmental laws and regulations. Such policies regulate different aspects of our operations, form the design, construction to the operation of our production facilities. In October 2018, HC Environmental was granted the Environmental Management System (ISO 14001) certificate. The following table sets out our major pollutants, environmental protection measures adopted and the relevant discharge standard:

	Major pollutants	Major environmental protection measures adopted	Discharge standards
1.	Exhaust gas	The exhaust gas emitted by our Group mainly comes from the detoxifying process of gold mine hazardous wastes, while the major pollutants produced include sulphur dioxide and hydrogen cyanide. Minimal emission is achieved by installing the confined exhaust gas absorption unit and the exhaust gas is emitted through a 25-metre exhaust pipe.	The Comprehensive Emission Standard of Air Pollutants (《大氣污染物綜合排放標準》) (GB16297–1996)
2.	Dust	Using water sprinkling equipment to sprinkle water on gold mine hazardous wastes, raw materials and recycled products regularly to maintain a certain surface humidity to avoid dust. The storage facilities are surrounded by 3-metre perimeter wall with plastic sheeting above to avoid dust.	The Comprehensive Emission Standard for Atmospheric Particulate Matter from Stationary Sources in Shandong Province (《山東省固定源大氣顆粒物綜合排放標準》) (DB37/1996–2011)

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	Major pollutants	Major environmental protection measures adopted	Discharge standards
3.	Wastewater during production process	Production facilities are equipped with production circulation pools which all polluted waste water generated during the production process can be recycled and not discharged.	The Wastewater Quality Standards for Discharge to Municipal Sewers (《污水排入城市下水道水質標準》) (CJ343-2010)
4.	Domestic sewage	Domestic sewage are treated by the integrated sewage treatment station in production facilities and then be used for greening and dust reduction within the production facilities without discharge.	
5.	Noise	Nosing producing machinery is arranged indoors and away from boundary of the production facilities to minimise the impact of noise on the surrounding environment. Further, we set up sound insulation hold for high-noise machinery to inhibit the noise generated by mechanical vibration from spreading and sound insulation doors and windows for production compartments	The Emission Standard for Industrial Enterprises Noise at Boundary (《工業企業廠界環境噪聲排放標準》) (GB12348-2008)
6.	Solid waste	Non-hazardous solid wastes are gathered and managed by the environmental protection and safety department for land filling within the production facilities or further disposal as appropriate. Hazardous wastes are deposited in specific storage area and entrusted qualified companies to undertake the disposal.	The Standard for Pollution Control on the Storage and Disposal Site for General Industrial Solid Waste (《一般工業固體廢物貯存、處置場污染控制》) (GB18599-2001) The Standard for Pollution Control on Hazardous Waste Storage (《危險廢物貯存污染控制標準》) (GB18598-2001)

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Our Directors confirm that, during the Track Record Period and up to the Latest Practicable Date, our operations had not been subject to any pending administrative penalties in relation to environmental laws and regulations of the PRC, which would have a material adverse effect on our business, financial condition and results of operations. For the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021, our costs of compliance with applicable environmental laws and regulations was approximately RMB0.4 million, RMB0.7 million, RMB0.9 million and RMB0.3 million, respectively. These costs were mainly attributable to salaries and wages for our staff of the environmental protection and safety department, testing fees, and consultancy fee in relation to environmental compliance and these costs did not include historical capital expenditure on property, plant and equipment that may be attributable to environmental compliance.

During the Track Record Period and up to the Latest Practicable Date, we did not receive any material claims from our customers or residents in the areas we operate for failing to comply with the relevant environmental requirements. According to the confirmation letters issued by Laizhou Branch of Yantai Municipal Ecology and Environment Bureau, we were in compliance with all material standards and requirements stipulated by the applicable PRC environmental laws and regulations during the Track Record Period. All of our production facilities met the relevant environmental requirements under the PRC laws and regulations, and we were not subject to any fines or legal action involving material non-compliance with any relevant environmental regulations, nor were we aware of any threatened or pending action by any environmental regulatory authority during the Track Record Period. We have passed the inspection for the completion of environmental protection for our production facilities as required by the applicable PRC laws and regulations. As at the Latest Practicable Date, we did not receive any notifications or warnings, and are not subject to any fines or penalties in relation to any breach of any applicable PRC environmental laws or regulations that could have a material adverse effect on our production. Based on the foregoing, our PRC Legal Advisers advised that we have not been subject to any material claim or penalty in relation to environmental protection and have been in compliance with the applicable PRC laws and regulations in all material aspects during the Track Record Period and up to the Latest Practicable Date.

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Our environmental-related risks and opportunities

We may be exposed to possible financial loss and non-financial detriments arising from environmental and climate-related risks. These risks include the following:

- (a) transition risks, being the risks arising from the compliance with the applicable environmental laws and regulations and the stringent environmental protection standards; and
- (b) physical damages, being the damages arising from the acute weather-related events and longer-term chronic shifts in climate patterns.

Acute physical risks can arise from extreme weather conditions such as flooding and storms, and chronic physical risk can arise from sustained high temperature, which may have potential financial implications for our Group. The operation of our production facilities may be interrupted and direct damage to our assets may result upon occurrence of extreme weather conditions. Also, our suppliers are based in PRC, and we may experience indirect impacts from supply chain disruption if our suppliers suffered from extreme weather conditions like flooding. Severe flooding caused by heavy rain or continuing rainfall may have material impact on our business, but we have established emergency response plans and procedures in order to reduce the risks caused by extreme weather, and the emergency response mechanism will be constantly reviewed by our Board and improved accordingly. While sustained high temperature may result in an elevation of electricity consumption, we have adopted energy conservation measures in managing such risk.

Our production activities in the PRC are subject to the national environmental laws and regulations in the PRC as well as the environmental regulations and standards promulgated by the relevant local government authorities as mentioned above. If we fail to comply with any of the applicable environmental protection laws and regulations and standards, we may be subject to fine or penalty. The laws and regulations on environmental protection in the PRC may change from time to time and any change may increase our cost of compliance and place burden on our operations. See “Risk Factors — Risks Relating to our Business and Industry — We are exposed to environmental compliance risks due to the nature of our operations” in this document for further information. Such regulatory developments, together with existing laws, regulations and expectations, may have impact on our business operations and thus present “transition” risks to us. Furthermore, if our Group is in breach of any environmental laws and regulations, or faces any accusation of negligence in environmental protection, it will adversely affect our reputation and our creditability. It may also affect our business performance. Our business opportunities may also be negatively impacted as our Group may be disadvantaged by the reputational damage and loss of creditability as our customers may be less willing to transact with an unsustainable service provider and recycled products supplier.

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Climate-related issues are among our key agenda. Supervised by our Board, we actively identify and monitor the climate-related risks and opportunities over the short, medium and long term, and we seek to incorporate such climate-related issues into our businesses, strategy and financial planning. Set forth below is a summary of the climate-related risks and opportunities we identified:

A. Climate-related risks

	Climate-related risks	Potential impacts
Short term (current annual reporting period)	<ul style="list-style-type: none"> ● Extreme weather conditions such as typhoon, rainstorm or heat 	<ul style="list-style-type: none"> ● Decreased production volume and reduced revenues, disruptions to supply chain
Medium term (one to three years)	<ul style="list-style-type: none"> ● Heightened pollutant discharge policies 	<ul style="list-style-type: none"> ● Higher operating costs due to increased costs for pollutant discharge, fines and penalties as a result of non-compliance and higher operating costs incurred in connection with investment in new equipment
	<ul style="list-style-type: none"> ● Environmental regulatory compliance risks 	<ul style="list-style-type: none"> ● Increased operating costs of environmental regulatory compliance
Long term (four to 10 years)	<ul style="list-style-type: none"> ● Worldwide initiatives for reducing carbon emissions 	<ul style="list-style-type: none"> ● Higher operating costs or tax burdens due to increased costs of raw materials

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B. Opportunities identified

Opportunities identified		Potential impacts
Resource efficiency	<ul style="list-style-type: none">• More energy-efficient machinery, equipment and technologies• Supportive policy incentives on raising the efficiency of resource consumed, such as water and energy	<ul style="list-style-type: none">• Reduced operating costs
Market	<ul style="list-style-type: none">• Governmental encouragement of circular economy leads to increasing demand for hazardous waste treatment and utilisation• More recycling channels of hazardous waste to promote the growth of the market	<ul style="list-style-type: none">• Increased revenue
Technology	<ul style="list-style-type: none">• More technology research and development ability on hazardous waste resource utilisation to enhance the utilisation value of unit hazardous waste	<ul style="list-style-type: none">• Increased profit

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Our Board will evaluate the likelihood of occurrence and the estimated magnitude of resulting impact over short, medium and long term horizons. The decision to mitigate, transfer, accept or control a risk is influenced by various factors such as the transportation network and policy change. We will incorporate physical and transition risk analysis into our risk assessment processes and risk appetite setting. If the risks and opportunities are considered to be material, we will incorporate them into the strategy and financial planning process. It is expected that the extreme weather conditions for potential physical risks, and change in climate-related regulations and policy for potential transition risks would not have a material impact on our operation in the short and medium terms. We also aim to minimise the transition risk in the long term through enhanced energy efficiency, adoption of green supply chain and we are committed to our emission targets. This does not only reduce our exposure to transition risk, but also improved the environmental performance of our services and recycled products. Upon annual review of the progress against our targets for addressing climate-related issues, we may revise our strategies as appropriate. For further details on our risk management on environmental-related risks, see “— Measures and Strategies in Address ESG-related Risk” and “— Mitigation Steps” below.

