THIS REGISTRATION DOCUMENT IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION. If you are in any doubt as to what action you should take, you should immediately consult a person authorised under the Financial Services and Markets Act 2000, as amended, ("FSMA") who specialises in advising on the acquisition of shares and other securities.

This Registration Document has been approved by the Financial Conduct Authority ("**FCA**"), as competent authority under the Prospectus Regulation. The FCA only approves this Registration Document as meeting the standards of completeness, comprehensibility and consistency imposed by the Prospectus Regulation. Such approval should not be considered as an endorsement of the Company that is the subject of this Registration Document. This Registration Document has been filed with the FCA and made available to the public in accordance with Rule 3.2 of the Prospectus Regulation Rules.

This Registration Document has been prepared to provide information on the Company and no Ordinary Shares or other securities are being offered for subscription or sale pursuant to this Registration Document.

To the best of the knowledge of the Directors, whose names appear on page 11 of this Registration Document, and the Company, the information contained in this Registration Document is in accordance with the facts and this Registration Document makes no omission likely to affect its import.

THE WHOLE OF THE TEXT OF THIS REGISTRATION DOCUMENT SHOULD BE READ BY PROSPECTIVE INVESTORS. YOUR ATTENTION IS SPECIFICALLY DRAWN TO THE DISCUSSION OF CERTAIN RISKS AND OTHER FACTORS THAT SHOULD BE CONSIDERED IN CONNECTION WITH AN INVESTMENT IN THE ORDINARY SHARES, AS SET OUT IN THE SECTION ENTITLED "RISK FACTORS" BEGINNING ON PAGE 1 OF THIS REGISTRATION DOCUMENT.

TIRUPATI GRAPHITE PLC

(Incorporated in England and Wales under company number 10742540*)*

No representation or warranty, express or implied, is made and no responsibility or liability is accepted by any person other than the Company and its Directors, as to the accuracy, completeness, verification or sufficiency of the information contained herein and nothing contained in this Registration Document is, or shall be relied upon as, a promise or representation as to the past, present or future. The delivery of this Registration Document shall not, under any circumstances, create any implication that there has been no change in the business or affairs of the Company since the date of this Registration Document or that the information contained herein is correct as of any time subsequent to its date. No person is or has been authorised to give any information or to make any representation not contained in or not consistent with this Registration Document and, if given or made, such information or representation must not be relied upon as having been authorised by the Company. Without limitation, the contents of the websites of the Group do not form part of this Registration Document and information contained therein should not be relied upon by any person.

This Registration Document may be combined with a securities note and a summary to form a prospectus in accordance with the Prospectus Rules, under which a securities offering may in the future be made. However, this Registration Document, where not combined with a securities note and a summary to form a prospectus, does not constitute an offer or invitation to sell or issue, or a solicitation of an offer or invitation to purchase or subscribe for, any securities in the Company in any jurisdiction, nor shall this Registration Document alone (or any part of it), or the fact of its distribution, form the basis of, or be relied upon in connection with, or act as any inducement to enter into, any contract or commitment whatsoever with respect to any offer or otherwise.

The Ordinary Shares have not been and will not be registered under the US Securities Act of 1933, as amended (the "Securities Act"), or under the securities laws of any state or other jurisdiction of the United States or under applicable securities laws of Australia, Canada, Japan, the Republic of South Africa or the Republic of Ireland. Subject to certain exceptions, the Ordinary Shares may not be offered, sold, resold, transferred or distributed directly or indirectly, and this Registration Document may not be distributed by any means including electronic transmission within, into, in or from the United States or to or for the account or benefit of persons in the United States, Australia, the Republic of South Africa, the Republic of Ireland, Canada, Japan or any other jurisdiction where such offer or sale would violate the relevant securities laws of such jurisdiction. This Registration Document does not constitute an offer to sell or a solicitation of an offer to purchase or subscribe for Ordinary Shares in any jurisdiction in which such offer or solicitation is unlawful or would impose any unfulfilled registration, publication or approval requirements on the Company. The Ordinary Shares may not be taken up, offered, sold, resold, transferred or distributed, directly or indirectly within, into or in the United States except pursuant to an exemption from, or in a transaction that is not subject to, the registration requirements of the Securities Act. There will be no public offer in the United States. The Company has not been and will not be registered under the US Investment Company Act of 1940 ("US Investment Company Act") pursuant to the exemption provided by Section 3(c)(7) thereof, and investors will not be entitled to the benefits of the US Investment Company Act. None of the Ordinary Shares have been approved or disapproved by the US Securities and Exchange Commission, any state securities commission in the United States or any other regulatory authority in the United States, nor have any of the foregoing authorities passed comment upon or endorsed the merit of the offer of the Ordinary Shares or the accuracy or the adequacy of this Registration Document. Any representation to the contrary is a criminal offence in the United States.

The distribution of this Registration Document in or into jurisdictions other than the UK may be restricted by law and therefore persons into whose possession this Registration Document comes should inform themselves about and observe any such restrictions. Any failure to comply with these restrictions may constitute a violation of the securities laws of any such jurisdiction.

Application will be made for the Ordinary Shares to be admitted by way of a Standard Listing on the Official List. A Standard Listing will afford investors in the Company a lower level of regulatory protection than that afforded to investors in companies with Premium Listings on the Official List, which are subject to additional obligations under the Listing Rules. It should be noted that the FCA will not have authority to (and will not) monitor the Company's compliance with any of the Listing Rules which the Company has indicated herein that it intends to comply with on a voluntary basis, nor to impose sanctions in respect of any failure by the Company to so comply.

CONTENTS

RISK FACTORS

Investment in the Company and the Ordinary Shares carries a significant degree of risk, including risks in relation to the Company's business strategy and projects, risks relating to the industry the Company operates in, and risks relating to the Ordinary Shares. Prospective investors should carefully consider the risks associated with any investment in the Ordinary Shares, together with all other information contained in this Registration Document including, in particular, the risk factors described below.

Prospective investors should note that the risks relating to the Company, its proposed sector of activity and the Ordinary Shares are the risks that the Company and the Directors believe to be the most material for an assessment by a prospective investor of whether to consider an investment in the Ordinary Shares.

The risks referred to below are those risks the Company and the Directors consider to be the material risks relating to the Company. However, there may be additional risks that the Company and the Directors do not currently consider to be material or of which the Company and the Directors are not currently aware that may adversely affect the Company's business, financial condition and performance, results of operations or prospects. Investors should review this Registration Document carefully and in its entirety and consult with their professional advisers before acquiring any Ordinary Shares. If any of the risks referred to in this Registration Document were to occur, the results of operations, financial condition, performance and prospects of the Company could be materially adversely affected. If that were to be the case, the trading price of the Ordinary Shares and/or the level of dividends or distributions (if any) received from the Ordinary Shares could decline significantly. Further, investors could lose all or part of their investment.

References in this section (Risk Factors) to the Company shall be deemed to include references to one or more of its Subsidiaries, as appropriate.

A. RISKS RELATING TO THE GROUP AND ITS INDUSTRY

Effects of the COVID-19 pandemic

In December 2019, a novel strain of coronavirus was reported to have surfaced in Wuhan, China, which has and is continuing to spread throughout the world. On January 30, 2020, the World Health Organization declared the outbreak of the coronavirus disease (COVID-19) a "Public Health Emergency of International Concern." On January 31, 2020, U.S. Health and Human Services Secretary declared a public health emergency for the United States to aid the U.S. healthcare community and on March 11, 2020 the World Health Organization characterized the outbreak as a "pandemic". To control the spread of the disease, various countries announced measures of lockdowns and other restrictions with certain liberties, which have been relaxed in different degrees subsequently.

The effects of the restrictive measures on the Group's operations during 2020 have been as follows:

- In Madagascar, the Group's operations survived lockdown orders issued in mid-March, being a permitted industrial activity. The operations of the Group's projects have therefore continued.
- Movement of inputs like spares and fuels were temporarily impacted causing time to time bottlenecks in operations. The Company estimates its output to have reduced by approximately 20% during the period of restrictions.
- Movement of finished goods from the plant to the port were initially affected, however, the Company was able to continue shipment of goods it had produced.
- Receipts of dues from customers have been delayed by 30 – 45 days from the due dates.
- Shipments have continued with some customers requesting delays of 30 – 45 days, whereas orders were received from buyers in pipeline.
- Travel of senior management team members was impacted, although this has not caused any significant effect on the operations of the Group.
- The Indian operations of TSG were under complete lockdown from 24 March 2020 and resumed operations on May 12 2020.
- Sales of goods have recommenced after the restart of operations duly adopting SOP's and best practices for prevention.

- A temporary reduction in consumption is reported and so is a drop in output by graphite producers in China. Temporary closure was announced by two new African based producers listed on the ASX.
- There has been no significant softening of prices of graphite caused by the pandemic. The prices of larger flake graphite, the primary product range of the Group, are reported to have marginally increased.
- No employee of the Group has reported to that Company that they have been infected with COVID-19 to date.
- Global sentiments for diversifying supply source from China have led to increased approach to the Company from buyers in Europe and other consuming locations.
- The Company sees an opportunity in fast tracking its development to seize this enhanced opportunity for both its Projects.
- Additionally, fast track development of its TGMRC will enable the Company to collaborate and develop use of graphene in personal protective equipment and for medical applications.
- The senior management team of the Company has continued to 'work from home' and have access to all required corporate data and records which are available online through cloud-based systems.

While the pandemic has not caused any significant negative impact on the Group's operations to date, except to the extent described above, the Directors' believe it has created opportunities for the Group. However, severe lockdowns prohibiting movement of goods and people extensively and more stringent than what has been implemented to date, extending for longer durations, spread of COVID-19 extensively among the Group's management and employees or any other unforeseen circumstances related to a pandemic or health emergency with severity higher than what has been seen in the period, could delay project implementation, effect the continuity of the Group's current operations or lead to impacts related to its markets. The Directors' believe that upon Admission, the Placing Proceeds will provide sufficient cushion to mitigate the impact.

Dependence on the Madagascar Primary Graphite Projects

The Group's only material mineral properties are the Madagascar Primary Graphite Projects. The Group does not, therefore, have the benefit of a diverse portfolio of mineral properties and its efforts are principally focused in two primary graphite projects. Unless the Group acquires or develops additional material mineral properties or projects, any adverse developments affecting the Madagascar Primary Graphite Projects or the Group's rights to develop the Madagascar Primary Graphite Projects could materially adversely affect a significant proportion of the Group's business and financial condition and the performance and results of operations of the Madagascar Primary Graphite Projects. This would directly affect investors in the Company, as the Company's share price could drop, which could result in a decrease in, or total loss of, an investor's investment in the Company. The Board feel that this risk is reduced to a certain degree due to the support provided to the Group by its Downstream Specialty Graphite Projects, which can source primary graphite from other suppliers; however, this remains a valid risk.

Dependence on the Tirupati Specialty Graphite Projects

The Group's downstream value-added graphite processing and graphene manufacturing facilities are located in India and owned by TSG and includes the Speciality Graphite Project and TGMRC, which represent distinct business units and profit centres for the Group. Unless the Group acquires or develops additional downstream processing facilities or projects, any adverse developments affecting the Specialty Graphite Project or the Group's rights to develop these projects could materially adversely affect a significant proportion of the Group's business and, financial condition and the performance and results of operations of the Tirupati Specialty Graphite Projects. This would directly affect investors in the Company, as the Company's share price could drop, which could result in a decrease in, or total loss of, an investor's investment in the Company. The Board feel that this risk is reduced to a certain degree due to the support provided to the Group by its Madagascar Primary Graphite Projects, which can sell primary graphite to other buyers; however, this remains a valid risk.

Development of the Madagascar Primary Graphite Projects

Notwithstanding the experience, knowledge and careful evaluation that the Board and management team bring to the Madagascar Primary Graphite Projects, there is no assurance that other factors such as technical difficulties, geological conditions, adverse changes in government policy or legislation or lack of access to

sufficient funding may mean that the mineral resource is not economically recoverable or may otherwise preclude the Company from successfully developing the Madagascar Primary Graphite Projects.

The current and future operations of the Madagascar Primary Graphite Projects may be affected by a range of factors, including, but not limited to:

- geological conditions;
- limitations on activities due to seasonal weather patterns;
- unanticipated operational challenges, mechanical failure or technical difficulties encountered in exploration activities, construction works, mine development, process plant commissioning and operations, production and treatment activities;
- sustained adverse weather conditions, material industrial and environmental incidents or accidents, unresolved industrial disputes and other force majeure events;
- sustained unavailability of essential drilling, mining, processing and other equipment;
- unexpected sustained shortages or significant/material increases in the costs of consumables, spare parts, plant and equipment and labour;
- prevention of access by reason of political or civil unrest, outbreak of hostilities, inability to obtain regulatory or landowner consents or approvals;
- terms imposed by governments on development of mining projects including conditions such as equity participation, royalty rates and taxes and appropriation of assets;
- delays in completing critical assessments, reports, feasibility studies and obtaining development approvals and consents required; and
- risks of default or non-performance by third parties providing essential goods and services.

Resource Estimations

Resource estimates are expressions of judgement based on knowledge, experience and resource modelling. As such, resource estimates are inherently imprecise and rely to some extent on interpretations made by qualified experienced professionals.

Additionally, resource estimates may change over time as new information, understanding or technologies becomes available. Should the Group encounter mineralisation or geological formations different from those predicted by past drilling, sampling and interpretations, resource estimates may need to be altered in a way that could adversely affect the Group's operations at the Madagascar Primary Graphite Projects, which will impact its financial performance and results (and, in turn, any investment made in the Company's Ordinary Shares).

Competition

The Board and management actively monitors and is generally aware of major developments with graphite and graphene industry and competitors including graphite producers and developers, graphene producers and developers as well as the new entrants into the graphite and graphene industries. However, there is a possibility that some of the Company's competitors may be more advanced than the Company in their project developments, corporate activities, commercial developments, technological innovations and/or project funding. Successful development of projects by the Company's competitors may have negative implications on the Company's own projects, its operations and/or its markets for its graphite and graphene products. In addition, while the Board believes the Company is well-positioned to become a market leader in the graphite and graphene industries, the emergence of one of its existing or future competitors as a dominant player in either of these industries may inhibit the Company's ability to achieve its operational and/or commercial objectives within its planned timeframes. This could have a material adverse impact on the Company's financial position. The impact for investors is that the Group may not grow and develop as planned and/or capital available for project investments and technological advances may be reduced, thereby affecting the potential return on investment for investors.

Management's Performance and Efficiency

It is essential that the Company effectively manages the growth of its business. Whilst the Directors believe the Company has developed an appropriate organisational management system and human resources plans and is therefore equipped to implement its development and growth strategy, sustained mismanagement of

project operations at any level could lead the business operations to suffer, which may impact the Company's performance and profitability. The responsibility to manage multiple projects across different jurisdictions while ensuring quality and sustainability sits with the Company's management team and the Board. Continuous growth in sales and profits largely depends on the Company's management team's ability to expand its operations and prudently and effectively manage its operating procedures, financial controls and information systems. While the Board is confident its current management team are well placed to deliver the Group's strategy, there is no guarantee that the management team will be able to continue to deliver as planned if the Group substantially increases in size. This could have an adverse effect on investors, as the management team's attention may be diverted from focusing on the Group's business.

Land Occupation – Madagascar

In Madagascar, the Company undertook a systematic and transparent approach with the local community working with government sanctioned agencies to conduct formal land settlement surveys to identify land holdings and determine an appropriate compensation regime. This process enabled the Company to obtain formal legal rights over land required for its operations. Whilst the Company cannot guarantee that disputes over land will never arise at any time in future, the Directors believe that systematic approach taken by the Company has been prudent and deems the process and structure implemented will reduce the risk of disputes over land as the Company's operations expand over time.

In India, the sites identified by the Company are within existing industrial areas and the framework for securing land rights is well established and held by entities of the respective provincial Government. While the Company cannot guarantee there will never be any disputes over land rights, the risk is deemed to be minimal given the well established procedures and systems under which these are provided in India.

Geopolitical, Regulatory and Sovereign Risk

The Madagascar Primary Graphite Projects and the Downstream Specialty Graphite Projects are located in Madagascar and India, respectively, and are therefore subject to the risks associated with operating in a foreign jurisdiction. Since these are developing countries, their legal and political systems are emerging when compared to those in operation in the United Kingdom. Such risks may include, but are not limited to:

- economic, social or political instability or change;
- hyperinflation, currency non-convertibility or instability;
- changes of law affecting foreign ownership, government participation, taxation, working conditions, rates of exchange, exchange control, the mining code, export duties, resource rent taxes, repatriation of capital, environmental protection, mine safety, land acquisition and labour relations;
- government control over mineral properties; and
- ability to sustain or renew its regulatory consents and mining permits on reasonable terms or on a timely basis.

The Downstream Specialty Graphite Projects are not exposed to the same issues as the Madagascar Primary Graphite Projects. However, at this time these projects are subject to challenge in respect to their ultimate location. The Company has identified preferred locations in Gujurat and an alternative location in Maharashtra for the Downstream Specialty Graphite Projects. However, the sites that have been made available to the Company by the Gujurat Industrial Development Corporation at present are fairly limited. Until the site has been secured, there is no guarantee that the Company will be able to secure its preferred or alternative locations to develop the Downstream Specialty Graphite Projects. The Company's inability to secure its preferred location may result in the Company having to dedicate further time and effort to identify and secure a third alternative location for the Downstream Specialty Graphite Projects. Ultimately, this would involve more management time which could therefore, result in delays to the Downstream Specialty Graphite Projects being constructed and getting into production as planned. This would have a negative impact on the Group's financial position, which could in turn impact any investment in the Company's Ordinary Shares.

The Company's future exploration and development activities and its operations generally will depend on its ability to obtain, sustain or renew various mineral rights, licenses, permits, authorisations and regulatory approvals (collectively, "Regulatory Consents") from governmental and quasi-governmental authorities in Madagascar and India. The Company's ability to obtain, sustain or renew such Regulatory Consents on acceptable terms and on a timely basis is subject to changes in regulations and policies and to the discretion

of the respective governmental and quasi-governmental bodies. The Company may not be able to obtain, sustain or renew its Regulatory Consents and they may not be obtainable on reasonable terms or on a timely basis. This could have a material adverse effect on the Company's business, prospects and financial position, which could negatively impact an investor's investment in the Company and the value of the Ordinary Shares.

Risk of valuation of the Company's assets

The assets of the Company are valued in accordance with the Company's accounting policies which complies with IFRS and regulations of the relevant jurisdictions in which it operates. Such valuations do not necessarily dictate the sale price of an asset as this would depend on many circumstances, for example, economic and other conditions, which are often outside the control of the Company. The sale price of assets held by the Company can therefore be higher or lower than the value of assets determined by an expert, which indirectly may affect the Company's financial position.

Environmental and Health and Safety Risk

The Madagascar Primary Graphite Projects and the Downstream Specialty Graphite Projects, including mining and production plants, are expected to have an impact on the environment, particularly in cases of advanced exploration or mine development, production sites and plants. Their activities are or will be subject to in-country national and local laws and regulations regarding environmental management and health and safety which sets the minimum standards regulating all aspects managing environmental and health and safety. The governing laws also provide for penalties and other liabilities for the violation of such standards. In certain circumstances they establish obligations to remediate current and former facilities and locations where operations are or were conducted.

Significant liability could be imposed on the Company for damages, clean-up costs, or penalties in the event of certain discharges into the environment, environmental damage caused by previous owners of property acquired by the Group, or non-compliance with environmental laws or regulations. The Company has undertaken relevant baseline environmental surveys and developed appropriate procedures and mechanisms aimed at minimising these risks in an environmentally responsible manner, in accordance with or exceeding requirements under applicable laws and regulations. Nevertheless, there are certain risks inherent in the Company's proposed activities at the Madagascar Primary Graphite Projects and the Downstream Specialty Graphite Projects which could subject it to extensive liability of which the Company shall continue to actively monitor and manage.

The activities of mining and minerals processing involves certain hazards inherent to the industry. As a result, the Group may become subject to liability for such mismanagement of such hazards, including pollution, contamination, industrial accidents and incidents and other risks to the environment and health and safety conditions at its projects against which it cannot, or may elect not, to insure against (i.e. self-insured risks). Although the Group intends to periodically review the availability of commercially reasonable insurance coverage with a view to maintaining appropriate insurance coverage where available, if a hazard were to occur, the costs of rectifying the hazard may exceed the Group's asset value.

As a result of public concern about the real or perceived detrimental effects of economic globalization and global climate impacts, businesses generally and large multinational corporations in the natural resources industries, face increasing public scrutiny of their activities. These businesses are required to demonstrate that all stakeholders, including employees, governments, communities surrounding operations and the countries in which they operate, benefit from and will continue to benefit from their commercial activities as they seek to generate satisfactory returns on investment to shareholders. Such pressures tend to be particularly focused on companies whose activities are perceived to have a high impact on their social and physical environment. The potential consequences of these pressures include reputational damage, legal suits, increasing social investment obligations and pressure to increase taxes and royalties payable to governments and communities. The Group is, however, confident that it will be maintain its obligations in respect of its corporate and social responsibilities.

The Group's ability to obtain permits and approvals and to successfully operate in particular communities may be adversely impacted by real or perceived detrimental events associated with its activities or those of other mining companies affecting the environment, human health and safety of communities in which it operates. Delays in obtaining or failure to obtain government permits and approvals may adversely affect the Group's operations, including its ability to explore or develop properties, commence production or continue operations. Key permits and approvals may be revoked or suspended or may be varied in a manner that

adversely affects the Group's operations, including its ability to explore or develop properties, commence production or continue operations.

The Group's exploration, development, mining and processing operations are subject to extensive laws and regulations governing worker health and safety and land use and the protection of the environment, which generally apply to air and water quality, protection of endangered, protected or other specified species, hazardous waste management and reclamation.

Infrastructure

The Group's business will depend to a significant degree on the existence of and access to adequate infrastructure. In the course of developing its operations, the Group will need to upgrade and/or construct infrastructure, which may include permanent water supplies, power, transport and logistics services which affect capital and operating costs. Significant additional funding may be required to develop such infrastructure. Unusual or infrequent weather phenomena, sabotage, government or other interference in the maintenance or provision of such infrastructure or any failure or unavailability in such infrastructure could materially adversely affect the Group's operations, financial condition and results of operations.

Operational Risks

The current operations of the Company generally include mining, processing, exploration, and production, any of which may be impacted by a wide range of factors which are outside of the Company's control.

The Company has established resources for the first phase of its Madagascar Primary Graphite Projects and further ongoing exploration is underway to expand the Company's resources base as its operations and capacities expand. The Board anticipates that any operational risks will relate to, for example, a failure to locate or identify deposits; failure to achieve the predicted product grades, unforeseen challenges in mining activities, the ability to attract and retain personnel, technical difficulties encountered during commissioning and operating plant and equipment, mechanical failures, metallurgical problems which affect extraction rates and costs, adverse weather conditions (including cyclones), industrial and environmental accidents, industrial disputes, unexpected shortages or increases in the costs of consumables, spare parts, plant and equipment, and the ability to develop and maintain the properties held by the Group.

The Company's business includes mineral exploration. There are numerous difficulties normally encountered by mineral exploration and resource based production companies, and these companies tend to experience a high rate of failure. The likelihood of success must be considered in light of the problems, expenses, difficulties, complications and delays encountered in connection with the exploration of the mineral properties that the Company plans to undertake. These potential problems include, but are not limited to, unanticipated problems relating to exploration and additional costs and expenses that may exceed current estimates, issues regarding transportation and logistics, manpower management and technical know-how. Other than the experience and capabilities of its management team and personnel, the Company itself has no history upon which to base any assumption as to the likelihood that the business will prove successful, and can provide no assurance to investors that it will generate any operating revenues or produce profitable operations.

The success of the Group's operations will require the use of outside suppliers and imported goods and materials and the reliability of each is beyond the Company's control.

In terms of the Downstream Specialty Graphite Projects, they will carry the risks associated with any chemical processing plant and, as such, may pose similar risks to the Madagascar Primary Graphite Projects in terms of their operation.

Key Personnel

Recruiting and retaining qualified personnel is critical to the Company's success. The Company is dependent on the services of key executives including its Managing Director and other highly skilled and experienced executives and personnel focused on managing the Company's interests. The number of persons skilled in acquisition, exploration and development of mining properties is limited and competition for such persons is intense. As the Company's business activity grows, the Company will require additional key financial, administrative, geologic, mining and engineering personnel as well as additional operations staff. There is a risk that the Company will not be successful in attracting, training and retaining qualified personnel as competition for persons with these skill sets may be high. If the Company is not successful in attracting, training and retaining qualified personnel, the efficiency of the Company's operations could be impaired, which could have an adverse impact on the Company's future cash flows, earnings, results of operations and financial condition.

Volatility of Graphite Prices

Graphite prices are affected by numerous industry factors, many of which are beyond the control of the Company. Such factors include, but are not limited to, technological advancements, forward selling by producers, production cost levels in major producing regions, logistics costs, macroeconomic factors such as inflation, interest rates, currency exchange rates and global and regional demand for, and supply of, graphite (including oversupply).

If the market price of graphite sold by the Company were to fall below the costs of production and remain at such a level for any sustained period, or if there was an oversupply of graphite in the market, the Company would experience a reduction in its profits.

Enforcement Risks

All of the Group's assets are located outside of the United Kingdom, in Madagascar and in India. It may not, therefore, be possible for investors to enforce judgments in the United Kingdom against the Company's assets. In addition, many of the Group's directors are residents of India or otherwise reside outside the United Kingdom, and all or a substantial portion of their assets, are located outside the United Kingdom.

Litigation

Whilst the Group currently has no outstanding litigation, there can be no guarantee that the current or future actions of the Group will not result in litigation since the mineral industry, as in all industries, is subject to claims, both with and without merit. Defence and settlement costs can be substantial, even with respect to claims that have no merit. Owing to the inherent uncertainty of the litigation process, there can be no assurance that the resolution of any particular legal proceeding will not have a material effect on the Group's financial position or results of operations.

B. RISKS RELATING TO THE ORDINARY SHARES

Regulatory Protection

Application will be made for the Ordinary Shares to be admitted to a Standard Listing on the Official List. A Standard Listing will afford Investors in the Company a lower level of regulatory protection than that afforded to investors in a company with a Premium Listing, which is subject to additional obligations under the Listing Rules.

Realisation of Investment

Admission to listing on the Official List should not be taken as implying that there will always be a liquid market in the Ordinary Shares. Investors should be aware that the value of the Ordinary Shares may be volatile and may go down as well as up and investors may therefore not recover the full value of their original investment. The price at which investors may dispose of their Ordinary Shares may be influenced by a number of factors, some of which may pertain to the Company and others of which are extraneous. On any disposal, investors may realise less than the original amount invested. Similarly, an investment in the Company may not necessarily guarantee appreciation in value over a short period of time as the Company's investment objectives may only be achieved over a longer period, if at all.

Volatility of Share Price

The market price of the Ordinary Shares could fluctuate significantly based on a number of factors in addition to those listed in this Registration Document, including:

- the Company's operating performance and the performance of competitors and other similar companies;
- the market's reaction to the Company's press releases, other public announcements and the Company's filings with various securities regulatory authorities;
- changes in earnings estimates or recommendations by research analysts who track the Ordinary Shares or the shares of other companies in the resource sector;
- changes in general economic conditions;
- the number of Ordinary Shares publicly traded;
- the arrival or departure of key personnel;

- acquisitions, strategic alliances or joint ventures involving the Company, the Group or its competitors; and
- the factors listed under the heading 'Forward-looking Statements' on page 10 of this Registration Document.

Past performance may not always necessarily be a guide to the future. Shifts in economic conditions, rates of inflation, industry conditions, competition, political and diplomatic events, trends, tax laws and other factors can substantially and adversely affect the Company's performance and the value of its investments and Ordinary Shares.

Dividends

The decision to declare and pay dividends will be made at the discretion of the Board and will depend on various factors such as the Group's results of operations, financial condition, solvency and distributable reserves, tests imposed by corporate law and such other factors that the Board may consider relevant. The Board recognises that it is important to ensure that shareholders are rewarded with appropriate returns on their investments and will be considering distribution of profits from time to time depending on the Company's performance, dividend policy, financial position, business operations and cashflow requirements of the ongoing projects.

IMPORTANT INFORMATION

No person has been authorised to give any information or make any representations other than as contained in this Registration Document and, if given or made, such information or representations must not be relied on as having been authorised by the Company or the Directors. Without prejudice to the Company's obligations under FSMA, the Prospectus Regulation Rules, the Listing Rules, the Market Abuse Regulation and the Disclosure Guidance and Transparency Rules, the delivery of this Registration Document shall, under any circumstances, create any implication that there has been no change in the affairs of the Company since the date of this Registration Document or that the information contained herein is correct as at any time after its date of publication.

Prospective investors must not treat the contents of this Registration Document or any subsequent communications from the Company, the Directors, or any of their respective affiliates, officers, directors, employees or agents as advice relating to legal, taxation, accounting, regulatory, investment or any other matters.

This Registration Document does not constitute, and may not be used for the purposes of, an offer to sell or an invitation or the solicitation of an offer or invitation to subscribe for or buy, any Ordinary Shares by any person in any jurisdiction: (i) in which such offer or invitation is not authorised; (ii) in which the person making such offer or invitation is not qualified to do so; or (iii) in which, or to any person to whom, it is unlawful to make such offer, solicitation or invitation. The distribution of this Registration Document in certain jurisdictions may be restricted. Accordingly, persons outside the UK who obtain possession of this Registration Document are required by the Company and the Directors to inform themselves about, and to observe any restrictions as to the distribution of this Registration Document under the laws and regulations of any territory in connection with any applications for Ordinary Shares including obtaining any requisite governmental or other consent and observing any other formality prescribed in such territory. No action has been taken or will be taken in any jurisdiction by the Company or the Directors that would permit a public offering of the Ordinary Shares in any jurisdiction where action for that purpose is required nor has any such action been taken with respect to the possession or distribution of this Registration Document other than in any jurisdiction where action for that purpose is required. Neither the Company nor the Directors accept any responsibility for any violation of any of these restrictions by any person.

The Ordinary Shares have not been and will not be registered under the Securities Act, or under any relevant securities laws of any state or other jurisdiction in the United States, or under the applicable securities laws of Australia, the Republic of South Africa, the Republic of Ireland, Canada or Japan. Subject to certain exceptions, the Ordinary Shares may not be offered, sold, resold, reoffered, pledged, transferred, distributed or delivered, directly or indirectly, within, into or in the United States, the Republic of South Africa, the Republic of Ireland, Australia, Canada or Japan or to any national, resident or citizen of the United States, Australia, the Republic of South Africa, the Republic of Ireland, Canada or Japan.

The Ordinary Shares have not been approved or disapproved by the US Securities and Exchange Commission, any federal or state securities commission in the United States or any other regulatory authority in the United States, nor have any of the foregoing authorities passed upon or endorsed the merits of the offering of the Ordinary Shares or confirmed the accuracy or determined the adequacy of the information contained in this Registration Document. Any representation to the contrary is a criminal offence in the United States.

Investment considerations

The contents of this Registration Document are not to be construed as advice relating to legal, financial, taxation, investment decisions or any other matter.

Prospective investors must rely upon their own representatives, including their own legal advisers and accountants, as to legal, tax, investment or any other related matters concerning the Company and an investment therein.

Any investment in the Company should be regarded as a long-term investment. There can be no assurance that the Company's objectives will be achieved.

It should be remembered that the price of the Ordinary Shares and any income from such Ordinary Shares, can go down as well as up.

This Registration Document should be read in its entirety. All Shareholders are entitled to the benefit of, are bound by, and are deemed to have notice of, the provisions of the memorandum of association of the Company and the Articles.

Forward-looking statements

This Registration Document includes statements that are, or may be deemed to be, "forward-looking statements". In some cases, these forward-looking statements can be identified by the use of forward-looking terminology, including the terms "targets", "believes", "estimates", "anticipates", "expects", "intends", "may", "will", "should", "could" or, in each case, their negative or other variations or comparable terminology. They appear in a number of places throughout the Document and include statements regarding the intentions, beliefs or current expectations of the Company and the Board concerning, among other things: (i) the Company's objective, acquisition and financing strategies, results of operations, financial condition, capital resources, prospects, capital appreciation of the Ordinary Shares and dividends; and (ii) future deal flow and implementation of active management strategies, including with regard to an investment. By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Forward-looking statements are not guarantees of future performances. The Company's actual performance, results of operations, financial condition, distributions to Shareholders and the development of its financing strategies may differ materially from the forward-looking statements contained in this Registration Document. In addition, even if the Company's actual performance, results of operations, financial condition, distributions to Shareholders and the development of its financing strategies are consistent with the forward-looking statements contained in this Registration Document, those results or developments may not be indicative of results or developments in subsequent periods. Important factors that may cause these differences include, but are not limited to:

- the availability and cost of equity or debt capital for future transactions;
- currency exchange rate fluctuations, as well as the success of the Company's hedging strategies in relation to such fluctuations (if such strategies are in fact used);
- changes in the economic climate; and
- legislative and/or regulatory changes, including changes in taxation regimes.

Prospective investors should carefully review the "Risk Factors" section of this Registration Document for a discussion of additional factors that could cause the Company's actual results to differ materially, before making an investment decision.

Forward-looking statements contained in this Registration Document apply only as at the date of this Registration Document. Subject to any obligations under the Listing Rules, the Disclosure Guidance and Transparency Rules, the Prospectus Regulation Rules and Market Abuse Regulation, the Company undertakes no obligation publicly to update or review any forward-looking statements, whether as a result of new information, future developments or otherwise.

Third party data

Where information contained in this Registration Document has been sourced from a third party, the Company and the Directors confirm that such information has been accurately reproduced and, so far as they are aware and have been able to ascertain from information published by that third party, no facts have been omitted which would render the reproduced information inaccurate or misleading. Where third party information has been used in this Registration Document, the source of such information has been identified. The Company takes responsibility for compiling and extracting, but has not independently verified, market data provided by third parties or industry or general publications and takes no further responsibility for such data. Reference materials include various historical and recent publications.

No incorporation of website

The contents of any website of the Company or any other person do not form part of this Registration Document.

Definitions

A list of defined terms used in this Registration Document is set out in "Definitions" beginning at page 251.

DIRECTORS, SECRETARY AND ADVISERS TO THE COMPANY

Directors	Shishir Kumar Poddar (*Managing Director*) Christian Gabriel St. John-Dennis (*Non-executive Director*) Hemant Kumar Poddar (*Non-executive Director*) Rajesh Kedia (*Non-executive Director*) Lincoln Moore (*Non-executive Director*)
Registered Office	49 Berkeley Square London W1J 5AZ
Company Secretary	London Registrars Ltd Suite A. 6 Honduras Street London EC1Y 0TH
Broker	Optiva Securities Ltd 49 Berkeley Square London W1J 5AZ
Legal advisers to the Company as to English law	Bird and Bird LLP 12 New Fetter Lane London EC4A 1JP United Kingdom
Legal advisers to the Company as to Madagascan law	Madagascar Law Offices, ALN Lot II L 111 ED Immeuble Appel, 2ème étage, Route des Hydrocarbures Antananarivo, Madagascar
Legal advisers to the Company as to Indian law	Khaitan & Co One Indiabulls Centre 13th Floor Tower 1 Mumbai 400013 India
Legal advisers to the Company as to Mauritian law	Lincoln's Inn Erriah Chambers 2nd Floor Hennessy Court Cnr of Pope Hennessy & Suffren Streets Port-Louis Mauritius

Legal advisers to the Optiva as to English law	DMH Stallard 6 New Street Square New Fetter Lane London EC4A 3BF
Competent Person	SRK Consulting SRK Mining Services (India) Pvt Ltd CE 106, Sector-1 Salt Lake City Kolkata 700064 West Bengal, India Tel:+91 82 7408 8317
Reporting Accountants	PKF Littlejohn LLP 1 Westferry Circus London E14 4HD
Auditors	PKF Littlejohn LLP 1 Westferry Circus London E14 4HD
Registrars	Share Registrars The Courtyard 17 West Street Farnham Surrey GU9 7DR

PART I

PART A – INFORMATION ON THE GROUP

1. Introduction

The Company was incorporated under the laws of England and Wales on 26 April 2017 with a primary focus of specialising in the exploration for and mining and production of natural flake graphite, a processed mineral with industrial and technology applications. Based on its structure-property relationship, graphite affords a variety of technologically innovative applications or performances in various industries a number of which are classified as 'green' industries. The products and uses for which it is employed include lithium-ion batteries, fuel cells, two-dimensional graphene, water purification, electronics, fibre optics, spintronics, refractories, electrical products, electric vehicles, flame retardants, solid-state high temperature lubricant, conductive polymers and friction materials.

Since its incorporation, the Company has completed two strategic acquisitions and one conditional strategic acquisition and is progressing development of its Projects. The Group's activities include exploration, mining, basic processing, production of flake graphite for industrial applications and downstream processing for high purity, intercalated, micronized and shaped/spherical flake graphite products for hi-tech applications. With these acquisitions, the Company has embarked on a journey to become a fully integrated flake graphite and Graphene company.

Through its two subsidiaries in Madagascar, the Company owns a graphite producing asset, the Sahamamy Project, and a near-term graphite producing asset, the Vatomina Project. The Projects have both undergone initial exploration to establish a certified JORC (2012) mineral resource estimate, and the Company aims to further develop projects in modules aligned with market development.

The Company has also developed a start-up flake graphite based flame retardant additive manufacturing unit, the Patalganga Project, and is intending to further expand this and develop a comprehensive downstream flake graphite processing plant for hi-tech specialty graphite products. It is also developing a research and technology centre, Tirupati Graphene and Mintech Research Centre ("**TGMRC**") which shall consist of a graphene manufacture and application development facility, cutting edge research and industry focused technology development.

The Directors believe that the structuring of the Projects completes the development platform for the Company to achieve its primary focus of being a comprehensive contributor in the flake graphite value chain. As a result of the Company's strategic acquisitions, the Directors believe that the Company now has the requisite technical capabilities and commercial expertise it needs to develop the Projects and is therefore well positioned to fast-track delivery of the planned development.

2. Brief History of the Company

The Company was set up by the promoters of Tirupati Carbons & Chemicals Pvt Ltd ("TCCPL"), an Indian company engaged in the exploration for and the development, production and marketing of flake graphite. TCCPL promoted TRM, the Mauritian company operating the Vatomina Project in Madagascar. Following incorporation, the Company completed the amalgamation of TRM as a 100% subsidiary and embarked on developing its business. In parallel with developing the Vatomina Project, the Company expanded its asset portfolio in Madagascar with acquisition of Rostaing and entered into a binding conditional agreement for the acquisition of TSG further integrating itself across the value chain of flake graphite and graphene development. It successfully completed three rounds of equity capital raising by private placement to progress the Projects to their current stage of development. The key milestones in the Company's history are as follows:

Calendar Year	*Key Milestones*
May 2017	The Company completed the acquisition of TRM in exchange for the issue of 30,000,000 Ordinary Shares to its two shareholders.
October 2017	First capital raise: £1.1 million raised by the Company via private placement.
October 2017	The Company entered into a binding agreement to acquire Rostaing, which owned the Sahamamy Project, from its two existing shareholders.
Q3 & Q4 2017	Development of the Vatomina Project.

Q1 2018	The Company took over control of the Sahamamy Project.
Quarter 2 and 3, 2018	The Company completed the acquisition of over 10 hectares of land for the Vatomina process plant in a non-mineralised zone.
July 2018	Commencement of construction of the first 3,000 tpa plant at Sahamamy Development and preparation of the plant area at Vatomina was also commenced. Commencement of marketing for Sahamamy and Vatomina.
September 2018	Second capital raise: £1.5 million raised by the Company through a private placement at an issue price of £0.20 per Ordinary Share.
October 2018	Conditional acquisition of 100% of the equity shares of TSG for £2.0 million, satisfied through the issue of Ordinary Shares at £0.20 per share. The completion of this acquisition is pending final regulatory approvals, which is expected after Admission. Please see paragraph 11.2.4 of Part V of this Registration Document for further information on the conditions.
November 2018	Installations at the Patalganga Project for 1,200 TPA flame retardant expandable graphite began.
Q1 2019	Further development of Sahamamy Project and construction of the new 3,000 tpa process plant at the Sahamamy Project, achieving production around the end of March 2019.
April – December 2019	The first flake graphite shipment from the new plant at Sahamamy was made in May 2019. A total of 927 MT flake graphite was produced and 769 MT flake graphite was shipped from production during the ramp up period, generating total revenues of £509,874. Commencement of commercial production was declared from January 2020.
July – December 2019	TSG completed trial production runs and commissioned the Patalganga 1,200 tpa flame retardants project in India. The Company launched its expandable flake graphite product for flame retardant and other applications under its own registered trademark 'CarboflameX', marking the commencement of commercial operations at the Patalganga Project. The Company raised a further sum of £720,001.45 (before expenses) through a private placement by issuing 2,057,147 Ordinary Shares at an issue price of £0.35 per share.
Q4 2019 to Q1 2020	TSG received confirmation of approval for the allotment to it of land in its desired location for the development of a graphene manufacture, technology and research centre in Bhubaneswar India. The construction of the plant building for a 6,000 tpa plant in the Vatomina Project is substantially completed. Procurement and shipment of mining and processing equipment has been initiated. The iComposites Research Centre of the University of Manchester completed its project on the development of a new polymer based graphene composite with preliminary results showing improved product quality for various applications.

The Company's Projects and Development Strategy

The Company currently owns the following Projects through its Subsidiaries:

Project Name	Location	Ownership	Remarks
Vatomina	Madagascar	98% owned	Mining and primary processing of flake graphite
Sahamamy Sahasoa	Madagascar	100% owned	Mining and primary processing of flake graphite

Subject only to regulatory approvals, the Company has entered into a binding agreement for the acquisition of 100% of the equity of Tirupati Specialty Graphite (P) Ltd., an Indian company holding the following projects:

Project Name	Location	Ownership	Remarks
Patalganga Project	India	100% owned	Manufacture of flake graphite based flame retardant additive composite
Specialty Graphite Project	India	100% owned	Proposed integrated project for downstream processing of flake graphite
TGMRC	India	100% owned	Proposed graphene manufacture, technology & research centre

Strategic planning for development of the Company's business

The Company is developing its project portfolio with a mission of becoming an integrated flake graphite and graphene company with special focus on developing sustainable, environmentally friendly operations and processes. Its projects have been structured to produce flake graphite for industrial applications with an emphasis on applications that aim to reduce the world's carbon footprint. It has also developed a proprietary environment friendly process and scalable technology for the manufacture of standardised high-quality graphene without the use of hazardous chemicals, and enabling development of graphene applications in selected areas of prospective industrial bulk consumption. The Company's objective is to catalyse the commercialisation of graphene applications by providing quality graphene at affordable prices to present and prospective end users.

The Company is embarking upon a medium-term development strategy for its Projects to grow and expand its production capacity in a staged manner over a three year period, focusing on minimising upfront investment capital requirements. During the formation of its development strategy, the Company was conscious of various market dynamics taking place in the green energy sector and within the areospace and technology sectors with respect to the adoption and commercialisation of graphene applications. The Company recognised opportunities to progressively define and evolve its longer-term development goals by planning additional capacities in specific areas. As a result, the Company's medium-term development plans ("**MTDP**", as described in detail further below) have been deliberately crafted with flexibility to build on and enhance the businesses of the Company based on the evolution of the flake graphite and graphene industries and their derivative products.

Understanding the dynamics of this niche material, the Company's MTDP took into consideration the following objectives:

a. minimise initial and overall investment capital and accelerate production by deriving early stage cash flows for all of the Projects; reduce equity dilution by minimising the need to access the equity markets and maximise shareholder returns;

b. mitigate project development risks through a modularisation strategy, tracking the growth of the graphite and graphene markets and related developments and technological advances;

c. aim for low gestation periods for project development to optimise return on investments;

d. integration across the value chain and organic market development – serving multifarious markets and diverse applications of specialised as well as conventional type;

e. optimising technologies and operations to ensure low costs, higher output and higher margins; and

f. sustainability in all spheres – environment, social and value creation.