We expect that the PRC government will implement more stringent regulation over hazardous waste treatment in the near future. According to the F&S Report, under the increasingly strict environmental protection policies and encouragement of circular economy, an increasing number of companies are expected to improve their hazardous waste utilisation, which enables the company to further expand its profitability and maximise the value of the gold mine while meeting national environmental protection requirements. We will strive to grasp the opportunity and continue to strictly implement our environmental protection measures to ensure compliance with the applicable PRC laws and regulations. We will allocate sufficient resources such as skilled personnel, technology and capital to support environmental protection. We will also strengthen the research and development of technologies, enhance refined management operation ability, adhere to the development strategy of endogenous growth and diversification of product offerings and improve the utilisation rate to maintain our profitability. We will also continue to keep abreast of the latest updates on the relevant laws and regulations in relation to environmental protection and pollution in the PRC and consult with our PRC legal advisers if necessary. As such, our Directors are of the view that we will continue to incur environmental-related compliance costs at a similar level. Based on the foregoing and taken into account the policies and measures adopted by our Group on monitoring and mitigating the impact of environmental risks (including climate-related risks), the strategies of our Group in addressing environmental-related risks and opportunities, and the commitment and dedication of our Directors and senior management on environmental, social and governance reporting requirements (“ESG”) as detailed below, our Directors consider, and the Sole Sponsor concurs, that there will not be environmental-related risks (including climate-related risks) affecting the business operation and financial performance of our Group in any material aspect going forward.

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Our environmental protection performance

In line with our vision for sustainable development, we oversee our environmental protection performances in various aspects, such as efficiency in the use of electricity, emissions and the quality of groundwater. During the Track Record Period, our emissions and electricity consumption increased due to the increase in our production volume and our scale of production. The table below sets forth an analysis of our environmental protection performance for the years/periods indicated:

A. Greenhouse gas (“GHG”) emissions

Scope of GHG emissions	Year ended 31 December ⁽⁴⁾		
	2018	2019 ⁽¹⁾	2020
	Emissions (tCO ₂ e)		
Scope 1 direct emission combustion of diesel	— ⁽²⁾	— ⁽²⁾	— ⁽²⁾
Scope 2 indirect emission purchased electricity ⁽³⁾	6,938	10,187	17,792
GHG intensity (per m² of gross floor area)	0.21	0.04	0.08
GHG intensity (per thousand RMB revenue)	0.07	0.08	0.09

Notes:

- (1) Our production facility in Shahe town, Laizhou city commenced trial operation in October 2019.
- (2) The usage of diesel during the respective year was minimal which the greenhouse gas emissions was less than 0.1% of the total emission of the respective year.
- (3) Combined margin emission factor of 0.8843 tCO_{2e}/MWh was used for purchased electricity in the PRC.
- (4) The GHG emissions analysis is conducted on an annual basis.

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B. Exhaust gas emissions

	Emissions (mg/m ³)				Discharge permitted level ⁽²⁾
	Year ended 31 December 2018	2019 ⁽¹⁾	2020	Six months ended 30 June 2021	
Air pollutant and waste gas					
Organised waste gas					
Hydrogen cyanide intensity	0.65	0.59	0.67	0.69	1.9
Unorganised waste gas					
Hydrogen cyanide intensity	—	—	—	—	0.024
Particulates intensity	0.29	0.21	0.3	0.22	1.0

Notes:

- (1) Our production facility in Shahe town, Laizhou city commenced the trial operation in October 2019.
- (2) The applicable standard was the Comprehensive Emission Standard of Air Pollutants (《大氣污染物綜合排放標準》) (GB16297-1996).

C. Quality of underground water

For the year ended 31 December 2018:

Heavy metals	Cadmium (µg/L)	Mercury (µg/L)	Lead ⁽³⁾ (µg/L)	Arsenic ⁽³⁾ (µg/L)	Zinc (µg/L)	Cyanide (mg/L)
Average	0.14	0.02	0.56	2.90	2.74	0.01
Maximum	0.9	0.27	4.4	9.3	51.8	0.046
Minimum	—	—	—	—	—	—
Standard requirement ⁽¹⁾	≤5	≤1	≤10	≤10	≤1000	≤0.05

For the year ended 31 December 2019⁽²⁾:

Heavy metals	Cadmium (µg/L)	Mercury (µg/L)	Lead ⁽³⁾ (µg/L)	Arsenic ⁽³⁾ (µg/L)	Zinc (µg/L)	Cyanide (mg/L)
Average	—	0.03	1.77	2.23	0.02	0.01
Maximum	—	0.12	9.8	9.5	0.35	0.046
Minimum	—	—	—	—	—	—
Standard requirement ⁽¹⁾	≤5	≤1	≤10	≤10	≤1000	≤0.05

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For the year ended 31 December 2020:

Heavy metals	Cadmium ($\mu\text{g/L}$)	Mercury ($\mu\text{g/L}$)	Lead ⁽³⁾ ($\mu\text{g/L}$)	Arsenic ⁽³⁾ ($\mu\text{g/L}$)	Zinc ($\mu\text{g/L}$)	Cyanide (mg/L)
Average	—	0.02	0.15	1.54	—	0.01
Maximum	—	0.19	5.5	5.1	—	0.042
Minimum	—	—	—	—	—	—
Standard requirement ⁽¹⁾	≤ 5	≤ 1	≤ 10	≤ 10	≤ 1000	≤ 0.05

For the six months ended 30 June 2021:

Heavy metals	Cadmium ($\mu\text{g/L}$)	Mercury ($\mu\text{g/L}$)	Lead ⁽³⁾ ($\mu\text{g/L}$)	Arsenic ⁽³⁾ ($\mu\text{g/L}$)	Zinc ($\mu\text{g/L}$)	Cyanide (mg/L)
Average	0.03	0.02	0.28	2.22	0.55	0.01
Maximum	0.33	0.25	6.01	7.52	11.1	0.048
Minimum	—	—	—	—	—	—
Standard requirements ⁽¹⁾	≤ 5	≤ 1	≤ 10	≤ 10	≤ 1000	≤ 0.05

Notes:

- (1) The applicable standard was Category III under the Standard for Groundwater Quality (《地下水質量標準》) (GB/T14848–2017).
- (2) Our production facility in Shahe town, Laizhou city commenced the trial operation in October 2019.
- (3) The relatively higher level of lead and arsenic in the underground water as compared to other heavy metals was mainly attributable to sampling and testing fluctuations resulted from variations in climate, rain, and natural dust in the atmosphere during the material time of sampling and testing. As confirmed by the independent testing company, as the sampling and tests were conducted on the same day at multiple sampling points, such sampling and testing fluctuations can be affected by the level of heavy metal elements in the atmosphere precipitating and infiltrating in underground water at the material time of sampling. Sampling and testing under different weather conditions would highly likely cause fluctuations in results, and in particular, sampling points where heavy metal element in the atmosphere is more concentrated, such sampling points would reflect a higher level of lead and arsenic.

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D. Electricity consumption

	Year ended 31 December			Six months ended
	2018	2019	2020	30 June 2021
Total electricity consumption (kWh)	7,846,000	11,520,000	20,120,000	9,457,000
Electricity consumption intensity (kWh per thousand RMB revenue)	76.7	86.2	98.0	82.7

Note: Our production facility in Shahe town, Laizhou city commenced trial operation in October 2019.

Governance on environmental-related risks and social responsibilities, including the respective roles and extent of involvement of our Directors and senior management of our Group

Our Group acknowledges its responsibility on environmental protection and social responsibilities and is committed to comply with the ESG reporting requirements upon [REDACTED]. We have established an ESG policy (the “**ESG Policy**”) which outlined, among others, (i) the appropriate risk governance on ESG matters; (ii) ESG strategy formation procedures; (iii) ESG risk management and monitoring; and (iv) the identification of key performance indicators (“**KPIs**”) and the relevant measurements. Our Group’s ESG Policy was established in accordance with the standards of Appendix 27 to the Listing Rules.

Our Board has the overall responsibility for evaluating and determining our Group’s ESG-related risks, and establishing, adopting and reviewing the ESG vision, policy and target of our Group. Certain senior management of our Group are designed to support our Board in implementing the ESG Policy and collecting ESG data from different parties while preparing for the ESG report. It serves as a supportive role and has to report to our Board regularly and to oversee and monitor in implementing measures to address our Group’s ESG-related risks and responsibilities.

We also intend to invest in social-related aspects, including compliance with employment-related laws and regulations, employees’ health and safety, employee development and training, anti-corruption and community investment.

BUSINESS

Measures and Strategies in Addressing ESG-Related Risk

We intend to adopt various strategies and measures to identify, assess and manage environmental-related risks, social-related risks, and climate-related issues, including but not limited to:

- reviewing and assessing the ESG reports of similar companies in the industry to ensure that all relevant ESG-related risks are identified on a timely basis;
- discussing among management from time to time to ensure all the material ESG areas are recognised and reported;
- discussing with key stakeholders on an ongoing basis on key ESG principles and practices as well as their concerns and expectations to ensure that the significant aspects are covered;
- setting targets for each major ESG KPI with reference to guidance on ESG released by the Stock Exchange, including emission, pollution and other impact on the environment aiming at reducing emissions and natural resource consumption and evaluate the ESG results annually; and
- adopting incentive policies for the management in relation to ESG matters, including but not limited to achievement of the announced ESG targets.

Our Group has also adopted and implemented health and safety measures and procedures to protect our employees from bodily harm and other health and safety risks. See “Occupational Health and Safety Matters” below for further details.

Mitigation Steps

To mitigate the potential impact resulting from environmental-related risk, social-related risk and climate-related risks, our Group has formulated an Emergency Environmental Incidents Response Plan (突發環境事件應急預案) which covers the immediate actions to be carried out during an emergency environmental incident, including leakage of exhaust gas, solid waste (including hazardous waste), solid waste caused by human or irresistible natural factors. This response plan aims to improve the emergency response system for environmental pollution, enhance the prevention and early warning mechanism, and build capacity of staff in handling environmental emergency situations. In addition, by abiding to the response plan, we strive to reduce the environmental risks incurred during the operation of our production facilities, as well as ensuring the environmental pollution incidents are under control within the boundary of our production facilities. In addition, our Group has formulated a crisis management plan (災難恢復計劃) to set out the procedures and guidelines that should be adopted during emergency situations, which include extreme climate events that constitute hazards and dangers to our Group’s property. A disaster management team lead by Mr. Sheng, our executive Director, is set up under an emergency situation to assess the destruction caused by the disaster and to minimise the impact by executing the contingency plan.

BUSINESS

Metrics and Targets

Further, our Board will set metrics and targets for material KPIs at the beginning of each financial year with reference to the disclosure requirements of Appendix 27 to the Listing Rules. Set forth below are some key metrics and targets for the material KPIs we have currently identified:

- (i) in relation to pollutants discharged and emissions, the key metrics mainly include direct (scope 1) and energy indirect (scope 2) GHG emissions in tonnes of carbon dioxide equivalent, and GHG emitted per revenue in tonnes of carbon dioxide equivalent per RMB. We target to reduce our GHG emitted per revenue;
- (ii) in relation to use of resources, the key metrics mainly include the amount of direct energy (diesel consumed in tonne) and indirect energy (electricity consumed in kilowatt-hour), the volume of water in thousand tonne, the average monthly costs of energy and water, the energy and water consumed per revenue. We target to reduce our consumption of energy and freshwater per revenue;
- (iii) in relation to waste generated, the key metrics mainly include hazardous waste in tonnes, and hazardous waste produced per revenue. We target to maintain 100% compliance rate in relation to hazardous waste disposal; and
- (iv) save for the abovementioned targets, we target to maintain zero environmental pollution accidents for our overall environmental matters.

The metrics and targets used to assess social-related risks mainly include employee gender structure, employee turnover rate, employee age distribution, frequency of employee training, and completion of learning hours.

We will continue to promote and educate students and staff on energy conservation and emission reduction to minimise the consumption of water, and energy, and the emission of GHG in accordance with our ESG policies.

Upon [REDACTED], our Directors confirm that we will closely monitor and ensure strict compliance with Corporate Governance Code and Corporate Governance Report as set out in Appendix 14 of the Listing Rules, the Environmental, Social and Governance Reporting Guide as set out in Appendix 27 of the Listing Rules and all relevant rules and regulations in relation to environmental, social and governance aspects.

BUSINESS

OCCUPATIONAL HEALTH AND SAFETY MATTERS

We are subject to the relevant PRC laws and regulations regarding labour, safety and work-related incidents. Under these laws and regulations, we are required to maintain safe production conditions and to protect the occupational health of our employees. We have implemented production safety management policies and safety measures based on the relevant laws and regulations in the PRC, including procedures on investigation, reporting to management and corrective activities in the event of an occurrence of an accident. We provide training on occupational health and safety for our employees to ensure that they are familiar with the occupational health and safety standards and procedures and our employees are required to follow the relevant standards and procedures. Our PRC Legal Advisers advised that based on the confirmation from the relevant competent authorities, we have not been subject to any material claim or penalty in relation to occupational health and safety, and have been in compliance with the applicable PRC laws and regulations in all material aspects in relation to occupational health and safety during the Track Record Period and up to the Latest Practicable Date.

Set out below are certain general measures included in our safety policy to prevent work accidents:

- proper and effective communication of safety procedures shall be established among our management, safety department, employees by, among others, maintaining proper records of accident statistics, safety reports and training documents, holding regular internal and external safety meetings and conducting briefings on occupational health and safety to all level of personnel;
- health and safety risk assessments to identify potential risks associated with the hazardous waste shall be conducted before commencement of our works and regularly during the processing stage;
- the safety track record and safety standard shall be considered when selecting suppliers provide transportation services;
- emergency response plan shall be developed and implemented and drills shall be organised regularly;
- our safety department shall be responsible for maintaining records of safety training, identifying appropriate training programmes for our employees, organising and inspecting the emergency response drills as well as ensure strict compliance with all applicable occupational health and safety laws and regulations and our internal safety policy; and
- all identified non-compliance at production facilities must be recorded, reported to our safety team and management in a timely manner.

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In October 2018, HC Environmental obtained the Occupational Health and Safety Management Systems (OHSMS 45001) certificate. During the Track Record Period and up to the Latest Practicable Date, our Group had not experienced any significant incidents or accidents in relation to workers’ safety, and have not been involved in any accident or fatality. Our Directors confirm that we were not subject to any penalties or disputes relating to any production safety matters that have a material adverse effect on our financial conditions or business operations during the Track Record Period and up to the Latest Practicable Date.

To mitigate the potential impact resulting from safety production risks, which refer to risks of corporate property loss, temporary production suspensions or tarnished reputation due to production safety accidents caused by deficient safety management system or inadequate accident preventive measures. We have formulated a comprehensive emergency plans (綜合應急預案) for safety accidents to standardise safety risks management and prevent accidents. We have formulated (i) comprehensive contingency plans, describing, among others, our contingency organisation and the functions thereof, the planning system, the response procedure, the prevention of incidents and the contingency training; and (ii) special contingency plans for major potential risks and incidents identified such as such as electric shocks, poisoning, burns, fires and explosions. The special contingency plans cover, among others, the relevant risk analysis, characteristics of potential incidents, preventive measures, contingency handling procedure and contingency safeguard measures.

Pursuant to the Regulations on the Reporting, Investigation and Handling of Work Safety Accidents (《生產安全事故報告和調查處理條例》), work safety accidents that cause personal injuries or deaths or direct economic losses are divided into four categories. The fourth accident category is the lowest category involving general accidents with less than three deaths, serious injuries of less than 10 people or accidents which incurred less than RMB10 million in direct economic losses required to be reported to the Emergency Authority of Laizhou City (萊州應急管理局). As our Group had no reportable accidents which are required to be reported under the fourth category or above in accordance with the relevant regulations, our reportable accident rate during the Track Record Period was nil. According to the F&S Report, the accidents rate in the PRC is usually evaluated by the number of fatalities from work-related accidents per 100 thousand works. According to the statistics from the National Bureau of Statistics (國家統計局), the total numbers of fatalities from work-related accidents in the PRC were 34,046, 29,519 and 27,412 in 2018, 2019 and 2020, respectively, indicating fatalities of 1.547, 1.474 and 1.301 per 100 thousand works, respectively. As such, our Group had a significantly lower accident rate during the Track Record Period. We target to maintain zero work-related fatalities in the future.

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Our Directors are also of the view that the production safety measures currently adopted are in line with the market practice of the industries in which our Group is engaged. During the Track Record Period and up to the Latest Practicable Date, as confirmed by our Directors, we did not experience any accidents that resulted in serious injuries or death and there were no reported accidents of our Group.