The project development stages and planned production capacities for the Projects are currently scheduled as follows:

Primary Flake Graphite Mining and Processing – Madagascar:

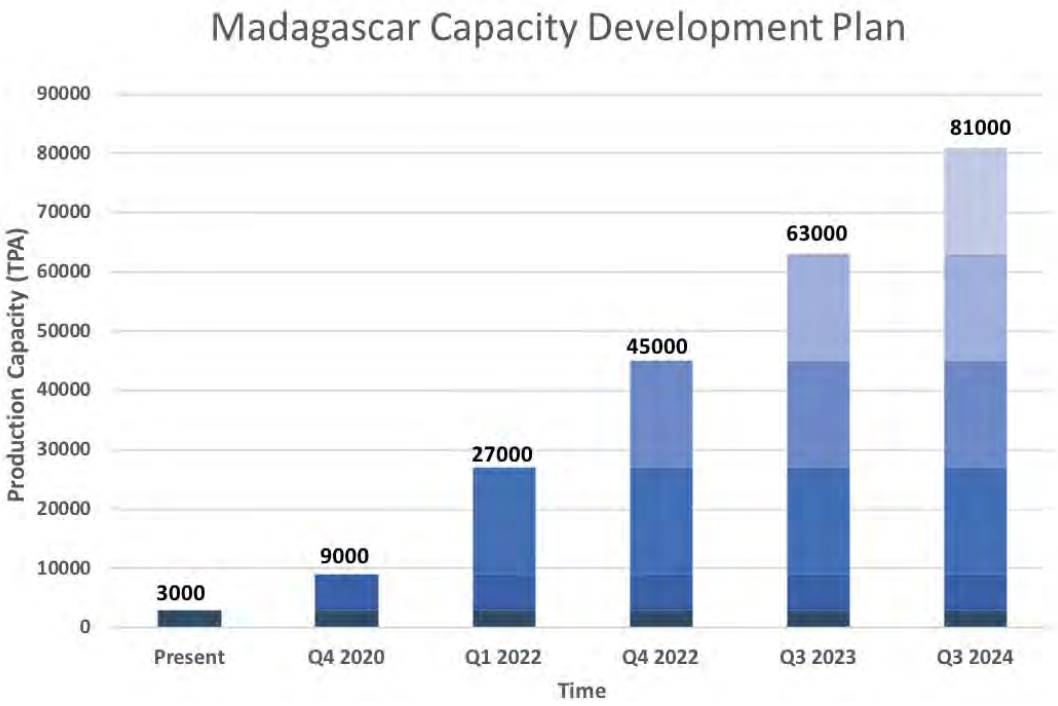
Vatomina Project

Phase/Stage name	Installed Capacity	Timing
Vatomina – Plant 1	6,000 tpa	Commissioning scheduled in Q2 2021
Vatomina – Plant 2	18,000 tpa	Commissioning planned in Q1 2022
Vatomina – Plant 3	18,000 tpa	Commissioning planned in Q3 2023
Vatomina – Plant 4	18,000 tpa	Commissioning planned in Q3 2024

Sahamamy Project

Phase/Stage name	Installed Capacity	Timing
Sahamamy – Plant 1	3,000 tpa	Commissioned Q1 2019
Sahamamy – Plant 2	18,000 tpa	Commissioning planned Q4 2022

With a total of 6 plants planned to be established, the first 3,000 tpa plant at Sahamamy has been completed and the second, 6,000 tpa at Vatomina is in an advanced stage of construction, the total capacity of primary flake graphite production in Madagascar across the two projects is planned to reach 81,000 tpa by Q3 2024.



Production Capacity Development Plan in Madagascar

Beyond 81,000 tpa, the Directors' believe the Company would be well positioned to continue to expand its production capacity further by installing additional modules based on prevailing market conditions and appetite for flake graphite at the time.

With the delivery of each phase, the Company's production and earnings will increase and this will afford it greater funding flexibility to meet its capital needs for subsequent development phases by giving it the option to leverage its earnings, and/or enhancing the Company's ability to raise further equity capital as required. The Company's staged development strategy also gives it flexibility to time its investment in the

development of its follow-on modules in accordance with external factors including markets for its products, capital markets and the overall prevailing global economic conditions at the time. Further, this reduces risks on technological and operations aspects of flake graphite processing giving the Company inputs for optimising it further.

The Company consciously decided to establish its primary projects in Madagascar, a few considerations were as follows:

- History of Flake Graphite in Madagascar: mining and processing of Flake Graphite in Madagascar has been ongoing and used globally in various applications since World War 1. It has been known for its high quality and is a viable source for various applications.
- Madagascar possesses large quantities of good quality flake graphite.
- The location of the Company's projects in Madagascar are in districts which have been producing graphite for decades. It is also well connected to the Tamatave Port as well as the capital city Antananarivo.
- The mining industry in Madagascar is crucial to its economic growth, forms a significant part of its GDP and total exports. Few very large mining projects have been set up in the country over the last 2 decades.
- The Madagascar mining code provides 40 year mining permits which are further renewable.
- The deposits in both the projects are saprolitic type – free dig mining at lower costs, lean process and thus have a lower carbon foot print.

1. Cameron, E. and Weis, P. (1960). *Strategic Graphite: A Survey*. Geological Survey Bulletin 1082 – E. [online] Washington: United States Government Printing Office.
2. Documents.worldbank.org. (n.d.). *ECONOMIC CONTRIBUTIONS FROM INDUSTRIAL MINING IN MADAGASCAR*. [online] Available at: http://documents.worldbank.org/curated/en/263731468179369566/pdf/100345-WP-P131522-mining-research-summary-Box393222B-PUBLIC-ENG.pdf [Accessed 20 Jan. 2020].

The Company has also strategized and worked extensively for the development of markets for its products from Madagascar. The modular strategy further helps in the process ensuring organic and long-term market development across the globe.

Downstream Processing Projects – India

The output from primary flake graphite projects shall typically have up to 96% purity and are directly usable in conventional applications like refractories, coatings, crucibles etc. Hitech applications like lithium ion batteries, flame retardants, composite materials etc require further processing generally referred to as "downstream processing" to manufacture "specialty graphite". The company will be setting up facilities for downstream processing in India.

Metallurgical tests have confirmed that the flake graphite concentrate from the Company's Madagascan projects is highly suitable as feedstock for downstream processing.

There are extensive hi-tech applications of specialty graphite including an array of applications that have significant contribution to green technologies. On the commercial side, it has substantial value-add over primary industrial flake graphite. It is presently estimated that about 25% of the total world consumption of flake graphite is in such specialty, hi-tech applications. However, high growth applications such electric vehicles, flame retardants, foils and gaskets, thermal management, conductive polymers and insulation all use specialty graphite. Typically, substantial value ranging between 2-6 times may be added between the primary flake graphite and specialty graphite. Thus, to be a company integrated in the value chain, the downstream processing facilities are planned.

At the downstream processing facilities, primary flake graphite will undergo one or more of the below processes, as an application demands.

a. Purification: Purification to remove remaining impurities from primary processed flake graphite to manufacture high-purity graphite with up to 99.95% purity.

b. Intercalation: Intercalation of flake graphite molecular layers with certain other molecules imparting a property of expansion at a trigger temperature. This has exclusive properties and applications in many areas, including flame retardants and thermal management.

c. Micronization: A process of size reduction with controlled particle sizing based on requirements of end usage in composite materials, lubrication, powder metallurgy etc.

d. Shaping: Modification of shape from sheets to spherical or potato type, primarily for Lithium ion battery applications.

Techno-commercial aspects of these processes are considered significant and discussed below.

(a) Purification:

Purification of primary processed flake graphite entails removal of impurities, which remain after primary processing using conventional flotation techniques, manufacturing high-purity graphite with up to 99.95% purity. The most common graphite purification processes are 1) hydrofluoric-acid ("HF") method, and 2) pyrometallurgy purification.

China, which is currently the world leader in the manufacturing and supply of high-purity flake graphite, most commonly uses HF method. Currently, this method is most widely used due to small-scale infrastructure investment, easy implementation, and strong universality. Hydrofluoric acid is considered as one of the most hazardous and severe acid and halogen chemical. Therefore, whilst it is a common process used in China, it is not the preferred method to consumers and is hazardous and harmful to the environment.

Pyrometallurgy methods are used by some companies in Europe and the USA. However, it requires processing temperatures exceeding 4000°C. Therefore, whilst such purification processes are effective, they are highly energy and cost intensive thus environmentally unfriendly.

Source 1 – Dietl J. Hydrometallurgical purification of metallurgical-grade silicon. Solar cells 1983; 10(2):145–54.
Source 2 – Chehreh Chelgani S, Rudolph M, Kratzsch R, Sandmann D, Gutzmer J. A review of graphite beneficiation techniques. Miner Process Extr Metall Rev 2016; 37 (1):58–68.
Source 3 – Bhima Rao R, Patnaik N. Preparation of high pure graphite by alkali digestion method. Scand J Metall 2004; 33(5):257–60.
Source 4 – Lloyd R, Turner MJ, Method for the continuous chemical reduction and removal of mineral matter contained in carbon structures, USA: US4780112A, October 25, 1988.
Source 5 – Lu X, Forssberg E. Preparation of high-purity and low-sulphur graphite from Woxna fine graphite concentrate by alkali roasting. Miner Eng 2002; 15 (10):755–7.

Considering the above, the Company has identified an opportunity in the market for a new entrant who offers to manufacture high-purity flake graphite:

- providing buyers diversification of source to ease the supply threat generally perceived by the rest of the world in the consuming arena, China being the major source;
- by an alternative environmentally friendly and sustainable process without using the generic dangerous and damaging processes.
- thereby, establish a strong foothold in the burgeoning market for high-purity graphite and its applications as outlined.

The Company has developed a new eco-friendly process to purify flake graphite up to 99.95% TGC without the use of the above two methods. The process is not energy intensive but environmentally friendly and cost effective. The process has been refined with testing, is proven to pilot scale and is scalable.

(b) Expandable Graphite:

Expandable graphite manufacturing process requires controlled intercalation of certain chemicals between the 2D layers in flake graphite. Currently approximately 90% of this product comes from China. The major advantages identified by the company for its development are as follow:

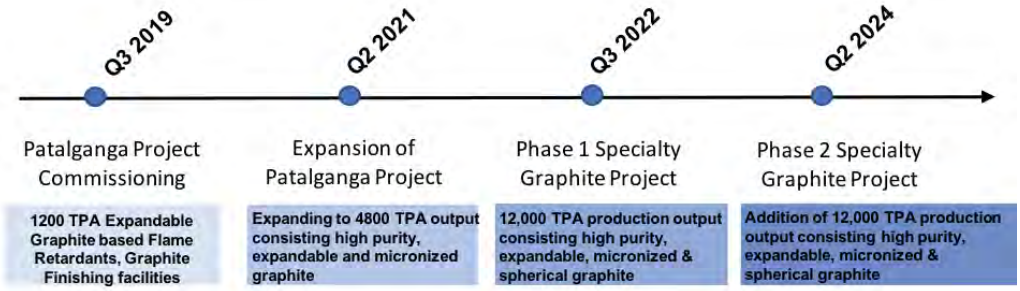
- Specialised treatment processes of intercalated graphite developed by the company enhancing its properties;
- Technical expertise for customising product as per application and aiding customers in development and improvement of their products.
- Preference of consumers to diversify sources for these niche materials with preference to eco friendly, integrated and ex China sources.

(c) Micronised & Shaped Graphite:

Commercially and technically proven processes for micronized and spherical graphite manufacturing are available which typically uses standardised milling equipment. The company is in engaged with reputable sources of these equipments for trials and sourcing.

Therefore, the company has distict advantages with required technological know-how and capabilities providing it a unique opportunity to develop its specialty graphite business and is engaged with various end users for market development.

The downstream processing capabilities are being developed under two projects, namely the Patalganga Project and the Specialty Graphite Project as follows:



Downstream Capability Development Plans & Planned Commissioning Timeline

The Patalganga Project

The Patalganga Project is a small-scale manufacturing and production plant for expandable flake graphite composites used as flame retardants in various products for construction, mobility, metallurgy and other applications. The Patalganga Project also houses facilities for flake graphite concentrate finishing, which provides the Company with a launch pad for its Madagascan flake graphite into the Indian markets.

The Patalganga Project was set-up to develop markets in expandable graphite ahead of the new capacities from the Company's integrated larger-scale, specialty graphite project (described further below). The project also provides the Company with early stage earnings and a solid foundation for the planned future developments, giving it early access to important and large Indian domestic and global customers.

Commissioning and trial run for flame retardant expandable graphite products was completed in July 2019 and the Patalganga Project is being ramped up alongside market development for its niche products. Products produced at the project were introduced to various manufacturers of flame-retardant products in order to gain product acceptance from buyers across Asia and Europe. First commercial sales from the project were shipped in July 2019 and the Company is continuing to build and establish its markets for its products. Sales and revenue are expected to rise further as product acceptance and sales continue to expand. In the interim period, the Company intends to keep the operations and costs of the project lean. The project has remained profitable even in this ramp-up phase.

With success in establishing this project and paving the way for forward integration, the Company has decided to expand its facilities in Patalganga by adding capabilities for manufacturing high purity and micronized graphite, befitting its corporate and development strategy. The Company also has extensively positive feedback and sample approvals for its high-purity graphite from various large consumers, attributed to its unique purification process.

The Specialty Graphite Project

The Company plans to establish its proposed integrated specialty graphite project in the west coast of India, preferably in the state of Gujarat or Maharashta. These are favourable operating jurisdictions located within close proximity to input materials and have good access to a skilled and technically qualified work force, which is critical to the operations. The Speciality Graphite Project is planned to be developed in two stages of 12,000 tpa estimated throughput, aggregating to 24,000 tpa output on completion of the second phase of the Company's MTDP. Each phase will be configured as follows:

Item	Metric
Raw material for the plant	Up to [96]% purity processed flake graphite
Purification plant capacity	10,000 tpa to >99% purity
Expandable & flame retardants plant	3,000 tpa
Micronisation & Spherodisation plant	3,000 tpa

As many applications need more than one of these processes performed, the total throughput is estimated at 12,000 tpa.

10,000 tpa raw material fed into the plant (e.g. the up to 96% purity graphite concentrate from Madagascar) shall first undergo a purification process to attain >99% to 99.95% purity flake graphite. From this, 6,000 tpa of the purified flake graphite has been earmarked from each stage module for sales applications where purified flake graphite is directly used. The balance of 4,000 tpa high purity graphite and additional 2,000 tpa raw material shall be subjected to further processing at the project to develop value-added expandable, micronized and spherodised graphite. The addition of spherodization facilities shall give the Company the capability to manufacture spherical graphite used in lithium ion batteries. In addition to these, other finishing facilities can be added in time, based on market demand, to widen the Company's capability to produce other products, such as colloidal graphite and palletised graphite. The Specialty Graphite Project will also provide access to hi-tech green energy and carbon footprint reducing applications in a wide arena of industrial applications.

The modular configuration and set-up of the Specialty Graphite Project production units gives the Company flexibility to determine the most viable production capabilities to expand beyond the initial 24,000 tpa, based on demand in the markets for energy storage, expandable graphite, or other applications at the time. The integrated approach provides the company the advantage to offer very specialised, customised and high value products, catering to a very niche lower-competition and hi-tech market.

Tirupati Graphene & Mintech Research Centre ("TGMRC")

The essence of the Company's business development emerges from materials and mineral processing technology. The Company has been developing its projects with a focus on technological excellence in order to provide a critical edge in its operations, products and services, and pave the way for its integration into the graphene sector. TGMRC has been planned and incorporated as a centre for graphene manufacturing and application development and further provide the company a technological backbone, develop advanced materials and provide mineral processing technology services.

A single atom layer of flake graphite is called graphene. Graphene is the first two dimensional ("2D") material to be discovered. This material displays extraordinary electrical, thermal, and physical properties. It is an allotrope of carbon, with a single planar sheet structure of covalently (sp2) bonded carbon atoms that are densely packed in a honeycomb crystal lattice. Graphene is a semi-metal or zero-gap semiconductor, allowing it to display high electron mobility at room temperature.[1] It is an exciting new class of material whose unique properties make it the subject of ongoing research globally.

Since its discovery in 2004, extensive research has been undertaken around the world for the development of commercially viable technologies for the manufacturing graphene and for its applications, which have the potential substantially to contribute to a greener planet. In 2017, there were a total of 13,371 patent filings about graphene worldwide, an increase of 30.7% over the previous year, and with a CAGR of 60.9% between 2010 and 2017. The global graphene market size stood at roughly US$85 million in 2017, before growing to nearly US$200million in 2018. It is forecast to reach US$1 billion by 2023 as new applications are developed and commercialised according to a report by Research and Markets in November, 2018[2].

The development of TGMRC has been planned in three stages. The first stage will be the creation of the basic facilities for manufacture of "few layer" (3 to 8) graphene oxide and reduced graphene oxide and Ultra High Purity Graphite (UHPG). Post completion of Stage 1 and market development for graphene, the second stage shall expand graphene manufacturing facilities to 10kg per day, establish lab and pilot scale mineral processing facilities and enhance material characterisation, assessment and research facilities. The third stage will introduce further high-end equipment and pilot scale facilities in extractive metallurgy and materials technologies.

The core team for the project has been formed with the initial set up of an office and work centre in Bhubaneswar, India, established and operational. The specialist, dedicated team has already been working on every aspect of developing the project, including producing graphene & graphene oxide in few kg scale which the Company has been distributing to selected reputable research and development institutions, as well as a number of major industrial companies, for testing, analysis and application development, with the view of achieving first commercial sales and creating collaborations with these parties in the near future.

[1] : https://courses.lumenlearning.com/introchem/chapter/allotropes-of-carbon/
[2] : https://www.globenewswire.com/news-release/2018/11/01/1641346/0/en/Global-and-China-Graphene-Market-2018-Forecast-to-2023.html

Specific details on the Company's Medium-Term Development Plan ("MTDP")

As described above, the Company is in the process of developing complementary business verticals which comprises of 1) Madagascar Primary Graphite Projects; and 2) downstream processing projects in India which encompasses the Patalganga Project and the Specialty Graphite Project and TGMRC.

The development of each phase is economically independent, implying that a single phase developed, shall not be dependent for its operations on any subsequent operating modules across any of its business verticals. This gives the Company a high degree of flexibility in determining the most economical development path considering optimising return on its investments.

The table below outlines the specifics components which make-up the Company's MTDP with regards to a) estimated timing of the developments, b) target commissioning dates of each production module, c) estimated CAPEX budget, d) investment status; and e) notes to explain the expected impact that each production module may have on the Company's business performance and financial position as they are commissioned.

Tirupati Graphite Plc

Components of the Medium-Term Development Plan and their impact

Module Code	Description	Actual / Estimated commissioning Date	CAPEX (£) Budget Estimate	Investment Status	Impact
MP1	3000 tpa primary flake Graphite at Sahamamy Project	01-Apr-19	£895,000	Incurred	Company demonstrated > 50% Operating margins, GBP 663 basket price realisation
MD1	Patalganga 1200 tpa Flame Retardant Expandable Graphite	01-Jul-19	£62,000	Incurred	Started generating Operating margins within the Ramp up period
MP2	6000 tpa primary flake Graphite at Vatomina Project	Apr-21	£1,432,000	From IPO Proceeds	Combined 9,000 tpa primary capacity, >50% operating margin & £ 663 basket price demonstrated by MP1 module
MD2	Patalganga Expansion 4800 tpa integrated Downstream	October -21	£2,464,000	From IPO Proceeds	The project once commissioned provides prospects of additional revenues and step forward for specialty graphite business
MG1	Graphene & Technology Centre Stage 1	October-21	£1,304,000	From IPO Proceeds	The project once commissioned provides additional revenues and step forward to graphene and advanced materials business
Total CAPEX across the three Verticals for next modules part of IPO proceeds utilisation			£5,200,000	From IPO Proceeds	The balance of IPO fund raise meets working capital requirements for each project and leaves buffer
Note	The completion of above modules can position the company to operate irrespective of whether further modules are added or not.				
MP3	18000 tpa primary flake Graphite at Vatomina Project	Jan-22	£5,168,000	The company shall consider options for raising capital for these modules at appropriate time	These relate to modules for which investments need to start from April 2021 The company has flexibility to plan timings of each of these modules. Each module being independent, the previously installed operations are not impacted.
MG2	Graphene & Technology Centre Stage 2	Apr-22	£4,925,000		
MD3	Specialty Graphite project Phase 1	Jul-22	£8,419,000		
MP4	18000 tpa primary flake Graphite at Sahamamy Project	Oct-22	£4,648,000		
Note	The completion of above modules signify completion of second phase of development under the medium term development plan.				
MP5	18000 tpa primary flake Graphite at Vatomina Project	Jul-23	£4,076,000	The company has flexibility to alter schedules advancing more profitable modules. These are expected to be internally funded.	Completion to these will mean completion of the Medium Term Development Plan. The company has the opportunity to further expand any of its three business units based on commercial considerations.
MD4	Specialty Graphite project Phase 1	Apr-24	£5,731,000		
MG3	Graphene & Technology Centre Stage 3	Apr-24	£7,075,000		
MP6	18000 tpa primary flake Graphite at Vatomina Project	Jul-24	£4,076,000		

The budgets, timing and impacts are forward looking estimates, and the progress of these plans will depend on various factors both internal and external. This progressive, modular development strategy was developed by the Company's leadership team and included extensive in-house planning, design, engineering and proven processes stemming from years of experience in its areas of business. While the planned timings are

indicative and subject to various factors that may impact them, one of the main advantages of the Company's modular development strategy is the significant flexibility it has in determining the timing of implementing its subsequent capex plans to expand its production capacities at all three of its business verticals which enables the Company to prioritise its development to achieve the best commercial outcomes. Depending upon prevailing market and financial conditions, the Company can choose to decelerate its capacity build and reduce its capex to meet cashflow requirements, or should it find it prudent to accelerate its developments ahead of plan due to favourable market conditions, it will be able to adjust its development plans at the opportune time.

Further details of each of the Projects are detailed below, with an updated status of development.

1. Vatomina Project, Madagascar

The Vatomina Project covers a 25 square km mining permit area strategically located in eastern Madagascar, approximately 70 km south of Tamatave, the main port city of Madagascar, and which straddles the National highway NH-2 which links the Tamatave port to Antananarivo, the capital city of Madagascar. Acquired under a binding agreement dated 11thMay 2017 from Tirupati Carbons & Chemicals Private Ltd. ("**TCCPL**"), TRM holds 98% of the equity in the project level entity, TMVSARL in Madagascar. At the time of acquisition, the Vatomina Project was comprised of the following:

- A 25 km^2, 40-year flake graphite mining permit which commenced in January 2017, with environmental authorisation for setting up a 12,000 tpa flake graphite mining and processing facility.
- A maiden JORC geological report dated March 2015, authored by Anirudh Krishana Sharma MAusIMM and Prashant Roy MAusIMM from Rockgeo, identifying mineralised areas with a resource target of between 6.5 to 13.1 million tons of flake graphite with grades ranging between 2 to 11% Total Graphite Content ("**TGC**") in a 1.15 km^2 area of the permit.
- Exploration data from geological mapping, trenching and pitting activities conducted by TCCPL between March 2015 to May 2017, which identified additional about 4 km^2 mineralised areas within the permit area.
- Project development plans for a 24,000 tpa capacity project to be developed over two 12,000 tpa plants at the Vatomina Project area.
- An in-country management team with extensive experience in leading and developing flake graphite mining and processing operations.

Following the acquisition of Vatomina, the Company implemented two primary activities to reduce potential risks at the Project: 1) enhancing resource security by conducting a detailed exploration program to establish resources in the explored areas and the potential of the geologically open extensions along strike, and 2) conducting mineralogical and metallurgical tests to confirm and optimise the processing technology further.

Simultaneously, the Company also conducted a detailed assessment of the staged development strategy, executed various initial site activities for development of the project, started building the internal infrastructure at the project, conceptualised and initiated feasibility studies for its new MTDP which increased the flake graphite production capacity development plan to 60,000 tpa in four modules.

The various developments advanced at the Vatomina Project since its acquisition by the Company is summarised below.

Exploration

In terms of its strategy of staged investment and development, the Company planned the first phase of exploration with the primary purpose of securing sufficient comfort on availability of deposits for its development plan. The maiden JORC geological report that the Company inherited as part of the acquisition defined prospects and a resource target in a part of the permit area. The Company possessed and further enhanced its exploration and geological team to execute its exploration program and also commissioned an independent team of geotechnical consultants to oversee the activities.

With 33 km^2 of mining permits across its two projects, the core drilling activities required to be performed justified, and the Company procured its own diamond core drilling rig and a set of Auger drills rather than using contract drilling. The establishment of in-house drilling and exploration capabilities helped improve core recovery in the weathered friable saprolite zone of the deposits and resulted in substantial cost savings, higher availability rates of its drilling equipment and has enabled significant progress drilling and exploration activities across both projects.

Exploration activities commenced at Vatomina from Q3 2017 and the key activities conducted upto 31st December 2019 are summerised in the table below:

Nature of Works	Period	Remarks
Reconnaissance Geological Survey	2014-2015	Geological traverse in area on regional scale for graphite mineralisation
Regional geological mapping (1:50,000)	2014-2015	Delineation of Graphite mineralization.in the 9 km^2 in the eastern part of the license
Topographic Survey	2014-2015	To take up detailed exploration on 1:5000 scale 11 km^2 in eastern part
Geophysical Survey	2014-2015	This confirmed subsurface mineralization IP, SP, in 0.24 km^2 area
Detailed Geological mapping on 1:5000 scale	2014-2019	Lithological mapping to delineate graphite zones and sampling 5.0 km^2
Pitting	2014-15 2016-2018	To trace graphite mineralization below soil 225.0 m cumulative depth in 43 pits
Grab samples	2014-15 and 2016-2017	To determine assay value of Graphite Grab -40 Pit Samples-118
Exploratory Pit for Bulk sample	2017	36ton ore was collected for pilot plant and lab study.
Metallurgical studies	2017 2018	i. 200kg for lab metallurgical studies ii. 2 tons for pilot plant
Petrographic studies	2017-2018	Size and liberation analysis show ore has favourable industrial value
Auger drilling	2018-2019	4879.0 m in 549 holes with average 9.0m depth
Core Drilling	2019	3125.9m in 66 holes

The resultant Mineral Resource Estimate and further potential extracted from the CPR placed in Part II is as below;

SRK Mineral Resource Statement Vatomina Graphite Project, Madagascar, in accordance with the JORC Code (2012) as of 31 December 2019

Resource Category	Quantity	Grade
	(Mt)	(GC%)
Measured	—	—
Indicated	3.2	4.3
Inferred	15.2	4.7
Total Mineral Resource	18.4	4.6

Exploration Target

In addition to the Mineral Resources reported herein, SRK is of the opinion that Vatomina consists of about 8-10 Mt of mineralised materials with the average grade containing about 3-4%GC as Exploration Target, as the term is defined in the JORC Code (2012), within the area that has been explored as of writing this report. The estimation of such Exploration Target was derived from the available mapping data and the geological logs of the auger boreholes. Such Exploration Targets, include:

- Along the strike of the already identified mineralised bodies; and
- Along the dip direction of the identified mineralised bodies.

The currently defined Mineral Resource Estimate under JORC (2012) implies a total contained graphite of 852,000 tons resulting in a mine life of over 14 years based on the planned 60,000 tpa production capacity. Throughout the development of the first and second modules at Vatomina to 24,000 tpa production capacity,

the Company will conduct its second phase of exploration activity to upgrade the Mineral Resource locked in exploration targets and explore the balance 75% of the Permit area to update its resource base.

Metallurgical Tests and processing plant design

As a part of the acquisition of the Vatomina Project, the Company inherited the proven flake graphite processing technology, including equipment designs and manufacturing, process flow etc. These had been tailor-made for processing flake graphite and has been in use by TCCPL for years in their Indian operations. In addition, the development plans, technical data and various other studies which had been prepared by TCCPL for the Vatomina Project were also inherited. The mastermind of these Intellecctual Properties is the Executive Chairman of the Company and in addition the the key human resource team possessing this IP are direct employees of the company.

The Company further commissioned the expertise of the Institute of Minerals and Materials Technology ("**IMMT**") located in Bhubaneswar, India to undertake metallurgical tests and analyse the Company's resources to independently verify and define the Company's processing plans and technology. IMMT is a leading independent research centre within the Council of Scientific & Industrial Research (under the Ministry of Science & Technology, Government of India), and is specialised in materials and mineral processing technology development.

The initial work by IMMT included detailed mineralogical and characterisation studies on the Vatomina resource samples and lab scale beneficiation studies, presenting an interim report to the company in Q4 2017. This identified a processing flow sheet for the plant including an additional pre-process that resulted in:

- the elimination of more than 60% of impurities by the precursor;
- recovery of over 50% of head feed as construction grade sand, a usable by-product for construction and other applications;
- reduced milling in the circuit resulting in better retention of larger flakes;
- Extremely favourable recoveries of over 90% with product grade of up to 96% purity.

Pilot scale tests using 12 MT graphite ore mined from Vatomina during the exploratory mining program was concluded in Q1 2018 confirming the parameters of the flow sheet designed. The results led the Company to design and engineer plants of different capacities planned to be setup under its MTDP.

External Infrastructure and connectivity

The Vatomina Project is located approximatly 70 km south of Tamatave, which is the main sea port for Madagascar. It is connected to the National Highway (NH-2), which connects Antananarivo, the capital of Madagascar, to Tamatave, the main sea port city. The two lane highway is blacktop and provides easy transportation from the project to the port city providing access to global shipping. It also connects the project to Ivato International Airport in Antananarivo, facilitating access to the project. The connectivity of Vatomina can be seen below:

Location of Vatomina Project – External Infrastructure of Road & Port

The Tomasina port in Tamatave city accommodates regular container vessels of premier liners, including Mearsk, MSC, CMA CGM. These liners provide weekly incoming and outgoing sailings and container shipping facilities to various parts of the world including Asia, Europe and America. In Tamatave, the Company has hired a warehouse to act as a transit point for both incoming and outgoing cargo and an office for management of all its shipments and related activities from the port.

Furthermore, mobile connectivity and internet access is provided by leading telecom services and is available at the project. No investment is therefore required into the key external infrastructure of the project.

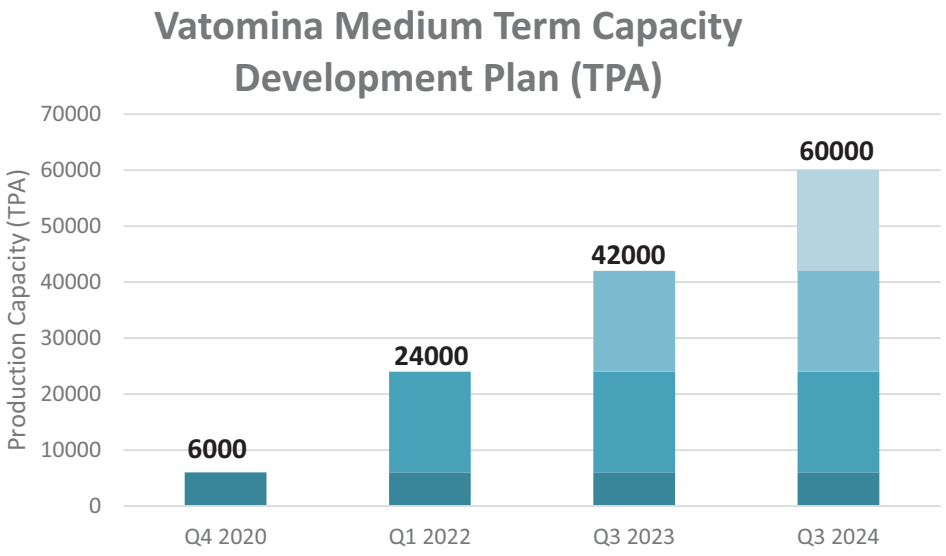
Project development to production – staged with early cash flows

Following the assessment of the resource and metallurgical tests which underpinned the Company's investment decision, the Company considered various methods for the development of operations to production at Vatomina. The Company considers the following to be the key drivers:

- progressive and disciplined approach to lower early stage investment requirement;
- continual de-risking through execution with minimised investment;
- project development to track the growth in systematic development of markets for the company's products and aligned with the graphite markets; and
- early stage cash flows providing ability for leveraging cash flows for follow on modules.

Accordingly, the Company conceptualised its project development over four stages for its MTDP for mining and processing, the first being a 6,000 tpa module and the remaining three successive modules of 18,000 tpa each. Whilst having a relatively smaller investment requirement, the 6,000 tpa facility shall provide the Company with a sizable operation and establish a successful execution base which shall substantially de-risks the execution of the follow-on larger modules.

The planned schedule for the construction and commissioning of the four modules is depicted below:



Timeline of planned capacity development at Vatomina up to 60,000 tpa

A parcel of 10 hectares of land in non mineral bearing areas was acquired for setting up the processing facilities and the basic infrastructure required began in Q4 2018. Deatailed planning and analysis have been concluded for each module, including assessments of mining fleet, engineering and maintainence facilities and human resource requirements

The modular/staged development plans of the Company give it considerable flexibility to advance or delay further capacity development as required, depending on various factors such as external markets and funding. Significantly, the first 6,000 tpa plant itself shall provide positive operational cash flows and thereby paving the way for development of the larger 18,000 tpa plants and supporting further fund raising required by the Company.

Internal Project Infrastructure development

The Permit area is divided into two parts separated by the National Highway. The eastern part of the project has been identified as more prospective, and around 12 km^2 has been targeted for the first development. The following infrastructure has been developed in this area to date:

- A concrete all-weather 11X4 m^2 bridge was constructed at the entrance of the project area to crossover a stream for loads of up to 35MT. Internal roads totalling around 25 kilometres have been built within the project area for access to plant and base camp area and mining and exploration sites. The relevant roads have further been widened to 6m with drains to prepare for operations and mining activities, strengthened to enable all weather operations.
- A management camp area has been constructed which can accommodate up to 20 people. The area provides boarding, lodging, dining and recreation facilities for the resident management and technicians' team and visiting team/guests. An office area with IT infrastructure, laboratory, store room and utilities depot has also been created at the base camp and is powered by solar energy. As part of the development plan of the first plant, additional residential facilities; a formal operations controlling office; a community centre; and a recreation centre will be developed. These facilities have been planned to overlook the plant site area. The land preparation activities for the same have been completed.

Development of 6000 tpa facility:

The area grading & preparation for construction for the first 6,000 tpa plant module was initiated in Q3 2018. In Q1 2019, the construction activities were initiated and foundations, platforms for various machines guard wall, engineering centre, stores, power house, laboratory water and tailing management infrastructure etc substantially completed by Q4 2019. With establishment of the engineering centre, fabrication of the plant building superstructure begun in Q2 2019 and ready to erect.

Post completion of the IPO, the company shall fast track the completion of the balance development activities for the 6,000 tpa facilities which include the following:

- Shipment of earthmoving equipment fleet for opening of the mining activities, procurement of which is substantially advanced.
- Shipment of various processing equipment to the project.
- Erection of the plant building and completion of balance construction activites.
- Initiation of mine development with stripping in two identified first development areas and creation of initial ore stockpile.

The Company has created all in-house facilities and expertise for engineering procurement and construction providing it a critical capital cost edge.

2. Sahamamy Sahasoa Project

In October 2017, the Company entered into a binding agreement for the acquisition of Etablissements Rostaing SARL ("**Rostaing**"), a private company which had an existing operating project in Madagascar called the Sahamamy Sahasoa Project ("**Sahamamy Project**"), located at approximately 8 km aerial distance west from the Vatomina Project. The Sahamamy Project was one of the few historical operational flake graphite producing projects though small and obsolete in both mining and processing plant facilities. At the time of acquisition, the Sahamamy Project was comprised of the following:

- Two contagious Mining Permits covering an area of 1.56 km^2 & 6.25 km^2 both issued for 40 years and renewable. Additionally, three pending applications for the grant of exploration permits over a combined area of approximately 8 km^2 of known flake graphite deposit areas which the Directors believe are likely to be granted in due course.
- A processing facility, though obsolete but producing about 200-250 tpa flake graphite and environmental authorisation for 3,000 tpa flake graphite mining and processing facility.
- A base camp and connecting road for approach from Gismay to Sahamamy built by the project.
- Exploration and geological data, generated using conventional techniques.
- A non-operating 75 KW hydro power generating facility with a reservoir, water pipeline, turbine house, a turbine and power generator.

The Company took full control of the operations of the Sahamamy Project with effect from 1 January 2018. The entire management and operations team of Rostaing also joined the Company at this time.

Upon taking control of the project, the company continued to operate the existing small operations making whatever improvements were possible, while drawing up the plan to redevelop the project with new modern operation to its authorised capacity of 3,000 tpa using the inputs it had and the technological understanding of its experienced team.

TCCPL had been purchasing all of the production from Rostaing for over three years prior to the acquisition by the Company. Therefore, the Board and Company's management were already very familiar with the Sahamamy Project, its product and it's potential.

Resource assessments

The Company inherited historical exploration data for the activities conducted in the Sahamamy Project area. Although no systematic exploration or drilling had previously been completed, the exploration data and existing mining operations provided a firm foundation for the Resource assessment for the Project. The Company engaged an independent team of geological consultants alongside its internal team to develop an exploration and drilling program and commenced exploration activities, including topographical surveys using total station, compilation and reinterpretation of all historical geological and mining data available, detailed geological mapping, geophysical studies, augur drilling, sampling and assays. The geological report was delivered to the Company in October 2018, delineating extensive insight and prospects of mineralisation in the permit areas and giving confidence to develop a larger scale operation. The geological and mineralogical characteristics of the resource was similar to that found in Vatomina.

While continuing to use the information derived, redeveloping the mining operations further exploration activities were continued in the identified deposit areas and the company commissioned the services of SRK

Consultants in March 2019 for a combined CPR under JORC Code 2012 for its Madagascar projects, which has provided the following present Resource numbers for the project:

SRK Mineral Resource Statement Sahamamy Graphite Project, Madagascar, in accordance with the JORC Code (2012) as of 31 December 2019

Resource Category	Quantity	Grade
	(Mt)	(GC%)
Measured	—	—
Indicated	1.4	4.10
Inferred	5.7	4.20
Total Mineral Resource	7.1	4.20

Exploration Target

In addition to the Mineral Resources reported herein, SRK is of the opinion that the Sahamamy Project has potential to host about 5-7 Million Tonnes of Exploration Target with expected grade of 4-5% GC. Such Exploration Target, is identified in the following areas within the leasehold:

- Along the strike of the already identified mineralised bodies;
- Along the dip direction of the identified mineralised bodies; and
- In the central part of the leasehold area, where occurrences of the parallel mineralised zones are reasonable geological expectation.

The currently defined Mireral Resource Estimate under JORC (2012) implies a total contained graphite of 296,800 tons resulting in a mine life of over 14 years based on the planned 21,000 tpa production capacity. It is pertinent to note that the current JORC 2012 resource in Sahamamy is only derived from the limited exploration and mining activities conducted in the area. Once the drilling program at the Vatomina Project is completed, the Company intends to redeploy its drilling rig at the Sahamamy Project in order to further explore and define the complete resource potential of the Sahamamy Project, which is expected to substantially enhance the total resource.

Strengthening of Approach Road

The project had an existing approach road in place which was upgraded in order to enable expansion of the project into the planned larger-scale operation. The dedicated approach road of approximately 13 km between Gismay and Sahamamy was widened to 6 metres and strengthened with drains and slope stabilisation where required. In addition, the Company commissioned surveys for the construction of a direct road connecting its two projects leading from Berano to Gismay, and has obtained the requisite clearance for its construction. This shall provide the Sahamamy Project with the logistical benefits enjoyed by the Vatomina Project.

Internal Infrastructure Improvements

The base camp at the processing plant site was improved to facilitate boarding and lodging for the enlarged team and a new standalone dwelling has been developed to accommodate the growing management team. These incorporate features and materials used locally to ensure best use of available resources and traditional practices.

The internal roads connecting various mining pits, ancillary buildings, processing plant and utilities etc., have been strengthened, weather-proofed and widened to accommodate movement of the mining fleet and transportation vehicles.

With historical operations providing surface rights to the company, no new land settlement was required for the project. The previous operators had historically built and provided small dwellings for the workers at the Project, which were located in the plant area. The Company has relocated this settlement to a more appropriate area within such that it is distant from the everyday plant operations, developing a new housing area for these families with full support from the community.

Further, once the plant operations commenced, the company has extensively used the construction sand produced as by-product from the processing plant for all infrastructure rebuild activities including internal and external roads, establishing its concept of "Waste to Wealth". The Company further plans to develop required infrastructure for the next stage of the project.

Rebuild to 3,000 tpa authorised capacity and its operations

Upon acquisition in January 2018, the Company continued to operate the old processing facilities until November 2018, during which time it produced and shipped 300 tons from these operations. Meanwhile, the Company prepared a significant plan to develop a modern 3,000 tpa flake graphite operation for which requisite authorisations were in place. This included building a new processing plant with new equipment and technology and deploying new earthmoving equipment, creating modern laboratory, developing on site engineering and maintainence facilities and arranging of the power requirements amongst other things. The Company commenced development and construction of the new facility in Q3 2018 designed in accordance with the flow sheet developed for Vatomina including the new process precursor, developed during Metallurgical Tests.

The construction of the new processing plant building with equipment foundations was completed by January 2019 and installations completed in February 2019. Extensive trials were conducted for each component followed by successful commissioning of this plant in March 2019. The new mining fleet was put into service mid of January 2019 and extensive stripping of mine area initiated. Over the ensuing period, while providing mined ore to the processing plant, mine development has continued resulting in a well developed modern systematic mine meeting global standards.

The 3,000 tpa plant commenced operations from April 2019, and over the subsequent nine months, ending on 31 December 2019, debottlenecking and ramping up production has been completed and the company declared start of commercial operations from 11 January 2020. In the nine month debottlenecking and ramp up period, the company produced 927 MT sellable flake graphite of which 769 MT was shipped to buyers across three continents. The first shipment of 80 MT was made to a German buyer in May 2019. Having achieved all plant operational targets, operated the period with lower than estimated costs and made a substantial operating margin of 53% during the debottlenecking and production ramp up period, the Company expects to achieve financial results better than its expectations. The operating production and financial results achieved are tabulated below:

RAMP UP PERIOD (April 2019 – 31st December 2019)	
Saleable production	927 MT
Quantity sold & shipped	769 MT
Sales Revenue	US$ 643,887
Basket Price Realised	US$ 837 per MT
Operating Costs	(or £239,039)
C2 Operating Cost per MT	(or £257 per MT)
Gross Margins	(or £270,834)

The total CAPEX spent to redevelop the project constituted £719,984 for the new mining fleet and processing plant set up and £181,044 for exploration, evaluation, engineering & infrastructure improvements. A further sum of £155,000 is budgeted for CAPEX spend for current operations and for internal and external infrastructure strengthening at the project. £457,500 is budgeted for spend over the next two quarters to prepare the project for larger operations development. Redevelopment of the project was completed within both budget and time schedule, achieving better than target results in operational and financial parameters. The key operating and financial parameters targeted and achieved include:

- Commercial use of the process precursor "SAGE" has been successfully adopted in the process and by-product being approximately 50% output of ore feed as construction grade sand, presently used in-house.
- Up to to 97% GC flake graphite produced against design target of up to 94% GC set for this plant.
- Production rate of up to 10 tons a day and a mining strip ratio of 2:1 has been achieved.
- CAPEX for the mining & plant facilities created at £240/- per MT of annual capacity created, better than guidance, establishes the ability to successfully build at industry lowest CAPEX.
- Gross margins of 50% and C2 operating costs of £257 per ton achieved, establishing its capabilities to produce at industry on low OPEX.

- A lean process flow sheet planned and used has been proven and provides comfort for further modules planned to be set up at both the projects.
- Superior product basket achieved with circa 50% jumbo, 35% large and 15% small flakes.
- The entire engineering, procurement and construction activities were executed in house by the company using its expert team and support from TCCPL.

Quality Control, Engineering Centre and MIS:

Alongside the processing plant, a laboratory, an engineering & fabrication centre, store for consumables and spares and tailings dam have also been developed at Sahamamy. With insight on process control from its experienced team, the company has adopted quality assurance and control practices monitoring its production on a regular basis for all production parameters. The laboratory tests multiple samples every day drawn from defined process stages. In addition, it also tests samples from continued mining operations and exploration. The engineering centre is equipped with relevant fabrication equipment, materials and human resources. Various fabrication activities including that of the plant building superstructure, bunkers and other support structural, installation requirements etc., were built in-house at the centre. It now caters to the maintenance requirements of both the processing plant and earthmoving equipment and continues to contribute to building additional structures on going at the project.

For processing of the reduced (50%) process tailings, the tailings dam has been built. The dam is being used for conditioning of tailings and processing water for its reuse. In due course, the company intends to find beneficial use of settlings from the tailing dam which are primarily clay type materials.

In addition to internal daily operations reporting systems for all activities, the Company has built a tailor made cloud-based operations management system with extensive data analytics. The system is capturing real-time data and being built as a combined platform for all operations of the company, present and future.

Having successfully redeveloped and brought the operations at the Sahamamy Project up to the first 3,000 tpa capacity, the project is now producing and selling high quality flake graphite. The Company has sold its products in multiple countries across Europe, Asia and North America, for various applications. With this success, the Company has reduced various risks associated with production and technology and optimised its development plans further and established better than guidance results, paving the way to its growth as per its plans.