INSURANCE

We maintain integrated insurance coverage on our properties and fixed assets, production facilities and equipment against property damage. Further, we are required by relevant laws and regulations in the PRC to maintain employment injury insurance, which covered, among other things, work injuries, accidents or incidents which gave rise to employees’ occupational health diseases. We do not maintain insurance coverage in relation to potential health hazard litigation as is not a mandatory insurance coverage in the PRC, and F&S confirmed that our Group’s insurance coverage is in line with the industry practice. We also make contributions to social security insurance for our employees in accordance with the relevant laws and regulations of the PRC. We also maintained product liability insurance coverage with respect to our sales, which is not compulsory in the PRC. Our Directors believe that this is in line with the general practice in the PRC of the industry in which our Group is engaged.

Our Directors are of the view that we have maintained sufficient insurance coverage for our business and operations. Certain types of risks, such as the risk in relation to the collectability of our trade receivables and liabilities arising from events such as epidemics, natural disasters, adverse weather conditions, political unrest and terrorist attacks, are generally not covered by insurance because they are either uninsurable or it is not cost justifiable to insure against such risks. See “Risk Factors — Risks Relating to Our Business and Industry — Our Insurance Coverage May Not Adequately Cover the Risks Related to our Business and Operations.” in this document for details.

PROPERTIES

Our head office and production facilities for our business operations are located in Laizhou city, Shandong province.

Owned Properties

As at the Latest Practicable Date, we owned six parcels of land, with an aggregate area of approximately 228,683 sq.m., and 11 buildings, with an aggregate gross floor area of approximately 159,014 sq.m. in the PRC. Save for the two warehouses used for the hazardous waste storage rental services, all of the above properties are used for non-property activities as defined under Rule 5.01(2) of the Listing Rules. The total market value of our property interests as at 31 August 2021 was approximately RMB309.5 million, according to the property valuation report prepared by Cushman & Wakefield Limited. Cushman & Wakefield Limited had valued the properties owned by us as at 31 August 2021. The text of the letter and the valuation report issued by Cushman & Wakefield Limited are set out in Appendix III to this document.

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Land use right

As at the Latest Practicable Date, we have obtained the appropriate land use right certificates for six parcels of land that we own, with an aggregate gross site area of approximately 228,683 sq.m., three of which parcels of land have been pledged for bank borrowings. The following table sets forth a summary of our land use rights:

No.	Land use right owner	Number of parcel of land	Location	Gross site area (sq.m.)	Existing use	Expiry date
1	HC Mining	5	Shahe town, Laizhou city, Shandong province	195,231	Industrial	23 December 2064
2	HC Environmental	1	Jincheng town, Laizhou city, Shandong province	33,452	Industrial	25 November 2059

Buildings

As at the Latest Practicable Date, we obtained the appropriate property ownership certificates for 11 buildings that we occupied in the PRC with an aggregate gross floor area of approximately 159,014 sq.m., of which six buildings have been pledged. The following table sets forth a summary of the buildings that we occupied:

No.	Building used by	Number of buildings	Location	Aggregate gross floor area (sq.m.)	Existing use
1	HC Mining	7	Shahe town, Laizhou city, Shandong province	143,607	Office, dormitory, warehouse and industrial
2	HC Environmental	4	Jincheng town, Laizhou city, Shandong province	15,407	Office, warehouse and industrial

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As at the Latest Practicable Date, we had four buildings, with a total gross floor area of 1,986 sq.m., without relevant construction procedures and real estate title certificates, located on our owned land. The buildings involved were three bungalows and one canopy enclosure. We use the canopy enclosure as waiting area and parking space for delivery vehicles and the bungalows for storage of sundry items. As advised by our PRC Legal Advisers, the potential legal consequences would be mandatory demolition of such buildings within a prescribed period and if the buildings cannot be demolished, the buildings or the unlawful income would be confiscated and we may, in addition be fined not more than 10% of the construction cost of such buildings. See “Risk Factors — Risks Relating to Our Business and Industry — We may be subject to potential adverse consequences due to our lack of relevant construction procedures and valid title certificates in respect of certain properties we occupied in the PRC.” in this document. Laizhou Municipal Bureau of Natural Resources and Planning (萊州市自然資源和規劃局) and Laizhou Municipal Bureau of Housing and Urban-Rural Development (萊州市住房和城鄉建設管理局), which are the relevant competent authorities, confirmed that our Group has no administrative penalty record in planning and construction procedures, and the above buildings could be maintained in their current state, the authorities further confirmed that they would not require demolition of the buildings, confiscation of the buildings, illegal income or fines to our Group for the above situation. Therefore, our PRC Legal Advisers are of the view that the likelihood that our Group would be penalised or prosecuted for failure to comply with construction procedures and obtain real estate title certificates by the relevant authorities is remote. Given that these buildings are not used for production and operation premises or office premises of HC Mining, our Directors are of the view that such risk would not have a material adverse effect on our business operations or financial positions. As at the Latest Practicable Date, our Group was not under any notice to demolish any of such buildings. In case we were being noticed, we shall duly comply with such request. It is estimated by our Directors that the demolition cost would be approximately RMB75,000.

Leased Properties

Land use rights

As at the Latest Practicable Date, the land parcel in the PRC we leased as the leasee during the Track Record Period had expired, and we did not have any leased land use rights as leasee as at the Latest Practicable Date.

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Buildings

As at the Latest Practicable Date, we leased, as the lessee, two properties with an aggregate gross floor area of approximately 770 sq.m. in the PRC. The following table sets forth the property leased by our Group in the PRC:

No.	Lessee	Location	Leased area (sq.m.)	Existing use	Term of lease	Lease expiry date
1	HC Mining	4/F, No. 317 Service Centre, Beiyuan Road, Laizhou city, Shandong province	720	Office	Three years	31 March 2023
2	HC R&D	307, Shandong Qiaoshang Shuangchuang Industrial Park, Qianbeiliu Village, Yonganlu Street, Laizhou city, Shandong province	50	Office	Three years	31 October 2023

As at the Latest Practicable Date, we, as the landlord, leased out two warehouses in our production facility in Shahe Town. See “— Our Production Facilities — Our Warehouses — Our Rental Services for Storage of Hazardous Wastes” above for further details of the two lease agreements.

As at the Latest Practicable Date, the four lease agreements for our leased properties, either as the landlord or the lessee, had not been registered with the competent construction or real estate authorities as required under PRC laws. Registration of lease agreements requires the submission of certain documents, including identity documentation of the counterparties and title certificates of the relevant properties, to the authorities. Therefore, the registration is subject to the cooperation of our counterparties, which is not within our control.

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As advised by our PRC Legal Advisers, the lack of registrations will not affect the validity and enforceability of these lease agreements. However, the relevant government authorities may require us to rectify these unregistered lease agreements within a certain period of time and, if we fail to rectify, impose a fine from RMB1,000 to RMB10,000 for each unregistered lease agreement. See “Risk Factors — Risks Relating to Our Business and Industry — We may be subject to administrative penalties as we have not registered all of our leased agreements with competent construction or real estate administration authorities.” in this document. Our PRC Legal Advisers have advised us that the estimated total amount of potential penalty for our failure to register our lease agreements is RMB4,000 to RMB40,000. As at the Latest Practicable Date, we had not received any notice from any regulatory authority with respect to potential administrative penalties or enforcement actions as a result of our failure to file the lease agreements described above.

In the event that our leases as the lessee are challenged by third parties, we intend to find alternative locations nearby and relocate relevant offices. We estimate that the relocation costs will be approximately RMB5,500. Given that these properties are not material to us as they are only used for office purpose, and based on the above, our Directors are of the view that such non-registration would not have a material adverse effect on our business operations or financial positions.

Our Controlling Shareholders have undertaken to indemnify our Group against all fines and penalties incurred by the Group as a result of or in connection with the non-compliances regarding our properties. See “Other Information — 15. Tax and Other Indemnities” in Appendix V to this document for the indemnity undertakings given by our Controlling Shareholders.

Save as disclosed above, our Group did not have any other property interests as at the Latest Practicable Date.

INTELLECTUAL PROPERTY RIGHTS

As at the Latest Practicable Date, we are the registered owner of certain trademarks, six patents, and a domain name in the PRC and Hong Kong. For further details in relation to our intellectual property rights, see “Other Information — Further Information about the Business of Our Group — 9. Intellectual Property Rights of Our Group” in Appendix V to this document.

During the Track Record Period and up to the Latest Practicable Date, we had not been subject to any intellectual property infringement claims which had any material adverse impact on our Group. See also “Risk Factors — Risks Relating to Our Business and Industry — We may not be able to adequately protect our intellectual property rights in relation to our research and development technology, which could result in losses to our revenue and profit and could, in turn, materially and adversely affect our business, financial position and results of operations.” in this document.