Reconditioning and optimisation of the old hydro power generation facilities

Whilst the Company's focus has been on transforming the operations, it has done so with the overarching desire to contribute positively to the environment along the way. The ultimate switching over in favour of the use of renewable sources of energy is therefore a priority area for the Company. The Sahamamy Project area is made up of undulating terrain and the topography and drainage provides opportunities for hydro power generation. The project has an existing small hydro power plant ("**SHPP**") with 50kw capacity but is not operable and requires reconditioning. The Company commissioned the services of AIDER, specialists in renewable energy based in Madagascar, for a pre-feasibility study which has established that the existing facilities can be feasibly redeveloped for a 75KW capacity and additionally 400 KW new facilities can be created. This is planned to be progressed over the next two years to completion and shall yield environmental and economical banefits.

Development of Berano-Gismay Road

Access to the Sahamamy Project currently is from Brickaville to Gismay by a 45 minute boat journey. For the development of larger scale operations, access by road is considered essential. The Company initiated a study for this purpose, and it was determined that an existing road from Vatomina to Berano could be connected to Gismay by constructing a 13 km road. The Company commissioned the services of TECMAD, a Madagascan expert consultant group, to plan the alignment and layout of the road and to conduct a detailed survey and feasibility study into developing road access to the project, which was completed in Q1 2018. Based on the recommended alignment and designs, the company conducted its internal assessments, obtained consents for 13 km road from Berano to Gismay from various statutory bodies including the local Government, forest and road works department and has obtained authorisation to construct the road. Construction of the new road is scheduled to commence utilising the Company's internal road building team and earthmoving equipment in Q2 2020.

Development of further processing facilities

The Company's stage 2 development plan at the Sahamamy Project is an additional 18,000 tpa facility. With commercial production from the initial 3,000 tpa stage 1 plant successfully constructed and commissioned, including construction of the mine and processing facilities, the foundation for further development activity have been well laid.

At this stage, the Company plans to commence construction of the second stage, 18,000 tpa capacity module in the later part of Q1 2022 which would see commissioning commencing during Q4 2022. However, with its modular approach, the Company is able to maintain flexibility on its precise timing which will be determined by a number of factors including the results from the next stage of exploration, execution status of the Vatomina Project's development activities and taking into account graphite market developments and other prevailing economic conditions.

Prior to construction of stage 2 at Sahamamy, the Company intends to advance its assessments on the creation of additional hydro power capacity, develop connecting road from Berano to Gismay, its utilities and infrastructure requirements and prepare other project facilities in preparation for the larger scale operations.

Following completion of stage 2 in Sahamamy, with 21,000 tpa of production capacity installed, the Company will assess further expansion opportunities beyond this capacity.

The Patalganga Project

The Patalganga Project was set up by TSG as a precursor to the larger downstream processed flake graphite project, establishing markets in specialised products. TSG has completed development and commissioned the project in July 2019, which includes facilities to manufacture 1,200 TPA expandable flake graphite flame retardant, in Patalganga, near Mumbai. The plant also contains primary flake graphite finishing facilities, allowing the Company to screen and blend products to produce customised products for conventional applications in the end-user based domestic Indian market for its Madagascan products.

All required statutory and tax registrations were obtained and the start of commercial production from the project was declared in October 2019. An operations and management team has been put in place with laboratory facilities, allowing not only the testing of products, but also for customised flame retardant graphite grades to be manufactured based on customer requirements.

For the expandable graphite based products, the Company has launched its own 'CarboflameX® brand which includes a range of products for use in an array of flame retardant applications such as in polyurethane foam, rubber latex foam, coatings on wood and metals, intumescent tapes, bitumen roofing, door, textiles and window fire seals. Therefore, the Company already boasts a variety of applications of its products including those of a specialty, high-tech nature.

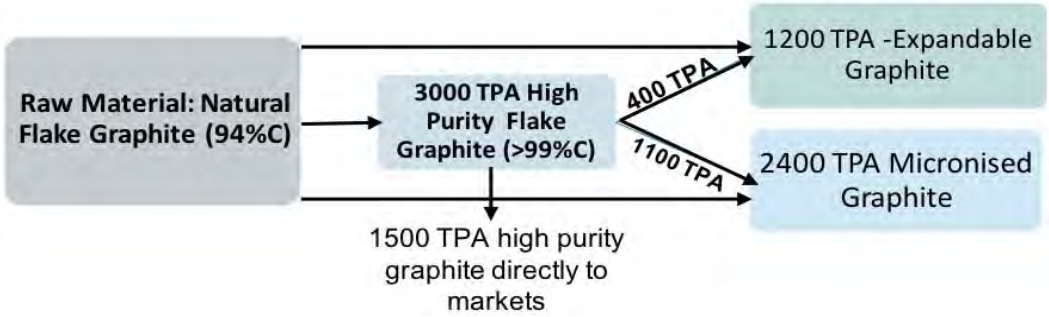
This plant is closely aligned to the Company's strategy of starting operations with smaller facilities to establish itself prior to building its markets and reputation ahead of its larger investments, which substantially de-risks its development.

Furthermore, the Patalganga Project also has installed capabilities to serve as a finishing facility and point of sale for flake graphite from the Sahamamy Project. The first shipments of industrial flake graphite from Sahamamy were received, subjected to certain downstream processes to produce the end product and subsequently sold to various end users of the material. These sales shall continue to grow alongside the Company's flame retardant product capabilities.

While engaging with the markets both for its products from Madagascar and for expandable flake graphite from Patalganga, the company received extensive interest for its proposed high purity flake graphite, micronized graphite and other specialty graphite products. Having considered the prospects and considering that the time requirements for the larger project planned to be set up, the company considered it fit to expand its facilities in Patalganga by adding capabilities for manufacture of high purity graphite and with micronized graphite manufacturing facilities. The Company has completed internal studies for the same and intends to expand the activities at the Patalganga Project to produce 4,800 tpa speciality graphite products, including high purity flake graphite, integrating the expandable graphite operations to all its applications and for manufacture of micronized graphite of both 94-96% and $>99\%$ purity range.

The Company's strategy is to fast-track production which allows it to accelerate the launch and capitalise on its exclusive non-fluorine high-purity flake graphite product line. The Company expects to command a pricing premium over current Chinese sources of high-purity flake graphite manufactured using hydrofluoric acid. Additionally, the high-purity graphite capacity further complements the Company's expandable graphite

operations helping it to extend its product range to the entire spectrum of specialty graphite products and also substantially de-risk larger production investments. Construction of the remainder of this module will follow in due course in 2020 as per the Company's MTDP. On completion of expansion, the following will be the outputs from the Project:

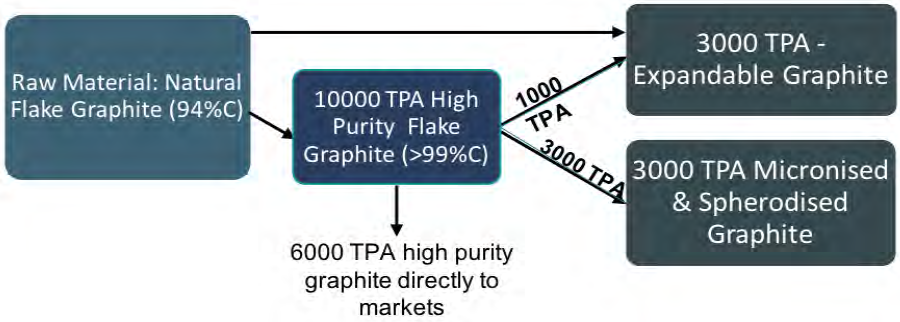


Patalganga Expansion Plan

The Patalganga Project is located near the bustling port city and commercial hub of Mumbai, India's financial capital. It also serves as prime sourcing hub for an array of materials that the Company requires for its Madagascan projects and also acts as the logistics hub for the operations of the Group. Thus, the project is providing additional benefits to the company's development and activities.

Development of Specialty Graphite Project

The Company has completed detailed project development studies for establishing a downstream specialty graphite processing plant in India ("**Speciality Graphite Project**"). The Patalganga Project shall set the base for the Company to develop this plant by reducing market barriers and risks associated with various aspects of the project. Within the Company's MTDP, the project shall be developed to 24,000 tpa of downstream specialty graphite production capacity via two modules of 12,000 tpa output each. Each module of this Project shall have the following capacities:



Specialty Graphite Project Module Plan

The Company has chosen to set up the Specialty Graphite Project in India considering multiple factors:

- Huge and growing domestic consumption of these products – India is projected to be one of the major markets for Electric Vehicles over the next decade. The Government of India aims to eliminate sales of internal combustion vehicles in the country by 2030, giving a major boost to the EV industry. This shall provide the Company privilege with access to one of the largest Li-ion battery markets. Further, due to major fire breakouts in the country, the flame retardancy requirements under statute and public consciousness toward it are becoming stringent and leading to growth in internal consumption of expandable graphite.
- India also has various policies promoting manufacturing sector in the country, like 'Make in India' Policy. The government has further developed various systems and platforms to improve the ease of doing business. Many lithium-ion battery and electric vehicles manufacturing units are in the pipeline, given India's large auto industry.
- The cost structures in the country are much lower compared to other advanced jurisdictions.

- India provides access to competent human resource at all levels, has availability of all the raw materials and infrastructure required for the project facilitating efficient cost-effective production and global sales of the poducts.
- Further, the technologies for the various specialty graphite products have been developed in India, removing the technology barrier.

The Company has identified two areas, Gujarat and Maharashtra states in western India, taking into consideration the following factors offered by both locations:

- well-developed infrastructure in all areas including roads, rail, air connectivity, proximity to multiple seaports, well developed industrial areas with facilities like water supply, common effluent treatment plant facilities, reliable power supply etc.;
- proximity and availability of goods and services that may be outsourced for establishing and operations of the port facilities;
- extensive urban centres providing ease of quality human resource availability and support infrastructure for their well-being; and
- policies and facilities for industrial development and ease of doing business, from both Provincial and Federal Government.

In order to progress the development of the project, the Company has taken the following steps:

- The project has been registered for Government support under the department of Industrial Promotion and Policy of the Government of India, under Industrial Entrepreneurs Memorandum no. 264185.
- An internal detailed feasibility study has been completed by the Company including technological assessments, process designs, market assessments, financial modelling and all related requirements for implementation of the Specialty Graphite Project.

Extensive background preparations are ongoing for detailed equipment sourcing and further team building preparations as the downstream projects are being progressed. Market development for all products began with the Patalganga Project. As market penetration is a slow process in these niche materials, the company has started working on it extensively to have ready markets.

It is expected that the acquisition of land will be completed in 2021, and the construction of the first module of 12,000 tpa shall be commenced immediately upon completion of statutory approvals. The timeframe for completing of the first module is estimated to be 10 months from start of construction (expected in Q4 2021). The construction of the second module shall follow completion and steady operations of the first and expected to be completed by Q1 2024 bringing total integrated downstream capacity to 24,000 tpa from this project. The Company retaining the flexibility to modify the precise timing of its investment according to prevailing market conditions.

With the successful development of the Specialty Graphite Project, the Company will have created a full service, integrated downstream processing plant with an output of 24,000 tpa. The Company remains open to further capacity expansions beyond this capacity through any of the product streams based on the development of graphite markets.

The Specialty Graphite Project provides the Company with an independent profit centre in a more advanced jurisdiction with flexibility around raw material sources, and therefore provides insulation to the Company against various risks associated with primary mining projects that are located in lesser developed jurisdictions.

Long term techno-commercial opportunities for the Downstream Specialty Graphite Project

High-purity flake graphite and its product derivatives promises to be an area of exceptionally high growth driven primarily by growth expectations with various applications including energy storage, flame retardants, composites etc. The increasing global adaptation electric vehicles and development of grid energy storage using Lithium ion batteries, promises to be one of the highest flake graphite consumption growth areas with market forecasters expecting CAGR's in excess of 30% over the coming decade. Much of the specialty flake graphite applications that are expected to experience high growth requires purified flake graphite as the precursor for further specialty processing as previously discussed (e.g. intercalated, mincronised and spherical graphite).

The development of the Company's proprietary non-fluorine-based process for high-purity graphite puts the Company in an advantageous position to capture and grow its business in-line with graphite market developments across the board. Further, the company's expertise in expandable graphite provides it an entirely different revenue steam and access to a market which is also growing at a high CAGR. Therefore, the Board and management of the Company are open to further capacity expansions and are confident that there shall be ample additional opportunities to developing its businesses and product lines further, well beyond its MTDP as set out.

Tirupati Graphene & Mintech Research Centre ("TGMRC")

TGMRC is a facility to be established by the Company in Bhubaneswar, India, which was inherited with the acquisition of TSG. TGMRC shall be an integrated applied research and technology Centre for Materials and Minerals Technology in the Graphene industry.

The Directors believe that graphene will be a huge contributor to new age materials and technological advances. It is a single atomic layer of a honeycomb lattice of flake graphite and the first 2-dimensional material to be discovered by humankind. Graphene oxide and graphene produced from natural graphite have wide scope of applications because of their outstanding properties, with remarkably high electron mobility, and graphene can be manufactured into a material which is lighter than plastic yet 10 times stronger than steel, amongst other key characteristics. At the core of TGMRC lies its capabilities in graphene manufacturing and its application development, making it a frontrunner in the global development of the material in our Directors opinion.

Concept

The centre will focus on manufacturing of graphene with development of advanced graphite and graphene applications and developing cutting edge technology for mineral processing industry. All R&D activities shall be focused on and driven by industry needs, translating knowledge output to industrial applications. The centre is based on the following objectives and revenue streams:

- Manufacture of high quality commercially viable reduced graphene oxide and graphene oxide for industrial use. Graphene is known to be a wonder material with remarkable properties.
- Application and materials development using graphene and graphite, for targeted application in composite materials, coatings and additives.
- Focussed on advanced materials and solutions for energy storage, green energy, carbon emission reduction and for meeting global human needs reducing impact on environment.The foundation of the company's activities stems from mineral processing and extractive metallurgy. Leveraging the company's expertise, the centre shall have a second independent arm focused on providing mineral technology solutions to industries. This shall provide the project an additional and independent source of revenue, making it self sufficient. These shall include providing service packages to industries for human resource training and skill development, characterisation of minerals/products, facilities for research, process development, feasibility strudies, pilot scale testing, engineering and design with an objective of sustainability and cost reductions for industries. This shall address a huge gap in country and act as an economic booster.

TGMRC will be composed of centres of excellence in the areas of its activities, of which are as detailed below:

Graphite & Graphene Research and Application Centre ("GRACE")

GRACE shall be focussed on the commercially viable manufacture of graphene oxide and graphene ("GO" & "RGO") and its application, utilising the Company's existing in-house expertise and capabilities. It shall also develop graphite/graphene based materials for various composite products, energy devices, electronic gadgets, coating on different materials, membranes, energy storage, unconventional energy, and reducing carbon emission. Under the Company's plans, GRACE will have facilities for the manufacturing 10kg per day of graphene as well as ultra-high purity graphite ("UHPG") products (>99.95% TGC), which is a marketable precursor product for graphene. This graphene and UHPG manufacturing capacity provides the Company with a revenue stream for the centre which will be complemented further with fee-based consulting services on graphene and graphene research.

1. *Mineral Processing and Extractive Metallurgy Centre ("MINMET")*

MINMET shall develop commercially viable technologies for mineral processing, providing metallurgical solutions for the resource industry. It shall focus on viable technologies and processes to utilize lean and

low-grade ore resources through state of art process and technology development. In addition to the latest characterization and mineralogical study capabilities, the centre will be fully equipped with lab and pilot scale facilities for physical beneficiation, agglomeration, reduction and extraction techniques to meet the desired quality of concentrate/product of user industries. MINMET will provide a further independent revenue stream for the Company by providing fee-based specialist consulting services to external customers as well as servicing the internal needs of the Company.

2. *Sophisticated Analytical Instrumentation Facility ("SAIF"):*

SAIF shall provide analytical facilities in order to carry out measurements for R&D work in various areas of graphene development and mineral and material science and technology. SAIF shall host various sophisticated instruments which cater the need of cutting-edge research in many areas. It will also provide the Company with another independent revenue stream for its fee-based specialist consulting services to external customers as well as servicing the internal needs of the Company.

3. Centre for Knbowledge Sharing ("CKS"):

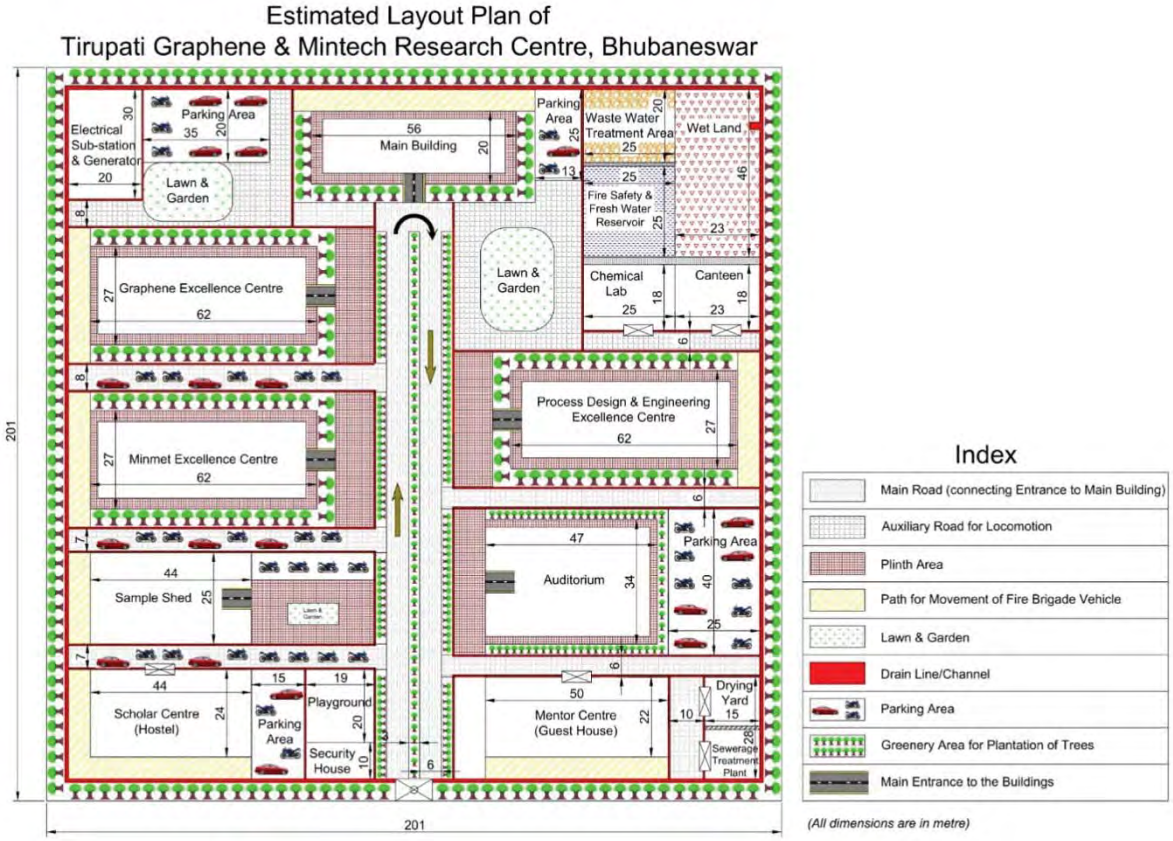
The centre shall be focused on developing relations with user industries and world class institutes through MOUs for exchange of knowledge and application of R&D outcome at commercial levels. It shall also provide the services of skill development and training of human resources to industries and provide opportunitires of R&D to individual and industries.

The development of TGMRC has been based on the principle of ensuring complete financial independence and thus a value generative investment for the Company by housing the ability to generate fee-based income through the provision of value enhancing R&D to commercial and industrial users in addition to its core manufacturing capabilities of graphene and UHPG products which will be marketed and sold to global consumers.

The Company has completed detailed internal feasibility and project development studies and reports as well as undertaken basic design and engineering for the development of the project. Some of the key milestones achieved at the project to date include the following:

- Processing technology for manufacture of reduced graphene oxide and graphene oxide has been developed and tested to a 1 kg/day scale. These products have been stabilised and launched for application development to various industries for different applications.
- The UHPG manufacturing process has also been developed and tested. Samples of the same have been offered to companies as a precursor for graphene. The material has received approvals from various graphene manufacturers.
- Extensive background preparations are ongoing including detailed engineering and design development, equipment sourcing, product market development and staff recruitment preparations in order to fast track the development upon land allocation.

- A detailed feasibility study for the project has been completed by the Company covering various aspects like markets, technology, project planning, financial modelling etc. The conceptual layout plan for development of the centre is as below:



Layout plan of TGMRC

Whilst the intellectual property of manufacturing graphene prevents the Company from divulging extensive information on its proprietary processes, a high level overview is provided below:

- The Company has developed its proprietary technology for the manufacture of RGO & GO which enables it to manufacture graphene using flake graphite as the base material, without the use of chemical exfoliation methods.
- The product development process undertaken by the Company has resulted in standardisation of both the manufacturing process and product output which allowed the Company to publicly release a standard specification sheet for its graphene in Q2 2019.
- The Company is working on a number of target application industries and have actively engaged with a few highly reputable users of graphene by providing them with samples for their product research and development activities.
- It has also provided samples of its graphene to various leading universities and research centres that are renowned for their significant faculties in the fields of graphene. Tirupati graphene samples have undergone a number of tests and assessments, characterisation and trials in various application development arenas.
- The Company's immediate priority is to develop these relationships into commercial arrangements for the supply of Tirupati graphene and/or collaborations in the development and application of its graphene.

Environmental Sustainability and Contribution to 'Green Technology'

The Company believes in practices sustainability in all spheres – environment, social and value creation. With the aim to develop a unique one-stop solution benchmark company for graphite, the company also

aimed at developing advanced technologies to promote sustainable development. The company has taken various steps at all its projects to make them environment friendly and sustainable.

Madagascar Projects

The Company has developed and adopted environment friendly methods for mining, processing and infrastructural developments at the projects:

- Mining: The Company's projects consist of saprolitic type graphite ore. Thus, the ore can be extracted by free-dig mining. This has led to zero-blasting requirements at the mines. The number of mining equipment required is also much lower comparatively, reducing fuel consumption. The company has developed systematic mining plans for both its projects, considering the terrain of the region.
- The Company has developed technologies which reduce the number of equipment required, making the process very lean. This has reduced the energy requirements of the processing plant.
- The Company has developed a proprietary technology which removes sand from the input ore at the first step of the processing. This has reduced the total material handling and load of the processing circuit and further reduced waste generation on the processing by 50%. In fact, the process is generating 50% of the ore as a by-product – construction sand. The process has had massive positive impact on the carbon footprint of the company.
- The water discharged from the process consists of impurities mainly in the form of clay. The company has developed tailings dam for reconditioning of the processed water. This shall make the water reusable in the process. The settled impurities i.e. clay, is planned to be used for social development.
- The generation of dust from the plant is negligible as the company has adopted multiple methods for controlling the same. The company uses closed and automated finishing technologies which reduce dust generation.
- The Company has performed a feasibility study for setting up hydro-electricity facilities at the projects. It plans to meet all its electricity requirements using renewable sources. The company has installed solar panels to meet the electricity requirements at the Vatomina base camp.
- Naturally available materials and output sand have been used to develop the internal infrastructure of the company. Further, traditional environment friendly materials used for construction.
- The Company participated in plantation activities organised by the government of Madagascar. Plantations have also been done at project sites.

Indian Projects

The Company has developed unique proprietary green processes for manufacturing hi-tech graphite products and graphene:

- Currently, two processes are used across the globe for manufacturing high purity graphite – by use of Hydro Fluoric acid (HF) or by intensive heat treatment. The company has developed a Zero-HF, non-heat intensive process for purification achieving 99.95% plus purity levels. This makes it highly environment friendly and also reduces carbon footprint of the material.
- The process has zero waste generation. All inputs in the process achieved as products and by-products.
- The graphene manufacturing process is also a zero-chemical process developed by the company, making it highly environment friendly compared to other processes like Hummer's Process.
- The Company's projects are all incorporated with plans to have large green belts of plantations. Plantations have also been done at the Patalganga Project.

Flake Graphite and Derivatives – A 'Green' Material

Flake graphite is an allotrope of carbon, a non-hazardous material. Its properties and application help in reducing carbon foot print, increasing energy efficiency and making it a green material. A few examples are listed below:

- Flake graphite is used in various new and upcoming energy generation and storage technologies like Li-ion Batteries, Fuel Cells and Super Capacitors. These technologies shall reduce global fuel consumption and provide solutions for storage of renewable energy.

- It is also used for heat dissipation, thermal and electrical conductivity in various applications like electronics, refractories etc. It is also a lubricant. Thus, graphite adds to the energy efficiency of various products and industries, reducing the carbon footprint.
- Expandable graphite-based flame retardants are much more effective compared to conventional flame retardants. They are halogen free, reduce fire hazard, retard fire spreading, reduce toxic fumes and smoke and reduce melt dripping. It does not produce highly toxic fumes making the material highly environment friendly and efficient.
- Graphene is being developed for use in multiple composites for its strength, thermal and electrical conductivity properties. This shall lead to reduction in weight and energy consumption and hence has the potential to massively reduce the carbon footprint of the globe, across industries, applications and products.

Social Engagement in Madagascar Projects

Madagascar is among the poorest countries in the world with 75% of the population living on less than $1.90 per day. Being one of the poorest countries, it faces challenges like malnutrition, bad living standards, low literacy rate etc. According to the needs of the people and society upliftment, the company carved its social care and engagement program "Shakuntalam" symbolising "motherhood" with defined objectives and performed activities as below:

1. Enhance Earnings and Skills	
Ongoing and Increasing	Generating high levels of direct and indirect employment, >95% employees are locals
	Training and skill development in multiple activities
2. Catalyse Education	
2019	Rebuild of local school building near the Sahamamy Project, improving infrastructure and capacity. Improved connectivity
	Approach road built for local school near Vatomina Project
Regular	Organising sports events, providing stationery
3. Improve Health	
2019	Established 24/7 health centre stocked with generic medicines, manned by a doctor also providing transfers – free of cost for locals
Regular	Health, safety and awareness camps, protection gear to workers
4. Catalyse Happiness	
2018	Assisted locals in official land recording and certification
2019	Refurbishment of local market and increasing connectivity due to internal road development
Regular	Participation in various local festivals and events organised by the locals and the government

With progress of development of the projects, a community centre in planned to be built at each of the two projects with a vocational training centre, health and hygiene centre, sports and recreation centre and education facilitation. Additionally, the company intends to provide drinking water, facilitation of transport, sanitation support and similar need based facilities to the local community for achieving the objectives laid under its community development program "*Shakuntalam*".

3. Trends affecting the Company

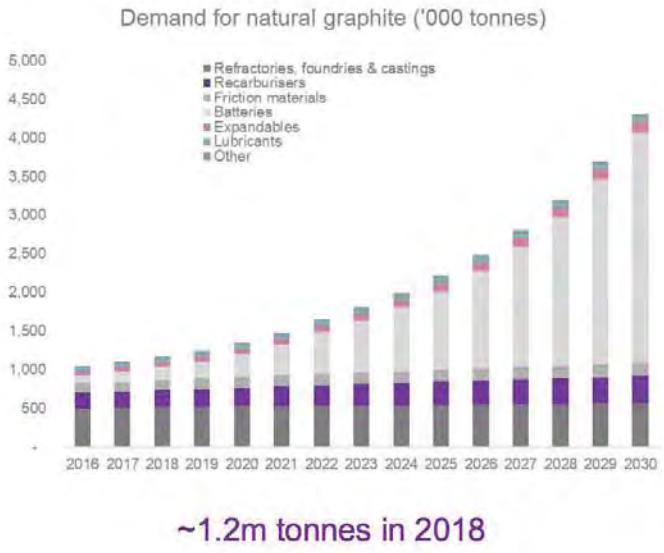
The following summary sets out recent trends affecting the Group.

Market Trends

Flake graphite is a processed mineral with diverse applications. Most of its applications are consumptive in nature resulting in relatively consistent demand. The graphite markets consist of over 150 applications in diverse arenas of industrial and consumer goods. Being a material with diverse properties, it is the preferred choice in many hi-tech applications as well. The diversity of applications provides insulation to sectoral dependence. Certain applications for flake graphite such as energy storage, flame retardants and composites are expected by leading market forecasters to be entering a period of high growth over the next decade. Some significant trends in different segments of flake graphite consumption segments are as follows:

- Energy storage (batteries): Flake graphite is a key material in the energy storage sector. The development of Lithium ion batteries has transformed the energy storage industry with substantially improved energy density in batteries, paving the way for viability of increased adaptability for electric vehicles and grid storage applications. The anode of the lithium ion battery uses flake graphite as its primary ingredient. The global capacity for manufacture of lithium ion batteries is estimated to grow over 5 times over the next 7-10 years. This application is a major driver for accelerating the consumption of flake graphite which would support the high growth rates often reported by all the leading market forecasters.
- Steel & Refractory: Flake graphite is used in various applications and products used in primary and secondary steel making processes. These include basic and specialised refractory, flow control systems, crucibles, coatings and recaborisers. The increasing transformation to the continuous casting route in steel making has resulted in increased growth of consumption of flake graphite in flow control systems. As a recarboriser, flake graphite pellets are being preferred over other conventional carbon forms which are increasing consumption in this application. Owing to similar transformations, the growth rate of flake graphite consumption in steel and refractory sector is estimated to be higher than the growth is steel output itself.
- Expandable Graphite: By a process of intercalation, flake graphite attains the property of expanding hundreds of times its volume upon heating to a threshold temperature which is commonly referred to as expandable graphite and is used to manufacture flame retardants for various applications. It is also used in the manufacture of sheets and gaskets, thermal management foils and other applications. Currently, the majority of flame retardant applications made without graphite are using various other materials which are often toxic. Graphite based flame retardant products presently only accounts for few percentage points of the total market size. However, more recently the use of flake graphite based flame retardants has been gaining ground due to its superior performance over non-graphite flame retardant based products. Thus, of all the applications for expandable graphite the markets for graphite based flame retardants is estimated to exhibit the strongest growth rates over the next decade.
- Composites: Various composites are manufactured using flake graphite as a component. These include friction materials such as brake pads and linings, insulation sheets and conductive polymers, with new applications continually being developed. The arena of composites provides the flake graphite markets with consistent and stable demand with surge demand as a new application is developed.
- Lubricants: Flake graphite is one of the only solid state lubricants with stability at high temperatures. While the applications provide flake graphite with consistent and stable demand, its growth is expected to be relatively moderate but, can also be subjected to surge growth similar to the composites.
- Other applications: Flake graphite has application in various other products and processes such as powder metallurgy, pencils, paints, catalysts and fuel cells.
- Graphene: The top down method of graphene manufacture using flake graphite as the precursor has been developing over the years with various applications in diverse areas reaching commercialization stage. Any bulk application of graphene can be expected to result in surge growth in demand of flake graphite, particularly higher quality flake graphite which produces a similarly higher quality graphene.

With such diverse areas of applications, some of which are exhibiting signs of exceptional high growth with others at more moderate to normal growth expectations, the total market-size for flake graphite is estimated to grow from 1.2 million per annum in 2018 to more than 4 million tons per annum by 2030.



Growth forecast for flake graphite markets (Source: Fast Markets Report)

Trends in graphite exploration

Up until the latter part of the first decade of this century, exploration for graphite was at a miniscule level outside of China, owing to Chinese production substantially exceeding global demand. However, with the development of larger scale applications in energy storage catalysing the electric vehicle development and with many other applications depicting significant growth potential, exploration and development of flake graphite projects gained momentum in different parts of the world, most significantly in the African continent and Canada. Over the past five to seven years, various projects have been conceived and are listed mostly in the Canadian and Australian Stock Exchanges and are at different stages of exploration. This activity has led to a significant rise in the resource inventory for flake graphite.

It has been reported that over the past few years there have been increasing levels of stringency in the implementation of environment regulations by the Chinese Government which has led to significant disruptions to graphite output from historical operations in China. Despite increasing growth in graphite consumption which has fuelled increased exploration activities over recent years, there have not been significant additional output of flake graphite from outside China apart from a new project in Mozambique, which finally declared commercial production in earlier 2019 after a protracted period of commissioning of the plant which continues to struggle to achieve nameplate capacity due to ongoing technical issues. However, more relevantly, the graphite product reported by this project demonstrates that it is producing some 85% of its production in the small flake graphite category (i.e. lowest value graphite), which compares to TGPLC projects which are producing over 85% of its product in the jumbo and large flake categories. This offers TGPLC huge commercial advantages on both superior basket pricing as well as flexibility on its distribution channels for its production.

The European Union and the United States of America have both classified flake graphite as a critical resource, signifying recognition of the supply side threat given that the material is an input into various advanced technology and vital applications and are promoting the development of resources of graphite.

With the Group entering the market as a producer with advanced stage development projects which will see a progressive build-up of capacity aligning to the graphite market uptick in demand, it has a significant advantage by being one of the early-movers in the industry to become a major player in flake graphite.

Following Admission, the Company shall have the distinction of being the first company listed on the London Stock Exchange undertaking mining and production of flake graphite and graphene as an integrated company.

Economic trends

The following macro-economic trends are expected to have an impact on the economics of flake graphite:

- the growth in electric vehicles markets and other energy storage applications using lithium ion batteries;
- the growth in global steel output;
- the growth in consumption of various composite materials using flake graphite as an ingredient;
- the growth in use of flake graphite in flame retardant applications; and
- the overall global economic growth.

With a diverse set of applications, flake graphite market demand is, to a large extent, relatively insulated to sectoral performance. Therefore, even in adverse market conditions in one sector, there are other sectors and other market opportunities for flake graphite.

4. Directors

The management expertise and experience of each of the Directors is set out below.

Shishir Kumar Poddar, Executive Chairman & Managing Director (born March 1970)

A co-founder of the Company, Shishir Kumar Poddar is its Executive Chairman & Managing Director. The strategist, mastermind, key driver and architect of the Company, he has led the Company to successfully execute its three acquisitions, three rounds of pre-IPO capital raise by private placing, designed the development path of the Company, formed an extensive team across the Company's project locations that incorporates its techno commercial talents, and has conceptualised and driven the Company to present day.

In 1991, Mr Poddar joined his family business Chotanagpur Graphite Private Limited, a pioneer of flake graphite mining and processing in India promoted by his father. Spending 15 years in the business, he masterminded its transition from a primitive to modern operation. In 2007, he co-promoted TCCPL building it as the leader in flake graphite in India. With a vision of building a world leading flake graphite company he co-promoted the Company in 2017.

Mr Poddar is well renowned within the global flake graphite industry and is often invited as guest speaker/ panellist at various conferences around the world on industrial minerals, industrial policy and development and SME finance.

He is also a member of, and has held positions of authority in several social, industry and trade bodies. Having been actively involved in the evolution of industrial development policy in India, Mr Poddar previously held an appoint as a Special Invitee in The National Board for MSME, a statutory body under the Ministry of MSME Govt. of India. Under this position, Mr Poddar has extensively contributed to the national policy and finance aspects of Industrial development.

Mr Poddar is currently a director of TCCPL, Safearth Clean Technologies (P) Ltd, TSG, TRM, and TMVSARL. He previously was an executive director of Stratmin Global Resources plc (AIM listed) and Graphmada Mauritius.

Mr Poddar qualified from Bombay University with a BSc Hons in Mathematics.

Christian St. John-Dennis, Non-Executive Director (born June 1964)

Christian Gabriel St John-Dennis has over 30 years' experience in finance, working in both corporate broking and investment management in the UK and New York. Mr. Dennis is a co-founder of the Company and has also served as Company Secretary for the past two years. He provides expertise in corporate affairs, corporate finance and capital raise strategies and contributed his expertise to the acquisitions made by the Company to date.

Mr Dennis founded Optiva Securities Ltd, formerly Orbis Equity Partners, in 2008 as part of a management buy in of the existing Sectram business. Optiva Securities has since established itself as a specialist broker offering both corporate broking services and investment management services to companies and retail clients. Under his leadership, Optiva Securities has evolved into a specialist boutique brokerage business that identifies and supports early stage companies and entrepreneurs to build businesses by connecting them to a discreet and loyal investor base.

Prior to Optiva Securities, Mr Dennis was part of the management buy-in team at Hichens Harrison Limited, and helped to take the company's value from £2.3m to over £50m within 4 years before the company was sold to Relegate Securities. Mr Dennis has an extensive background in the natural resource sector, specialising in mining and oil and gas. He has been involved with numerous successful companies from their early stages onwards including Oxiana Resources, Kryso Resources, EMED, Dekel Oil and Asiamet Resources, amongst others.

Mr Dennis is currently a director of Optiva Securities Limited, Optiva Resources Limited, Tobin Bronze PLC and ECR Minerals plc. In the past five years, he has also held directorships in SB Newco 240212 Ltd, Primus Resources Ltd, Upland Resources Limited, Upland (KSAR Hadada) Ltd, Upland (N Tunisia) Ltd Upland (S Tunisia) Ltd, Upland (El Fahs) Ltd, CD Tempco Limited, CSD Consultancy Limited, and Bengkulu Coal (BVI) Limited.

Mr Dennis qualified from the University of Birmingham with a BSc Hons in Biological Sciences and is an Associate Member of the CISI, Level 4.

Hemant Kumar Poddar, Non-Executive Director (born April 1964)

Hemant Kumar Poddar is a co-founder of the Company and co-promoter of TCCPL. Mr Poddar has 34 years of experience in the flake graphite industry, initiating his exposure to the industry with Chotanagpur Graphite Private Ltd.

Mr Poddar is extensively travelled and his frequent attendance at global industry conferences means he is well connected with primary users of flake graphite globally. With primary responsibilities on operations of TCCPL, he provides insight to the Company as an non-executive Director for its development.

Mr Poddar is currently a director of Tirupati Carbons & Chemicals (P) Ltd, Safearth Clean Technologies (P) Ltd, the Company, TSGPL, TRM and TMVSARL.

Mr Poddar qualified from Bombay University with a BSc Hons in Chemistry.

Rajesh Kedia, Non-Executive Director (born May 1977)

A qualified chartered accountant, Rajesh Kedia has extensive and diversified experience with over 16 years of experience in corporate finance and equity capital raising. Mr Kedia has advised several companies on their growth plans and capital raising on international markets. An ex Morgan Stanley and RBS banker, he is presently engaged as an Assistant Director at UK Government Investments Ltd.

Mr Kedia's contributions to the Company's strategy, corporate governance, acquisitions, and contribution to various policies and sub-committees of the Board have helped in various aspects of the Company's development.

Lincoln Moore, Non-Executive Director (born January 1978)

For the past 12 years Mr Moore has been actively involved in establishing and raising finance for African based mining and agriculture projects and currently serves as an executive director of West African based AIM listed Dekel Agri-Vision, with primary responsibilities for the corporate finance activities of the organisation including equity and debt capital raises. Since his appointment to Dekel in 2013, he has had responsibility for a number of debt and equity transactions with London, African and international government backed financial institutions. In addition, he currently serves as a non-executive director of Firering Holdings Ltd, a private Cote d'Ivoire based Tantalum near term mining production project. Mr Moore is a Chartered Accountant and former senior manager in the restructuring division of Deloitte London.

5. Dividend policy

The decision to declare and pay dividends will be made at the discretion of the Board and will depend on various factors such as the Group's results of operations, financial condition, solvency and distributable reserves, tests imposed by corporate law and such other factors that the Board may consider relevant. The Board recognises that it is important to ensure that shareholders are rewarded with appropriate returns on their investments and will be considering distribution of profits from time to time depending on the Company's performance, dividend policy, financial position, business operations and cashflow requirements of the Projects. Please see the section of this Registration Document called "Risk Factors" set out on page 1 of this Registration Document.

6. Incentive arrangements

During the first two years after incorporation of the Company, with the consent of its Board and senior management team, the Company adopted a minimal approach to incentives and provided no bonuses to the executive management team or the Board. However, to show the appreciation of the Company, the Board was provided with annual incentive package at a premium to the prices for which Ordinary Shares have been subscribed when the Company raised equity in the relevant period. Accordingly, as at the date of this Registration Document, the following warrants are held by the members of the Board of the Company:

Name	Number of warrants issued	Exercise price	Issue date
Hemant Kumar Poddar	200,000	£0.30	01/10/2017
Christian St. John-Dennis	200,000	£0.30	31/12/2017
Shishir Kumar Poddar	600,000	£0.30	31/12/2017
Hemant Kumar Poddar	240,000	£0.40	31/12/2018
Christian St. John-Dennis	240,000	£0.40	31/12/2018
Rajesh Kedia	140,000	£0.40	31/12/2018
Shishir Kumar Poddar	900,000	£0.40	31/12/2018
Hemant Kumar Poddar	240,000	£0.40	31/12/2019
Christian St. John-Dennis	240,000	£0.40	31/12/2019
Rajesh Kedia	140,000	£0.40	31/12/2019
Shishir Kumar Poddar	900,000	£0.40	31/12/2019
Total	4,040,000		

The Company has also provided broker warrants to Optiva, on a success basis, for the fundraising activities executed by it prior to Admission. As on the date of this Registration Document, the following broker warrants are outstanding:

Name	Number of Broker Warrants issued	Exercise price	Issue date
Optiva Securities Limited	376,509	£0.20	13/09/2018
Optiva Securities Limited	61,714	£0.525	12/08/2019
Optiva Securities Limited	To be determined (expressed as a percentage multiplied by the number of shares issued pursuant to any placing carried out by Optiva on Admission)	To be determined (expressed as a multiple of the price at which shares are issued pursuant to any placing carried out by Optiva on Admission)	31/01/2020
Optiva Securities Limited	To be determined (expressed as a percentage multiplied by the number of shares issued pursuant to any placing carried out by Optiva on Admission)	To be determined (expressed as a multiple of the price at which shares are issued pursuant to any placing carried out by Optiva on Admission)	26/02/2020
Optiva Securities Limited	To be determined (expressed as a percentage multiplied by the number of shares issued pursuant to any placing carried out by Optiva on Admission)	To be determined (expressed as a multiple of the price at which shares are issued pursuant to any placing carried out by Optiva on Admission)	26/02/2020
Optiva Securities Limited	To be determined (expressed as a percentage multiplied by the number of shares issued pursuant to any placing carried out by Optiva on Admission)	To be determined (expressed as a multiple of the price at which shares are issued pursuant to any placing carried out by Optiva on Admission)	22/05/2020

Name	Number of Broker Warrants issued	Exercise price	Issue date
Optiva Securities Limited	To be determined (expressed as a percentage multiplied by the number of shares issued pursuant to any placing carried out by Optiva on Admission)	To be determined (expressed as a multiple of the price at which shares are issued pursuant to any placing carried out by Optiva on Admission)	28/05/2020
Optiva Securities Limited	To be determined (expressed as a percentage multiplied by the number of shares issued pursuant to any placing carried out by Optiva on Admission)	To be determined (expressed as a multiple of the price at which shares are issued pursuant to any placing carried out by Optiva on Admission)	15/06/2020
Optiva Securities Limited	To be determined (expressed as a percentage multiplied by the number of shares issued pursuant to any placing carried out by Optiva on Admission)	To be determined (expressed as a multiple of the price at which shares are issued pursuant to any placing carried out by Optiva on Admission)	30/06/2020
Optiva Securities Limited	To be determined (expressed as a percentage multiplied by the number of shares issued pursuant to any placing carried out by Optiva on Admission)	To be determined (expressed as a multiple of the price at which shares are issued pursuant to any placing carried out by Optiva on Admission)	30/06/2020

The Company is in the process of formulating its long term incentive plan for its executive management, which may include share incentive plans and bonus or any other means to provide benefits commensurate to the contributions by its key management team members, including any incentives for the past period.

7. Corporate governance

As an unlisted Company, the Company is not required to comply with the provisions of the UK Corporate Governance Code as at the date of this Registration Document.

The Board of the Company is made up of one Executive Director and four non-executive Directors. Shishir Kumar Poddar is the Executive Director and Chairman of the Company. Hemant Kumar Poddar, Christian St. John-Dennis, Rajesh Kedia and Lincoln Moore are the non-executive directors, and Mr John-Dennis, Mr Kedia and Mr Moore are considered to be independent. It is the Board's policy to maintain independence by having at least half of the Board comprising non-executive Directors who are free from any material business or other relationship with the Group. The structure of the Board ensures that no one individual or group is able to dominate the decision making process.

The Board ordinarily meets regularly and no less than on a regular basis providing effective leadership and overall control and direction of the Group's affairs through the schedule of matters reserved for its decision. This includes the approval of the budget and business plan, major capital expenditure, acquisitions and disposals, risk management policies and the approval of the financial statements. Formal agendas, papers and reports are sent to the Directors in a timely manner, prior to Board meetings. The Board also receives summary financial and operational reports before each Board meeting. The Board delegates certain of its responsibilities to management, who have clearly defined terms of reference.

All Directors have access to the advice and services of the Company Secretary, who is responsible for ensuring that all Board procedures are followed. Any Director may take independent professional advice at the Group's expense in the furtherance of his duties. One third of the Directors retire from office at every Annual General Meeting of the Company. In general, those Directors who have held office the longest time since their election are required to retire. A retiring Director may be re-elected and a Director appointed by the Board may also be elected, though in the latter case the Director's period of prior appointment by the Board will not be taken into account for the purposes of rotation.

The Board attaches importance to maintaining good relationships with all its Shareholders and ensures that all price sensitive information is released to all Shareholders at the same time. The Group's principal communication with its investors is through the Annual General Meeting, the annual report and accounts, the interim statement and its website.

Audit Committee

The Audit Committee meets when required to fulfil its duties and is responsible for ensuring that the financial performance, position and prospects of the Group are properly monitored. The Audit Committee is also jointly responsible with the Board for the appointment of the external auditor of the Company, and liaising with the Company's auditors to discuss accounts and the Group's internal controls and reporting procedures.

The members of the Audit Committee consist of the following:

Sr. No.	Members	Capacity
1	Shishir Kumar Poddar – Chairman and Managing Director	Member
2	Rajesh Kedia – Non Executive Director	Member
3	Lincoln Moore – Non Executive Director	Member
4	Kien Huynh – Chief Financial Officer	Special invitee
5	Ameya Gogate – TSG – Group Manager (account and Finance)	Special invitee

Remuneration Committee

The Remuneration Committee meets as and when necessary and is responsible for making decisions on Directors' and key management's remuneration packages.

The Remuneration Committee reviews the performance of the Executive Directors and makes recommendations to the Board on matters relating to their remuneration and terms of service. The Remuneration Committee also makes recommendations to the Board on proposals for granting of options and other equity incentives pursuant to any employee share scheme or equity incentive plans in operation from time to time.

The Remuneration Committee seeks to provide the remuneration packages necessary to attract, retain and motivate Executive Directors of the quality required to manage the business of the Group. In establishing the level of remuneration of each director, the Committee seeks to avoid paying more than is necessary and has regard to packages offered by similar companies. Consistent with this policy, the benefits packages awarded to Executive Directors comprise a mix of performance and non-performance elements.

The members of the Remuneration Committee are as follows:

Sr. No.	Members	Capacity
1	Shishir Kumar Poddar – Chairman and Managing Director	Member
2	Christian St. John-Dennis- Non Executive Director	Member
3	Rajesh Kedia – Non Executive Director	Member

Nominations Committee

The Nominations Committee meets as and when required to fulfil its duties of reviewing the Board structure and identifying and nominating candidates to fulfil Board vacancies as they arise. The Nominations Committee reviews and makes decisions in respect of: (i) the size and composition of the Board; (ii) the organization and responsibilities of the appropriate committees of the Board; (iii) the evaluation process for the Board and committees of the Board and the chairpersons of the Board and such committees; and (iv) the balance of expertise and qualifications among members of the Board. In the nomination process, the Board assesses its the current composition and requirements going forward in light of the stage of the Company, and the skills required to ensure proper oversight of the Company and its operations are always duly assessed.

No formal induction process exists for new Directors, but the Chairman ensures that each individual is given a tailored introduction to the Company and fully understands the requirements of the role.

The members of the Nominations Committee are as follows:

Sr. No.	Members	Capacity
1	Shishir Kumar Poddar – Chairman and Managing Director	Member
2	Christian St. John-Dennis- Non Executive Director	Member
3	Rajesh Kedia – Non Executive Director	Member
4	Puruvi Poddar – Group Manager (Business & Projects Development)	Special Invitee

8. Bribery and Corruption

Among the 168 countries surveyed by Transparency International in 2015, Madagascar ranked 123rd with a score of 28/100. The current government of Madagascar has continually emphasized the importance of combatting corruption and began work in 2015 on a 10-year National Anti-Corruption Strategy. Madagascar was the 158th least corrupt nation out of 180 countries according to the 2019 Corruption Perceptions Index reported by Transparency International. Thus, despite the strengthened rhetoric from the government significant, concrete results have yet to materialize.

In Madagascar, the Independent Anti-Corruption Bureau (BIANCO) is the agency formally responsible for combating corruption and in mid-2008, the country also set up a Financial Intelligence Unit (SAMIFIN) to carry out research and financial analysis related to money laundering. Transparency International also has an office in the country which has been operating since 2002. Madagascar has signed and ratified the UN Anticorruption Convention and the African Union Convention against Corruption.

However, there is no requirement for companies to establish internal codes of conduct that, *inter alia*, prohibit bribery of public officials. However, most foreign companies have oriented their internal controls and ethics and compliance programs to prevent bribery.

The Company has an overarching commitment on environmental management and protection, sustainability, social and community development and corporate governance, which underpins its 'green' initiatives and its CSR programmes which is delivered under the Company's "Shakuntalam" program in Madagascar. With the full endorsement by the Board, the Company has implemented a series of group policies designed to ensure it runs its businesses with integrity and in an honest and ethical manner.

As a UK company, the Company understand its legal obligations in respect to anti-money laundering and corruption, tax evasion, ethical trading and anti-slavery which are primarily governed by the following laws:

- The Proceeds of Crime Act 2002 (as amended by the Serious Organised Crime and Police Act 2005);
- The Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations 2017;
- The Terrorism Act 2000 (as amended by the Anti-Terrorism, Crime and Security Act 2001 and the Terrorism Act 2006);
- The Bribery Act 2010;
- The Criminal Finances Act 2017; and
- The Modern Slavery Act 2015.

The Company and its employees are aware of the potential negative impact on its business and reputation should the actions, activities or conduct by any of its staff contravene its high environmental, sustainability and ethical standards. The consequences of breaching these group policies for both the Company and its employees can be serious and result in fines and/or imprisonment.

All directors, officers and employees, and those working for it or with it, are required to observe the minimum standards expected by the Company. It upholds a zero-tolerance position with respect to contraventions of its group policies including its Anti-Bribery & Corruption Policy and Anti-Tax Evasion Policy and violations represents serious misconduct, and may result in an internal investigation and disciplinary consequences, up to and including dismissal.

PART I

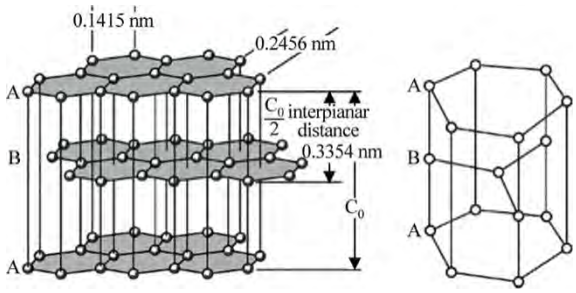
PART B – FLAKE GRAPHITE: APPLICATIONS AND MARKETS

Flake Graphite – a specialised resource with diverse properties and applications

Diamonds and graphite are two allotropes of carbon which are pure forms of the same element that differ in crystal structure. Due to the structural difference, the two materials possess contrasting properties.

Flake Graphite has a layered, planar structure with a hexagonal lattice. In each layer, the carbon atoms are covalently bonded to 3 other carbon atoms, forming a (2D) planar layer commonly known as Graphene. These 2D planes are stached like a book weakly bonded to each other making Flake Graphite. Each carbon atom in flake graphite has a free electron which can migrate within the planar layer to impart the conductivity properties of graphite [7]; as the electrons are free to move, electricity moves through the plane of the layers. It is an extremely soft material and has a high regular stiffness and strength [1,3,4]. Graphite is a good conductor of heat and electricity [3]. In a reducing atmosphere, it can sustain temperatures greater than 3600 ^{o}C [1]. It is a highly lubricating material with chemical inertness and corrosion resistance [5,6].

1. Pierson HO. Handbook of carbon, graphite, diamonds and fullerenes: properties, processing and applications. Park Ridge (New Jersey): Noyes Publications; 2012.
2. Wenk H-R, Bulakh A. Minerals: their constitution and origin. Cambridge: Cambridge University Press; 2016.
3. Deprez N, McLachlan D. The analysis of the electrical conductivity of graphite conductivity of graphite powders during compaction. J Phys D 1988;21(1):101
4. Zheng W, Wong SC. Electrical conductivity and dielectric properties of PMMA/expanded graphite composites. Compos Sci Technol 2003;63 (2):225–35.
5. Bolz F. Advanced materials in catalysis. Cambrige (Massachusetts): Academic Press; 2013.
6. Kelly BT. Physics of graphite. London (Englewood, N.J.): Applied Science Publishers; 1981.
7. Kharisov, B. and Kharissova, O. (n.d.). *Carbon Allotropes: Metal-Complex Chemistry, Properties and Applications*.



Systematic illustration of the crystal structure (hexagonal) of flake graphite.
Source: A.D. Jara et al. / International Journal of Mining Science and Technology 29 (2019) 671–689

The following properties exhibited by flake graphite make it ideal for a host of industrial applications:

- A solid-state, high temperature dry lubricant.
- The only high-performance non-metallic conductor of heat and electricity.
- Reflector as a single particle.
- Excellent refractory properties.
- Thermal resistance (negligible thermal expansion).
- High temperature stability in reducing atmosphere.
- Low adsorption of X-rays and neutrons.
- Expansion on intercalation – up to 500 times.
- Shining luster – leaves a streak in rubbing.
- Mostly inert to other materials and various chemicals

Graphite is therefore an important industrial mineral which finds applications in almost every facet of manufacturing including energy storage, electronics, atomic energy, hot metal processing, friction, coatings, aerospace, powder metallurgy, lubrication, thermal management, composite materials etc.

Flake graphite is found in the form of mineral deposits in mother Earth. For commercial use, this is mined and processed into the required grades.It has deposits across the globe having been mined in the China, India, South America, Canada, Madagascar, Germany, Ukraine and Russia. Flake graphite has been classified as a critical resource for industry and national security by the USA and European Union [2].

The monetary value and extent of these properties vary with the following 3 parameters in Flake Graphite:

(a) Particle Size

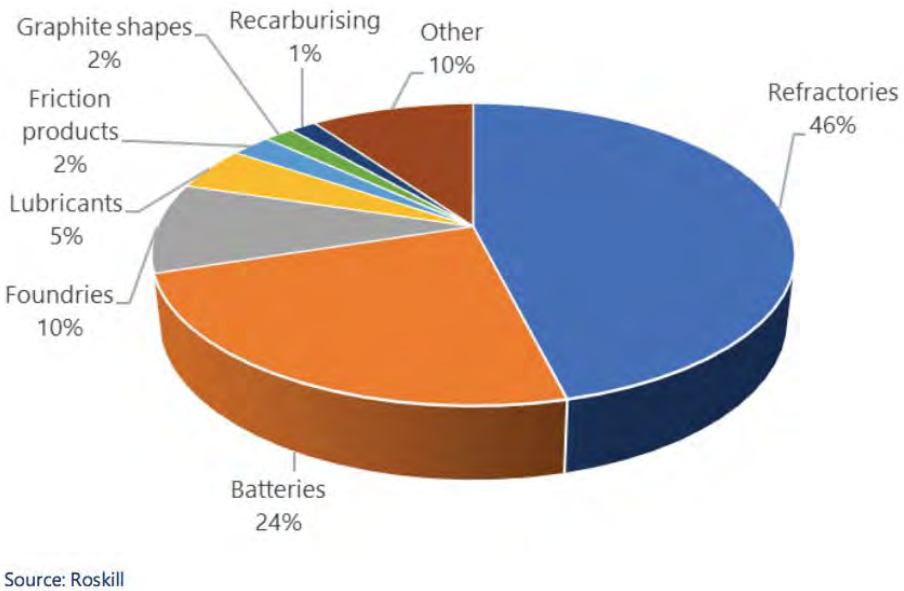
(b) Purity (Carbon %)

(c) Downstream Process (if any)

1. https://courses.lumenlearning.com/introchem/chapter/allotropes-of-carbon/
2. Critical raw materials – Internal Market, Industry, Entrepreneurship and SMEs – European Commission. [online] Available at: https://ec.europa.eu/growth/sectors/raw-materials/specific-interest/critical_en
3. Fast Markets (2019). *Prospects for Natural Graphite Flake Markets*.

Applications and Markets

In 2017, the total flake graphite production in the world was about 895,000 metric tons according to Roskill. It has a wide range of uses in over 150 applications that are diversified, across various industry sectors. These applications range from conventional applications in metal manufacturing processes to green technologies and high-tech applications in areas such as energy storage, flame retardants, conductive polymers, fuel cells, composite materials and the production of graphene. The consumption pattern of flake graphite across these applications is broadly estimated in the following chart by Roskill (2019):



Consumption Pattern of Flake Graphite across Applications (2019)

Based on the Company's experience in producing, selling and marketing of flake graphite to international industrial consumers, it views the market demand more from an applications perspective which it broadly divides into two parts:

(a) Industrial graphite uses/applications, produced in primary mining & beneficiation that generally have graphitic carbon purity ranging from 85% up to 97% and graded by particle size (i.e. jumbo, large and small). These types of flake graphite products are generally consumed in more conventional industrial applications (e.g. refractories, hot metal flow control, dry cells etc.) and are also used as the precursor material for further downstream processed for specialy process applications; and

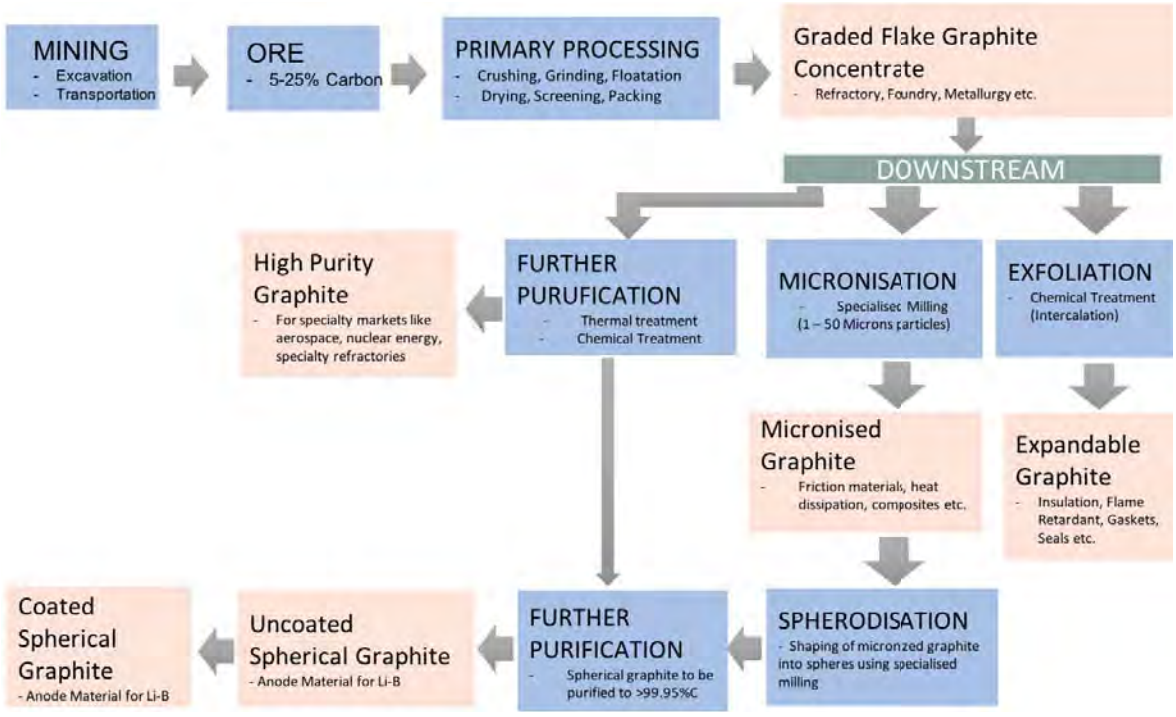
(b) Specialty graphite applications, which are primary flake graphite products having undergone one or more of downstream processes of purification typically above 98% up to 99.95%, intercalation, micronisation and spherodization to yield specialty graphite for high-tech application products like:

    1) intercalated flake graphite which is used in flame retardants, thermal management and gaskets;

    2) micronised flake graphite which is used for polymers and composites, lubricants and electronics applications; and

3) spherical graphite which is the key component of the anode material for lithium-ion batteries and are widely used in grid-attached residential and industrial energy storage solutions, electric vehicles (EVs) as well as portable consumer electronic devices such as mobile phones.

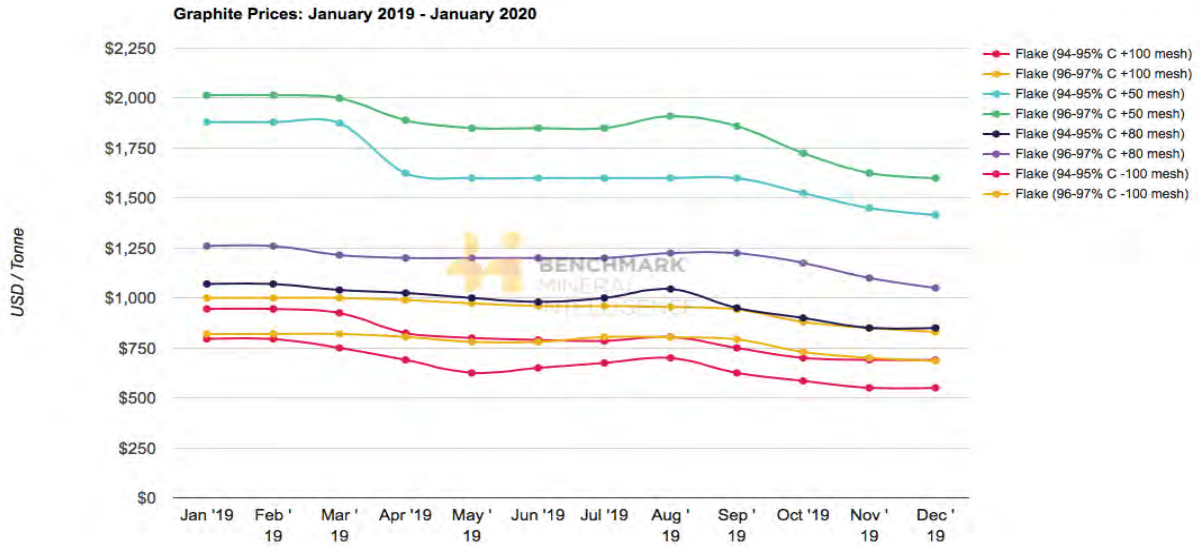
The value chain of flake graphite starts at primary processing (mining, purifying up to 97%C and particle size grading) and further extends downstream to host a variety of specialised graphite products. This is explained in the following chart:



Value Chain of Flake Graphite

Source: 1. Fast Markets (2019). *Prospects for Natural Graphite Flake Markets*., 2. Company's Expertise

For primary and specialty flake graphite, flake size and purity are the determinant factors for price. Particle size is broadly classified as jumbo (300-500 μm), large flake (180-300 μm) and small flakes (<180 μm); however the market demand can be of standard as well as customised grades. Being a niche and critical material, customers may demand highly customised and specialised grades. The pricing trend with variation of carbon content and flake size are depicted in the following graph:



Flake Graphite Prices for Various Grades (Jan 2019 – Jan 2020)

Source: Benchmark Minerals Intelligence Graphite Prices, [online] Available at: https://www.benchmarkminerals.com/mineral-pricing-chart/?productId=Graphite [Accessed 19 Jan. 2020].

Supply Dynamics

Over the last few decades, China has dominated the supply of flake graphite to the rest of the world. Flake graphite is mined and produced in three regions of China namely Shandong, Heilongjiang and Inner Mongolia. The Shandong region has been the main source of large flake graphite from China. Over the past few years, mining and primary processing of natural graphite has become extremely challenging in China due to multiple reasons:

- Limited availability of larger flakes
- Increasing production costs
- Quality of remaining resources
- Environmental restrictions
- Over-exploitation of existing resources
- Policy concerns as government continues closures of graphite mines and factories due to environment factors.

This has led to limited availability and growth scope from China, especially for the large flakes. Heilongjiang experiences extreme weather conditions in the winter season and Inner Mongolia has logistics challenges due to its locational disadvantages. All these factors make it difficult for China to expand its production capabilities of mining and processing primary flake graphite. There is further expectation of closures due to environmental concerns.

Further, larger quantities of flake graphite were also mined and produced in India, Brazil and Russia. USA and EU define graphite as a critical resource. The world bank estimates that 500% increase in flake graphite production may be required by 2050. With further increasing demand for the material from multiple growing new applications, ex-China sources are required. Over the last 5 years, projects have been identified in Canada and Africa with high quality graphite resources. But most of these projects are still at a very initial stage while the demand for graphite is expected to be 2 million tpa by 2025 from current 1.2 million tpa and their fruition to production depends on multiple factors. Canada has higher costs and longer development timelines compared to Africa which is a low-cost jurisdiction (although costs are rising), has

relatively easy access for shipping due to its location in the globe and is developing its infrastructure and economies. Madagascar is known for its large size flake and high carbon grade.

For the downstream hi-tech processing technologies which include high purity graphite, expandable graphite, micronized and spherical graphite, the main raw material is primary processed flake graphite of which 50-70% is currently produced in China. Further >90% of global production is located in China. These products serve consumers in hi-tech green applications like thermal management, lithium ion batteries etc as described in Part B. Thus, diversification of source of these critical materials is also essential. For example, graphite used in lithium ion batteries follows the following chain:

Mined Ore -> Primary Processed graphite -> High purity treatment -> micronisation & spherodization

50-70% in China		**>90% in China**

COMPETENT PERSONS REPORT ON THE SAHAMAMY AND THE VATOMINA GRAPHITE PROJECTS, MADAGASCAR

Report Prepared for

TIRUPATI GRAPHITE PLC

Report Prepared By

srk consulting®

SRK Mining Services (India) Private Limited

June 2020

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SRK Legal Entity:	SRK Mining Services (India) Private Limited
SRK Address:	CE 106, Sector 1, Salt Lake City, Kolkata, West Bengal, India, 700064
Client Legal Entity	Tirupati Graphite Plc
Client Address:	49 Berkeley Square, London W1J 5AZ, United Kingdom
Signature Date:	1 June 2020
Effective Date:	1 June 2020
Project Number:	IN0824
SRK Project Reviewer:	Dr. Mike Armitage, Corporate Consultant (Resource Geology) SRK Consulting (UK) Limited
SRK Project Manager:	Shameek Chattopadhyay, Principal Consultant (Resource Geology) SRK Mining Services (India) Private Limited

EXECUTIVE SUMMARY

COMPETENT PERSONS REPORT ON THE SAHAMAMY AND THE VATOMINA GRAPHITE PROJECTS, MADAGASCAR

INTRODUCTION

SRK Mining Services (India) Private Limited ("SRK") was requested by Tirupati Graphite Plc ("Tirupati", hereinafter also referred to as "TGPLC" or "the Company") to prepare a Competent Person's Report ("CPR") on their mineral assets in Madagascar. These assets comprise two graphite Mining Licenses, located in the Atsinanana region in the Brickaville district in the eastern part of Madagascar. The mining licenses are Vatomina and Sahamamy, respectively (also referred jointly as "Projects").

This CPR presents a summary of the projects geology and exploration undertaken including presenting the Mineral Resource statement dated 1st June 2020 and Tirupati's strategic development plan.

SRK understands that Tirupati is undertaking an initial public offering of securities ('IPO') and listing in London, United Kingdom, and that this CPR shall be included in the Company's Prospectus and related documents ("Admission Documents"). SRK has prepared the CPR following a comprehensive review of data and reports, which were provided by Tirupati and site visits to the project areas in 2019.

ASSET SUMMARY

Vatomina

Vatomina is located on the east coast of Madagascar and is situated about 70km south of Toamasina, the port city of Madagascar. The license can be accessed by N2 national highway from Brickaville to Toamasina. Tirupati acquired the license (PRE-Number 38321) from its previous holder, and subsequently acquired the commercial mining permit. The Mining Permit covers a 25km^2 area and is valid for a period of 40 years through to 17 December 2055. Tirupati presently has an environmental permit to produce 12,000 tpa of graphite concentrate from Vatomina.

Sahamamy

Sahamamy consists of a Mining Right covering a 8km^2 area along with an adjacent Exploration Permit, which covers a further 8km^2 area. The project area is located about 8 km aerially from Vatomina and can be accessed from the Brickaville town by road to Anivorano village (around 20km from Brickaville) and then by water transport on Rianial river for around 10km to Gisimay, followed by a graded road to Sahamamy. Sahamamy can also be reached by taking a motorable road from Brickaville to Vohipamelona (around 6km), followed by water transport to Gisimay for around 21km.

Tirupati acquired Sahamamy in January 2018. Prior to the acquisition, mining activity was being conducted in the property from shallow small open pits and graphite concentrate was being produced from an old process plant at 240 tpa, which existed at the site. Following acquisition, Tirupati constructed and commissioned a new 3,000 tpa process plant in February 2019.

GEOLOGY

Geologically, both Vatomina and Sahamamy lies within the Anaboriana-Manampotsy Belt of the Antananarivo Domain of central-east Madagascar, which consists of graphite bearing quartzo-feldspathic gneissic rock that have been variably weathered leading to the formation of saprolite horizons. Graphite mineralisation is hosted within saprolitic horizon. The geology in the Sahamamy block is dominated by saprolite at the top (underlying the alluvium/topsoil) with thickness varying between 15-20m, reported at mine pits, road cuttings and exploration boreholes. In Vatomina, saprolite underlain the topsoil (3-6 m thick) and is reported up to a depth of 25-30m from surface. Present work within the Sahamamy and Vatomina deposits has identified 2-3 graphite bands with thickness totalling 20-30m.

MINERAL RESOURCES

Based on the exploration data available, SRK has produced a geological model which defined broadly four major lithological units, namely, overburden, Non-graphitic Granite Gneiss, Graphitic Gneiss and Dolerite Dyke. In addition, a 3-dimensional regolith model was also constructed, in which a total of three horizons were defined, namely Pedoloith, Saprolite/Sap Rock and Bed Rock. Domaining of the different graphic bands were done based on the lithological data, its position in the regoloithic profile and the available assay results. Based on the preliminary statistical study, SRK decided a threshold value of 2% GC over a minimum composite length of 2m to be included into the estimation domains.

Ordinary Kriging (OK) was used as the grade interpolation method. The open pit Mineral Resource reported has been determined by constraining all material within the lithological wireframes and all material falling within a conceptual pit shell using a marginal cut-off of 1.8% GC, representing a graphite concentrate price of US$ 950/t. Table ES-1 and Table ES-2 shows the resulting Mineral Resource Statement for Vatomina and Sahamamy, respectively.

Table ES - 1: SRK Mineral Resource Statement Vatomina Graphite Project, Madagascar, in accordance with the JORC Code (2012) as of 1st June 2020

Resource Category	Quantity	Grade	
		(Mt)	(GC%)
Measured		-	-
Indicated		3.2	4.3
Inferred		15.2	4.7

Total Mineral Resource	18.4	4.6

Table ES - 2: SRK Mineral Resource Statement Sahamamy Graphite Project, Madagascar, in accordance with the JORC Code (2012) as of 1st June 2020

Resource Category	Quantity	Grade
	(Mt)	(GC%)
Measured	-	-
Indicated	1.4	4.10
Inferred	5.7	4.20
Total Mineral Resource	7.1	4.20

Note:

(1) All reported quantities are rounded to the nearest 100,000 tonnes and the GC grades are rounded to the nearest one decimal point to reflect the relative accuracy of the estimates.

(2) The Mineral Resource Estimate was constrained by the lithological wireframes, and a conceptual pit shell defined by the following assumptions: Graphite Concentrate price of US$ 950/t; overall slope angles of 30º; a mining recovery of 95%; a mining dilution of 5%; a base case mining cost of US$ 1.5/t of ore; dry processing cost US$ 6.6/t of ore, and 5% mass yield; without considering revenues from other elements.

The statement has been classified in accordance with the Definitions and Guidelines specified in The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 Edition (the JORC Code) by Mr Shameek Chattopadhyay (MAusIMM), a Director and Principal Consultant Resource Geology at SRK who a Competent Person is as defined by the JORC Code.

SRK considers that both Vatomina and Sahamamy remains open to the strike extension as well as down-dip extensions. Furthermore, there may be potential for additional mineralised zones beneath the current known area as the few deeper holes indicated mineralisation.

In SRK's opinion, there is good potential for further extensions to the known deposit and the potential mineralisation extensions to the north and east are a priority for future exploration drilling, including in-fill drilling in the known area to upgrade confidence in the defined resources.

MINING

Sahamamy

The mining operation in Sahamamy is presently a small-scale, free-digging, open pit operation, with mining presently being undertaken by Tirupati from two areas within the lease (Pit-A and Pit-B). The ore and the waste material are excavated and loaded by backhoe's and transported by tractors (with hydraulic trailer) and tipper trucks. Ore is carried to the processing plant and is either dumped directly onto the receiving hopper of the processing plant or placed on the RoM pad near the plant. The operating stripping ratio in the mine at this stage is about 2.

Sahamamy is currently permitted for producing 3,000 tpa of processed graphite. Assuming a yield of 4.5%, the run-of-mine (RoM) ore requirement is estimated at between 60,000 tpa to 70,000 tpa.

Vatomina

Vatomina is a greenfield project with a mining permit of 25 km^2 area. The style of mineralisation in Vatomina as evident from geological modelling, is likely to require shallow free digging surface mining. A preliminary open pit optimisation tests on the Vatomina geological model has confirmed that the Resources defined is amenable to open pit operation. Additional work of a PFS level is required to upgrade the mineral resources to mineral reserves.

A conceptual study undertaken by Tirupati in support of its expenditure plan, has assumed mining equipment as is in Sahamamy. It is considered that initial mining will focus on mining depths to about 50-60 m depth.

MINERAL PROCESSING/PLANT DESIGN

The mineral processing plant design for Sahamamy and Vatomina, are based on a full suite of metallurgical test work performed by CSIR-Institute of Minerals & Materials Technology (IMMT) in Bhubaneswar, India in 2018. These tests included laboratory scale metallurgical work and a bulk sample / pilot plant program, with bulk samples collected from Vatomina.

Tirupati along with IMMT has developed a relatively novel flowsheet. By using two stages of screw scrubber and the addition of a graphite collecting reagent, plant operation in Sahamamy has indicated that it is possible to reject up to 64% of the feed mass following scrubbing, with negligible loss of graphite, which is helping to enhance the flotation selectivity.

A 3,000 tpa plant which was designed in-house by the Company, is successfully commissioned in Sahamamy in early 2019 and is now in production. A 6,000 tpa plant, is under construction in Vatomina with earthworks for the plant construction reportedly substantially completed.

The process is designed with an assumed yield from ore (80% minimum recovery) to be 4.50%, from an average plant feed head grade considered for design purposes to be between 5-5.5% Cg with a 20% markdown on design and rated capacities.

Based on input shared with SRK, the RoM ore feed grade in Sahamamy on daily basis has varied between 3.25% to 5.91%, the yield (% production per ton ore) varied between ~3-5%, the graphite recovery varied broadly between 80-90%.

The graphite concentrate produced during the same period comprised graphite flake sizes distributed as follows: >50 mesh (Jumbo) between 50-60%, between 50-80 mesh (Large) between 25-30% and the remainder being <80 mesh (Small/Fine) between 10-15%.

PROJECT INFRASTRUCTURE

Location wise, both, Vatomina and Sahamamy projects enjoy important advantages. The Vatomina Project is located on the N2 national highway which connects Toamasina port to the capital city, Antananarivo. The Toamasina port is at about 70km by road from Vatomina. The Sahamamy Project is located at an aerial distance of 8km, west of Vatomina. The driving time from Vatomina to Sahamamy is approximately 30 minutes for which an internal approach road linking the two projects is being developed by the Company. Once the connecting road is built, Sahamamy will also have access to the external infrastructure and access to the port and the capital city through Vatomina.

Sahamamy

The Sahamamy Project was acquired with existing infrastructure which included an approach road, a base camp, the existing residential facilities along with an old but operational mineral processing plant. The Sahamamy Project also had infrastructure for a hydro power plant which was decommissioned however, consisted of a reservoir, turbine house, and other infrastructure, which reportedly once operated at a capacity of 50 Kw.

Since acquisition, Tirupati has upgraded some of the old infrastructure that were available in Sahamamy and as of this Report, has set up and commissioned a new process plant of 3,000 tpa.

Other new facilities built by Tirupati includes a laboratory, a fabrication centre, additional residential units for the management team and diesel-based power generation arrangements. A dedicated approach road of about 13km was also widened to +6m and strengthened by Tirupati with drains and slope stabilisation.

Sahamamy's water requirements are presently sourced from an existing water reservoir arrangement which was already in place and operating prior to the acquisition.

Vatomina

Since acquiring the property, the Company undertook earth and site preparation works to advance the Project to construction ready status, while awaiting the installation of the initial 6,000 tpa process plant.

Internal roads connecting from the N2 national highway to the base camp, processing plant site, and a road network totalling about 15km has been built by the Company to provide access within the Vatomina license area. An 11mx4m concrete bridge was also constructed to cross over a stream at the entrance of the permit area from the N2 to gain access to the site area. The bridge is an all whether, reinforced concrete construction designed to carry up to 35 tonne loads.

A management camp area to accommodate 20 persons has been built. The Camp is powered by solar energy.

Electric power for Vatomina would initially be sourced using diesel-based DG sets as no grid power is presently available in the area. The water requirements for Vatomina are expected to be met from a perennial stream adjoining the plant area. For drinking and other human use, underground water from deep bore wells would be the preferred source with required water treatment facilities.

Management Information System

Tirupati is developing a formal MIS called GRID that aims to cover all areas of the organisation, including operation, manufacturing, sales and in time, ESG aspects as well.

GRID is designed to be a cloud based, fully customisable, real-time MIS that would cover every aspect of the operations from mining of ore and waste through to sales and delivery to their buyers and end-users. GRID was officially launched for implementation by the Company in September 2019. The system is currently being integrated across the Company's operations.

STRATEGIC PLAN

Sahamamy and Vatomina projects each holds mining permits for 40 years with combined area of 33km2. The Company's overall strategy is to establish a combined production capacity of 81,000 tpa of flake graphite with 21,000 tpa capacity in Sahamamy and 60,000 tpa capacity in Vatomina, within 2023.

Tirupati proposes to develop its production capacity in 6 phases, as summarised in Table ES-3.

Table ES - 3: Strategic Development Plan

Process Plant Throughput Capacity	Projected Date of Commercial Production
3,000 tpa (Sahamamy)	April 2019
6,000 tpa (Vatomina)	Q2 2020
18,000 tpa (Vatomina)	Q2 2021
18,000 tpa (Sahamamy)	Q2 2022
18,000 tpa (Vatomina)	Q2 2022
18,000 tpa (Vatomina)	Q1 2023

The Company's Strategic Plan outlines an expenditure programme totalling US$24M, including capital expenditure already made for its first 3,000 tpa capacity unit at Sahamamy.

The Strategic Plan assumes significant increases in production from 2022 with the proposed peak production of 81,000 tpa flake graphite achieved within 2024. Commissioning further technical assessments including completion of multi-disciplinary pre-feasibility studies (''PFS'') to demonstrate the technical feasibility and economic viability of the expansion programmes in Sahamamy and Vatomina is crucial.

CONCLUDING REMARKS

As at 1st June 2020 the projects in Madagascar has the following Mineral Resources in accordance with the JORC Code:

- At Sahamamy: An Indicated Mineral Resource of 1.4Mt grading 4.10 GC% and an Inferred Mineral Resource of 5.7 Mt grading 4.20 GC%; and
- At Vatomina: An Indicated Mineral Resource of 3.2 Mt grading 4.30 GC% and an Inferred Mineral Resource of 15.2 Mt grading 4.70 GC%

Potential exists to expand the Mineral Resource base at both projects following further exploration for which Tirupati has budgeted for US$4.25 M.

SRK concludes that the geological potential of the Projects is of sufficient merit to justify the direct exploration expenditures budgeted for.

The Company's Strategic Plan assumes the expenditure of some US$24 M, to be expended within 2023. The Strategic Plan assumes substantive increases in production from 2022. SRK notes that the level of technical work undertaken to support such expansion is at a conceptual level and relies upon a number of high-level assumptions. Accordingly, SRK considers that completion of a multidisciplinary PFS which demonstrates the technical feasibility and economic viability of that proposed to be crucial.

For and behalf of **SRK Mining Services (India) Private Limited**

Shameek Chattopadhyay	**Subrato K. Ghosh**
Principal Consultant (Resource Geology)	Corporate Consultant (Project Evaluation)
SRK Mining Services (India) Private Limited	SRK Mining Services (India) Private Limited
Somnath Gain	**Dr. Mike Armitage**
Principal Mining Engineer	Corporate Consultant (Geology)
SRK Mining Services (India) Private Limited	SRK Consulting (UK) Limited

Table of Contents

List of Tables

List of Figures

COMPETENT PERSONS REPORT ON THE SAHAMAMY AND THE VATOMINA GRAPHITE PROJECTS, MADAGASCAR

1 INTRODUCTION

1.1 Purpose of this Competent Person's Report

Tirupati Graphite Plc ("Tirupati", "TGPLC" or "the Company") has requested SRK Mining Services (India) Private Limited ('SRK') to prepare an independent Competent Person's Report (the 'CPR' or this "Report") on its two graphite projects (the "Projects"), located in Madagascar. SRK understands that Tirupati is undertaking an initial public offering of securities ('IPO') and listing in London, United Kingdom, and that this CPR shall be included in the Company's Prospectus and related documents ("Admission Documents").

The CPR presents the following key technical information as on 1st June 2020:

- an overview of the geological setting of Tirupati's Madagascar project areas and the associated graphite mineralisation;
- outline the recent exploration work undertaken on each of the project areas by Tirupati;
- present the defined Mineral Resources, reported in accordance with the terms and definitions of the JORC Code (2012);
- the exploration potential of Tirupati's project areas;
- the projected expenditures necessary to execute the Company's proposed strategic development plan (the ''Strategic Plan''); and
- provide SRK's comments and recommendations on further work to be undertaken in the project areas.

The subject of this CPR are two graphite mining areas located in the Atsinanana region in the Brickaville district in the eastern part of Madagascar. The areas are known as Sahamamy and Vatomina; Figure 2-1.

The Sahamamy Project ("Sahamamy") area, consists of a Mining Right covering an 8km^2 area along with an adjacent Exploration Permit, which covers a further 8 km^2 area. Sahamamy was historically operated as an open pit graphite mining and processing facility which was permitted to produce 3,000 tpa of graphite concentrate.

The Vatomina Project ("Vatomina") is a greenfield property which is located about 8km aerial distance from Sahamamy on the east coast of Madagascar. Vatomina consists of a Mining Right

covering a 25km^2 area. Vatomina is under development with Tirupati initiating construction activity in the area since early 2019. Vatomina currently holds permit to produce 12,000 tpa of graphite concentrate. Tirupati has initiated construction of a 6,000 tpa processing plant as part of its first stage development plan.

In producing this CPR, SRK has reviewed and commented upon the following technical aspects of the Project:

- Geology and Mineral Resources;
- Mining;
- Metallurgy and Mineral Processing;
- Project Development Plan;
- Environmental and social aspects;
- Permitting; and
- Graphite quality and marketing

As no Ore Reserves have been defined for the Projects, this CPR do not contain an independent valuation of the Projects, neither a valuation was expected from Tirupati. While the ownership structure is commented upon, a proper legal due diligence is not part of the report.

The reporting standard adopted by this CPR is the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 edition) (the "JORC (2012)") prepared by the Joint Ore Reserves Committee of the AusIMM, the Australasian Institute of Geoscientists and the Minerals Council of Australia.

This CPR contains forecasts and projections provided by the Company and other professional consultants and advisers to the Company. SRK's assessment and comments are based on technical reviews of Project data provided by Tirupati and two visits to the Project site.

References to costs and prices, in this Report, are solely intended to validate the certification of the Mineral Resources according to JORC (2012) guidelines, and shall not be considered by any investor, or any company or person outside this context.

1.2 Consultant Qualification & Responsibility

SRK is a subsidiary of the international group holding company, SRK Global Limited (the "SRK Group"). The SRK Group comprises 1,450 staff, offering expertise in a wide range of resource engineering disciplines. The SRK Group's independence is ensured by the fact that it holds no equity in any project. This permits the SRK Group to provide its clients with conflict-free and objective recommendations on crucial judgment issues.

The SRK Group has a demonstrated track record in undertaking independent assessments of resources and reserves, project evaluations and audits, CPRs and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies and financial institutions worldwide. The SRK Group has also worked with a large number of major international mining companies and their projects, providing mining industry consultancy service inputs. SRK also has specific experience in commissions of this nature.

This CPR has been prepared based on technical review by a team of consultants sourced from the SRK Group's offices in India and United Kingdom. These consultants are specialists in the fields of

geology, resource and reserve estimation and reporting, open pit mining, rock engineering, infrastructure, environmental management and mineral economics.

1.2.1 Responsibility for the Competent Person's Report

Mr. Shameek Chattopadhyay (Director & Principal Resource Geologist) and Mr. Subrato K. Ghosh (Managing Director and Corporate Consultant) are the principal authors of this Competent Persons' Report which has been reviewed by Dr Mike Armitage (Corporate Consultant; SRKUK). Parts of this Report have been prepared by Mr Sukhanjan Bose (Principal Exploration Geologist), Mr.Somnath Gain (Principal Mining Engineer), Dr. John Willis (Principal Consultant-Mineral Processing; SRKUK) and Mr.Gopal Ganguly (Associate Consultant-Mineral Processing).

In May 2019, Mr. Shameek Chattopadhyay and Mr. Somnath Gain conducted a site visit of Tirupati's Madagascar project areas.

The information in this Report that relates to Mineral Resources is based on information compiled by Mr. Shameek Chattopadhyay, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr. Shameek Chattopadhyay is a full-time employee of SRK Mining Services (India) Private Limited. Mr. Shameek Chattopadhyay has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Shameek Chattopadhyay consents to the inclusion in the Report of the Mineral Resources in the form and context which it appears.

In preparing the Report, all authors have relied on information provided by Tirupati. Mr. Shameek Chattopadhyay and Mr. Subrato K. Ghosh have also had in depth discussions with Mr Shishir Poddar, Executive Chairman & Managing Director, Tirupati, Mr Uday Pratap Singh, Project Director, TMV and other employees of the Company, regarding various aspects of its Madagascar mining projects.

1.1 Verification, Validation and Reliance

The CPR is dependent upon technical and legal input. The technical information as provided by Tirupati to, and taken in good faith by, SRK has not been independently verified by means of recalculation, but all Mineral Resource have been substantiated, or re-modelled, by evidence from SRK's site visits and observations, are supported by exploration results, analyses and other evidence and take account of all relevant information supplied by Tirupati. SRK has also conducted a review and assessment of all material technical issues likely to influence the future performance of the Project which included the following:

- Inspection visits to the Project site, undertaken in March and May 2019;
- discussion and enquiry following access to key on-site and corporate personnel;
- a review of Tirupati's resource estimates with re-modelling where appropriate;
- A review of all Permit documents; and
- An assessment of Tirupati's development plan including production and cost forecasts.

The Mineral Resource statements presented in the CPR have been prepared in accordance with the JORC (2012) code by SRK.

SRK has placed reliance on Tirupati that the following information provided by the Company to SRK is both valid and accurate for the purpose of compiling the CPR:

- all technical information; and
- that the legal ownership of the property has been verified and save as disclosed in the CPR, that no significant legal issues exists which would affect the likely viability of the Project and/or the Mineral Resources as reported herein.

1.3 Limitations, Declarations, and Consent

1.3.1 Limitations

The Company has agreed that, to the extent permitted by law, it will indemnify SRK and its employees and officers in respect of any liability suffered or incurred as a result of or in connection with the preparation of this Report albeit that this indemnity will not apply in respect of any material negligence, wilful misconduct or breach of law. The Company has also agreed to indemnify SRK and its employees and officers for time incurred and any costs in relation to any inquiry or proceeding initiated by any person except to the extent SRK or its employees and officers have been materially negligent or acted with wilful misconduct or in breach of law in which case SRK shall bear such costs. The Company has confirmed to SRK that to its knowledge the information provided by the Company was complete and not incorrect or misleading in any material aspect. SRK has no reason to believe that any material facts have been withheld and the Company has confirmed to SRK that it believes it has provided all material information. The achievability of the Development Plan presented here is neither warranted nor guaranteed by SRK. The production and any cost forecasts presented herein for information, have been proposed by the Company's management. Notably, the forecasts are necessarily based on economic and market assumptions, many of which will be beyond the control of the Company.

1.3.2 Declarations

SRK will receive a fee for the preparation of this CPR in accordance with normal professional consulting practice. This fee is not contingent on the outcome of any transaction and SRK will receive no other benefit for the preparation of this Report. SRK does not have any pecuniary or other interests that could reasonably be regarded as capable of affecting its ability to provide an unbiased opinion in relation to the Company's Mineral Resources. SRK does not have, at the date of this Report, and has not ever had, any shareholding in or other relationship with the Company or the Project and consequently considers itself to be independent of the Company.