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LEGAL PROCEEDINGS

During the Track Record Period and up to the Latest Practicable Date, there was no litigation or arbitration pending or threatened against our Group or any of our Directors which could have a material adverse effect on our Group’s financial condition or results of operations.

REGULATORY COMPLIANCE

During the Track Record Period and up to the Latest Practicable Date, we had been involved in certain non-compliance incidents, a summary of which is set out in the table below. Prior to the Track Record Period, administrative penalties amounting to a total of approximately RMB1.2 million were imposed on HC Environmental due to unauthorised use of land of approximately 51,000 sq.m. in aggregate situated in Jincheng town, Laizhou city, mainly for storage of cyanide tailings. All such fines had been fully settled and relevant facilities had been demolished, and such relevant plots of land had been returned in 2018. Save as disclosed, our Directors, based on the legal opinion issued by our PRC Legal Advisers, confirm that we have been in compliance in all material respects with the applicable PRC laws and regulations relating to our business operations during the Track Record Period and up to the Latest Practicable Date.

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Details of non-compliance incident	Reasons	Possible legal consequences and impact	Remedial measures and internal control measures
<p>(i) <i>Social insurance and housing provident fund</i></p>			
<p>HC Mining and HC Environmental failed to make full contributions to the social insurance and housing provident fund for employees during the Track Record Period.</p>	<p>The non-compliance incident was mainly due to (i) the insufficient understanding of the relevant PRC laws and regulations of our responsible handling staff; and (ii) absence of professional advice for our staff at the material time.</p>	<p>According to Social Insurance Law of the PRC 《中華人民共和國社會保險法》, where an employer fails to pay social insurance premiums in full, the relevant competent authority shall order it to pay or make up the balance within a prescribed time limit, and impose daily late charge of 0.05%. If an employer still fails to pay within the time limit prescribed, the relevant competent authority may impose a fine of one to three times of the overdue amount.</p>	<p>The carrying amount of our provisions for the underpaid amount of our social insurance and housing provident funds contributions amounted to approximately RMB1.1 million, RMB1.7 million, RMB2.0 million and RMB2.0 million, respectively, as at 31 December 2018, 2019 and 2020 and 30 April 2021. Our Directors are of the view that, the provisions can cover the potential payment in relation to the non-compliance matters, and confirm that HC Mining and HC Environmental have made full contributions to the social insurance and housing provident fund for employees since June 2021.</p>
<p>We estimate the underpaid amount of social insurance and housing provident fund contributions for the years ended 31 December 2018, 2019 and 2020 and the four months ended 30 April 2021 was approximately RMB0.7 million, RMB1.1 million, RMB0.9 million and RMB0.2 million, respectively.</p>	<p>According to the Housing Provident Fund Regulation 《住房公積金管理條例》, in the event that an employer fails to pay its housing provident fund contributions, the relevant competent authority may order it to rectify the non-compliance incidents within the prescribed time limit, failing which the relevant competent authority may apply to the court for compulsory enforcement.</p>	<p>We have obtained (i) confirmations from Laizhou Human Resources and Social Security Bureau 《萊州市人力資源和社會保障局》; and (ii) confirmations from Yantai Housing Provident Fund Management Centre Laizhou Branch 《煙臺市住房公積金管理中心萊州分中心》 that HC Mining and HC Environmental have not and would not be penalised for violating laws and regulations related to social insurance and housing provident fund, respectively.</p>	<p>Our Directors believe that the foregoing non-compliance incident has not caused or will not cause any material and adverse financial or operational impact on us as our internal policy and guidelines have been revised to include (i) calculation of social insurance and housing provident fund contribution matters; (ii) our finance department will review calculation of the relevant contributions, and keep proper records of any contributions paid; and (iii) internal review and approval by our general manager of the calculation of the relevant contributions.</p>
			<p>In addition, we have designated our finance director to carry out procedures of review to ensure the register of payment record is updated properly and that all payments of contributions to social insurance and housing provident fund are made on a timely basis.</p>

BUSINESS

Details of non-compliance incident	Reasons	Possible legal consequences and impact	Remedial measures and internal control measures
<p>(ii) <i>Transportation of cyanide tailings</i></p> <p>Throughout the Track Record Period until April 2021, HC Mining and HC Environmental had engaged transportation companies which did not possess appropriate permits for the operation of road transport of dangerous goods (“Permits”) for transporting cyanide tailings in Laizhou city from our customers (the “Engagement”).</p>	<p>According to the Safety Management of Dangerous Goods in Road Transport (《危險貨物道路运输安全管理辦法》) (the “Regulations”), it is the obligations of the carriers of dangerous goods to hold Permits and to carry dangerous goods in accordance with the Permits.</p> <p>Prior to each Engagement, our staff ensured the vehicles that we use must have in place effective protective measures for the safe transportation of cyanide tailings from our customers. In light of this requirement and our staff’s reliance on the representations made by the transportation companies regarding their legal and compliance obligations before each Engagement, our staff did not check the Permits of the transportation companies prior to each Engagement. Our Directors confirm that no Director or member of senior management was involved in this non-compliance incident.</p>	<p>According to the Regulations, there is no administrative penalties on consignors of dangerous goods (except consignors of dangerous chemicals) which do not engage carriers of dangerous goods with the Permits.</p> <p>We have obtained written confirmations from the Laizhou Branch of Yantai Municipal Ecology and Environment Bureau (煙臺市生態環境局萊州分局) (the “Environment Bureau”), pursuant to which, the Environment Bureau, among others, (i) confirmed that the Environment Bureau was aware that HC Mining and HC Environmental had engaged transportation companies which did not possess the Permits for the Engagement and details of such non-compliance incident; (ii) confirmed that HC Mining and HC Environmental did not have any material breach of relevant environmental protection laws and regulations for the Engagement; and (iii) HC Mining and HC Environmental had not been and would not be subject to any administrative penalties’ in relation to relevant environmental protection laws and regulations for the Engagement.</p>	<p>We have implemented the below enhanced internal control measures: (i) purchase department is responsible for requesting the transportation companies to provide the Permits and other qualification documents prior to their engagement; (ii) deputy general manager of transportation department performs regular assessment of the quality of services provided by the transportation companies and their respective qualification requirements; and (iii) upon expiration of the Permits, our purchase department requests the transportation companies to provide the renewed Permits and other qualification documents to us for filing purposes. Our internal control consultant, RSM Consulting (Hong Kong) Limited, has reviewed the above-mentioned enhanced internal control measures and did not note any material deficiencies. To strengthen internal supervision, our Group has designated Mr. Zhan, one of our executive Directors, to ensure that our enhanced internal control measures are properly carried out. For the qualifications and experience of Mr. Zhan, see “Directors and Senior Management” in this document.</p>
<p>The rectification of this non-compliance was fully completed in April 2021 because it was not discovered until the preparation for the [REDACTED] process which commenced in late 2020 when the relevant logistics companies admitted that they could not produce the Permits. Our Group took some time to look into the issue with our PRC Legal Advisers, who consulted the local ecology and environmental authorities. Our Group subsequently made arrangements to terminate the Engagement and to replace our supplier as soon as our Directors were advised of the non-compliance, the procedures of which requires time to complete.</p>	<p>As advised by our PRC Legal Advisers, the Environment Bureau is the competent authority to confirm the related matters.</p> <p>Our PRC Legal Advisers are of the view that the likelihood of prosecution by the Environment Bureau or other relevant PRC government authority is remote and that there are no other potential legal consequences as a result of this non-compliance incident.</p>	<p>During the Track Record Period, no environmental pollution accident or any major environmental violation in relation to the Engagement has occurred.</p> <p>Our Directors confirmed that the cost of engagement for approved transportation companies with relevant Permits is comparable with those without. Since May 2021, we only engage transportation companies with the Permits, and such approach has not and would not impose any material impact on the operations and financial performance of our Group.</p>	<p>During the Track Record Period, no environmental pollution accident or any major environmental violation in relation to the Engagement has occurred.</p> <p>Our Directors confirmed that the cost of engagement for approved transportation companies with relevant Permits is comparable with those without. Since May 2021, we only engage transportation companies with the Permits, and such approach has not and would not impose any material impact on the operations and financial performance of our Group.</p>