1.3.3 Consent

SRK consents to the issuing of this Report in the form and context in which it is to be included in a preliminary Admission Document and a final Admission Document.

Neither the whole nor any part of this Report nor any reference thereto may be included in any other document without the prior written consent of SRK regarding the form and context in which it appears.

2 ASSET SUMMARY

2.1 Location

The Vatomina, Sahamamy and Sahasoa projects are located in the Atsinanana region in the Brickaville district in the eastern part of Madagascar (Figure 2-1). The Vatomina Project is located near the Vatomina and Sahavalaina villages in the Brickaville district and falls under the Toposheet No. U46. The project site is located around 70km south of Toamasina, the primary seaport of the country on the east coast of Madagascar and is around 20km north of Brickaville.

The Sahamamy Project (E-21) is located near Anivorano village in the Vohibinany district and the contiguous block of Sahasoa (E-23608) falls in the Brickaville district, under the Toposheet No. U46. The project is located around 30km from Brickaville. Brickaville is located along Route National 2 (N2), 105 km south of Toamasina and 220 km east of Antananarivo (the capital). Brickaville (narrow gauge line) is the nearest railway connectivity in the area.

2.2 Accessibility

The Sahamamy Project is currently accessible from Brickaville town by road to Anivorano village (around 20km) and then by water transport on Rianial river for around 10km to Gisimay, followed by a graded road to Sahamamy (around 10km, maintained by Tirupati). The project site can also be reached by taking a motorable road from Brickaville to Vohipamelona (around 6km), followed by water transport to Gisimay for around 21km.

The Vatomina project site is accessible directly off the N2 national highway connecting it to Brickaville and the capital city, Antananarivo to the south and Toamasina to the north.

2.3 Climate

The climate of Madagascar is subtropical, with a hot and rainy season between November and April (summer), and a cooler dry season from May to October (winter). The east coast has a subequatorial climate and receives the heaviest rainfall, averaging as much as 3.5 m annually. The eastern coast is well known not only for a hot, humid climate but also for seasonal cyclones that occur during the rainy season.

The weather in the Brickaville district can be summarised as follows:

- The hottest months are January to March, the maximum temperature varies from 30 – 33°C and the minimum temperature around 26°C;
- The cooler months are July-August, the maximum temperature ranges from 24 – 26°C and the minimum temperature about 17°C;

January – March receives the heaviest rainfall, measuring between 350 – 500mm; October receives the lowest rainfall, around 75mm.

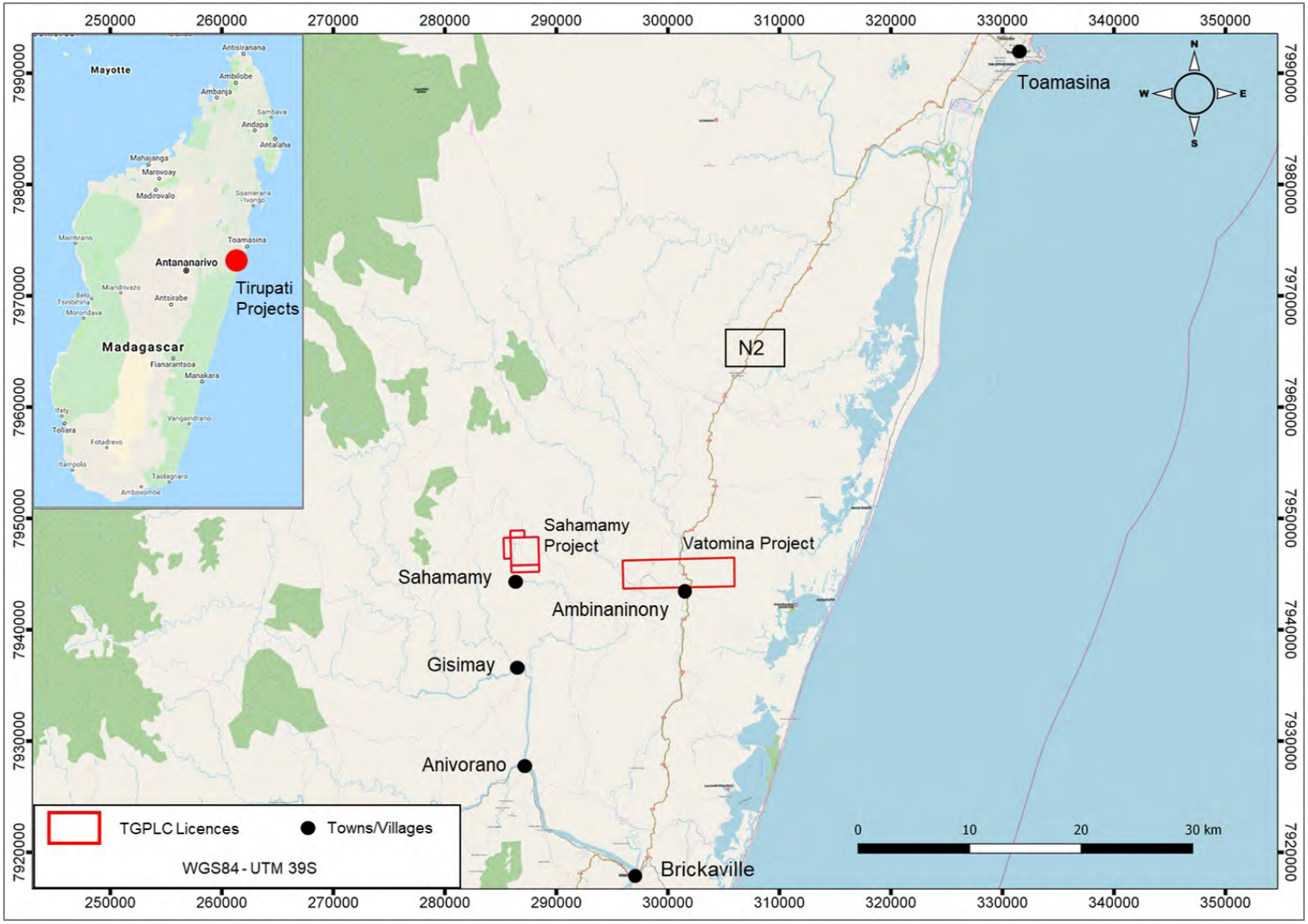


Figure 2-1: Location map of the Vatomina and Sahamamy projects (UTM, WGS-84)

2.4 Physiography

Tirupati's project areas are located within a moderately undulating area, forming the centre of the Madagascar metamorphic sub-province of the eastern region of the Madagascar plateau.

The properties are generally covered by dense subtropical vegetation. The intermittent areas covered by lateritic soil has grassland cover. Rock outcrops are rare due to high degree of weathering, with more than 5.0m cover of decomposed bedrock or alluvial.

In low relief areas, the alluvial cover is generally thicker and are covered by dense semi-rainforest vegetation. Most of the concession area have elevations between 20m and 50m above Mean Sea Level ("AMSL"). At the project areas the general elevations range from 290m to 400m AMSL, for most of the concession.

The general drainage systems in these concession areas occur in dendritic pattern, which form part of the head water streams of eastward draining coastal river systems. River Morongolo flows N-S through the middle of the Vatomina Project and joins the river Sahanavo (flowing from west of the project area) in the south to form Rongaronga River. The major river flowing through the Sahamamy concession area is the Lambovinany River and which flows in North-South direction and further on flows West to East beyond the concession.

2.5 Mineral Tenure, Permit and Ownership

Tirupati was registered in London in 2017, by incorporating a joint venture between the promoters of Tirupati Carbons and Chemicals Pvt. Ltd. ("TCCPL") which is based out of India and Optiva Securities Ltd. ("Optiva") based in London. TCCPL is an Indian private company established in December 2006. The promoters of TCCPL is in the business of flake graphite mining & processing since 1977. The Executive Chairman Mr.Shishir Poddar is engaged with the flake graphite industry since 1991.

Tirupati subsequently acquired 100% of the equity owned by TCCPL in Tirupati Resources Mauritius ("TRM"), which has a Madagascar based subsidiary Tirupati Madagascar Ventures SARL ("TMV"), who were the holders of the mining license for the Vatomina Project.

In January 2018, Tirupati acquired a second operating flake graphite company in Madagascar, namely Establissement Rostaing SARL ("Rostaing") which was the holders of the mining licences for the Sahamamy and Sahasoa Projects (collectively the "Sahamamy Project").

As part of the Company's vertical integration strategy, Tirupati entered into a binding agreement for acquiring 100% of the equity shares of Tirupati Specialty Graphite Private Limited, ("TSG"), subject only to regulatory approvals. TSG is a company incorporated by the promoters of TCCPL specifically for downstream flake graphite products and graphene in India. An outline of the holding structure assuming completion of the acquisition is given in Figure 2-2.

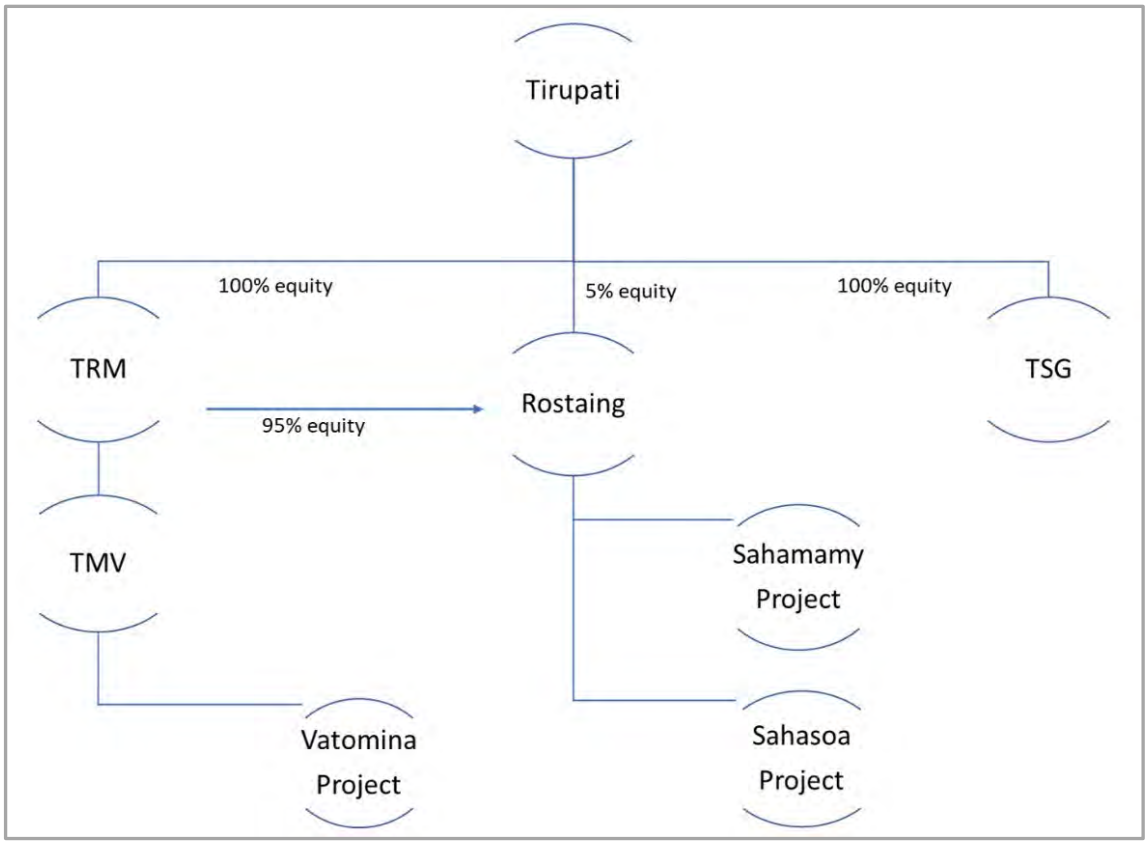
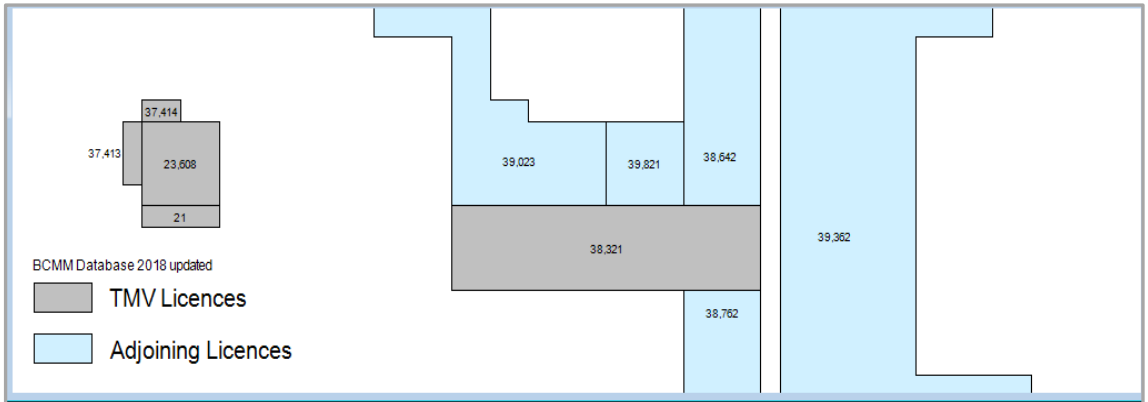


Figure 2-2: Tirupati holding structure

The present status of the licenses as per the Mining Cadastre Registry (BCMM) database is as given in Figure 2-3.



TITRE	T_AncienNu	T_Carte	T_DateOctr	T_DateVali	TYPE	Substance	R_Nom
21	U46-98-80/EIII	U46	07/28/1999	07/27/2039	E	Graphite	ROSTAING
23,608	12765	U46	04/06/2016	04/05/2056	E	Cristal, Quartz, Graphite	ROSTAING
38,642		U46		11/30/2018	PRE	Graphite, Pyrite, Quartz rose, Or, Rubis	DNI METALS MADAGASCAR
38,762		U46	12/01/2010	02/10/2021	PRE	Graphite, Pyrite, Quartz rose, Or, Rubis	RANDRIANASOLO
37,413		U46		05/25/2010	R	Graphite	ROSTAING
37,414		U46		05/25/2010	R	Graphite	ROSTAING
38,321		U46	12/18/2015	12/17/2055	E	Graphite, Chrome, Or, Cristal, Cuivre, Basalte, Bery	TIRUPATI MADAGASCAR VENTURES
39,023		U46		01/22/2016	R	Graphite	SOCIETE INTERNATIONAL METAL IMPROVE (I.M
39,362	APPEL_OFFRE	V46	11/18/2010	11/17/2015	R	Ilmenite, Zircon	MAINLAND MINING LTD
39,821	39023	U46			E	Graphite	SOCIETE INTERNATIONAL METAL IMPROVE (I.M

Figure 2-3: Status of licenses of Tirupati as per BCMM 2018 database

2.5.1 Vatomina Project:

TMV purchased an artisanal mining licence (PRE- 38321) from its previous holder Jean Soanomeiny Kara covering an area of 25.10km^2 and acquired the commercial mining permit (PE 38321) through conversion of PRE to PE on 18 December 2015, which was subsequently approved by Bureau du Cadastre Minier de Madagascar (BCMM) and Office National pour l'Environment (ONE) on 10 October 2016. The mining permit is valid for a period of 40 years through to 17 December 2055.

On 11 May 2017, Tirupati acquired TRM, thereby acquiring TMV, a subsidiary of TRM and the holders of the mining license for the Vatomina Project.

Following the acquisition, Tirupati initiated exploration in Vatomina, with drilling and bulk sampling. Tirupati published its maiden JORC compliant mineral resource estimate in November 2018. Further, Tirupati undertook metallurgical tests from Vatomina, developed process plant design as well as initiated infrastructure development at site including building access roads, bridge crossings, workshop, storage facilities and commencing preliminary civil construction and phase wise foundation works for the process plant. In the initial phase a 6000tpa capacity process plant is planned. The Vatomina project has a permit to produce 12000tpa graphite concentrate.

2.5.2 Sahamamy Project:

The Rostaing deposit (renamed as the Sahamamy Project by Tirupati) is an open pit mining and processing operation that was operated by different companies since 1967 up until the property was acquired by Tirupati. The mining permit area comprised of two contiguous exploitation blocks, the Sahasoa block in the northern area and the Sahamamy block in the southern part. At acquisition, open pit mining was active mainly in the Sahamamy block and in parts of Sahasoa block.

Prior to Tirupati's acquisition, mining activity was being conducted in the Sahamamy block and graphite concentrate was being produced at a 240 tpa process plant at the site. Following acquisition, Tirupati ramped up the process capacity to 600 tpa from July 2018. Alongside, Tirupati constructed and commissioned a new 3,000 tpa process plant in February 2019 and is currently producing from this newly installed plant to produce three sizes of flake and crystalline graphite from the Sahamamy Project.

The Sahamamy Project holds two (2) licences/permits - 21 (E) and 23608 (PE). License information is as shared by Tirupati and listed in Table 2-1.

Table 2-1: Licence/Permit status of Sahamamy (source: Tirupati)

Permit/Licence No.	Type of Licence	Area (Sq. Km)	Date of Grant	Valid Unto	Licence Block Name
21	E	1.569	28.07.1999	27.07.2039	Sahamamy
23608	E	6.275	06.04.2016	05.04.2056	Sahasoa

Tirupati has Environmental Clearance from the Office National pour l'Environment (ONE) for both Sahamamy and Vatomina projects; Table 2-2.

Table 2-2: Environmental Clearance status

Permit/Licence No.	Type of Licence	Area (Sq. Km)	Date of Grant	Granted Capacity	Licence Block Name
21	E	1.569	09.07.2013	3,000 tpa	Sahamamy
38321	E	25.10	08.08.2019	12,000 tpa	Vatomina

2.5.3 Tirupati Agreements

Tirupati has agreements in place with the local landowners for a 40 year lease over the required areas within the Mining Permit area for which payments are principally made up of two components – fixed annual rental payments based on land parcel size and a variable one-time compensation payment based on the type of crop being displaced or damaged by the operations.

2.5.4 SRK Comment

SRK has not independently verified the ownership and current standing of Tirupati's mineral properties in Madagascar. SRK is not qualified to make legal representations but rather, it has relied upon information provided by Tirupati in this regard. SRK has prepared this Report on the understanding that all the mineral titles constituting Tirupati's properties are currently in good standing. SRK has not attempted to establish the legal status of each of the mineral titles with respect to competing claims or any potential environmental issues and/or access restrictions, which would typically be the subject of a legal due diligence assessment.

3 GEOLOGY

3.1 Regional Geology

The Vatomina and the Sahamamy projects are located in the Neoproterozoic Betsimisaraka Subdomain of the Madagascar. The Betsimisaraka Subdomain is a part of the Antananarivo Domain (Kroner et al 2000) and broadly corresponds with the redefined Manampotsy belt (Key et al 2011). The Manampotsy belt separates the Masora, Antongali and Antananarivo cratons (Key et al 2011) and comprises quartzofeldspathic migmatitic paragneisses with varying biotite and horblende content, with local occurrences of graphitic, quartzitic and calc-silicate bearing horizons (Key et al 2011).

The Manampotsy Belt comprises NNW-SSE trending meta-sediments that attained amphibolite-granulite facies metamorphism and consisting mainly of granitoid gneisses, migmatites, and schist intruded by calc-alkaline granites, gabbro, and syenite. The belt was subjected to migmatitic paragneiss and granitoid orthogneiss (2.75 to 2.5 Ga), intruded by magmatic rocks, which was formed within an active continental margin setting. The Antananarivo domain is believed to be affected by a major tectonic movement, which led to the formation of NNW-SSE Betsimisaraka Suture (BS) zone, demarcating the closure of the Palaeo-Mozambique Ocean, separating Central Madagascar from the Antongil Block to the east as a result of westward subduction during the Neoproterozoic era. The metasedimentary protoliths were believed to be sourced from the Dharwar Craton and have depositional ages of 800 to 550 Ma. Eastward thrusting onto the shelf-craton took place between 630 and 515 Ma (Cambrian age). A generalised stratigraphic succession of the Anaboriana -Manampotsy Belt is presented in Table 3-1.

Table 3-1: Generalised Regional Stratigraphy After USGS and PGRM

Age	Group	Formation	Description
Quaternary to Recent			Undifferentiated Alluvium
Cretaceous	Mananjary Group		Continental Argillaceous Clayey Sandstone
		Anala Lava Suite	Basalt
			Gabbro and Microgabbro
Neo-Proterozoic		Kiangara Suite	Alkaline granites and syenites
			Charnockite
		Imorona-Itsindro Suite	Granodioritic Orthogneisses
			Orthogneiss of Brickaville
	Manampotsy Complex	Formation of Saka n ila	Biotite gneiss to amphibolite with hornblende units quartzite, graphitic rock-sillimanite with or without garnet
		Formation of Andasibe	Biotite paragneiss with or without hornblende and quartz-paragneiss with feldspathic units, quartzite lenses with or without sillimanite graphite sometimes with garnet and calcium silicate and cipolin (marble)

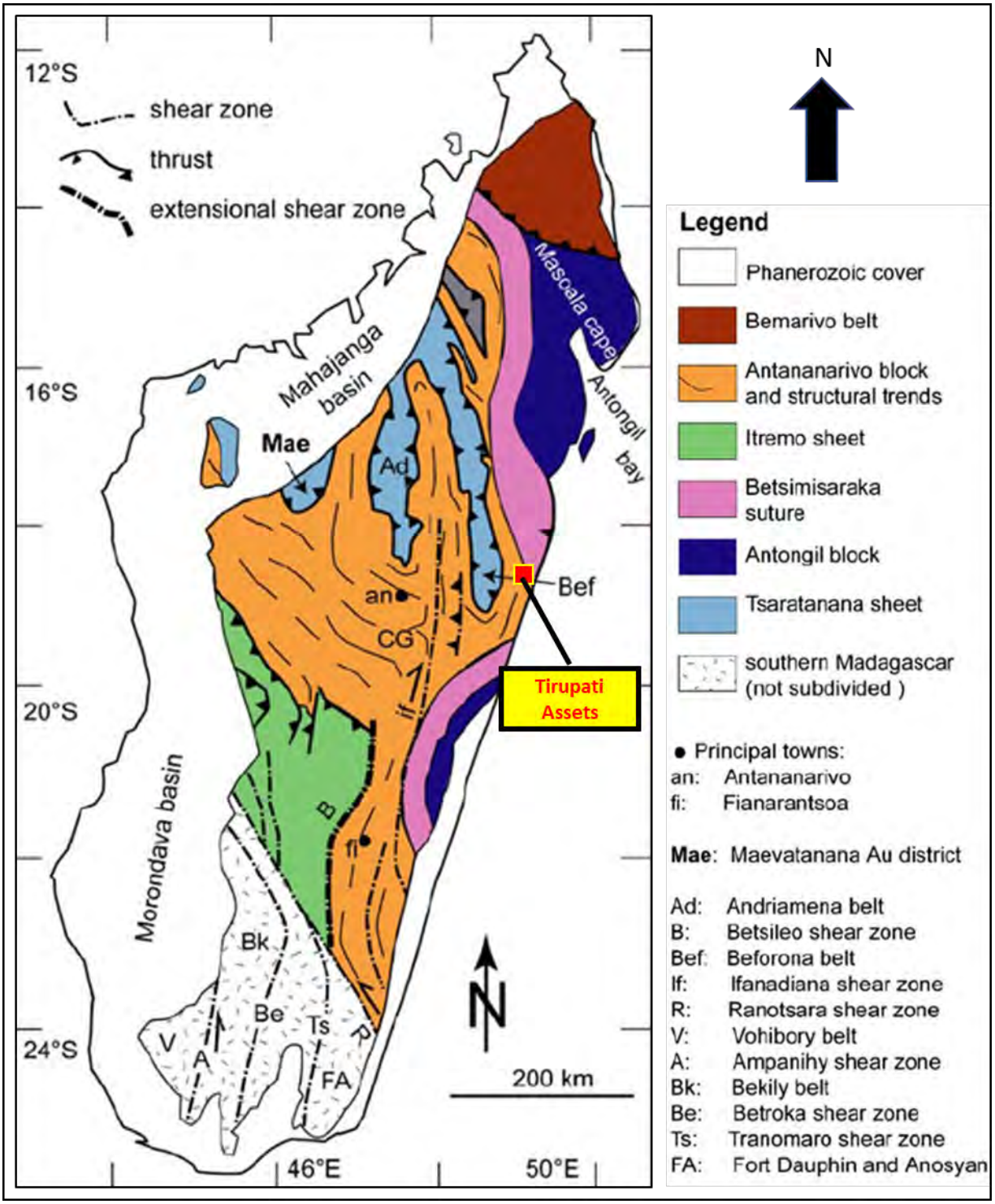


Figure 3-1: Map showing the location of Tirupati projects in the regional geological map

3.2 Local Geology

Graphite mineralisation in the area local to Tirupati's project areas is hosted within in situ weathered bedrock or saprolitic horizons and is reported to be highly folded in nature with graphitic horizons being confined to melanosomes of the regionally described Manampotsy Gneiss (Meso-Neoproterozoic to Pan-African) which imparts a well banded nature of the mineralized formation.

3.2.1 Sahamamy

The Sahamamy and Sahasoa licenses lie within the tectono-stratigraphic domains of Anaboriana and Manampotsy belts, formations which are regionally evaluated to be prospective for graphite mineralization and correspond to the Betsimisaraka Suture Zone. High pressure terranes along the Betsimisaraka Suture Zone may have facilitated metamorphism and associated graphite mineralization in the belt.

The geology in the Sahamamy block is dominated by saprolite at the top (underlying the alluvium/topsoil) with varying thickness of between 15–20m, as can be observed at several locations in the mine pits and road cuttings. The graphitic mineralization is present within the saprolite unit. The saprolite is a resultant of deep weathering of the gneiss, 'Graphitic Gneiss', comprises quartz, feldspar, biotite, graphite flakes disseminated with minor mica and amphiboles. Being a weathered product (soft rock), saprolite allows for ease of extraction with mechanised digging equipment.

The original structures like foliation and lithological contacts are preserved within the graphitic gneiss. The structural configuration indicates that the area has undergone multiphase of deformation, thereby variation in the strike and dip direction is observed. In the Sahasoa block, general strike is N-S and strata dips due west at around 40º whereas in the Sahamamy Block it dips due East and West with varying dip amount and NE-SW trend.

Graphitic zones (defined by melanosome of the gneissic bands) are generally sharp in contact with the waste rock (defined by leucosome of the gneissic bands). At places though, due to the complexity and tightness of the folding, variable alteration and leaching observed within the saprolitic nature of the host formation, and the sharpness of contact between ore and waste rock is obscured. Graphitic gneiss shows sharp contact with the dolerite dyke and porphyritic granite gneiss. Contact with the dyke trends N-S and dips due East at 45° dip amount whereas contact with porphyritic granite gneiss is steeper with 65° towards East.

Quartzo-feldspathic Gneiss is exposed all around the graphitic gneiss in both the Sahamamy and Sahasoa blocks. Only the saprolite part of this rock is exposed and fresh rock is absent due to deep weathering. Quartzo-feldspathic Gneiss is fine to medium grained and buff to brownish white in colour.

Quartzo-feldspathic Gneiss shows gradational contact with the graphitic gneiss and sharp contact with the intrusive dolerite dyke and prophyritic granite gneiss. The unit is devoid of graphite mineralisation.

Porphyritic granite gneiss is leucocratic, coarse to medium grained occurring as intrusive in gneiss and graphitic gneiss. This comprises feldspar, quartz and biotite as major minerals whereas tourmaline and pyrite occur as minor minerals. Graphite is absent in this granite gneiss.

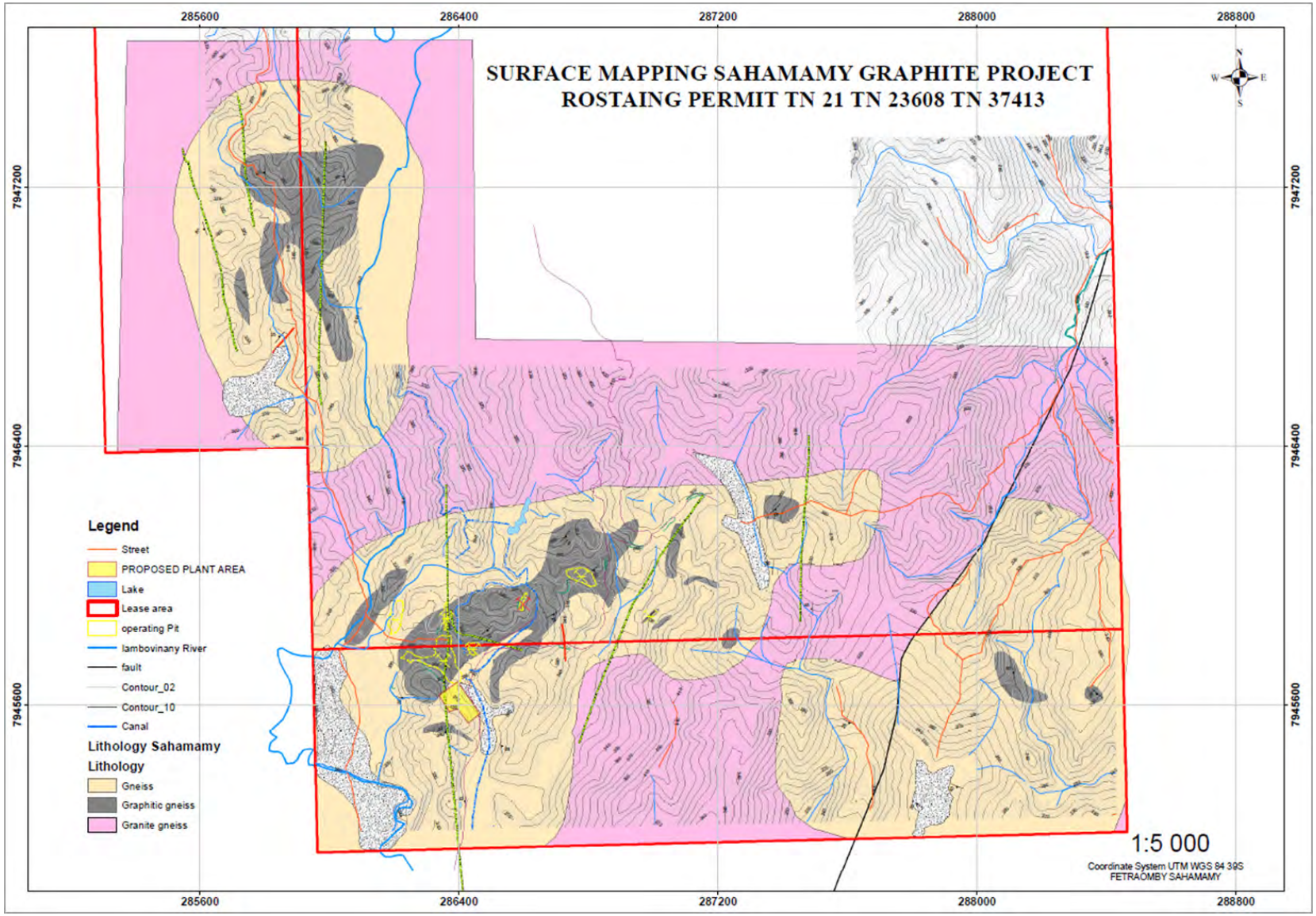


Figure 3-2: Geological map prepared by Tirupati for Sahamamy-Sahasoa project; interpretation is based on data collected from open pit exposure, channels, pits and auger drilling and data collected during field traverses; bedrock exposures are rare due to the deep weathering profile

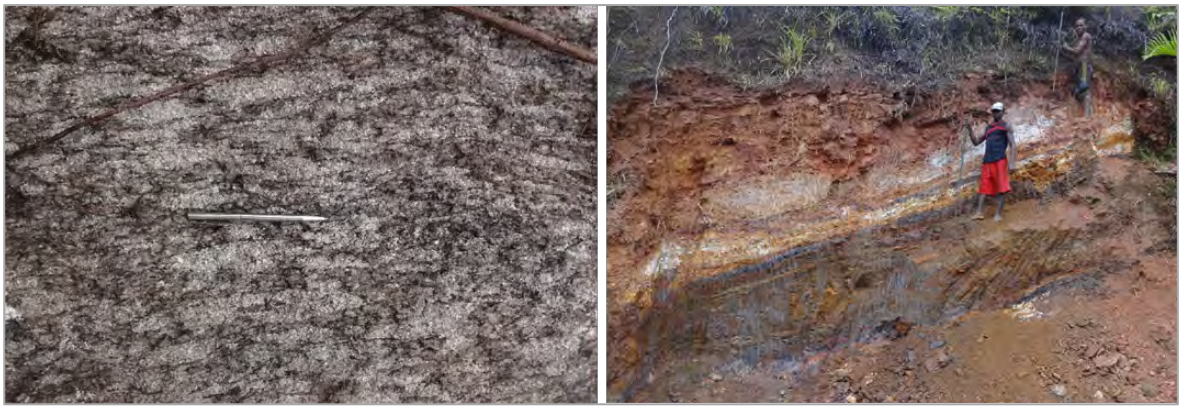


Figure 3-3: Quartzo-feldspathic gneiss as observed in Sahamamy site (Left); Graphitic zone being exposed in mining area in Sahamamy (Right)

The contact with the gneiss and graphitic gneiss is steeply dipping towards East at 65° with N-S trend. Crude foliations are observed in the rocks and that are found parallel to the contact between porphyritic granite gneiss and gneiss or graphite gneiss.

Dolerite occurs as intrusive into the gneisses, graphitic gneiss and in porphyritic granite gneiss. The rock is dark to light green, fine to medium grained and comprises mainly pyroxenes as mafic minerals, plagioclase and pyrite with some accessory minerals.

The average thickness of the dolerite dykes is less than 10m. Based on the geological mapping carried out by Tirupati, three dolerite dykes are reported in both Sahamamy and Sahasoa blocks with varying trends, the dominant being N-S. The contact between dykes and graphitic gneiss trends N-S to NE-SW and dipping Easterly.

3.2.2 Vatomina

The Vatomina concession lies within the Anaborian and Manampotsy belts primarily comprising of quartzo-feldspathic migmatiic paragneisses with varying biotite and hornblende.

Tirupati has carried out geological mapping within the concession area between 2017 to 2019 (Figure 3-6). The major lithological units observed are schists, gneisses and migmatite gneiss with graphite bands along with NNE-SSW trending basic intrusive like dolerite.

The top alluvium soil is around 3-6m thick and comprised of mainly brown to yellowish brown coloured ferruginous minerals. At the bottom of this layer, disseminated flakes of graphite was observed.

The saprolite underlain the topsoil and is reported up to a depth of 25-30m from surface. The unit is the resultant of weathering of ‘Graphitic Gneiss’, composed of quartz, feldspar, biotite, graphite flakes, minor mica and amphiboles. The graphitic gneiss is highly weathered and at places the original structures like foliation are preserved. Graphitic gneiss is a medium grain rock whereas the graphite flakes vary from fines to jumbo size (nearly 1cm). The general trend is NNE-SSW however NW-SE is also reported and dips towards west. The contact of the graphitic gneiss is usually sharp with the associated rocks.

Quartzo-feldpathic gneiss is reported within the graphitic gneiss, has mica and occasional presence of garnet (khondalite).

Figure 3-4: Sharp contact between graphitic zones (melanosome) and quartzo-feldspathic (leucosome) within saprolite (Left); Graphitic zones with variable leaching within the gneiss, obscuring any sharp contact (Right); As observed in Vatomina Project site

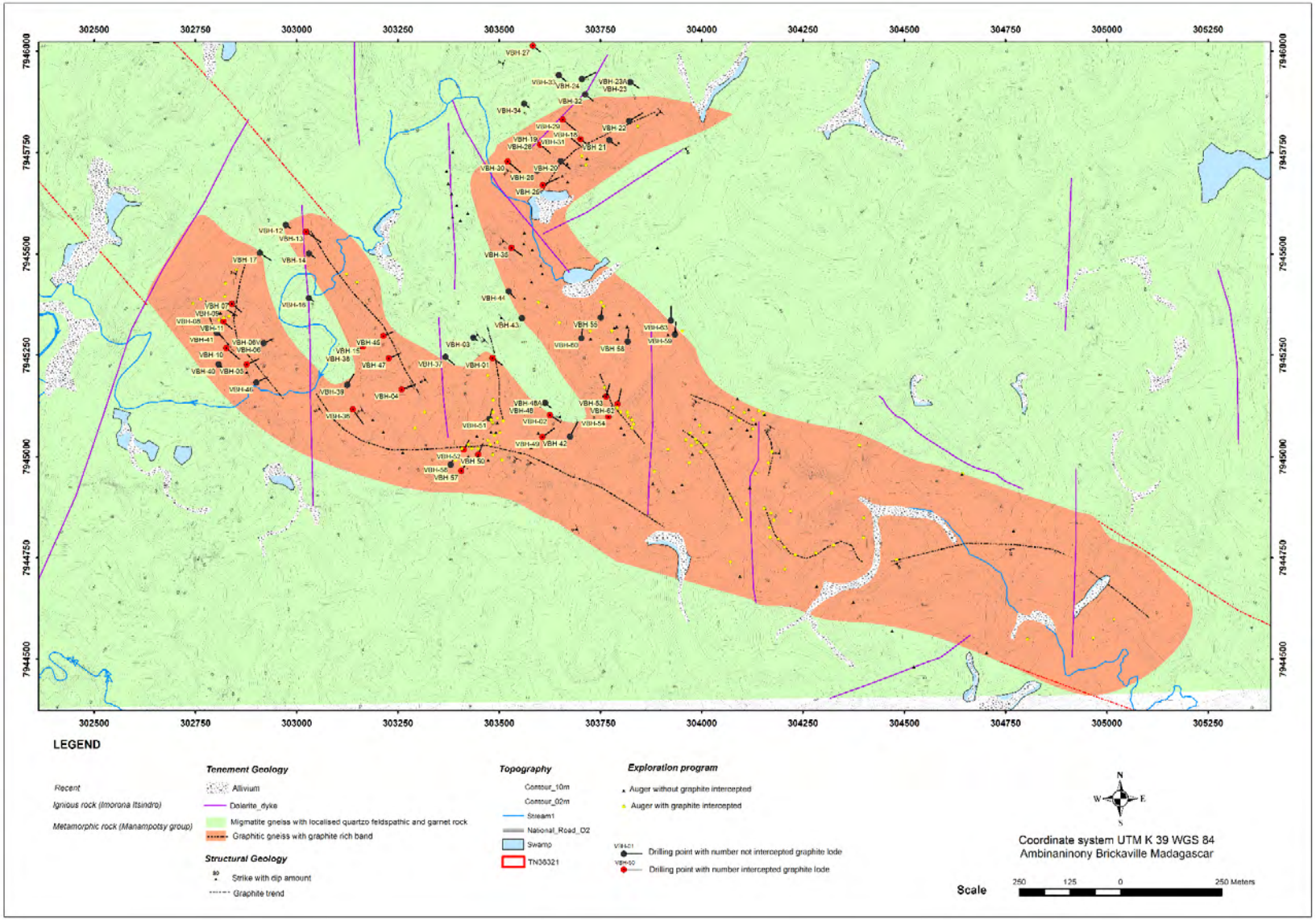


Figure 3-5: Geological map prepared by Tirupati for Vatomina project site; bedrock exposures are rare due to a deep weathering profile; mapping has been done based on information available from auger drilling, core drilling, pits and field traverses

3.3 Graphite Mineralisation Style

The graphite mineralisation in Madagascar occurs predominantly in quartzo-feldspathic schists and gneisses (+/- sillimanite, garnet and biotite), that have been variably weathered. The graphite, originally formed along cleavage and shear planes, remains relatively inert during the formation of the (lateritic) regolith, resulting in a free-dig graphitic ore material comprising of clays and other oxide minerals.

The graphite deposit in Sahamamy and Vatomina projects are saprolite hosted graphite deposit, epigenetic within the gneissic banded formation (Manampotsy Gneiss), which was deformed and metamorphosed at upper amphibolite to granulite facies.

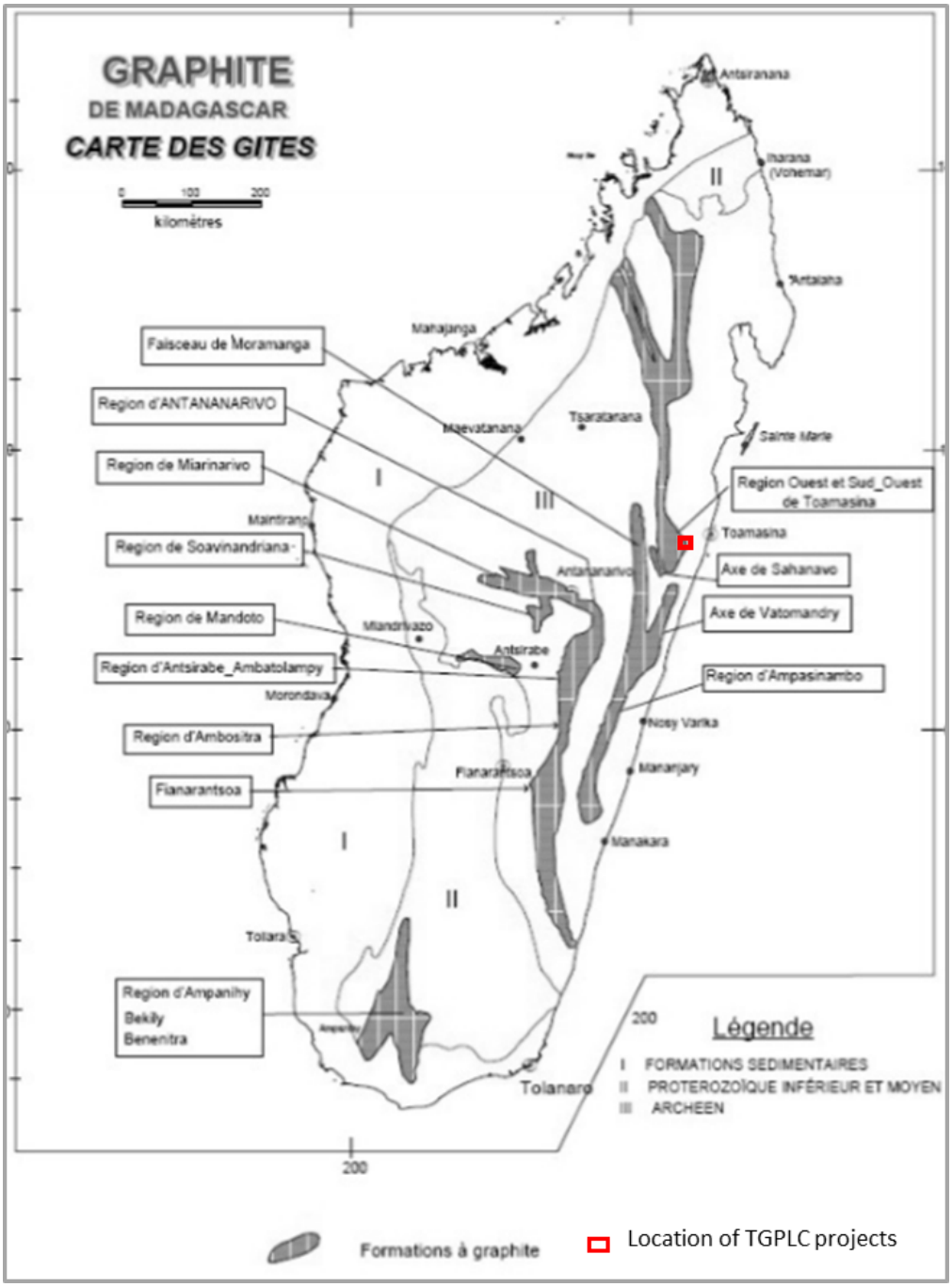


Figure 3-6: Graphite mineralisation in Madagascar (source Chul Ho Heo)

3.3.1 Sahamamy Project

At the Sahamamy project site, the exposed thicknesses of the graphitic zones observed at some of the open-pit faces varied between 3-7m (melanosome defining graphitic horizon with interband parting of leucosome (quartzo-feldspathic and altered clay rich bands) defining altogether a saprolitic quartzo-feldspatic gneiss or Manampotsy Gneiss. The strike of graphitic zone which is approximately 850m for the Sahamamy main zone and approximately 600m for the Sahasoa zone was considered the maximum extension direction of the topographic drape of the graphitic horizons shown by Tirupati on their working geological map. There are several bands intersected at different topographic levels and at least two such bands were verified between 320m AMSL and 350m AMSL during SRK's site visit, thus comprising a total ore horizon thickness of between 20-30m.

Figure 3-7: Graphite mineralisation within the saprolite (Left); Contact between 'High' grade and 'Medium' grade graphite ore body (Right) as observed in Sahamamy project

3.3.2 Vatomina

The thicknesses of the graphitic zones observed at some of the trench and pit faces in Vatomina project site varied between 3-6m (melanosome defining graphitic horizon with interband parting of leucosome (quartzo-feldspathic and altered clay rich bands) defining altogether a saprolitic quartzo-feldspatic gneiss or Manampotsy Gneiss). In Vatomina Project, strike of graphitic zone, which is approximately 900m on an average for the shaded zone was considered the maximum extension direction of the topographic drape of the graphitic horizons as shown by Tirupati on their working Geological map. There are several bands intersected at different topographic levels and at least three such bands were verified between 50m AMSL and 80m AMSL during SRK's site visit, thus comprising a total ore horizon thickness of 30m.

Present geological mapping depicts a wide single ore zone in Vatomina, well within the saprolite and weathered bedrock reaching down to hard rock formations intersected by drilling at selective drill holes. The banded nature of the ore body is yet to be mapped by Tirupati.

Almost the entire exposed profile at several pit locations in both Sahamamy and Vatomina project areas are highly weathered and altered to saprolite. In general, up to 70m depth is weathered with decomposed rocks all along the eastern coast of Madagascar.

Figure 3-8: Graphitic zones (dark coloured) within Khondalites (Left); Graphitic zone exposed at VBH-25 (Right), in Vatomina project site

The graphitic carbon content within the mineralised zones varies from 2.5% to around 23% (maximum), with an average of around 4%. The graphite flakes vary from 0.2mm (small flakes) to 5-6mm (Jumbo flakes) within the graphitic zones.

Figure 3-9: Jumbo flakes of graphite (Left); Small flakes of graphite (Right) as observed in Sahamamy and Vatomina sites

3.4 Structural Geology

3.4.1 Sahamamy

The graphitic zones in Sahamamy imparts a well banded nature of the mineralized formation, with tight isoclinal to recumbent geometry, and is broadly representing first and second order folds (F1-F2), often co-axial and overprinted by third order warps (F3, non-coaxial). Strike of gneissic banding (S0||S1 planes) measured from the graphitic horizon in the Sahamamy mine at different pit faces and at different contour levels is broadly in the range of 270-350 degrees with gentle dips (15-30 degrees) towards South and West.

Strike of the complexly folded graphitic bands observed on several occasion during SRK's site visit, measured E-W and N-S gneissic bands dipping gently to South and West respectively and contains the graphitic horizons as deeply weathered melanosomes. However, Tirupati has considered the graphitic zone as a composite of a series of asymmetric East verging folds with gentle Westerly to Southerly dipping normal limbs and at places folds with recumbent geometry defining the graphitic zone as a sheet (discounting the inter-ore waste zone, which is minimal within the broad envelop of the mineralized thickness of 20-30m), draped along and as exposed at different contour levels between 320 AMSL and 350 AMSL; this draping has been mapped as a composite graphitic zone which shows an extension of the zone along NE-SW trend in Sahamamy and N-S trend in Sahasoa.

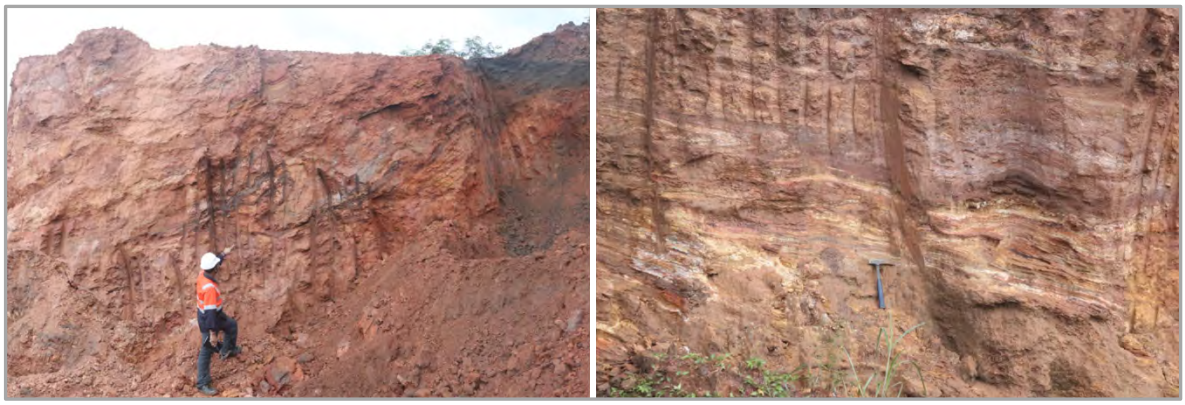


Figure 3-10: Asymmetric and recumbent fold geometry observed in Sahamamy pits

3.4.2 Vatomina

Gneissic bandings are frequently overturned and exhibits asymmetric folded geometry. These broadly represent first and second order folds (F1-F2), often co-axial and overprinted by third order warps (F3, non-coaxial). Strike of gneissic banding (S0||S1 planes) measured from the graphitic horizon in the Vatomina exploration areas at different pit, trench and lavaka faces and at different contour levels are in the range of 320-335° for one set of folded limbs, and 75-95° near hinge zones with highly variable dips towards South and West.

Strike of the complexly folded graphitic bands as observed in Vatomina prospect is similar to Sahamamy. During the site visit, SRK measured E-W and N-S gneissic bands dipping gently to S and W respectively which contains the graphitic zones as deeply weathered melanosomes within a saprolitic horizon. However, Tirupati has considered the graphitic zone as a composite of series of asymmetric folds with highly variable westerly to southerly dipping limbs defining the graphitic zone as a sheet (discounting the inter-ore waste zone, which is minimal within the broad envelop of the mineralized thickness of 20-30m), draped over the topography as exposed at different contour levels between 50m & 80m AMSL; this draping has been mapped as a composite graphitic zone which shows an extension of the zone along ENE-WSW direction with few sleeves along N-S and NW-SE trend.

Figure 3-11: Early F1|F2 Folds of graphitic zones (dark colour) within Khondalite (Left); Steeply dipping graphitic zones (Right), as observed in Vatomina site

3.5 SRK Comments

Madagascar possesses large quantities of good quality flake graphite with graphite mineralisation reported primarily from the central and eastern coastal areas of the country. The Sahamamy and Vatomina projects lies within graphitic horizons of the prospective geological belt of Anaboriana and Manampotsy formation, with graphite mineralisation occurring predominantly in quartzo-feldspathic gneisses that have been variably weathered. That way, Sahamamy and Vatomina projects are saprolite hosted graphite deposit.

Deposits hosted in saprolite have a distinct advantage over their bedrock-hosted counterparts; specifically, the general lack of a requirement for milling/grinding of the economic rock, which is energy intensive and can reduce the size of graphite flakes in the process.

Present work within the Sahamamy and Vatomina deposits has identified 2-3 graphite bands with thickness totalling 20-30m.

4 EXPLORATION

4.1 Background

Prior to Tirupati's acquisition of Vatomina and Sahamamy, both the assets were subjected to artisanal or small-scale mining, covering small portions of the license area. No records are however available from that period. After the acquisition of both the assets Tirupati initiated systematic exploration programmes in Vatomina and Sahamamy, a summary of which is presented in sections below.

4.2 Tirupati Exploration Strategy

Both Vatomina and Sahamamy is extensively covered with soil and outcrops of rocks are rare. In absence of any historical data from the assets, including geological maps of appropriate scale, Tirupati developed the following exploration strategies:

- Obtaining appropriate understanding of the geological characteristics of the mineralised horizon, including the control and local continuity of the mineralised horizons, as reflected in the artisanal mine in Vatomina and the small operating pits in Sahamamy and then use such knowledge in the relatively unknown areas;
- To develop progressive Areas of Interest (AoI) in the line of its overall development plan for the assets;
- Developing appropriate access to such AoIs in order to mobilise drilling rigs and other equipment that are required for undertaking the required exploration, and
- Dynamically review the exploration results and continuously update the geological maps and conceptual geological models to allow effective use of the exploration budget.

The geological and exploration activities was led by Mr. Uday Pratap Singh who is a qualified and experienced geologist with over 35 years of diversified experience in the mineral resource industry.

Given the location of the projects, the terrain condition and extensive soil cover, Tirupati's exploration strategy was appropriate for both the projects.

4.3 Summary of Exploration

Table 4-1 summarises the exploration programmes carried out in Vatomina.

Table 4-1: Summary of Exploration Programme in Vatomina

Nature of Works	Period	Remarks
Reconnaissance Geological Survey	2014-2015	Geological traverse in area on regional scale for graphite mineralisation
Regional geological mapping (1:50,000)	2014-2015	Delineation of Graphite mineralization.in the 9 km^2 in the eastern part of the license
Topographic Survey	2014-2015	To take up detailed exploration on 1:5000 scale 11 km^2 in eastern part
Geophysical Survey	2014-2015	This confirmed subsurface mineralization IP, SP, in 0.24 km^2 area
Detailed Geological mapping on 1:5000 scale	2014-2019	Lithological mapping to delineate graphite zones and sampling 5.0 km^2

Nature of Works	Period	Remarks
Pitting	2014-15 2016-2018	To trace graphite mineralization below soil 225.0 m cumulative depth in 43 pits
Grab samples	2014-15 and 2016-2017	To determine assay value of Graphite Grab -40 Pit Samples-118
Exploratory Pit for Bulk sample	2017	36ton ore was collected for pilot plant and lab study.
Metallurgical studies	2017 2018	i. 200kg for lab metallurgical studies ii. 2 tons for pilot plant
Petrographic studies	2017-2018	Size and liberation analysis show ore has favourable industrial value
Auger drilling	2018-2019	4879.0 m in 549 holes with average 9.0m depth
Drilling	2019	3125.9m in 66 holes

4.4 Topographical Survey

Society Geosciences Development of Madagascar (SGDM), based in Antananarivo, was engaged in November 2017 to carry out topographical survey in Sahamamy block, for an area of 5 km^2. Tirupati used the services of SGDM during October 2014 to December 2016 to carry out the topographical survey in Vatomina, covering a total area of 11.22km^2. SGDM used Total Station (Nikon, Leica and Topcon make) for collection of ground survey points along with recording of surface features like roads, populated areas (villages), water bodies, electrical lines, camps, etc. The density of survey points was used to prepare a topographic map in 1:5000 scale with 2m contour interval. The ground survey data were processed in AutoCAD for preparation of digital maps. Subsequently, the topographic map was used as a base mas for geological mapping.

4.5 Geological Mapping

Geological mapping of Sahamamy and Sahasoa blocks were carried out by Tirupati under the supervision of an experienced geologist, Mr. Uday Pratap Singh, Project Director and Tirupati's lead geologist. Since the area is covered by thick shrubs, vegetation and thick soil cover, very limited outcrops were observed. The lithological contacts therefore were mainly interpreted. The geological mapping of 5.0km^2 was carried out using topographical map prepared on 1:5000 scales as a Base Map.

Geological mapping in the Vatomina was focused primarily in the eastern part of the concession, based on the targets identified by HDR|Salva. Between 2017 and 2019, mapping traverses were undertaken within the N-E extension of mineralized zone and towards East of the area (totalling around 5.0km^2) in 1:5000 scale. Most of the area is covered by dense vegetation and as obvious, outcrops are limited. The highly weathered graphitic gneiss and gneiss, exposed as saprolite, were mapped along the road cuttings. Dolerite dykes are exposed in some areas.

Mapping in the area indicated the occurrence of graphite mineralization in the graphite gneiss. Graphite gneiss in the central part trends NNE-SSW and outcrop in road cuttings and pits. The contacts of the graphitic zone with the gneiss is primarily interpreted due to limited exposures. In the southern part, graphite gneiss trends WNW-ESE and shows evidence of folding. Exposures of dykes, which are forming high hills, have been mapped showing varying trends.

Further exploration by drilling, pitting and auger drilling indicated that the graphite gneiss (mineralized rock) is continuing further NE and E of the explored area. The regional geological map is also showing the NE continuity of graphitic gneiss and further NE of Vatomina area.

4.6 Ground Geophysics

Tirupati engaged SGDM to conduct a geophysical survey in Sahamamy and Vatomina blocks. With the bulk of the area under vegetation cover and with thick weathered/soil profile in both areas, recourse to geophysics was taken as one of the initial steps to develop an understanding of the sub-surface over a limited area. Accordingly, electrical techniques were used including Self Potential (SP), Electrical Resistivity Tomography (ERT) and Induced Polarisation Chargeability (IP), over a limited area; Table 4-2. The average targeted depth of penetration was 25m.

Table 4-2: Summary of geophysical survey done by SGDM

Block	SP	ERT	IP	Area Covered
Sahamamy (August 2018)	4508 stations with 10m spacing	Wenner method with 5m inter-electrode spacing	20 electrical lines	0.48 km^2
Vatomina (September 2014)	7400 stations 5m spacing	Wenner method with 5m inter-electrode spacing	14 electrical lines	0.24 km^2

Summary of the geophysical survey in Sahamamy:

The SP map show a negative anomaly which indicate the presence of flaky graphite. The natural electrical potential value varied from -270 mV to 190 mV. The negative anomaly indicated the mineralized area dominate the NW part of the survey area and it is elongated on SW-NE direction, following the direction of the graphite vein shown on the regional geological map.

The ERT/IP lines displayed on the negative anomaly gave high chargeability values under the negative anomaly area. Discontinuity anomalies were also confirmed by the ERT/IP geoelectrical section.

Tirupati's justification and reasoning for applying these three geophysical techniques is sound in SRK's opinion. However, the reports reviewed by SRK do not discuss the QAQC procedures adopted during data acquisition or processing. As previously noted, recourse to geophysics were taken to develop an initial understanding of the sub-surface and hence, the process was tested over a limited area. Subsequent geological mapping and drilling (core and auger) covers a larger area than the area covered by the geophysics conducted by Tirupati up to then.

The SP gives indication of shallow graphitic mineralisation but, at large, the overall geophysics has not been conclusive. The ERT/IP results seem to have been inconclusive and not relied upon by SGDM for interpretation. It would have been useful to compare some resistivity/IP cross sections with pit profiles to confirm what is causing resistivity and chargeability anomalies/contrasts (e.g. the water table, certain regolith horizons, saprolite, graphite mineralisation etc).

4.7 Pitting

Between October 2016 and January 2017, Tirupati excavated 43 pits in Vatomina; Figure 4-3. Based on the ground geophysical results and geological mapping, Tirupati planned for pitting the target. The objective of pitting was to understand the subsurface lithology, structure and nature of mineralisation.

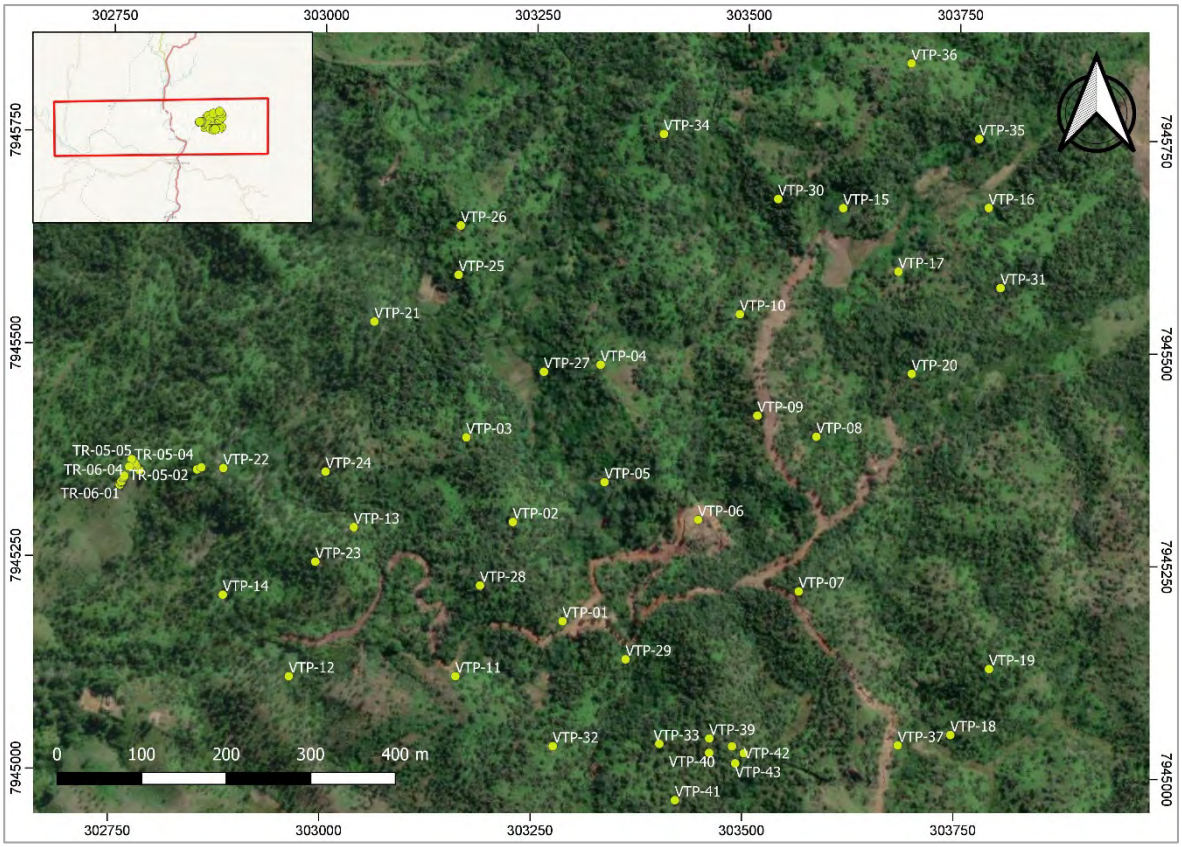


Figure 4-1: Map showing the location of the pits in Vatomina

A summary of pitting work in Vatomina:

- Total 43 pits done within the targeted mineralised area;
- Average dimension of each pit: 1m x 1.2m x 6m (LxBxD). The depth of the pits was 6.0m or the intersection of hard rock, whichever occurred earlier;
- A total 225.0m of subsurface data collected from the 43 pits;
- The location of the pits was marked using a hand-held GPS in UTM co-ordinates in WGS-84 datum plane;
- The wall of every pit was geologically logged and photographic documentary of each lithology was done;
- Channel sampling was done (8cm wide and 8cm deep) from every lithology; the length of each sample was 1.0m;
- The complete work was supervised by Tirupati geologists; and
- The excavated material from the pit was filled back in after completion of sampling.

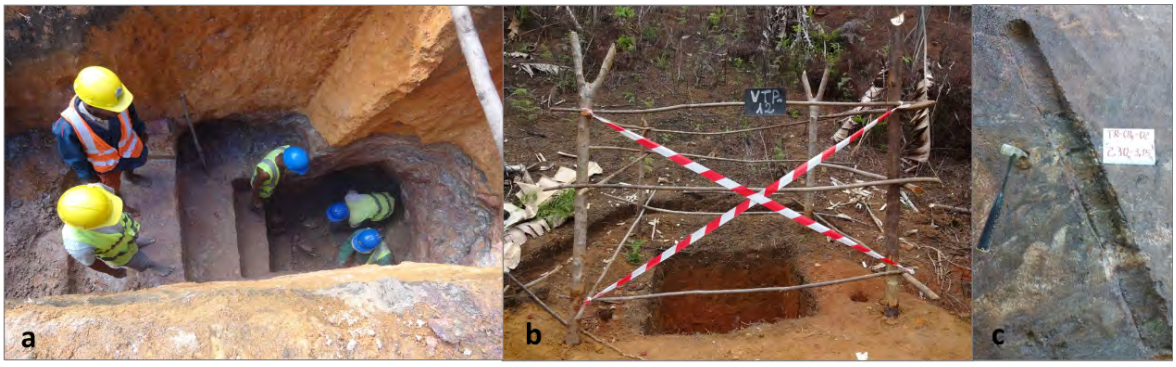


Figure 4-2: (a) Bulk sampling from pits, (b) Pit sampling, (c) Channel sampling from trenches

4.8 Trenching

Tirupati carried out channel sampling in 15 trenches. Samples were collected from channels of 10 cm width to 8cm depth (cross cutting band or horizontal channel). The sample length was selected based on the thickness of graphite bands.

SRK has reviewed the field procedures followed by Tirupati and considers these to be in line with industry good practices.

4.9 Drilling

Tirupati carried out both auger and core drilling in Sahamamy and Vatomina projects. A summary has been presented of all the drilling works carried out till date; Table 4-3.

Table 4-3: Summary of drilling programme undertaken in

Project	Hole Type	Number of Drill hole	Drilled Meterage (m)	Max Depth (m)	Avg. Depth (m)	Year of Completion
Sahamamy	Auger	99	732	12.00	12	2018-19
Vatomina	Core	66	3127.9	76.00	47.5	2018-19
	Auger	549	4879.0	11.00	8.9	2018-19

Sahamamy:

Tirupati conducted auger drilling in Sahamamy during 2018-19. A total of 99 boreholes were drilled with total meterage of 732m. The maximum depth of the boreholes was 12.0m, with average depth of around 8.0m. The size of the auger boreholes is equivalent to HQ size i.e., 96.0mm hole diameter. The drilling was done in-house by Tirupati's drilling team under the supervision of its geologists.

Figure 4-3: Map showing locations of auger drilling in Sahamamy

In Vatomina, Tirupati initiated auger drilling in 2017. The location of the auger and core drilling is shown in Figure 4-6 below. The entire drilling program was confined to the eastern part of the licence area.

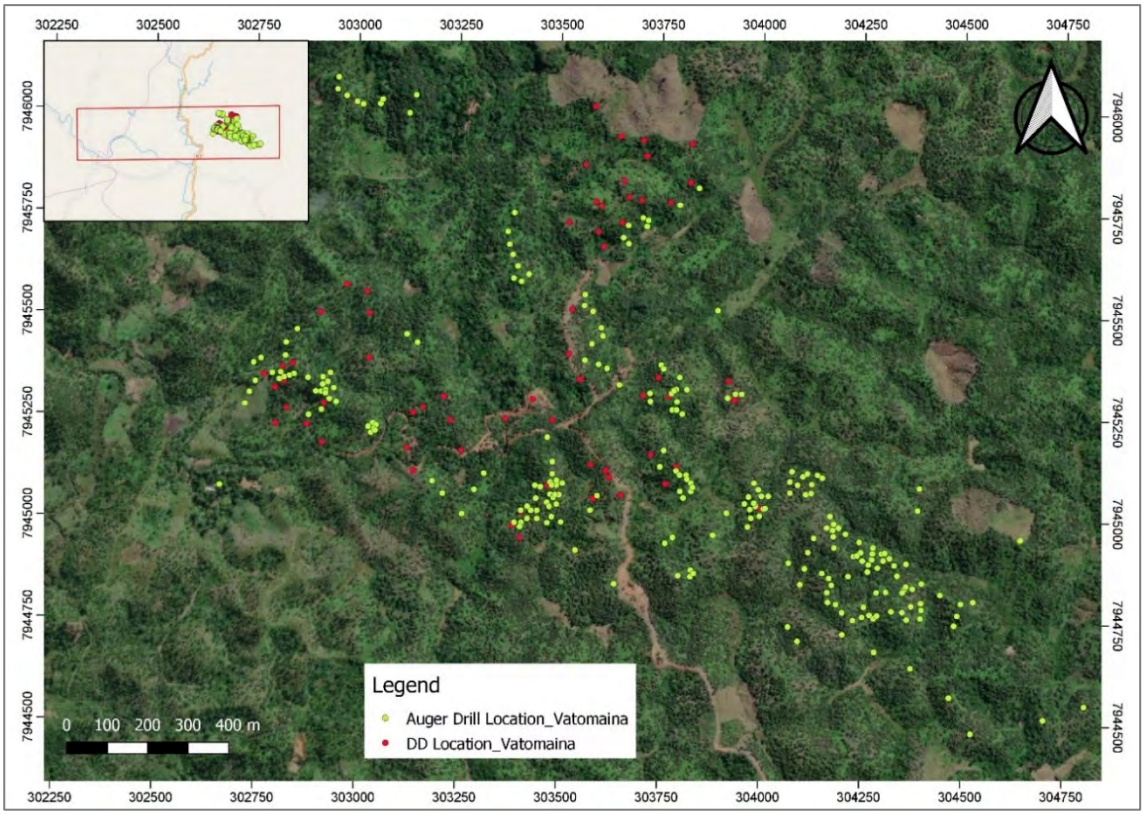


Figure 4-4: Map showing the borehole locations in Vatomina Project

Auger drilling, being fast and easy for soft formations, was taken up for establishing the graphite mineralisation below the soil cover. The maximum depth drilled by auger was 11.0m, average being around 9.0m. Auger drilling helped in establishing the location and the continuity of graphite mineralisation and the host graphitic gneiss, which helped Tirupati to design the core drilling program. Auger drilling along with core drilling were undertaken to cover a wider area and understanding the nature of the graphite mineralisation.

The auger drilling and the core drilling was done by in-house drilling team under the supervision of its geologists. Auger drilling was done in HQ size, 96.0mm diameter of the hole.

Core drilling program was taken up from January 2018 which to date, has delivered 66 boreholes totalling around 3,000m of core drilled. Tirupati used an in-house top drive hydraulic rig of Kores make for the core drilling campaign.

The objective of the core drilling program was to intersect mineralisation at deeper levels beyond the saprolite zone and in fresh rocks and to establish resources down to about 50m vertical depth. The maximum depth of the core drilling program was 76.0m, with an average depth of around 49.0m. The azimuth of the boreholes was decided based on the structural trend of the mineralisation, mostly varying between NE and SE. All boreholes were inclined (except VBH-06V and VBH-23A, which were vertical), but due to non-availability of any borehole deviation tool, no boreholes were surveyed for deviation. Measuring borehole deviation is important especially for the deep boreholes and should be implemented in the subsequent stages.

Core drilling was done using mainly NQ series (triple tube), whereas HW and NW (casing bit diameter) was used for the top weathered and loose formations. The core recovery varies in the mineralised and non-mineralised lithologies, summary given in the below table (Table 4-4).

Table 4-4: Summary of core recovery in Vatomina Project

Lithology	Minimum Recovery (%)	Maximum Recovery (%)	Average Recovery (%)
Mineralised	11.67	100	82.90
Non-mineralised	41.33	100	86.69

4.10 Logging and Sampling Procedures

The drilling programme was planned and managed by Tirupati, including the drillhole planning, drillhole set-up, all onsite drill rig supervision and monitoring, geological logging and sample selection. For each type of activities, Tirupati developed field protocols for internal use. SRK has reviewed the field procedures followed by Tirupati and considers these to have been to industry standard. Notably:

- Full core boxes were transferred to Tirupati's core storage with appropriate care.
- All core boxes were photographed showing the core and the lid with all information visible within the frame. The lid was placed at the top of the box and a readable tape measure along the centre rung of the box. The photograph was taken from above the core with at least a 45˚ angle to reduce reflection. The core is clean and damp when photographed to allow visibility of features.

Figure 4-5: Standard core box photography followed by Tirupati

- The site geologist made a preliminary geological log of the recovered materials from the auger holes or core using, as appropriate, using a standard log sheet.
- The standard format for logging was designed by Tirupati to record the lithological units in terms of colour, weathering profile, texture, mineralisation and lithological description. Standard lithological codes were developed for the major lithological units and separate codes for weathering, mineralisation and grain size. A secondary lithological code was developed to record any alteration zone like ferruginous, saprolite, etc. In case of core drilling, additional data on core recovery and RQD (where applicable) were recorded for each drill run in standard log formats.

4.11 Sampling and Sample Preparation

Sampling was done honouring the lithological breaks, mainly the mineralised units, such as graphitic gneiss and saprolite along with the visual identification of presence of any graphite in other lithological units like pegmatite veins, pedolith, etc.

Drill cores were marked, which were later split into two halves. For samples from saprolite (soft) formation, the samplers used chisel knife and metal plates to retrieve the half portion of the core for sample preparation. For harder rocks, a core cutting machine was used.

In case of auger drilling, sampling was done on a continuous basis of 1.0m in length. For core drilling, sample interval for the mineralized zone was considered at 1.0 to 3.0m but generally 2.0m sample length was done. The overall sampling interval for drilled cores varied from 0.40m to 4.0m within the mineralised units. The distribution of sample intervals for core drilling in mineralised and non-mineralised lithological units are given below (Figure 4-9).

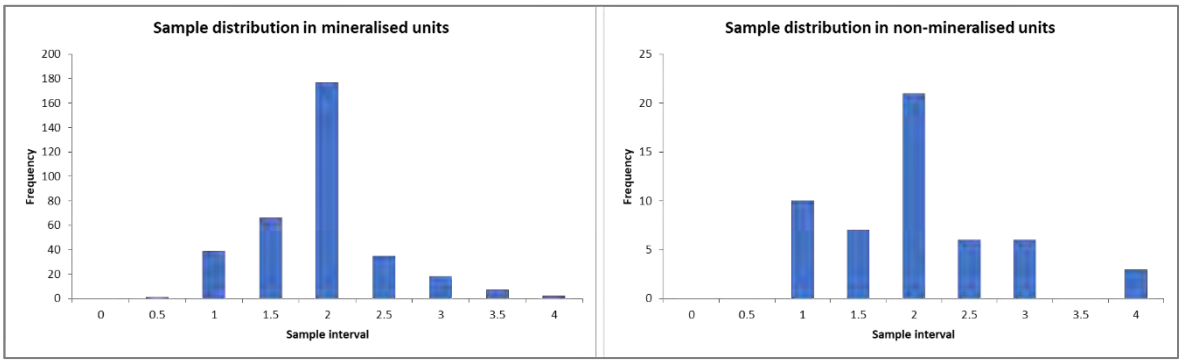


Figure 4-6: Distribution of sample interval of core drilling in mineralised and non-mineralised units in Vatomina Project

The sample preparation was done in-house for both Sahamamy and Vatomina projects using conventional methods for sample preparation.

- Samples dried in sun at field camp
- Crushed into 100 Mesh
- Samples were sieved using 1mm sieves
- Coning and quartering into 100gramms and submitted to the assay laboratory.

4.12 Assay

The exploration samples generated from the Sahamamy and Vatomina projects were analysed in three different laboratories:

- Tirupat's in-house laboratory in Sahamamy,
- SGS, South Africa, and
- Shiva Analytical, India.

Table 4-5: Summary of the Assay Methods in Different Laboratories

Laboratory	Assay Method	Detection Limit
Tirupati	Muffle Furnace	0.5%
SGS	LECO method (graphitic carbon)	0.05%.
Shiva	Muffle Furnace	0.5%.

For Vatomina project, Shiva Analytical acted as the primary laboratory and SGS was used as the Umpire laboratory. For the Sahamamy exploration, Trupati's inhouse laboratory was used as the primary laboratory and Shiva Analytical was used as the Umpire laboratory. Initially, orientation samples were analysed by Shiva using both Muffle Furnace and LECO methods, and after obtaining the required level of comparison between two methods the exploration samples were assayed using Muffle Furnace.

Table 4-6: Summary of samples analysed at different laboratories

Project	Sample	Shiva	SGS	Tirupati
Sahamamy	Auger	71	-	-
Vatomina	DD hole	382	134	52
	Auger	282	83	103
	Trial Pit	28	-	-

4.13 Quality Assurance and Quality Control (QAQC)

Tirupati's Quality Assurance and Quality Control for analytical results included insertion of Field Duplicates in every 25th sample. In terms of monitoring the accuracy of the assay results, Tirupati relied on the Certified Reference Materials, used by SGS and Shiva. Tirupati also periodically reviewed the results of the Blanks and Replicate samples used by these two laboratories. Table 4-7 presents the list of the Certified Reference Materials (CRM) used by SGS and Shiva.

Table 4-7: List of CRMs used by SGS and Shiva laboratories

Laboratory	Standards	Source	Graphitic Carbon %	Standard Deviation
SGS, South Africa	GGC-03	Geostats Pty Ltd, Australia	16.29	1.01
	GGC-07		0.13	0.04
	GGC-08		0.39	0.06
	GGC-10		4.79	0.29
Shiva Lab, India	OREAS 722	Ore Research & Exploration P/L, Australia	2.03	0.093
	OREAS 723		5.87	0.169
	OREAS 724		12.06	0.311
	OREAS 725		24.52	0.728

SRK reviewed the QAQC results received by Tirupati from different assay laboratory and found that the accuracy of the assay results is within the acceptable limit. Figure 4-7 presents an example of the time series plot of the CRM results, reported by SGS and Shiva, respectively.

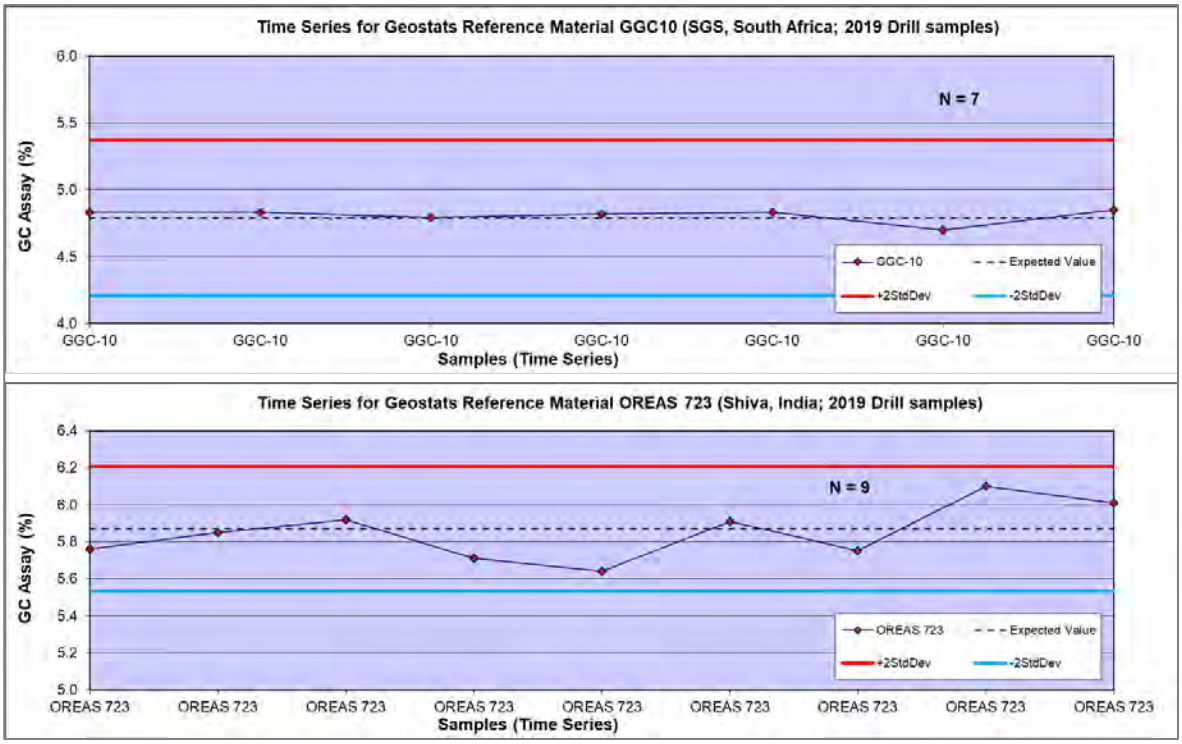


Figure 4-7: Graphs showing the plot of different CRM results against Mean Value

In regard to the Vatomina exploration data, SRK compared the results from between Shiva (Primary Laboratory) and SGS (Umpire Laboratory), which indicates that SGS has returned with higher assay values than Shiva. For the Mineral Resource Estimation program undertaken by SRK, the assay results from the Shiva lab has been considered.

On the other hand, the comparison between Tirupati's in-house laboratory (Primary) and Shiva (Umpire) indicate that both the results are within the acceptable level of precision.

While SRK is of the opinion that the above QAQC results provides adequate confidence to use the assay results for Mineral Resource estimates, going forward Tirupati should implement a more detailed assay QAQC programme, which should include the use of the following:

- The use of pre-allocated sample numbers to all the routine and QAQC samples,
- QAQC samples should include:
  - Certified Reference Material (5% of the total samples)
  - Field Duplicates (5% of the total samples)
  - Field Blanks (5% of the total samples)
  - Pulp Duplicates (5% of the total samples)

4.14 Density Measurements

Tirupati carried out measurements of specific gravity of the drilled core samples by following the standard process. The selected core samples were first weighed and wrapped in fine plastic. The plastic wrapped sample was inserted in water and again weighed. The displacement of water was measured for volume estimation. The density of the material was divided by the density of water, i.e., 1. The resultant bulk density data for various lithologies are shown in the below table (Table 4-8).

Table 4-8: Measured bulk density of different lithologies

Lithology	Bulk Density		
	Min	Max	Avg.
Gneiss	1.77	3.16	2.64
Granite	2.48	3.16	2.62
Amphibolite	2.46	3.13	2.87
Dolerite	2.68	3.80	3.11
Saprolite	1.25	2.91	1.96
Graphitic gneiss	1.14	3.58	2.19
Pedolith	1.53	2.39	1.85
Pegmatite	1.06	3.40	2.06
Quartzo-feldspathic rock	1.73	2.27	1.92

4.15 SRK Comments

Tirupati has undertaken a reasonable amount of work to date at Vatomina that helped them to identify the extent of graphite mineralisation within an area of about 2km^2 and which has generated technical data that enables the definition of a Mineral Resource at Vatomina. SRK has completed several validations on the raw data supplied prior to use in the MRE and has checked the QAQC results returned from the assay laboratories. SRK is confident that the quantity and quality of data available is appropriate to support a Mineral Resource Estimate at Vatomina. Further exploration will be required to upgrade the confidence level of the defined Mineral Resources and to determine the full extent of graphite mineralisation within the entire 25km^2 leasehold area at Vatomina.

In Sahamamy, the geological mapping and the auger drilling undertaken by the Company in and around the existing operating areas are adequate to produce a geological model and produce a Mineral Resource of Sahamamy. SRK has undertaken several validations on the raw data supplied prior to use in the MRE and has checked the QAQC results returned from the assay laboratories. SRK is confident that the quantity and quality of data available is appropriate to support a Mineral Resource Estimate at Sahamamy. Further exploration will be required to upgrade the confidence level of the defined Mineral Resources and to determine the full extent of graphite mineralisation within the entire 8km^2 leasehold area at Sahamamy.

5 MINERAL RESOURCES

5.1 Introduction

The Mineral Resource estimates presented in this section of the report have been produced by SRK and are reported in accordance with the JORC Code (2012).

5.2 Exploration Database

A summary of the exploration database used for Vatomina and Sahamamy Mineral Resource estimation is presented in Table 5-1 and Table 5-2, respectively.

Table 5-1: Summary of the Exploration Data in Vatomina Graphite Project

Drilling Type	Count	Drilled Meter
Auger Drilling	549	4879.0
Diamond Drillhole	66	3127.9
Trench	15	34.9
Grand Total	630	8041.8

Table 5-2: Summary of the Exploration Data in Sahamamy Graphite Project

Drilling Type	Count of BHID	Drilled Meter
Auger Drilling	99	732
Channel Samples	4	38
Trench	1	10
Grand Total	104	780

5.3 Data Validation

Prior to the construction of geological modelling, SRK undertook a data validation exercise to ensure the data quality is appropriate for undertaking a Mineral Resource Estimate. Those included:

- Validation of the borehole coordinates;
- Overlapping intervals
- Harmonisation of the geological logging codes
- Missing interval and missing assay results
- Assigning appropriate value for those samples where the GC% were reported below the detection limit; and
- Reconciliation of the geological logs with the assay results

SRK did not find any material issue in terms of the integrity of the exploration database.

SRK has, however, noted that:

- the samples from 276 holes (227 auger holes and 27 diamond drillholes) are yet to be assayed. As of writing this report, SRK understand that Tirupati is in the process of preparing these samples and submitting to the analytical laboratory;
- For those samples, that were logged as internal waste and which were not assayed or reported a grade below the detection limit, SRK assumed a default value of 0.25 %GC.

5.4 3D Geological Modelling

5.4.1 Vatomina

Topographic Model

The 3D topographic digital elevation model was constructed using Leapfrog Geo software, based on the topographic survey data, generated by Tirupati using Total Station survey equipment. SRK imported the elevation grid model into Leapfrog Geo software and created the 3D topographic surface with a resolution of 25m x 25m.

Lithology Model

3D lithological model was constructed based on the grouped lithological units, which include (a) Overburden, (b) Graphitic Gneiss, (c) Dolerite Dykes, and (d) Non-graphitic gneiss as a country rock. The hanging wall and foot wall contact surfaces of the graphic gneisses and doletrite dykes were constructed using the Leapfrog's vein tool. Figure 5-1 presents the 3D View of the Vatomina Geological Model (Looking Northwest).

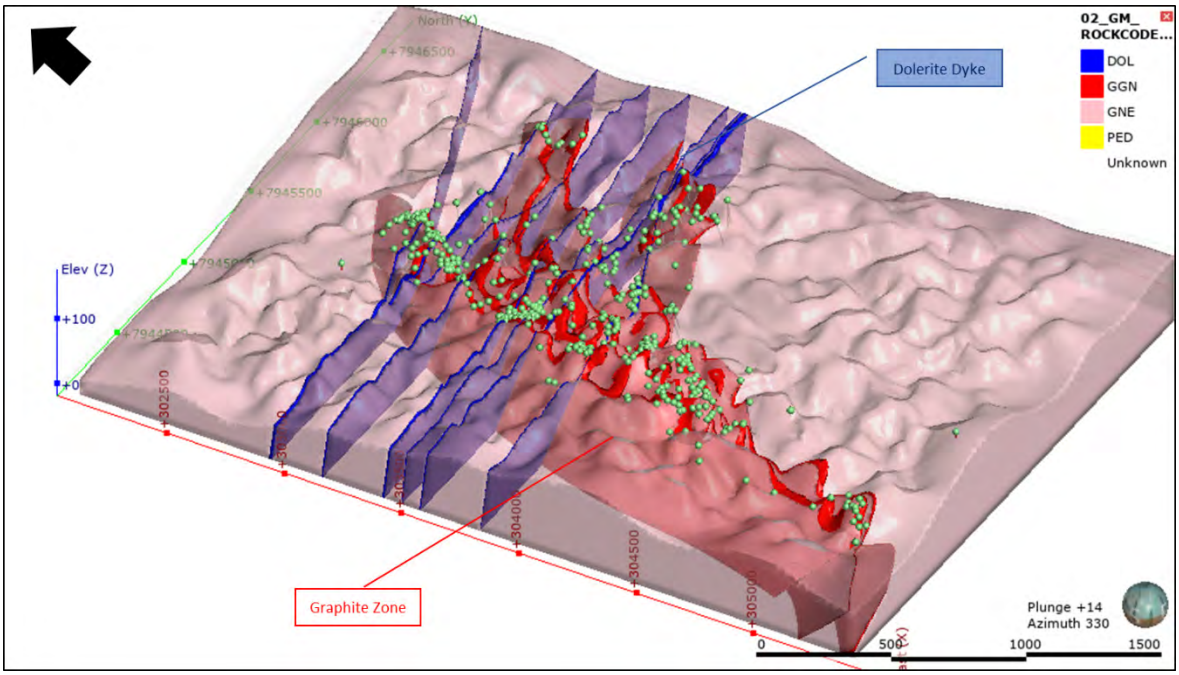


Figure 5-1: 3D View of the Vatomina Geological Model (Looking Northwest)

In order to define such broad geological units, 2m minimum intersection thickness was considered. Further, each graphitic band was separately coded within each drillhole. This was undertaken using a combination of the lithological observations and assay results. The contacts between the graphitic and non-graphitic gneiss were then defined based on a 2% GC. Figure 5-2 presents an overview of different zones that were identified during interpretation. In order to delineate the geometry of the graphitic bands, SRK used the structural data, which were generated by Tirupati.