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Details of non-compliance incident	Reasons	Possible legal consequences and impact	Remedial measures and internal control measures
<p>(iii) <i>Bill financing</i></p> <p>In November and October 2018, our PRC subsidiaries, being HC Mining and HC Environmental, were involved in two occasions that involved the issue of bank bills without underlying transactions which was not in compliance with Negotiable Instruments Laws of the PRC (《中華人民共和國票據法》) (the “Arrangements”). They were discovered during the annual audit of HC Mining and HC Environmental for the year ended 31 December 2018.</p> <p>The chain of events which led to the Arrangement was that in the second half of 2018, our Group was constructing a new warehouse for hazardous waste storage which required a large amount of construction materials. In September and October 2018, (i) HC Mining; and (ii) HC Environmental respectively entered into an agreement to purchase (i) gravel; and (ii) construction planks and boards in the amount of (i) RMB2 million; and (ii) RMB10 million respectively from Laizhou Hongshunxiang Logistics Company Limited (萊州鴻順祥物流有限公司) (“Hongshunxiang”), which was a supplier of construction materials and a company beneficially held by Mr. Liu. Our Group engaged Hongshunxiang as a supplier of construction materials because we generally would prioritise Mr. Liu’s associates for new business opportunities before deciding to offer the same to its competitors.</p>	<p>As advised by our Directors, the principal reason for this non-compliance was due to inadequate supervision of our finance department which was delegated to handle financing arrangements. After the management’s decision to raise fund for land purchase, Ms. Zhang who handled the financing plan attempted the Arrangements with an intention to save time and costs for our Group. She proceeded with the Arrangements after reporting the financing plan to Mr. Liu. Mr. Liu confirmed that he was not aware of the legal consequence of the Arrangements at the material time. Saved for Mr. Liu, no other Director or member of senior management was involved in this Arrangement. According to the Arrangements, we were required to place a deposit of 50% of the value of the Bank Bills to the Endorsing Banks for issuance of Bank Bills. In the two occasions, we obtained Bank Bills in total with face amount of RMB12 million by placing RMB6 million pledged deposit to the Endorsing Banks, and the net financed amount was RMB6 million. According to the relevant Bank Bills Business Management Measures (《銀行承兌匯票業務管理辦法》), the amount that a company is required to deposit with a bank as security for issuance of a bank bill corresponds to its credit rating with the bank. The face amount of the bank bill shall be construed to be the full amount available to the company and such deposit shall be refunded after the bank bill is repaid and settled. Ms. Zhang confirmed that she was not aware that the Arrangements were not in compliance with the relevant PRC laws and regulations and she thought it was an acceptable and convenient method to raise funds without going through the time-consuming normal bank loan approval procedures.</p> <p>As advised by our Directors, our Group did not encounter any difficulties in obtaining necessary financing from banks and/or financial institutions during the Track Record Period. To the best knowledge of our Directors after making reasonable enquiries, due to the relatively small scale of operation, Hongshunxiang did not obtain financing from banks and/or financial institutions from the commencement of the Track Record Period up to the date of its deregistration.</p>	<p>As advised by our PRC Legal Advisers, the Arrangements were not in compliance with Article 10 of the Negotiable Instruments Law (《中華人民共和國票據法》), which provides that bank acceptance bills must be issued on the basis of actual underlying transactions and debt relationship. Further, according to our PRC Legal Advisers, there are no specific provisions in the Negotiable Instruments Law or any relevant laws that impose any administrative or criminal liability for the Arrangements.</p> <p>Through the Bank Bills, our Group only incurred administrative costs and no interest was charged on the face amount of RMB12 million. We received interest income from the Endorsing Bank for the RMB6 million pledged deposit. The total amount of interest income received from the deposits placed with the Endorsing Bank under the Arrangements was RMB96,000. Considered that (i) in accordance with the requirements of the Endorsing Bank, for the issuance of the Bank Bills, our Group deposited a total of RMB6 million using our own funds as security into its security deposit account; (ii) interest income was generated from such amount deposited with the Endorsing Bank using our Group’s own funds; (iii) according to the Bank Bills Business Management Measures (《銀行承兌匯票管理辦法》), the interest from security deposits is calculated and paid in accordance with relevant provisions, and according to the Administrative Provisions on Renminbi Interest Rates (《人民幣利率管理規定》), interest from the security deposited collected by financial institutions with approval of the PBOC shall be calculated and settled as per the deposited; and (iv) our Group’s non-compliance with Negotiable Instruments Laws of the PRC (《中華人民共和國票據法》) was due to the transfer of the Bank Bills without underlying transactions, which did not relate to the aforementioned security deposit and interest income generated therefrom, and the Bank Bills had been fully settled by our Group within the agreed timeframe. In view of the above, our PRC Legal Advisers are of the view that such interest income generated through the security deposit account and received by our Group does not constitute non-compliance, and such interest income does not constitute illegal income. Assuming our Group did not enter into the Arrangements and had instead obtained bank borrowings from banks, our Group would have incurred additional interest expenses on the net amount of RMB6 million financed by way of Arrangements for a year, which would amount to approximately RMB429,000, based on the weighted average effective interest rates of bank borrowings.</p>	<p>Since November 2018, we have ceased to enter into any new non-compliant bill financing arrangements.</p> <p>To prevent recurrence of this non-compliant incident, we have adopted the following internal control measures: (i) implementation of internal guidelines and policies for (a) approving, reporting and monitoring bill financing transactions, and (b) prohibiting use of bill financing without underlying transactions; (ii) our finance director shall review all application for payment to suppliers by bank acceptance bills together with the relevant underlying agreements and assess the genuineness of the information contained in the application. The application must then be approved by our general manager; (iii) all bank acceptance bills shall be reviewed by our finance director and approved by our general manager before acceptance; (iv) any single transaction involving payment by or acceptance of bank acceptance bill of more than RMB5 million must be approved by our Board; (v) internal review on bill financing arrangements to be conducted quarterly by our finance director; and (vi) to strengthen internal supervision, our Group has designated Mr. Wong Yun Fai, our chief financial officer, to closely monitor and review bank acceptance bills and ensure that our internal control measures are properly carried out. For the qualifications and experience of Mr. Wong, see “Directors and Senior Management” in this document.</p> <p>In addition, a training has been provided by our PRC Legal Advisers to our Directors and members of the senior management covering areas including an introduction of bills and bill financing, the relevant PRC laws and regulations, the bill financing procedures and the associated risks, case study of bill financing non-compliance, and internal control on management of bill financing procedures.</p> <p>Our internal control consultant, RSM Consulting (Hong Kong) Limited, has reviewed the internal control measures set out above, and performed a walk-through and control testing. Based on the foregoing, our internal control consultant confirmed that it did not note any material deficiencies.</p>

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Remedial measures and internal control measures

Possible legal consequences and impact

To assess the legal consequences and impact of the Arrangement, on 23 April 2021, the Sole Sponsor, its PRC legal advisers and our PRC Legal Advisers have interviewed at the venue of and consulted with (i) Laizhou city branch of the PBOC (中國人民銀行萊州市支行) (“Laizhou PBOC”); (ii) Laizhou city Office, Yantai Branch of China Banking Regulatory Commission (中國銀行保險監督管理委員會煙臺監管分局萊州辦事處) (“Laizhou CBRC”), both competent authorities (represented by the vice president (副行長) of Laizhou PBOC and the supervisor (主任) of Laizhou CBRC) to opine on such matter; and (iii) the Endorsing Banks. Each of Laizhou PBOC and Laizhou CBRC has verbally confirmed that the Arrangement has ceased, it has not received any complaint on the matter and it has not impose any administrative penalties on HC Mining and HC Environmental and unless complaints are received in relation to the Arrangements, it will not impose any administrative penalties on HC Mining, HC Environmental, the shareholders, directors and senior management of HC Mining and HC Environmental. Each of the Endorsing Banks confirmed that the relevant Bank Bills have been duly settled, they did not incur any loss as a result of the issuance of the Bank Bills, they have not received or launched any complaint against HC Mining and HC Environmental and they have not taken any legal actions against the shareholders, directors and senior management of HC Mining and HC Environmental. Based on the interviews, it is confirmed that if future complaints in relation to the Arrangements are received, the relevant authorities might initiate investigations against the Endorsing Banks. As advised by our PRC Legal Advisers, it is unlikely that the relevant authorities will direct any enforcement actions or impose administrative penalties or fines on our Group.

As advised by our PRC Legal Advisers, Laizhou PBOC and Laizhou CBRC are competent authorities in terms of handling bank bills and given the positions of the relevant officers mentioned above, they are competent and properly authorised to make the confirmations in the interviews. Furthermore, no circumstance or evidence has come to the attention of our PRC Legal Advisers that would result in the confirmations provided by Laizhou PBOC and Laizhou CBRC to be challenged by any higher authority.

Reasons

Details of non-compliance incident

Hongshunxiang was established in the PRC as a limited liability company on 25 April 2017 and was held by our Group's finance manager Ms. Zhang Xiaobo (“Ms. Zhang”), and Mr. Wang Feng (“Mr. Wang”), an accounting staff who resigned at the end of 2019, as to 51% and 49% equity interest respectively on trust for Mr. Liu immediately prior to its dissolution in May 2019. At the material time, as our Group was investing in the construction of warehouses and a production facility in Shahu town, Laizhou city under HC Mining, Mr. Liu decided to establish a company principally engaged in the trading of construction materials as to support our Group, as well as to capture the demand and business opportunities trading of construction materials in the PRC. With Mr. Liu's and our Group's focus on the gold mine hazardous waste treatment business development and expansion, Ms. Zhang and Mr. Wang, as two of Mr. Liu's employees, were entrusted with the direct establishment of Hongshunxiang as nominees for Mr. Liu and its preparations in order to facilitate effective operation and management of Hongshunxiang.