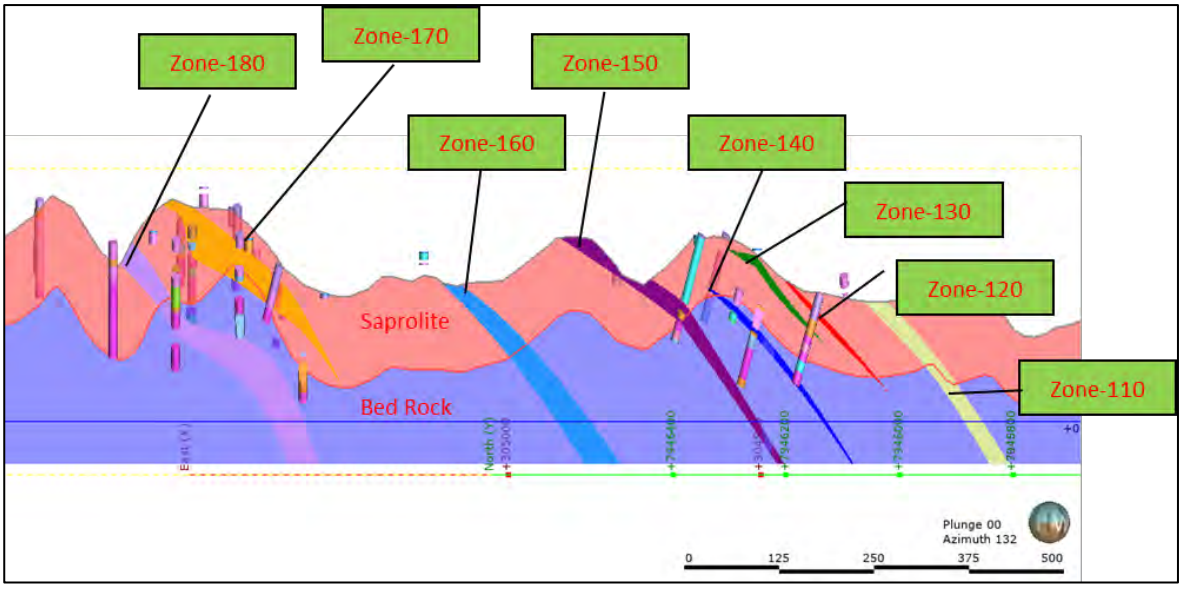


Figure 5-2: Example Cross Section Reflecting Different Estimation Domains in Vatomina

Regolith Model

In addition to the construction of the geological model, a 3-dimensional model of the regolith horizons was also constructed using the Leapfrog's stratigraphic modelling tool based on the geological logs. In this, SRK considered a total of three horizons including Pedoloith, Saprolite/Sap Rock and Bed Rock. The regolith model was intersected with the lithological model to derive the graphitic gneiss in the saprolitic horizon and in the fresh rocks. Figure 5-2 presents the 3-dimensional view of the modelled Graphitic Gneiss distributed in Saprolite and Fresh Rock.

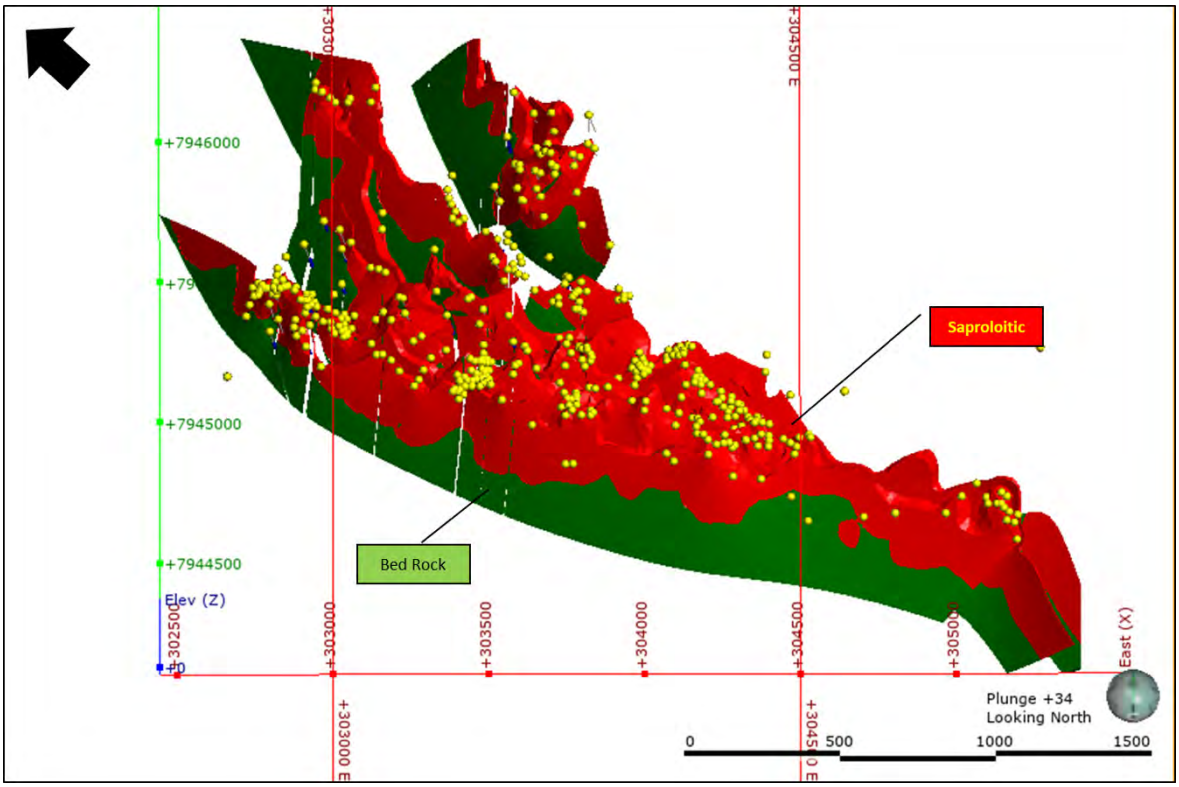


Figure 5-3: 3 D View of the Modelled Graphitic Gneiss distributed in Saprolite and Bed Rock (Looking North)

5.4.2 Sahamamy

Topographic Model

The 3D topographic digital elevation model for Sahamamy was constructed using Leapfrog Geo software, based on the topographic survey data, generated by Tirupati using Total Station survey equipment. SRK imported the elevation grid model into Leapfrog Geo software and created the 3D topographic surface with a resolution of 25m x 25m.

Geological Model

In order to define the mineralised zone in Sahamamy, SRK considered 2m minimum thickness with at least 2% GC. Graphite bearing zones were then correlated and coded. SRK modelled total 6 such zones, which were interpreted to be dipping toward south with a varying dip of 20º to 30º. Figure 5-4 presents a 3D view of the Sahamamy geology model.

Domaining of the different graphic bands were constructed based on the lithological data, there position in the regoloithic profile and the available assay results. Based on the preliminary statistical study SRK decided a threshold value of 2% GC over a minimum composite length of 2m to be included into the estimation domains. Figure 5-5 presents an overview of different zones that were identified during interpretation. In order to delineate the geometry of the graphitic bands, SRK used the structural data, which were generated by Tirupati.

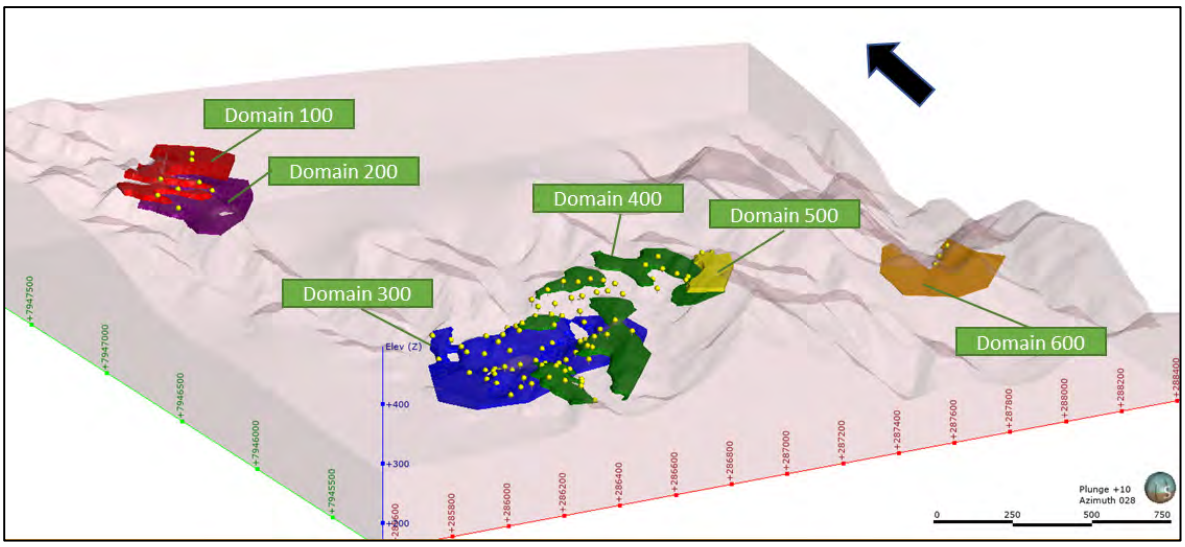


Figure 5-4: 3D View of the Sahamamy Geological Model (Looking Northwest)

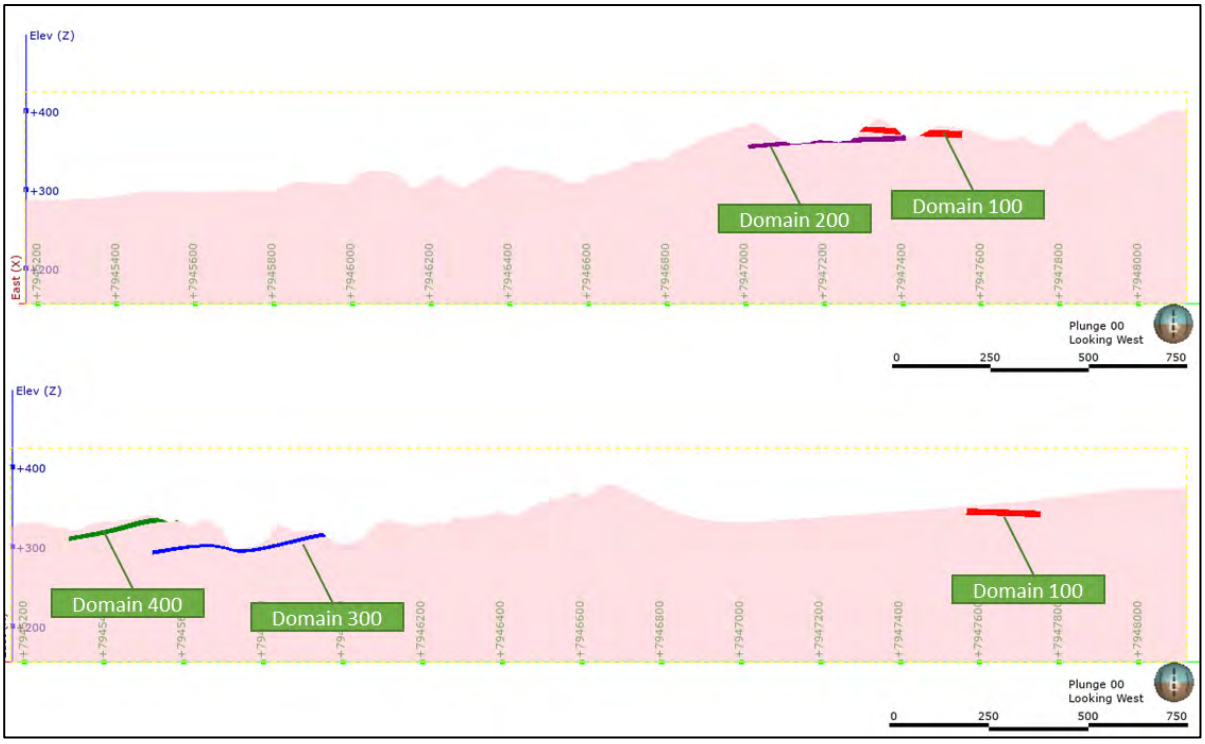


Figure 5-5: Example Cross Section Reflecting Different Estimation Domains in Sahamamy

5.5 Classical Statistical Study

5.5.1 Sample Statistics

The sample statistics of Vatomina and Sahamamy are presented in Table 5-3 and Table 5-4, respectively. The summary statistics show low coefficient of variation (CV) which indicate a low degree of GC% variability within the modelled mineralised zones.

Table 5-3: Summary of the Vatomina Sample Statistics

Zone	Field	Count	Minimum	Maximum	Mean	Variance	StdDev	CoV
110	GC	152	2.10	10.40	4.79	3.54	1.88	0.39
111	GC	8	5.31	11.47	8.72	4.04	2.01	0.23
112	GC	5	3.02	3.94	3.57	0.09	0.30	0.08
120	GC	110	2.02	14.90	4.72	7.51	2.74	0.58
130	GC	138	2.01	7.82	4.08	1.93	1.39	0.34
140	GC	151	2.01	13.53	4.11	4.12	2.03	0.49
150	GC	80	2.00	13.20	4.20	5.79	2.41	0.57
160	GC	36	2.04	8.75	4.48	3.46	1.86	0.42
161	GC	3	3.14	6.65	5.48	2.73	1.65	0.30
170	GC	42	2.12	11.36	4.29	4.27	2.07	0.48
180	GC	19	2.22	7.20	4.37	2.07	1.44	0.33

Table 5-4: Summary of the Sahamamy Sample Statistics

Zone	Field	Count	Minimum	Maximum	Mean	Variance	StdDev	CoV
100	GC	40	2.20	8.40	4.98	3.08	1.75	0.35
200	GC	13	1.80	3.50	2.53	0.35	0.59	0.23
300	GC	42	0.80	9.90	3.68	2.85	1.69	0.46
400	GC	43	1.00	18.30	6.00	17.30	4.16	0.69
500	GC	8	3.20	4.30	3.91	0.14	0.37	0.10
600	GC	2	3.70	5.20	4.45	0.56	0.75	0.17

5.5.2 Compositing

Prior to generating the MRE, the samples were composited to equal lengths such that a constant volume was achieved, therefore honouring the sample support theory. As sampling was predominantly based on lithological intervals, the actual sample lengths range between 0.1m to 3.75 m with a mean sample length of 1.4m, a composite length of 2 m was used. SRK undertook a statistical analysis to ensure that the resultant capping and composites did not result in a reduction in the mean GC grade. A summary of the composite statistics for Vatomina and Sahamamy are presented in Table 5-5 and Table 5-6, respectively.

Table 5-5: Summary of Composite Statistics in Vatomina

Zone	Field	Count	Minimum	Maximum	Mean	Variance	StdDev	CoV
110	GC	96	2.10	9.67	4.72	2.90	1.70	0.36
111	GC	4	7.12	11.47	8.72	3.20	1.79	0.21
112	GC	3	3.31	3.94	3.57	0.06	0.24	0.07
120	GC	81	2.02	14.90	4.72	6.86	2.62	0.55
130	GC	87	2.06	7.17	4.08	1.53	1.24	0.30
140	GC	100	2.01	11.49	4.11	3.63	1.90	0.46
150	GC	62	2.00	13.20	4.20	5.51	2.35	0.56
160	GC	23	2.14	7.54	4.48	3.32	1.82	0.41
161	GC	2	3.14	6.65	5.48	2.73	1.65	0.30
170	GC	35	2.12	11.36	4.29	3.92	1.98	0.46
180	GC	17	2.22	7.20	4.38	1.98	1.41	0.32

Table 5-6: Summary of Sahamamy 2m Composite Statistics

Zone	Field	Count	Minimum	Maximum	Mean	Variance	StdDev	CoV
100	GC	40	2.20	8.40	4.98	3.08	1.75	0.35
200	GC	13	1.80	3.50	2.53	0.35	0.59	0.23
300	GC	42	0.80	9.90	3.68	2.85	1.69	0.46
400	GC	43	1.00	18.30	6.00	17.30	4.16	0.69
500	GC	8	3.20	4.30	3.91	0.14	0.37	0.10
600	GC	2	3.70	5.20	4.45	0.56	0.75	0.17

5.6 Geostatistical Study

A geostatistical study was undertaken to investigate the grade continuity and to derive parameters for grade interpolation. The 3D variogram analysis was undertaken in Snowden Supervisor software.

Semi-variograms were constructed for each domain to determine the grade continuity and spatial variability of GC% and to determine the search neighbourhood approach and setting up the kriging parameters.

Initially, the Nugget Effect was determined from the downhole experimental semi-variograms. SRK attempted to construct directional variograms, but due to the absence of closed spaced drilling at this stage of the project, SRK relied on the omni-directional variograms. Graphical representation of the constructed omni-directional semi-variograms for Vatomina and Sahamamy are presented in Figure 5-6. Table 5-7 presents the summary of the variogram parameters.

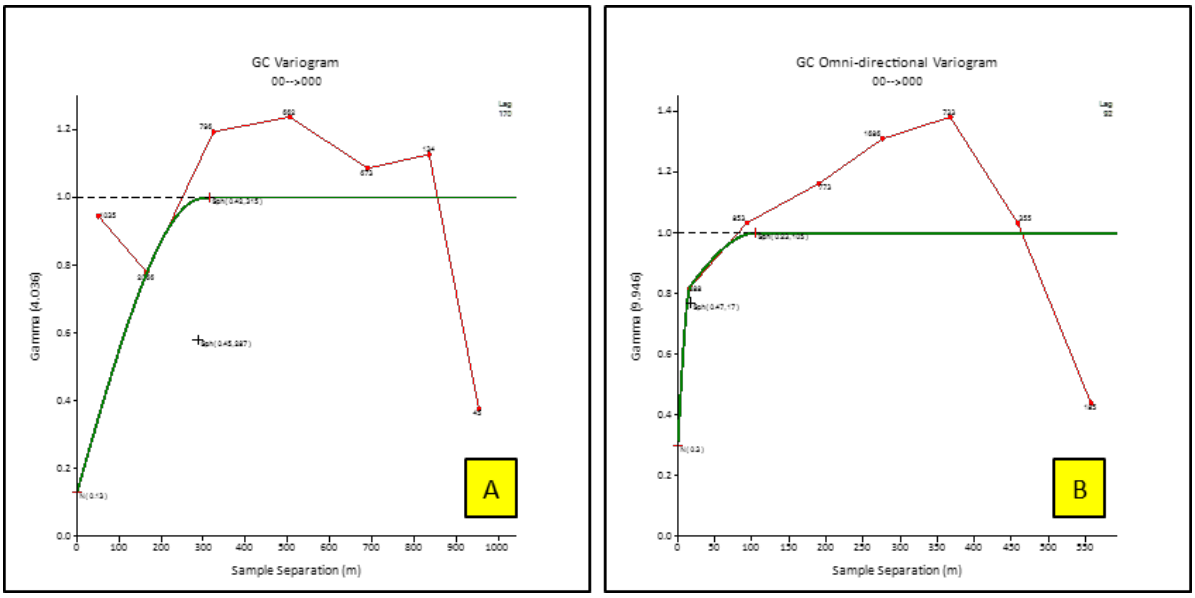


Figure 5-6: Omni-directional modelled variogram (a) Vatomina, (b) Sahamamy

Table 5-7: Summary of the Normalised Variogram

Parameter	Vatomina	Sahamamy
Element	GC%	GC%
Variogram reference number	1	1
Rotation angle around Z axis	0	0
Rotation angle around X axis	0	0
Rotation angle around Z axis	0	-90
Nugget variance	0.1	3
Variogram model type (Structure 1)	Spherical	1
First Range of structure 1	7	3
Second Range of structure 1	7	0.3
Third Range of structure 1	7	1
Sill parameter of structure 1	0.22	17
Variogram model type (Structure 2)	Spherical	17
First Range of structure 2	24	17
Second Range of structure 2	24	0.47
Third Range of structure 2	24	1
Sill parameter of structure 2	0.68	105

5.7 Block Model Grade and Interpolation

5.7.1 Block Model Framework

Following the construction of the wireframes and the geostatistical analysis, a 3D block model was created in the Datamine Studio 3 software. For the selection of the block model framework SRK considered the average borehole spacing and possible open pit bench height. In order to increase the accuracy of the domain boundary definition, SRK used sub-blocks along each direction for all the modelled geological wireframes. Table 5-8 and Table 5-9 presents the summary of the block model parameters selected by SRK for Vatomina and Sahamamy, respectively.

Table 5-8: Summary of the block model parameters used in Vatomina

	X (m)	Y (m)	Z (m)
Minimum	302000	7944000	-100
Maximum	306000	7946300	100
Range	4000	2300	200
Parent block size	20	20	5
Number of blocks	200	115	40
Rotation	0	0	0

Table 5-9: Summary of the block model parameter used in Sahamamy

	X (m)	Y (m)	Z (m)
Minimum	285300	7944900	170
Maximum	288700	7948400	430
Range	3400	3500	260
Parent block size	20	20	1
Number of blocks	170	175	260
Rotation	0	0	0

5.7.2 Grade Interpolation

For both Vatomina and Sahamamy, SRK used Ordinary Kriging (OK) for the grade interpolation into the block model, honouring the geological contacts defined by the geological modelling process and using the variogram parameters set out above. Before undertaking the grade estimation, SRK carried out a search neighbourhood analysis for the appropriateness of the search and estimation parameters through the optimisation of the following parameters:

- Search Ellipsoid Dimension,
- Number of minimum and maximum samples to be used for estimation,
- Optimisation of Search Octants, and
- Number of discretisation points.

Based on the results of the above study, SRK selected the final search parameters for Vatomina and Sahamamy, which are reflected in Table 5-10 and Table 5-11, respectively. In order to compare the mean grades derived from the Ordinary Kriging, SRK also estimated the empty block model using Inverse Distance Weighted Method. The estimation parameters were set up by visually checking the data to ensure suitable minimum and maximum samples have been used, and that the factored searches were sufficiently large to fill the entire block model.

Table 5-10: Summary of the Search Parameters used for Vatomina GC% Grade Estimation

Domain	110	111	112	120	130	140	150	160	161	170	180
Element	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC
Search Method	110	111	112	120	130	140	150	160	161	170	180
Rotation angle about Z Axis	2	2	2	2	2	2	2	2	2	2	2
Rotation angle about X Axis	150	70	80	100	100	100	100	100	100	100	250
Rotation angle about Z Axis	150	70	80	100	100	100	100	100	100	100	250
First Pass Search distance along strike	150	70	80	100	100	100	100	100	100	100	250
First Pass Search distance across strike	0	0	0	0	0	0	0	0	0	0	0
First Pass Search distance along dip	0	0	0	0	0	0	0	0	0	0	0
Minimum Number of Sample First Pass	0	0	0	0	0	0	0	0	0	0	0
Maximum Number of Sample First Pass	3	3	3	3	3	3	3	3	3	3	3
Second Pass Search distance along strike	1	1	1	1	1	1	1	1	1	1	1
Second Pass Search distance across strike	3	3	3	3	3	3	3	3	3	3	3
Second Pass Search distance along dip	5	3	3	3	3	3	5	5	3	5	3
Minimum Number of Sample for the Second Pass	15	4	4	8	8	8	15	15	4	8	8
Maximum Number of Sample for the Second Pass	2	2	2	2	2	2	2	2	2	2	2
Third Pass Search distance along strike	5	3	3	3	3	3	5	5	3	3	3
Third Pass Search distance across strike	15	4	4	8	8	8	15	15	4	4	4
Third Pass Search distance along dip	10	10	10	10	10	10	10	10	10	10	10
Minimum Number of Sample for the Third Pass	3	2	2	3	3	3	3	3	2	2	2
Maximum Number of Sample for the Third Pass	8	4	4	8	8	8	8	10	4	4	4
Use Octant Search	No	No	No	No	No	No	No	No	No	No	No
Number of octants containing samples	-	-	-	-	-	-	-	-	-	-	-
Minimum number of samples per octant	-	-	-	-	-	-	-	-	-	-	-
Maximum number of samples per octant	-	-	-	-	-	-	-	-	-	-	-
Maximum Number per borehole	2	-	-	2	2	2	2	2	-	2	2

Table 5-11: Summary of the Search Parameters used for Sahamamy GC% Grade Estimation

Domain	Domain100	Domain200	Domain300	Domain400	Domain500	Domain600
Element	GC	GC	GC	GC	GC	GC
Search Method	1	2	3	4	5	6
Rotation angle about Z Axis	2	2	2	2	2	2
Rotation angle about X Axis	100	100	100	300	300	300
Rotation angle about Z Axis	100	100	100	300	300	300
First Pass Search distance along strike	100	100	100	300	300	300
First Pass Search distance across strike	0	0	0	0	0	0
First Pass Search distance along dip	0	0	0	0	0	0
Minimum Number of Sample First Pass	0	0	0	0	0	0
Maximum Number of Sample First Pass	3	3	3	3	3	3
Second Pass Search distance along strike	1	1	1	1	1	1
Second Pass Search distance across strike	3	3	3	3	3	3
Second Pass Search distance along dip	3	2	3	3	3	2
Minimum Number of Sample for the Second Pass	5	5	8	8	5	5
Maximum Number of Sample for the Second Pass	2	2	2	2	2	2
Third Pass Search distance along strike	3	2	3	3	3	2
Third Pass Search distance across strike	5	5	8	8	5	5
Third Pass Search distance along dip	5	5	5	5	5	5
Minimum Number of Sample for the Third Pass	3	2	3	3	3	2
Maximum Number of Sample for the Third Pass	5	5	8	8	5	5
Use Octant Search	No	No	No	No	No	No
Number of octants containing samples	-	-	-	-	-	-
Minimum number of samples per octant	-	-	-	-	-	-
Maximum number of samples per octant	-	-	-	-	-	-
Maximum Number per borehole	2	3	2	2	-	-

5.7.3 Model Validation

SRK has undertaken a number of validation exercises on the resulting estimated model, to confirm that the modelled estimates represent the input sample data on both local and global scales, and to check that the estimate is not biased. Methods of validation used include:

- visual inspection of block grades in comparison with drillhole data;
- sectional validation and swath plots; and
- comparison of block model and sample mean grades.

Visual Validation

Visual validation provides a comparison of the interpolated block model on a local scale and in this case, this showed a reasonable correlation, with local block estimates displaying similar grades to nearby drillholes. Figure 5-6 shows an example of the visual validation checks for the model, which highlight the overall block grades corresponding with the composite samples grades.

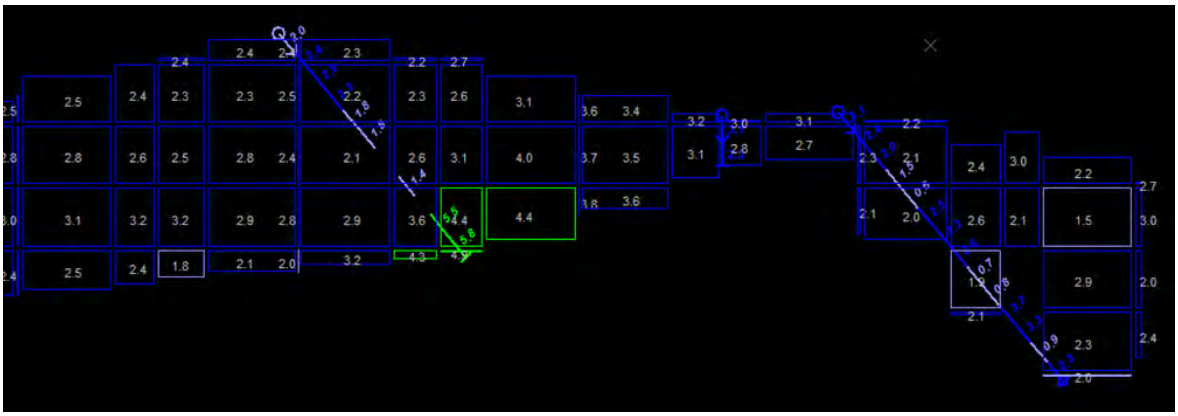


Figure 5-7: Visual validation of the Vatomina block model against drillhole data

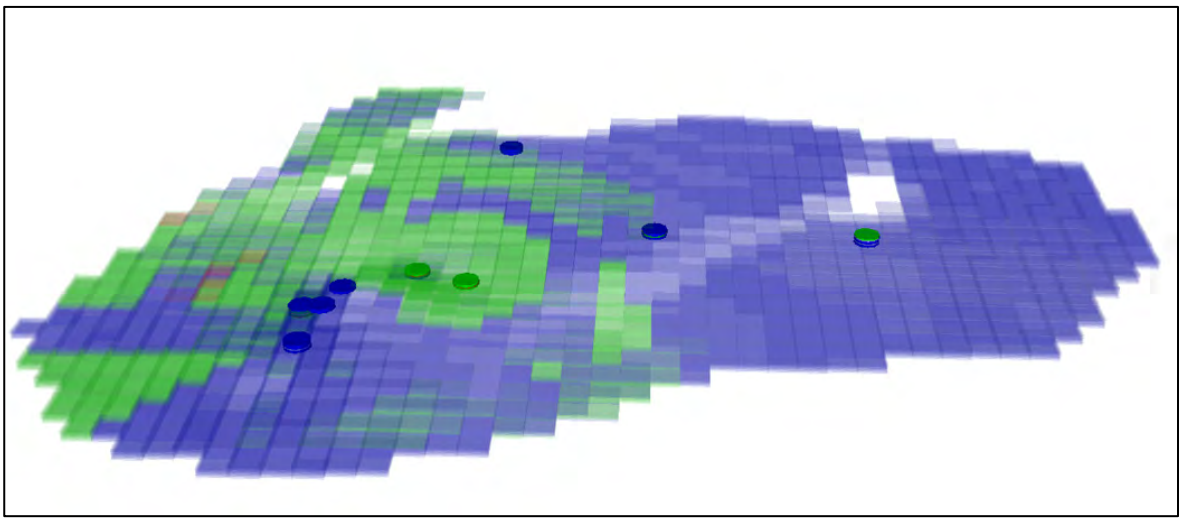


Figure 5-8: Example of visual validation of the Sahamamy block model against composite

Statistical Validation

A statistical validation of the interpolated block model has been undertaken and the results are presented in Table 5-7. A comparison was made between the declustered capped composite samples and the OK grade estimate. In general, the declustered capped composite samples compare well with the OK block model estimates, with no sign of any bias therefore validating the

global estimated grades. Based on the visual and statistical validation results, SRK accepted the grades in the block model.

Table 5-12: Statistical validation of composite sample statistics versus estimated block model statistics

Domain	Composite Mean	Estimated Mean	Absolute Difference	% Difference
110	4.72	4.62	0.10	2%
111	8.72	8.38	0.34	4%
112	3.57	3.55	0.02	0%
120	4.72	4.24	0.48	10%
130	4.08	4.08	0.00	0%
140	4.11	4.28	-0.17	-4%
150	4.20	4.65	-0.45	-11%
160	4.48	4.03	0.45	10%
161	5.48	5.07	0.41	8%
170	4.29	4.26	0.03	1%
180	4.38	3.93	0.45	10%

Table 5-13: Statistical validation of composite sample statistics versus estimated block model – Sahamamy

ZONE	Composite Mean	Estimated Mean	Absolute Difference	% Difference
100	4.98	4.85	0.13	3%
200	2.53	2.55	-0.02	-1%
300	3.68	3.60	0.08	2%
400	6.00	5.85	0.15	2%
500	3.91	4.11	-0.20	-5%
600	4.45	4.47	-0.02	0%

5.8 Density Model

In absence of detailed study on the dry in-situ bulk density measurement, SRK assumed a default density of 1.92 t/m3 for all mineralised zones. SRK understands that Tirupati will be undertaking a next phase of exploration to generate further exploration data to enhance the density model.

5.9 Assessment of Reasonable Prospect of Eventual Economic Extraction

The JORC Code 2012 edition, defines a Mineral Resource as:

"A 'Mineral Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories."

The JORC Code 2012 edition further explains that:

“The “reasonable prospects for economic extraction” requirement generally imply that the quantity and grade estimates meet certain economic conditions and that the Mineral Resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries.”

Considering the above definition and explanation, SRK developed conceptual pit shells for Vatomina and Sahamamy to assess the material that has reasonable prospect for open pit mining and the parameters which were used for generation of the conceptual pit shell, is presented in Table 5-14.

Table 5-14: Parameters Used for Generating Conceptual Pit Shell to Define Mineral Resource

Parameters		Units	Value
Production			
	Production Rate - Ore	(tpa)	270,000
Geotechnical			
	Footwall	(Deg)	30
	Hangingwall	(Deg)	30
Mining Factors			
	Dilution	(%)	5.0
	Recovery	(%)	95.0
Processing			
	Average Mass Yield	(%)	5.0
Operating Costs			
	Mining Cost	(US$/$t_{rock}$)	1.5
	Incremental Mining Cost	(US$/bench)	0.01
	Reference Level	(Z Elevation)	
	Processing	(US$/$t_{ore}$)	6.9
	G&A	(US$/$t_{ore}$)	7.6
	Transport and Other	(US$/$t_{ore}$)	7.0
	Selling Cost	(US$/$t_{conc}$)	107
Price			
	Graphite	(US$/$t_{conc}$)	950
		(US$/$t_{conc}$)	1,030
Product Grade		(%)	92
Other			
	Discount Rate	(%)	10
Cut-Off Grade			
	Marginal	(US$/$t_{ore}$)	14.5
		(%)	1.81

5.10 Mineral Resource Classification

5.10.1 Classification Code and Definitions

The Mineral Resource statement presented herein has been classified following the definitions and guidelines of the JORC Code (2012) from which the following definitions have been taken.

Inferred Mineral Resources

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource.

The Inferred category is intended to cover situations where a mineral concentration or occurrence has been identified and limited measurements and sampling completed, but where the data are insufficient to allow the geological and/or grade continuity to be confidently interpreted. Commonly, it would be reasonable to expect that the majority of Inferred Mineral Resources would upgrade to Indicated Mineral Resources with continued exploration. However, due to the uncertainty of Inferred Mineral Resources, it should not be assumed that such upgrading will always occur.

Indicated Mineral Resources

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed at the 80% cut-off used.

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource but has a higher level of confidence than that applying to an Inferred Mineral Resource.

Mineralisation may be classified as an Indicated Mineral Resource when the nature, quality, amount and distribution of data are such as to allow confident interpretation of the geological framework and to assume continuity of mineralisation.

Confidence in the estimate is sufficient to allow the application of technical and economic parameters, and to enable an evaluation of economic viability.

Measured Mineral Resources

A 'Measured Mineral Resource' is that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.

Mineralisation may be classified as a Measured Mineral Resource when the nature, quality, amount and distribution of data are such as to leave no reasonable doubt, in the opinion of the Competent Person determining the Mineral Resource, that the tonnage and grade of the mineralisation can be estimated to within close limits, and that any variation from the estimate would be unlikely to significantly affect potential economic viability.

This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit.

Confidence in the estimate is sufficient to allow the application of technical and economic parameters and to enable an evaluation of economic viability that has a greater degree of certainty than an evaluation based on an Indicated Mineral Resource.

5.10.2 Vatomina Classification

Based on the presently available data, SRK classified the Vatomina Mineral Resource into the Indicated and Inferred categories, as the terms defined in the JORC Code (2012). In determining this, the following factors were considered:

- the quality, distribution and quantity of data used in the estimation;
- the geological knowledge and understanding, focusing on geological and grade continuity; and

- the quality of the geostatistics and quality of the estimation.

Table 5-15: Key Considerations for Vatomina Mineral Resource Classification

Criteria	SRK Consideration
Data Quality	• The methodologies adopted by the Company for the drilling programme is in the line of the standard industry practice. • The results from the QAQC programme show no evidence of material bias within the laboratory, • Database SRK has been supplied with electronic copies of the drilling database and while the database is relatively simple, the systems used for data capture and storage appear to be satisfactory, with no observable errors when importing the data into mining software packages.
Data Distribution	• The exploration was not done on regular grid. The current spacing between the drillholes ranges from 50m to 500m.
Geological Knowledge and continuity	• The geology of the graphite mineralised zone is complex. • There are variations in thickness and grade between adjacent drillholes. In addition to that, the area has been intruded by a number of dolerite dykes.
Quality of Geostatistics and Grade Interpolation	• The quality of the semi-variograms are comparatively poor. • The resultant block model validates well when compared to the input sample data.

Considering the above, SRK classified the Mineral Resources using the following criteria:

- Indicated Resource – part of domain 110, 120, 130, 140 and 150 that occurs within the saprolitic horizon, where the drilling data are broadly distributed at 100m interval and dominantly consisting of auger holes, the quality of the estimate is reasonably well;
- Inferred Mineral Resource – the remaining part of the above domains and all other domains that falls within the saprolitic zone.

Figure 5-9 depicts the Mineral Resource classification of Vatomina.

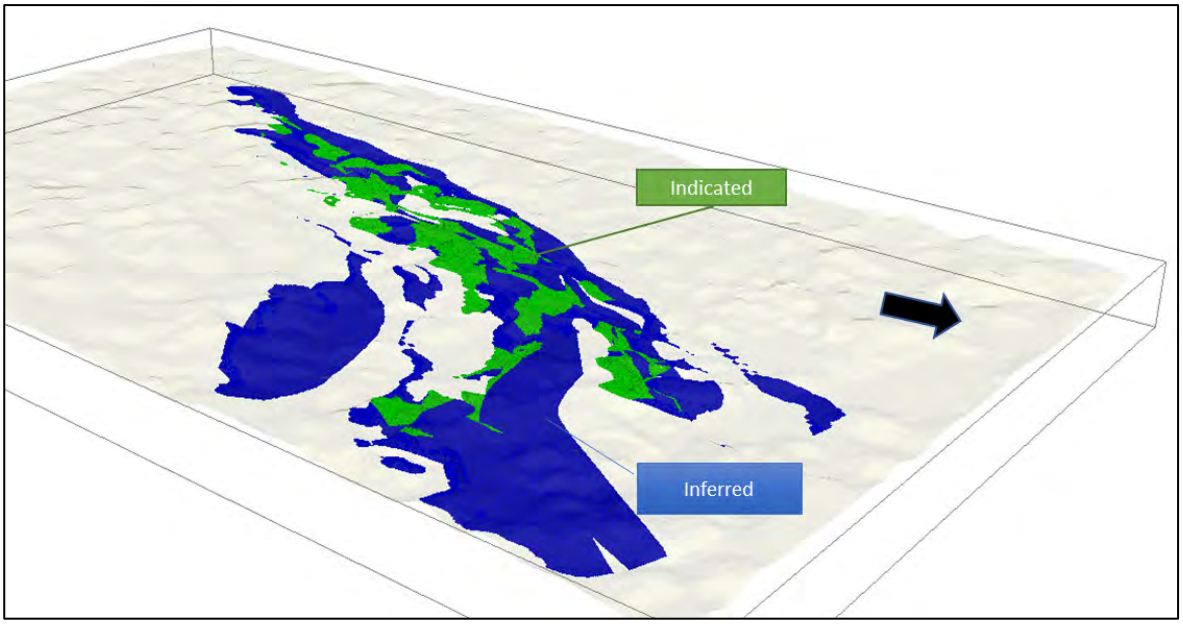


Figure 5-9: Area of Inferred category resources (Blue) for Vatomina Graphite Project

5.10.3 Sahamamy Mineral Resource Classification

Based on the presently available data, SRK has assigned portions of the Sahamamy Mineral Resource into the Inferred categories. In determining this, the following factors were considered:

- the quality, distribution and quantity of data used in the estimation;
- the geological knowledge and understanding, focusing on geological and grade continuity; and
- the quality of the geostatistics and interpolated block model.

The key consideration for Sahamamy Mineral Resource classification is presented in Table 5-16.

Table 5-16: Key Considerations for Sahamamy Mineral Resource Classification

Criteria	SRK Consideration
Data Quality	• The methodologies adopted by the Company for the drilling programme is in the line of the standard industry practice. • The results from the QAQC programme show no evidence of material bias within the laboratory, • Database SRK has been supplied with electronic copies of the drilling database and while the database is relatively simple, the systems used for data capture and storage appear to be satisfactory, with no observable errors when importing the data into mining software packages.
Data Distribution	• The exploration was not done on regular grid. The current spacing between the drillholes ranges from 50m to 500m.
Geological Knowledge and understanding of geological and grade continuity	• The geology of the graphite mineralised zone is complex. There are variations in thickness and grade between adjacent drillholes. In addition to that, the area has been intruded by a number of dolerite dykes.
Quality of Geostatistics and Grade Interpolation	• The quality of the semi-variograms are comparatively poor. • The resultant block model validates well when compared to the input sample data.

Considering the above, SRK classified the Mineral Resources using the following criteria:

- Indicated Resource – part of domain 100, 300 and 400, where the distribution of the drilling data is within 100m interval and the quality of the estimate is reasonably well;
- Inferred Mineral Resource – the remaining part of the above domains and all other domains to the extent of the geological model.

Figure 5-10 depicts the Mineral Resource classification of Sahamamy.

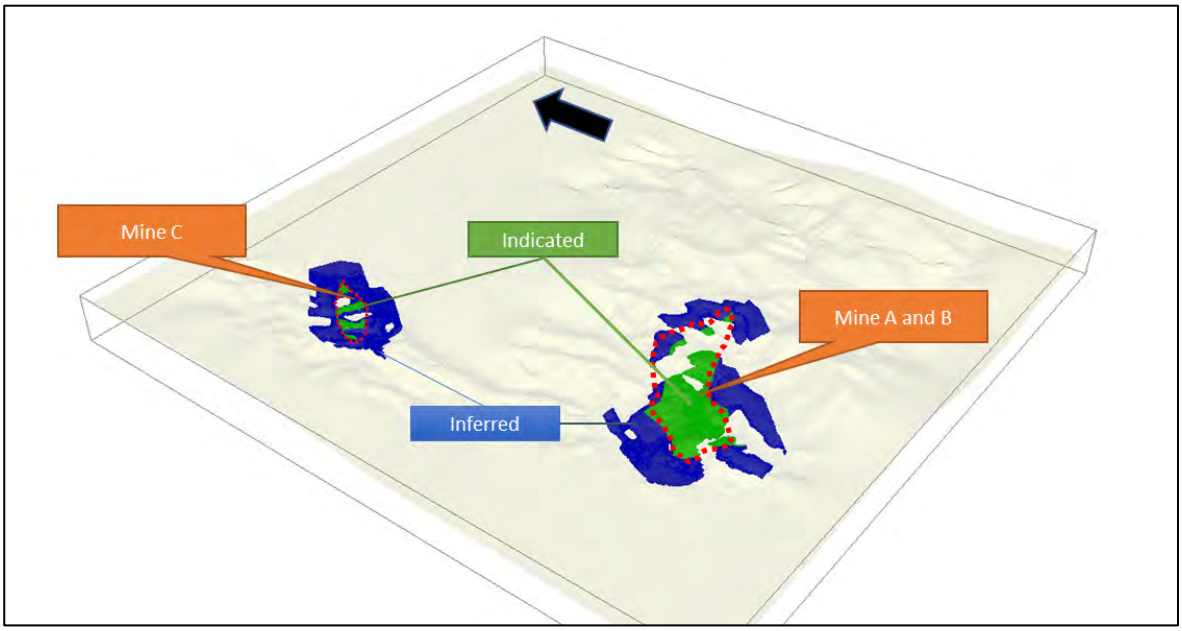


Figure 5-10: Mineral Resource Classification of Sahamamy.

5.11 Mineral Resource Statement

The statement in this report relating to Mineral Resource was produced on 1st November 2019, based on the information available at that time and was compiled under the direction of Mr Shameek Chattopadhyay, M.Sc; who is a Member of the Australasian Institute of Mining and Metals (AusIMM), which is a 'Recognised Overseas Professional Organisation' (ROPO) included in a list promulgated by ASX from time to time. Mr. Chattopadhyay is a full-time employee of SRK and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined by the JORC Code (2012).

The SRK Classified Mineral Resource Statement is shown in Table 5-9.

Table 5-17: SRK Mineral Resource Statement Vatomina Graphite Project, Madagascar, in accordance with the JORC Code (2012) as of 1st June 2020

Resource Category	Zone	Quantity	Grade
		(Mt)	(GC%)
Measured	110	-	0.0
	111	-	0.0
	112	-	0.0
	120	-	0.0
	130	-	0.0
	140	-	0.0
	150	-	0.0
	160	-	0.0
	161	-	0.0
	170	-	0.0
	180	-	0.0
Sub-total Measured		-	0.0

Indicated	110	0.9	4.2
	111	-	0.0
	112	-	0.0
	120	0.8	4.9
	130	0.4	3.7
	140	0.7	4.1
	150	0.4	4.6
	160	-	0.0
	161	-	0.0
	170	-	0.0
	180	-	0.0
Sub-total Indicated		3.2	4.3
Inferred	110	3.3	4.8
	111	0.2	9.1
	112	0,1	3.6
	120	1.5	4.3
	130	2.0	4.2
	140	1.9	4.1
	150	3.2	5.6
	160	0.4	3.8
	161	-	5.6
	170	1.9	4.1
	180	0.5	4.1
Sub-total Inferred		15.2	4.7
Total Mineral Resource		18.4	4.6

Note:

(1) All reported quantities are rounded to the nearest 100,000 tonnes and the GC grades are rounded to the nearest one decimal point to reflect the relative accuracy of the estimates.

(2) The Mineral Resource Estimate was constrained by the lithological wireframes, a marginal cut-offs of 1.8% GC and a conceptual pit shell defined by the following assumptions: Graphite Concentrate price of US$ 950/t; overall slope angles of 30º; a mining recovery of 95%; a mining dilution of 5%; a base case mining cost of US$ 1.5/t of ore; dry processing cost US$ 6.6/t of ore, and 5% mass yield; without considering revenues from other elements.