Hongshunxiang was principally engaged in the wholesale trading of construction materials prior to its deregistration. The daily operation of Hongshunxiang was handled by Ms. Zhang who was director and the legal representative. As confirmed by Mr. Liu, he was not involved in the day-to-day operations of Hongshunxiang at the material time. Incorporated in April 2017, Hongshunxiang's revenue for the year ended 31 December 2017, the year ended 31 December 2018 and for the three months ended 31 March 2019 were approximately RMB6.2 million, RMB15.1 million and RMB 2.3 million respectively, whereas its profit/(loss) for the corresponding period/year was approximately RMB50,000, RMB85,000 and (RMB19,000) respectively. It was voluntarily deregistered on 8 May 2019 due to poor business performance and fierce market competition.

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Remedial measures and internal control measures

Possible legal consequences and impact

Reasons

Details of non-compliance incident

Both transactions were then presented to two local banks (“**Endorsing Banks**”) for the issuance of a series of bank bills (the “**Bank Bills**”) to Hongshunxiang in (i) October 2018, and (ii) November 2018. However, Hongshunxiang was unable to provide the construction materials as specified in accordance with the agreed time, due to short notice received from supplier of Hongshunxiang for difficulties in sourcing steel tiles and steel sheets of our required standard and size, as per the understanding of our Directors with Hongshunxiang. Shortly after, both purchase agreements were terminated without the performance of the actual transactions upon negotiation between the parties, due to the decision to not cause any delay to the project in view of its tight schedule and our Group sourced from alternative suppliers with relevant industry expertise to ensure smooth and adequate supply of construction materials and smooth completion of the project. During Track Record Period, Hongshunxiang did not supply any goods and services to our Group. At the same time, Hongshunxiang has supplied other construction materials to other third parties and the terms of such transactions were comparable to those offered by other suppliers of our Group which are independent third parties and the then prevailing market rates. Despite the transactions with Hongshunxiang had been terminated, Ms. Zhang considered that the Endorsing Banks had already issued the Bank Bills and the relevant bank pledges had already been placed, for convenience, cost and time saving, she proceeded with the Arrangement and used the Bank Bills to settle some of our Group’s payables and then she reported to Mr. Liu. Mr. Liu was not aware of the legal consequences of the Arrangement at that time. The settlement of genuine transactions with Independent Third Parties included (i) construction costs and the refund of a prepayment received from a potential customer, and (ii) land purchase costs. Further details are as follows:

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Details of non-compliance incident	Reasons	Possible legal consequences and impact	Remedial measures and internal control measures
(i) for land acquisition, Supplier G was one of our landlord and our electricity and water supplier as well as the vendor for a parcel of land which we acquired. See “— Purchases of Services and Goods — Our Five Largest Suppliers” above for further details of the background and other details of Supplier G. The total consideration of land purchase was approximately RMB33.6 million, of which RMB10 million was paid using the Bank Bills;			
(ii) for construction costs, the Zhuwang Jian'an Branch of Shandong Jianfa Company Limited (山東建發有限公司朱莊建安分公司) (“ Shandong Jianfa ”) and Laizhou Wenhua Steel Structure Factory (萊州市政涵鋼結構廠) (“ Laizhou Wenhua ”) were engaged by our Group for the construction of our production facilities in Shahe town, Laizhou city and its ancillary structures. The business scope of Shandong Jianfa includes housing construction works, building renovation and decoration, installation of mechanical and electrical equipment and structural steel works, while Laizhou Wenhua is principally engaged in the processing, sales and installation of, among others, structural steel and steel tiles, and sales of construction materials. The relevant construction cost was approximately RMB5.4 million, of which approximately RMB1.5 million was paid using the Bank Bills; and			

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Details of non-compliance incident	Reasons	Possible legal consequences and impact	Remedial measures and internal control measures
<p>(iii) for refund of a prepayment, Laizhou Runyu Paper Company Limited (萊州市潤宇紙業有限公司) (“Laizhou Runyu”), a potential customer whose business scope involves the sales of certain paper-related products, sought our services in the area of printing waste treatment in March 2018, which we obtained a prepayment. Our Directors believe that Laizhou Runyu approached us to provide printing waste treatment services (印刷廢紙無害化處理) even though our Group did not have any prior experience in handling printing waste, as they may have considered that it was similar to our experience in handling gold mine hazardous waste, and the geographical advantage as a result of proximity in location between our Group and Laizhou Runyu, and which was introduced to our Group through a friend of Mr. Liu. At the time of negotiation, our Directors considered that since Laizhou Runyu is an acquaintance and an opportunity arose in which we could explore new business prospects to enhance our scope of operations, we seized our chance and entered into the agreement with Laizhou Runyu. Later in October 2018, we decided that the printing waste treatment was not our focus and we fully refunded the prepayment to Laizhou Runyu upon termination of the agreement after negotiations without providing any services to Laizhou Runyu^(Note). The relevant prepayment was approximately RMB0.5 million, all of which was repaid using the Bank Bills.</p>			
	<p><i>Note:</i> According to the agreement entered into between our Group and Laizhou Runyu in March 2018, the term for provision of services was between April 2018 and December 2018. The contract sum was RMB2 million, and a prepayment of RMB0.5 million was advanced to our Group. Subsequently, we obtained a report dated 5 September 2018 from an Independent Third Party laboratory analysing a printing waste sample provided by Laizhou Runyu and the composition of chemical elements, the results of which revealed that we would not be able to achieve the conditions for harmless treatment with our existing machinery and equipment and we would require new and additional machinery and equipment and modification of our production process. Our Directors considered that our business focus of gold mine hazardous waste treatment would be directly affected if our machinery and equipment was modified to handle this small intermittent supply of printing waste and that the agreed sum may not be able to cover our costs for providing such services. As such, our Directors terminated the agreement after negotiation with Laizhou Runyu in October 2018.</p>		

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Remedial measures and internal control measures

Possible legal consequences and impact

On the basis of the interview results from Laizhou PBOC, Laizhou CBRC and the Endorsing Banks, our PRC Legal Advisers are of the view that the chance of HC Mining and HC Environmental being penalised or prosecuted by the relevant PRC government authority for the Arrangements is remote. There are no other potential consequences as a result of the Arrangement because (i) the Endorsing Banks did not incur any loss as a result of the issuance of the Bank Bills; (ii) there are no specific provisions in the Negotiable Instruments Law or other applicable relevant PRC laws that impose any administrative penalties on the relevant companies and their shareholders, directors and senior executives for the Arrangements; and (iii) there has been no administrative or criminal consequences in connection with the Arrangement brought against HC Mining and HC Environmental.

Our Directors are of the view that the Arrangements did not have any material impact on our operations and our ability to obtain future fundings or borrowings because (i) of the views of our PRC Legal Advisers based on the interview results with Laizhou PBOC, Laizhou CBRC and the Endorsing Banks; (ii) the total additional fund resulted from such activities was only RMB6 million and we have sufficient financial resources generated from our operating activities; and (iii) the interest expenses saved by our Group under the Arrangements were not material to our operating profit during the same period.

Reasons

As confirmed by the Directors, apart from the two occasions as mentioned above, we did not conduct any further Arrangements during the Track Record Period and up to the Latest Practicable Date. We have ceased to enter into any new Arrangements since November 2018 and the Bank Bills were duly settled by November 2019.

Details of non-compliance incident

The Bank Bills were issued for one year and they were duly settled in (i) October; and (ii) November 2019.

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Indemnity given by our Controlling Shareholders

Our Controlling Shareholders have entered into the Deed of Indemnity in favour of our Group, under which they have agreed to indemnify our Group, subject to the terms and conditions therein, in respect of any liability that may be borne by our Group in respect of the above non-compliance incidents. See “Other Information — 15. Tax and other indemnity” in Appendix V to this document for further details of the indemnity that was given by our Controlling Shareholders.

View of our Directors and the Sole Sponsor

Taking into consideration that:

- our Group has established a proper internal control system to prevent future non-compliance with the relevant laws and regulations, and has also implemented the abovementioned internal control measures, including, among others, regular reporting by our staff and supervision by our assigned Director and finance director, to prevent recurrence of the non-compliance incidents;
- our internal control consultant reviewed the internal control measures and did not note any material deficiencies; and
- there has been no recurring of similar non-compliance incidents since the implementation of such measures,

Our Directors confirm, and the Sole Sponsor concurs that, the abovementioned internal control measures implemented are sufficient and could effectively ensure a proper internal control system of our Group and prevent the recurrence of any non-compliance incidents.

RISK MANAGEMENT AND INTERNAL CONTROL

Risk Management

With the growth and expansion of our operations, potential risks to our business increase as well. In order to identify, assess and control the risks that may create impediments to the growth of our business, we have designed and implemented risk management policies to address various potential risks identified in relation to our operations, including operational risks, credit risks, market risks, financial risks and legal risks. Our risk management policies set forth procedures to identify, analyse, categorise, mitigate and monitor various risks as well as the reporting hierarchy of risks identified in our operations. Each of our business departments and functions is responsible for identifying and evaluating the risks relating to its area of operations and implementing our risk management and internal control systems.

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Our audit committee is responsible for overseeing our management in the implementation of our overall risk management and internal control systems and assessing our risk management and internal control systems. For details about the qualifications and experiences of the members of our audit committee, see “Directors and Senior Management”.

We have adopted a risk management system, which we would conduct an enterprise risk assessment when there is a significant change in potential risks, or at least annually, to ensure that:

- a critical risk identification and assessment process is conducted with the involvement of senior management;
- critical risks are identified based on risk parameters and ranked accordingly;
- key risk mitigation measures are developed; and
- the results of the risk assessment are reviewed and approved by our board of Directors and the audit committee of our Company.

For measures over quality control and other risks, see “— Quality Assurance” above. We do not adopt any hedging policy. For details regarding the risks involved in our operations, see “Risk Factors” in this document.

Internal Control

It is responsibility of our Board to ensure that our Company maintains sound and effective internal controls to safeguard our Shareholders’ [REDACTED] and our Group’s assets at all times. We have adopted or expect to adopt immediately after the [REDACTED] a series of internal control policies, procedures and programmes designed to provide reasonable assurance for achieving objectives including effective and efficient operations, reliable financial reporting and compliance with applicable laws and regulations. Highlights of our internal control system include the following:

- **Code of conduct.** Our code of conduct explicitly communicates to each employee our values, acceptable criteria for decision-making and our ground rules for behaviour.
- **Internal audit.** Our internal audit team regularly monitors key controls and procedures in order to assure our management that the internal control system is functioning as intended. The audit committee is responsible for supervising our internal audit function.

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- ***Anti-corruption and anti-bribery:*** Our anti-corruption and anti-bribery policies provide the tools and resources necessary to enable, monitor and enforce full compliance with the anti-bribery and anti-corruption laws of the PRC and other countries where we conduct our business operations. In order to comply with the applicable laws and regulations in relation to anti-corruption and anti-bribery, we have established and implemented anti-corruption and anti-bribery policies and measures to prohibit all forms of bribery and corruption acts or intention of such acts. The policy also sets out the requirements of a company-wide anti-bribery and corruption training and disciplinary actions to be taken in situation of violation of the policy and/or relevant laws and regulations, including termination of employment and bringing forward to legal proceedings. We have also put in place a whistle-blowing system which is overseen by the audit committee of our Board.
- ***Appropriate training.*** We regularly provide training to our Directors, senior management and employees with respect to our internal control policies and the duties and responsibilities of directors and management of listed companies under the Listing Rules and other applicable laws and regulations.
- ***Compliance with Listing Rules.*** Our various policies aim to ensure compliance with the Listing Rules, including but not limited to aspects related to corporate governance, connected transactions and securities transactions by our Directors.
- ***Compliance adviser.*** We have appointed First Shanghai Capital Limited as our compliance adviser to advise on ongoing compliance with the Listing Rules and other applicable securities laws and regulations in Hong Kong.
- ***Non-compliances.*** Please see “— Regulatory Compliance” above for our internal enhancement measures that we have implemented to prevent re-occurrence of the non-compliances. Our Directors are of the view that the internal enhancement measures are adequate and effective for our Group to avoid the non-compliances going forward.

Our Directors are of the view that our current internal control measures are adequate and effective.

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OUTBREAK OF COVID-19

Impact on our operations and financial performance

In view of the outbreak of COVID-19 in the PRC, measures including temporary suspension of operations and travel restrictions have been imposed by the PRC government including Shandong province’s local governmental authorities. Our major upstream customers in Shandong province experienced temporary suspension in February 2020 due to the *Urgent Notice on Delaying the Resumption of Work of Enterprises in Shandong Province* (關於延遲省內企業復工的緊急通知) issued by Shandong Ministry of Human Resources and Social Security on 29 January 2020 in response to the outbreak of COVID-19. According to the F&S Report, the enterprises in Shandong province gradually resumed work and production in March 2020 and there was no suspension of gold mine operations of more than three months in Shandong province caused by the COVID-19 outbreak during the Track Record Period.

In order to further reduce the risk of nationwide outbreak of COVID-19 cases during Chinese New Year in 2021, the General Office of People’s Government of Shandong Province has implemented various measures including mandatory COVID-19 testing, quarantine measures and travel restrictions in preventing high volume of cross-provincial travels during the festive period. Although temporary suspension of business operation of some customers outside Shandong province occurred under the implementation of the aforementioned restrictions and measures since late February 2021, as at the Latest Practicable Date, local governmental authorities in Shandong province have lifted such travel restrictions and quarantine measures. Our Directors consider that the impact of temporary suspension of operations of our upstream customers in February 2020 on our Group’s operations was relatively minimal because it was a relatively short period of suspension and there had been gradual resumption of gold mine operations and production within one month of suspension in March 2020.

In addition, according to the F&S Report, the total volume of accumulated gold mine hazardous waste in Yantai city is estimated to be more than 10 million tonnes as at the end of 2020 and is estimated to be mainly stored in the storage and/or the production facilities within the gold mining companies with business operation in Yantai city. As confirmed by our Directors, the continuous treatment of the historical accumulated gold mine hazardous waste provided by these gold mining companies could also, to certain extent, absorb the impact of temporary suspension during the period. Indicated by the growth in our treatment volume for the year ended 31 December 2020 when compared with the previous year and the availability of accumulated gold mine hazardous waste yet to be treated in the market, our Directors are of the view that our business operation had not been materially affected by the temporary suspension of operation of our upstream customers. Our Directors confirmed that there was no material disruption to our Group’s supply chain in gold mine hazardous waste during the Track Record Period. Our Group’s revenue generated from gold mine hazardous waste treatment services and sale of recycled products for the eight months ended 31 August 2021 has increased as compared to the corresponding period in 2020.

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Our Directors considered that the outbreak of COVID-19 has some degree of indirect impact on the financial position of our Group as the outbreak of COVID-19 in 2020 has led to the plummeting downstream demand of sulphuric acid, and has thereby led to a decrease in both the price of sulphuric acid and the selling price of our pyrite concentrate. However, our Directors believe that, based on information available to our Directors up to the Latest Practicable Date, the outbreak of COVID-19 would not result in a material disruption to our business operations and financial positions due to the fact that (i) amid the outbreak of COVID-19, we recorded an overall increasing trend of our Group’s total revenue from approximately RMB102.3 million for the year ended 31 December 2018 to approximately RMB133.7 million for the year ended 31 December 2019, and further increased to approximately RMB205.4 million for the year ended 31 December 2020, and our increase in demand outweighed the decline in selling price of our pyrite concentrate; (ii) saved for the temporary suspension of our production facility in Jincheng town, Laizhou city from 15 November 2019 to 19 January 2020 for an in-depth and comprehensive repair and maintenance and the closure of our two production facilities for the Chinese New Year holiday from 27 January 2020 to 6 February 2020, our business operations were not suspended during the Track Record Period; (iii) there was no cessation of our Group’s operations subsequent to the Track Record Period and up to the Latest Practicable Date saved for the closure of our two production facilities for the Chinese New Year holiday from 4 February 2021 to 18 February 2021; (iv) no contract or delivery of our services or products has been terminated or materially delayed due to the COVID-19 pandemic; (v) none of our customers who had entered into contracts with us before the COVID-19 pandemic have terminated the contracts; and (vi) our Group has not encountered any material supply chain disruption subsequent to the Track Record Period and up to the Latest Practicable Date.

Our Directors, after careful and due consideration, confirmed that the business, financial condition and results of operation of our Group would not be materially affected by the outbreak of COVID-19, and thus it is unlikely for us to use the [REDACTED] from the [REDACTED] for other purposes or require a business contingency plan under the outbreak of COVID-19. Our Directors will continue to assess the impact of COVID-19 on our Group’s operation and financial performance and closely monitor our exposure to the risks and uncertainties in connection with the pandemic. We will take appropriate measures as necessary and inform our Shareholders and potential [REDACTED] as and where necessary. For further details, see “Risk Factors — Risks Relating to Our Business and Industry — Ongoing pandemic of COVID-19 could significantly affect our production, demand for our services and products and our business.”.