Table 5-18: SRK Mineral Resource Statement Sahamamy Graphite Project, Madagascar, in accordance with the JORC Code (2012) as of 1st June 2020

Resource Category	Zone	Quantity	Grade
		(Mt)	(GC%)
Measured	100	-	0.00
	200	-	0.00
	300	-	0.00
	400	-	0.00
	500	-	0.00
	600	-	0.00
Sub-total Measured		-	0.00
Indicated	100	0.2	5.20
	200	-	0.00

Resource Category	Zone	Quantity	Grade
	300	1.0	3.40
	400	0.2	6.40
	500	-	0.00
	600	-	0.00
Sub-total Indicated		1.4	4.10
Inferred	100	1.4	5.30
	200	1.3	2.50
	300	1.4	3.60
	400	1.3	5.50
	500	0.3	4.10
	600	-	0.00
Sub-total Inferred		5.7	4.20
Total Mineral Resource		7.1	4.20

Note:

(1) All reported quantities are rounded to the nearest 100,000 tonnes and the GC grades are rounded to the nearest one decimal point to reflect the relative accuracy of the estimates.

(2) The Mineral Resource Estimate was constrained by the lithological wireframes, a marginal cut-offs of 1.8% GC and a conceptual pit shell defined by the following assumptions: Graphite Concentrate price of US$ 950/t; overall slope angles of 30º; a mining recovery of 95%; a mining dilution of 5%; a base case mining cost of US$ 1.5/t of ore; dry processing cost US$ 6.6/t of ore, and 5% mass yield; without considering revenues from other elements.

5.11.1 Sensitivity

SRK has produced a Grade-Tonnage Curve for GC% for the Inferred Mineral Resources, which is shown in Figure 5-8.

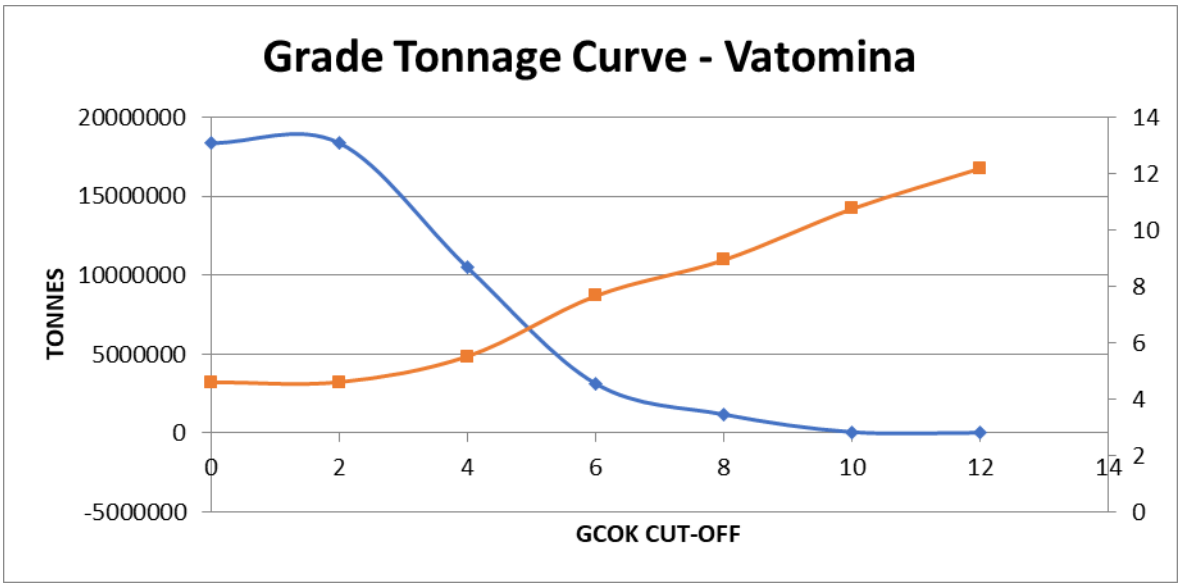


Figure 5-11: Grade-Tonnage Curve for Vatomina Mineral Resource

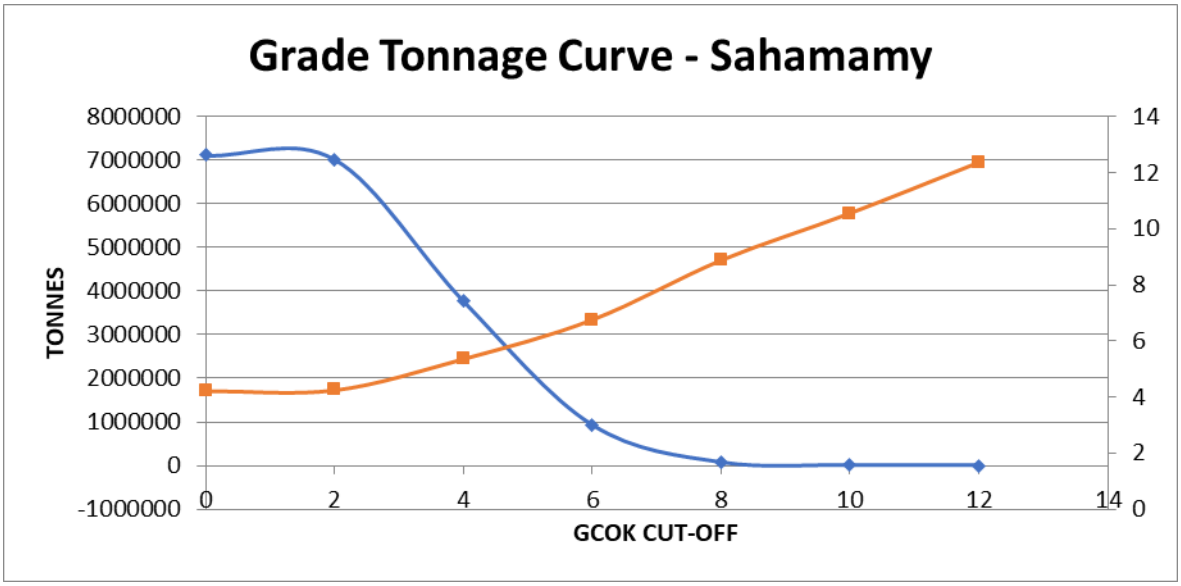


Figure 5-12: Grade-Tonnage Curve for Sahamamy Mineral Resource

5.12 Exploration Target

5.12.1 Vatomina

In addition to the Mineral Resources reported herein, SRK is of the opinion that Vatomina consists of about 8-10 Mt of mineralised materials with the average grade containing about 3-4%GC as Exploration Target, as the term is defined in the JORC Code (2012), within the area that has been explored as of writing this report (Figure 5-9). The estimation of such Exploration Target was derived from the available mapping data and the geological logs of the auger boreholes. Such Exploration Targets, include:

- Along the strike of the already identified mineralised bodies; and
- Along the dip direction of the identified mineralised bodies.

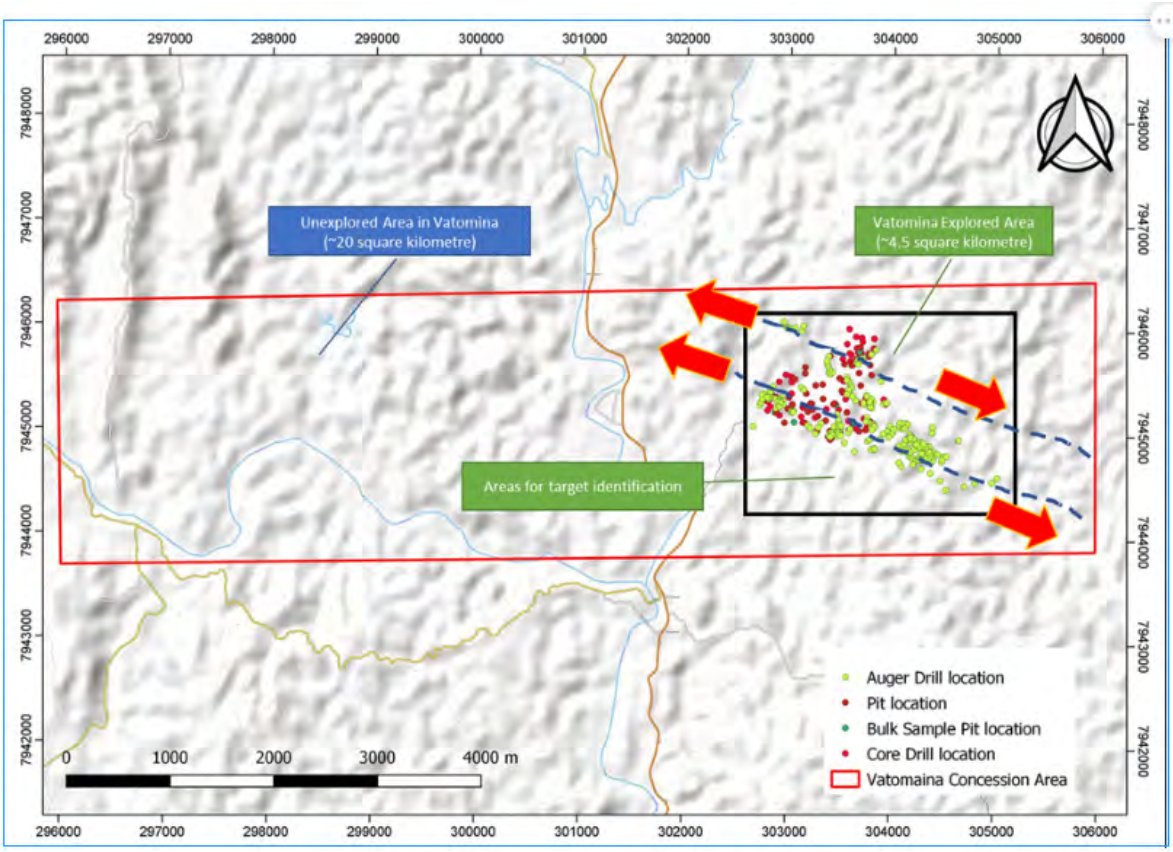


Figure 5-13: Figure defining areas needing further exploration

SRK note that the strike wise extension of the already identified mineralised zones is still open and falls within the northern and eastern boundary of the license area. SRK considers that the strike wise continuity of such mineralised zones should be investigated through geological mapping and limited auger boreholes. The grade and quantities of such mineralised zones cannot be ascertained at this stage until some exploration is undertaken.

SRK also note that the exploration undertaken in Vatomina, was restricted to about 25% of the license area. Considering the significant portion of the license area consists of the similar geological unit that has potential to host graphite bearing layers within the gneissic rock, SRK recommend Tirupati to undertake a preliminary mapping programme to confirm the presence of the graphitic bands in the remaining 75% of the license area that occurs in west of the areas that has been explored (Figure 5-9).

In addition to that, below the saprolitic zone, Tirupati has intersected the hard rock graphitic zones. Due to insufficient data in this horizon, SRK has not included such zone into the Mineral Resource estimate. SRK however, recognise that depending on the grade of such material, these hard rock graphitic zones has sufficient potential as further drilling targets.

5.12.2 Sahamamy

In addition to the Mineral Resources reported herein, SRK is of the opinion that the Sahamamy Project has potential to host about 5-7 Million Tonnes of Exploration Target with expected grade of 4-5% GC. Such Exploration Target, is identified in the following areas within the leasehold:

- Along the strike of the already identified mineralised bodies;
- Along the dip direction of the identified mineralised bodies; and

- In the central part of the leasehold area, where occurrences of the parallel mineralised zones are reasonable geological expectation.

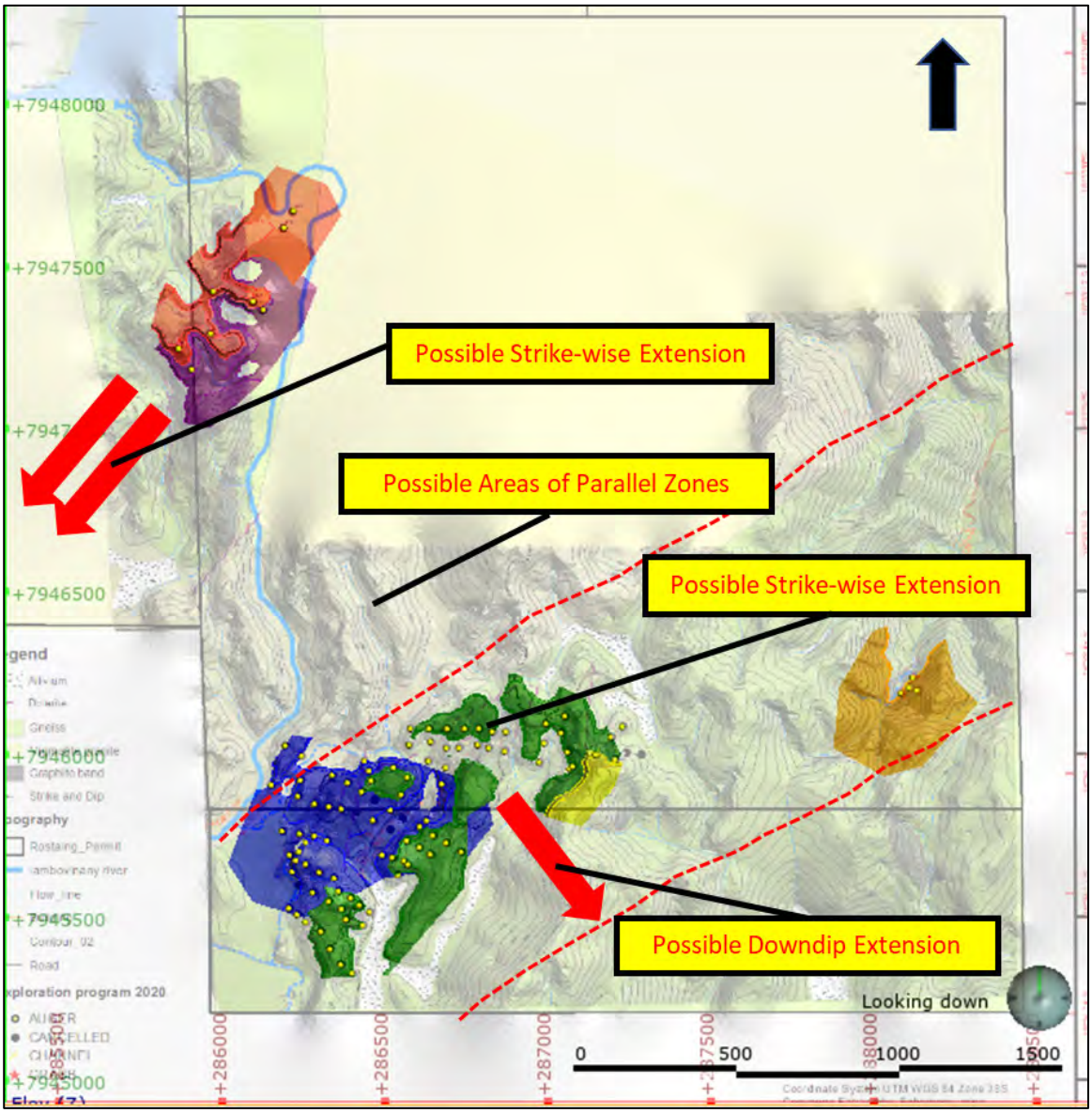


Figure 5-14: Distribution of the Exploration Targets in Sahamamy

SRK is of the opinion that such areas should be drilled with diamond core drill holes in order to confirm the geometry and shape of the mineralised bodies and evaluate the results during the future exploration programmes.

5.13 SRK Comments

Based on the available exploration data and the geological modelling undertaken, 18.4 Mt and 7.1 Mt Mineral Resources have been established in Vatomina and Sahamamy, respectively. Additionally, Exploration targets are identified within the explored areas for both the projects. The potential quantity and grade of the Exploration Targets identified are conceptual in nature but are areas that should be explored on priority. For Vatomina, only about 25% of the 25km2 area has been explored.

SRK understand that Tirupati have adopted a phased exploration programme and have budgeted for follow up exploration programmes. The objectives of the follow up exploration programmes will be to

upgrade the confidence of the defined Mineral Resources and explore identified target areas. Upgrading the Resource confidence can be achieved by conducting diamond drilling programme at 200m x 100m to 100m x 50m grid spacing, targeted to intersect the mineralised intersections with a high angle, together with implementation of appropriate field protocols for logging, sampling, sub-sampling, sample preparation, assay and QAQC.

In regards to identifying additional drilling targets in Vatomina, SRK is of the opinion that Tirupati should continue the auger drilling programme with 200m x 25m spaced grid and delineate the drilling targets. At Sahamamy, SRK is of the opinion that the Tirupati should initiate a structured exploration programme, initially by drilling the targets that was previously defined by the auger drilling campaign undertaken by the Company. In addition, Tirupati should continue to investigate for further mineralised bodies using the auger drilling at 200m x 25m grid and contingent to the outcome of the results, identify the targets for diamond core drilling programme together with appropriate geological logging, sampling, sample preparation, assay and QAQC protocols.

6 MINING

The Sahamamy project that Tirupati acquired had a small-scale open pit mine, which the Company has revived since its acquisition. Vatomina is a greenfield property with first phase exploration undertaken over a 2 km^2 area. This section provides a brief account of mining activity in Sahamamy.

6.1 Sahamamy

The mining operation in Sahamamy is presently a small-scale free-digging open pit operation. The mining operation comprise of historically mined open-pits as well the current open-pit operations. Based on 6-month results to 1st June 2020, a total of 116,483 t of material has been moved, of which 36,846 t had been ore material. The operating stripping ratio at this stage is about 2:1 (t:t)

The ore and the waste material are excavated and loaded by 0.70-1.0 cum bucket size backhoe and transported by a number of 5 cum Tractors (with hydraulic trailer) and 15t tipper trucks. Ore from the mine is either directly dumped at the hopper of the processing plant or at the RoM pad near the hopper.

With a new processing plant (3,000 tpa) installed and functioning, mining activities has increased in the last few months as evident from operational data shared with SRK.

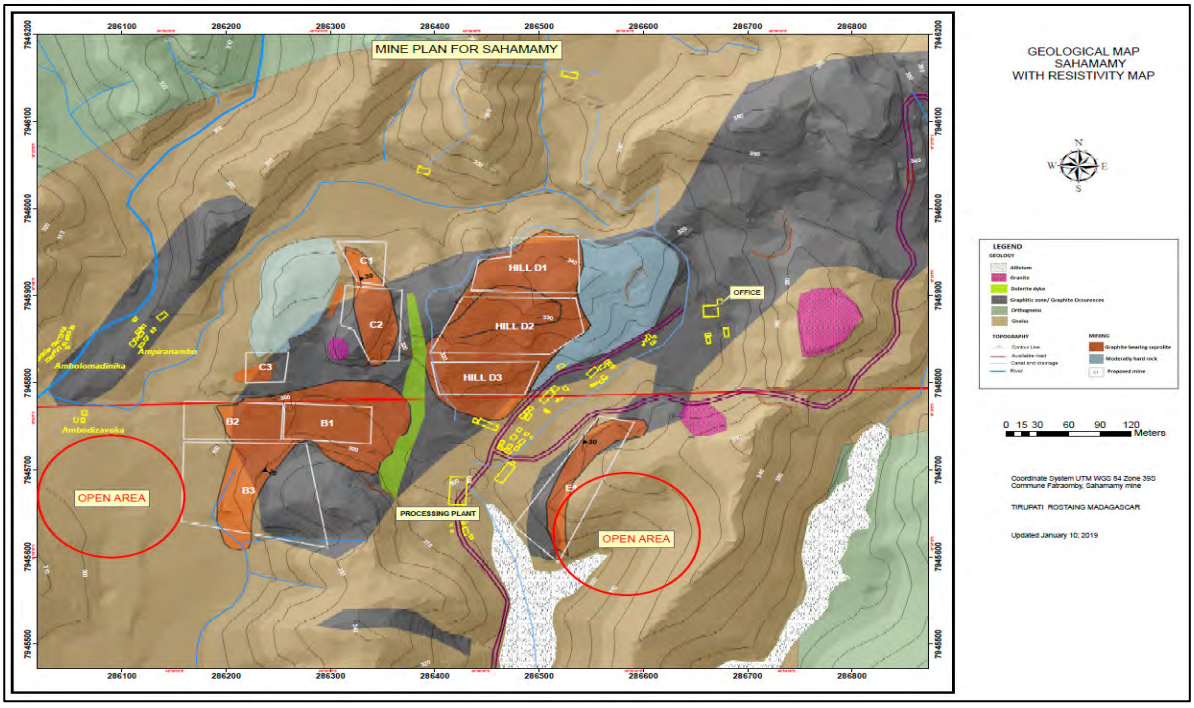


Figure 6-1: Layout of Mining pits in Sahamamy

A conceptual mine plan is available from Tirupati, in which five different areas for mining (A to E) as illustrated in Figure 6-1, is identified, with present mining activity happening in pit area A and B.

Figure 6-2: A view of mining area A and B in Sahamamy; June 2019

Figure 6-3: Excavator in operation in mining area B

Figure 6-4: Hauling machinery in Sahamamy

Sahamamy has permit for producing 3,000 tpa of processed graphite. Assuming a yield of 4.5%, the annual run-of-mine ore requirement is estimated between 60,000 tpa to 70,000 tpa. With Tirupati having plans to install a second processing plant of 18,000 tpa capacity, the combined ore requirement at peak capacity of 21,000 tpa, will be around 0.50 Mtpa. The Company's Strategic Plan assumes expenditure for additional mining capital along with exploration and technical studies of a PFS level.

Figure 6-5: Dumping of ore at processing plant hopper

Figure 6-6: Ore stock at RoM pad

Figure 6-7: Waste dump at Sahamamy

6.2 Vatomina

Vatomina is a greenfield project with a mining permit of 25 km^2 area. The mining permit is granted for 40 years effective from December 2016. The mining permit can be further renewed for a further 20 years each renewal. At this stage, Vatomina has environment authorization for setting up a 12,000 tpa flake graphite processing capacity. The first phase of 6,000 tpa capacity is under development. Area grading, plant equipment manufacturing and procurement, internal roads, construction of ancillary and processing building for first stage is ongoing and have made substantial progress. Tirupati's strategic plan is to extend the project capacity to 60,000 tpa of graphite concentrate adding three 18,000 tpa plant modules over three additional phases.

Figure 6-8: Views of Vatomina area

The style of mineralisation in Vatomina is likely to require shallow surface mining. A preliminary open pit optimisation tests on the Vatomina geological model has confirmed that the Resources defined is amenable to open pit operation and appears to have reasonable prospects of eventual economic extraction under a realistic set of criteria. Additional work of a PFS level is required to upgrade the mineral resources to mineral reserves.

A conceptual study undertaken by Tirupati in support of its expenditure plan, has assumed mining equipment and mining geometries as is in Sahamamy. It is considered that initial mining will focus on mining depths to about 50-60 m depth. Being saprolite, mining in Vatomina would be free digging as it is in Sahamamy.

7 METALLURGY AND MINERAL PROCESSING

7.1 Metallurgical Testwork

The process plant(s) is designed in-house by Tirupati for Sahamamy and Vatomina and is based on a full suite of metallurgical test work performed by CSIR-Institute of Minerals & Materials Technology (IMMT) at their facility in Bhubaneswar, India in 2018. These tests included laboratory scale metallurgical work and a bulk sample / pilot plant program.

Preliminary testwork was conducted on two samples, BK-4 (75 kg) and BK-6 (125 kg). Optical mineralogy and XRD analysis were used to characterise the mineral phases present in the samples. Optical mineralogy indicated that the graphite flakes contained silicate inclusions, and that the extent of liberation of the graphite particles increased with decreasing grind size. A liberation size of 75-100 µm was indicated.

The XRD analysis indicated the presence of graphite, quartz and muscovite mica, and a proximate analysis returned a fixed carbon content of 5.3% in sample BK-4 and 10.4% in sample BK-6.

Size-by-size assays indicated the potential to produce flake graphite in the intermediate size ranges of 75-2000 µm (BK-4) and 45-710 µm (BK-6).

Wet scrubbing was tested, with the aim of recovering liberated flaky graphite to the scrubber overflow. Screening the scrubber overflow at 150 µm produced oversize fractions containing 74.9% (BK-6) and 79.5% (BK-4) fixed carbon at recoveries of 38.5% (BK-4) and 63.3% (BK-6).

Several streams were tested for the potential to upgrade using flotation, as follows:

- Scrubber underflow: 94.7% fixed carbon using rougher, regrind and cleaning for BK-4, and 96.4% for BK-6 with recleaning;
- Scrubber overflow, 50-150 µm fraction: 83.6-85.6% fixed carbon using rougher and cleaner;
- Scrubber overflow, -50 µm fraction: 82.5% fixed carbon using rougher and cleaner for BK-4, but only 58.7& for BK-6; and
- Scrubber overflow, +150 µm fraction: 91.0-92.2% fixed carbon using rougher and cleaner.

The mixed tailings from these tests was reground and floated using column flotation, producing cleaner concentrates with a fixed carbon content of 62.1% (BK-4) and 69.0% (BK-6).

Further testwork was undertaken using 5 samples: BK1, BK4(W), BK4, BK6(W) and BK6. The samples had fixed carbon contents ranging from 3.4% to 7.0%. The following process steps were used for all samples, except where noted below:

- Crushing to -3 mm;
- Scrubbing using a screw scrubber;
- Screening scrubber overflow at 150 µm;
- Flotation (rougher and cleaner) of the +150 µm fraction;
- Hydrocyclone separation of -150 µm fraction;
- Separate flotation (rougher and cleaner) of the hydrocyclone overflow and underflow fractions;
- Grinding scrubber underflow to -300 µm;
- Screening this fraction at 150 µm;

- Flotation (rougher and cleaner) of the +150 µm fraction;
- Hydrocyclone separation of the -150 µm fraction; and
- Separate flotation (rougher and cleaner) of the hydrocyclone overflow and underflow fractions.

Exceptions:

- BK4, BK6W, BK4W – no hydrocyclone separation of scrubber overflow -150 µm fraction;
- BK6 – no hydrocyclone separation stages;
- BK4, BK6 – recleaner used on scrubber overflow +150 µm fraction;
- BK6 – recleaner used on scrubber underflow +150 µm and -150 µm fractions; and
- BK4W – with the addition of a graphite collecting reagent to the scrubber, the scrubber underflow was essentially barren and so no further testwork was carried out on this fraction.

The combined final concentrates ranged in fixed carbon assay from 92.5% for BK6W to 96.1% for BK4W.

A pilot scale study was then conducted using all of the above feed materials combined. The combined sample had a free carbon assay of 6.0%. The sample was crushed to -3 mm ahead of scrubbing. By using the graphite collecting reagent and a second screw scrubber stage on the underflow of the first stage, 64% of the mass was rejected to the second stage scrubber underflow at 0.2% fixed carbon.

The first scrubber overflow was screened using sieve bends at 150 µm and 45 µm, with the -45 µm material able to be rejected (0.3% fixed carbon). The +150 µm fraction was subjected to flotation, with the rougher stage producing a discardable tail (0.5% fixed carbon), and the cleaner concentrate (following a mild regrinding) assayed 94.0% fixed carbon.

The second stage scrubber overflow was reground to -150 µm, then mixed with the first stage scrubber overflow +45 µm fraction for flotation. Rougher and cleaner flotation produced a concentrate assaying 92.0% fixed carbon. Finally, the two cleaner tailing streams were combined and subjected to rougher and cleaning flotation stages producing a concentrate assaying 66.5% fixed carbon.

Combining these three cleaner concentrates resulted in a final concentrate assaying 91.8% fixed carbon, at a mass yield of 6.3% and a fixed carbon recovery of 96.0%. The coarse concentrate was 99.3% +150 µm, and the high-grade fine concentrate was 60.1% +150 µm.

7.2 Proposed Flowsheet

Based on the test works undertaken, IMMT proposed two flowsheets:

- Crushing to -3 mm. Scrubbing with screening of the scrubber overflow at 150 µm and grinding of the scrubber underflow to -300 µm followed by size separation at 150 µm. Separate flotation of the +150 µm fractions and flotation of the combined -150 µm fractions. Flotation consisting of rougher, cleaner and recleaner stages; and
- Crushing to -3 mm. Scrubbing with the addition of the graphite collecting reagent with screening of the scrubber overflow at 150 µm and rejection of the scrubber underflow. Separate flotation of the +150 µm and -150 µm fractions. Flotation consisting of rougher, cleaner and recleaner stages.

The final flowsheet proposed by IMMT and the Company mirrors more closely the flowsheet used at pilot scale in the test work:

- Crushing to -3 mm;
- Two stages of scrubbing, with rejection of the second stage scrubber underflow;
- First stage scrubber overflow:
- Screening at 150 µm;
- +150 µm fraction:
- Rougher flotation, tailings rejected;
- Regrinding of rougher concentrate followed by cleaner flotation:
- Cleaner concentrate is a final concentrate;
- Cleaner tailings reground then subjected to rougher and cleaner flotation stages:
- Cleaner concentrate is a final concentrate;
- Tailings from both stages rejected;
    - -150 mm fraction:
        - Screening at 45 µm:
            - -45 µm fraction rejected;
            - +45 µm fraction sent to second stage scrubber overflow flotation circuit;
- Second stage scrubber overflow:
    - Screening at 150 µm:
    - +150 µm fraction:
- Regrinding followed by rougher and cleaner flotation:
- Rougher tails rejected;
- Cleaner concentrate is a final concentrate;
- Cleaner tailings send to the first stage scrubber overflow cleaner tailings flotation circuit;
    - -150 µm fraction:
- Screened at 45 µm:
- -45 µm fraction rejected;
- +45 µm fraction added to +150 µm fraction after regrinding for flotation.

The flowsheet mass balance indicates a combined product assaying 91.8% fixed carbon at a mass yield of 3.8% and a fixed carbon recovery of 96.2%.

The proposed processing circuit for Vatomina for the 6,000 tpa plant is the same as the circuit that is undergoing production at Sahamamy, except that the designed capacity of the Vatomina plant is double that in operation in Sahamamy. The Sahamamy plant was commissioned in Q1 2019 and as of September 2019 was reported to be running at 70% of design throughput while achieving the other key processing parameters (recovery, product grade, etc).

7.2.1 SRK Comment

IMMT has developed a relatively novel flowsheet for the processing of the Sahamamy and Vatomina orebodies, utilising the properties of the ores: high flake graphite component, relatively simple

gangue mineralogy and relatively coarse liberation size. By using two stages of screw scrubber and the addition of a graphite collecting reagent, a pilot plant trial indicated that it is possible to reject up to 64% of the feed mass following scrubbing, with negligible loss of graphite. The scrubbing process is considered as an effective way for removing clay minerals or impurities because such impurities can be removed from the expanded particles by mechanical impacts, which in turn helps to enhance the flotation selectivity which is advantageous to the process adopted by the Company.

7.3 Process Plant & Recovery Methods

7.3.1 Introduction

Using the metallurgical testing results of IMMT and the finalised flowsheet (Figure 7-1), Tirupati further developed and refined an industrial concentration process for both its deposits at Sahamamy and Vatomina.

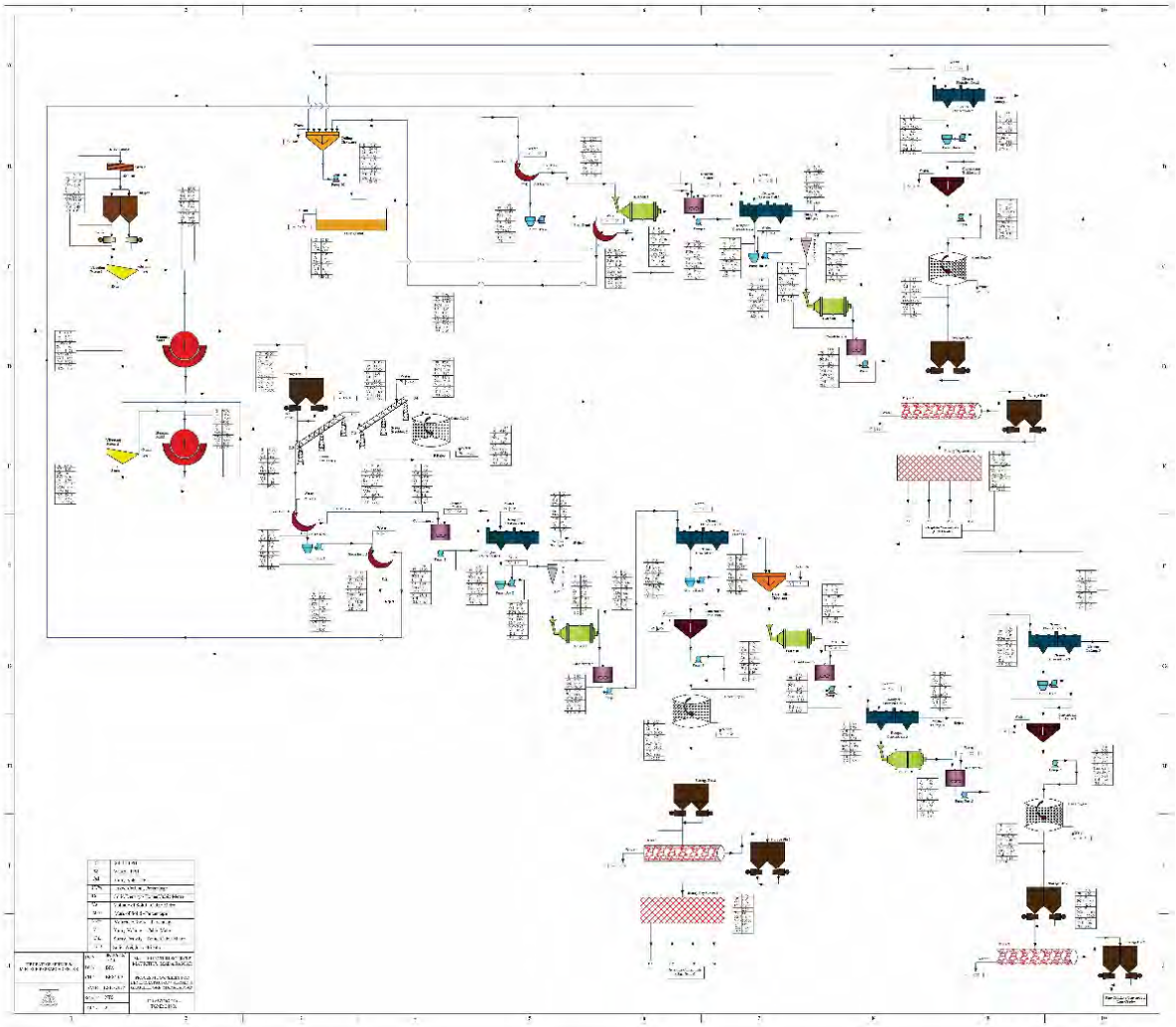


Figure 7-1: Finalised Process Flow Sheet

A 3,000 tpa plant, designed in-house, has already been commissioned in Sahamamy in early 2019, which is now producing. A 6,000 tpa plant, following the final process flowsheet, is envisaged in Vatomina with plant construction substantially completed. As mentioned previously, Tirupati proposes to develop its capacity in both the deposits in stages, with the concentration plant's in later stages planned for 18,000 tpa capacity of graphite concentrate production over a series of phases.

The process is designed with an assumed yield from ore (80% minimum recovery) to be 4.50%, from an average plant feed head grade considered for design purposes to be between 5-5.5% Cg.

7.3.2 Sahamamy

Prior to acquisition of the property by the Company, Sahamamy was reportedly producing approximately 250 tonnes of flake graphite per annum from an old process plant. Upon acquisition, Tirupati increased output from the plant to a rate of 40-50 tpm as of July 2018. The project holds environment authorisation for a capacity of 3,000 tpa processed graphite production.

On review of the existing facilities, Tirupati determined that the existing plant was neither capable of nor technologically up to the mark for achieving the pre-approved capacity. Accordingly, Tirupati drew up a plan for a new process plant and designed a 3,000 tpa plant, which was constructed and commissioned during Q1 2019; Figure 7-2.

Figure 7-2: View of the Plant site taken during site visit in June 2019 at Sahamamy; the new Plant is designed for 3,000 tpa graphite concentrate

Figure 7-3: Another view of the Plant built in Sahamamy

Figure 7-4: Process plant photograph taken during plant site visit in June 2019; hopper, ball mill, scrubber-classifier SAGE, ball mill discharge point, centrifuge recovery of graphite

Process Description

ROM ore of (-) 200 mm size is being put into a hopper fitted with fixed grizzly to arrest presence of any oversize material. The hopper is fitted with an apron feeder which discharge ore on to a scalping screen of 50 mm aperture. The oversize material from the scalping screen is put into an Impact crusher to reduce all (+) 50 mm ore to (-) 50 mm product. Re-circulation of crusher product is being done to the scalping screen so that the final product (-) 50 mm comes out from the undersize of Scalping screen.

The entire (-) 50 mm crushed ore from Scalping screen underflow is again fed to another sizing screen of 3 mm aperture. The (-) 3 mm fraction from the screen undersize goes directly to a hopper. (+) 3 mm fraction goes to DR Crusher which reduces the (+) 50 mm to (-) 3 mm. The entire product from DR Crusher is re-circulated back to the check sizing screen. Thus, the final product from this section is (-) 3 mm which is the U/S fraction of check sizing screen.

The entire (-) 3 mm ore fraction goes to Storage bin for beneficiation.

Minus 3 mm fraction from Storage bin is being fed to Screw Scrubber (SB). Screw scrubber overflow (O/F) is being fed to a Sieve bend -1. The oversize from SB goes to a conditioner where Diesel oil is being put as conditioning reagent along with Sodium Silicate. The overflow from the conditioner goes to Rougher Froth Floatation cell where MIBC / Pine oil is being put as frother. The tailings from Rougher Flotation Cell goes to tailing thickener for final disposal as rejects.

The Concentrate from the flotation cell is being put to Classifying Cyclones which are in close circuit with Ball mill which un-lock the coarse particles so that proper liberation produces better yields. Thus, the product from BM is being fed to Conditioner followed by Cleaner Flotation Cell. Concentrate from the Cleaner Flotation Cell are being fed to Concentrate Thickener. The underflow (U/F) from the Concentrate Thickener is being fed to Centrifuge for dewatering followed by Dryer before putting into Storage bin.

The U/F from Screw Scrubber is being fed to second Screw Scrubber. The beneficiation steps are similar to as described above. The O/F from this second scrubber produces high grade concentrate as the final product comes through 2nd stage of Cleaner Flotation Cell.

The Company expects to put the final tailings such as clay, into beneficial use. SRK is informed that the Company is presently conducting different types of studies on the tailings including design of thickners, assessing the clay uses and anticipates the material could be used locally for terracotta tiles, bricks and other earthen wares.

Present Status (3,000 tpa Plant)

The plant commissioning started in February 2019 and was completed end of March 2019, with a sand extraction technology (Scrubber) proposed by IMMT, which the Company has termed SAGE - Self Attrition Graphite Extractor installed. Since it was successfully commissioned, from April 2019 the Company stabilised the operation of SAGE and integrated the equipment into the overall process. In June, the plant was operated at 40-50% capacity. By September 2019, the plant operated at 70% of design throughput while broadly achieving the other key processing parameters. Plant optimisation activities were completed by December 2019 and after a Christmas break, Tirupati has declared start of commercial production from 11 January 2020. Plant production at the rated capacity of 250tpm of graphite concentrate is expected from March 2020, with January and February having lower number of operating days.

Based on input shared with SRK, for the month July 2019 to May 2020, the RoM ore feed grade on daily basis has varied between 3.25% to 5.91%, the graphite concentrate yield (% production per ton ore) varied between ~3-5%. Combined product assayed 85% to 96% fixed carbon with a fixed carbon recovery varying between 80-90%. Between July 2019 to May 2020, the total run-of-mine ore feed to the Plant was 22,903 tonnes (dry basis); the total product (graphite concentrate) produced were 894,966 kg. The yield (% production per ton ore) on monthly basis varying between 3.5% to 4.7%, respectively. The graphite concentrate produced between July 2019 and May 2020, had graphite flakes, as:

- >50 mesh (Jumbo) between 50-60%;
- between 50-80 mesh (Large) between 25-30%; and
- rest were flakes below 80 mesh (Small).

7.3.3 Vatomina

The Vatomina deposit is a greenfield property. At the first stage, Tirupati has conceived a 6,000 tpa production capacity processing plant, which it has in-house designed and have initiated earthworks at the site for the plant construction; Figure 7-5.

Going forward, the Company proposes to add additional plant capacity in stages adding 18,000 tpa plant modules, which it has also designed in-house. The Company's Strategic Plan is to develop a total production capacity of 60,000 tpa of graphite concentrate from Vatomina.

Figure 7-5: Vatomina: View of the Construction site taken during SRK site visit in 2019

Figure 7-6: Vatomina: truck unloading point; under construction

Process Design Criteria (6,000 tpa Plant)

Table 7-1 summarizes the general parameters upon which the 6,000 tpa concentration plant design is being conceived for Vatomina. Sizing of the selected equipment is based on these parameters.

Table 7-1: Plant (6000tpa) Design Criteria

Basic Parameters	
Production capacity planned in a Year (t)	6,000
Production capacity planned in a Month (t)	500
Average Production days assumed in a month	25
Target daily Production (t)	20
Target hourly Production (Kgs)	830
Safety factor assumed for plant design capacity	20%
Design Production capacity per day (Kgs)	996
Assumed Yield from ore (85% min recovery)	4.50%
Target head grade for the yield considered	5 - 5.5%
Ore feed capacity per hour for plant design tph	22.13

Operating feed rate required for rated capacity	18.44
Operating feed rate considered for material flow calculations (t)	20

The process is the same as the 3,000 tpa process plant constructed by the Company in Sahamamy.

Water Recycling and Affluent Treatment

The process established provides as solid waste, high quality sand which is free of clay and with favourable particle size distribution that is good for use in construction. In time, Tirupati proposes to make this sand commercially available for export. The waste tailing affluent shall undergo treatment for removal of suspended clay particles by cyclones and thickeners adjacent to the plant outside the primary area and will be recycled into the processing plant and put it into use by the Company. The facility shall integrate input water treatment, storage and supply, tailing processing and recirculation with solid waste settling, storage and disposal facility. Tirupati envisages using the fertile clay output from the tailings on a free of cost basis for general community use in various areas including for the manufacture of clay articles or for top layer replenishment in non-mineralized areas within the permit or even outside.

7.4 SRK Comment

The process flowsheet proposed for Vatomina is the same as the new plant currently being operated at Sahamamy. It can be expected that the Company's experience of bringing Sahamamy into production together with any process modifications that were introduced during its ramp up exercise to steady state, provides the Company with a degree of confidence that the process proposed for Vatomina should achieve the target process performance parameters.

SRK notes that Tirupati management has experience operating graphite processing plants in India and elsewhere, of which it has used to develop and finalise the process design for the plants in Sahamamy and Vatomina. Such in-house experience is positive for the Company and its projects.

8 PROJECT INFRASTRUCTURE

8.1 Introduction

This section provides a summary account of the existing infrastructure available in Sahamamy and new infrastructure and utilities proposed and/or being developed at Sahamamy and Vatomina by Tirupati. The information is summarised from documents and strategy plan shared by the Company and data collected by SRK during the site visit. SRK has not undertaken any independent study on project infrastructure and utility requirements. An overall general site layout for Sahamamy and Vatomina, as conceived by Tirupati, are provided in Figure 8-2 and Figures 8-3.

Location wise, both, Vatomina and Sahamamy projects enjoy important advantages. The Vatomina Project is located on the N2 national highway which connects the largest deep-water port of Madagascar, Toamasina, to the capital city Antananarivo. Accordingly, the project, has ready external infrastructure with proximity to the port as well as the major city in the country. This makes flow of goods and services from and to the project area convenient and feasible. The Toamasina port is about 70 km from the Vatomina project.

The Sahamamy Project is located at an aerial distance of 8 km, west of Vatomina. The driving time from Vatomina to Sahamamy would be approximately 30 minutes for which an internal approach road linking the two projects is being developed by the Company. Once the connecting road has been built, Sahamamy will also have access to the external infrastructure and access to the port and capital through Vatomina.

The Toamasina port has operations and shipping facilities to all over the world, making it highly feasible to ship Tirupati's products to its customers globally. SRK understands that the Company is lined up with shipping lines for import as well as export and has carried both ways of trade for import of equipment and export of bulk testing samples and graphite concentrate from Sahamamy on a regular basis. The Company also has a warehouse at the port to store incoming/outgoing goods as it requires. The movement of products to the port can also be done conveniently with direct connection through the major national highway.

Figure 8-1: Aerial view of the Toamasina port facility (source: www.triposo.com/)

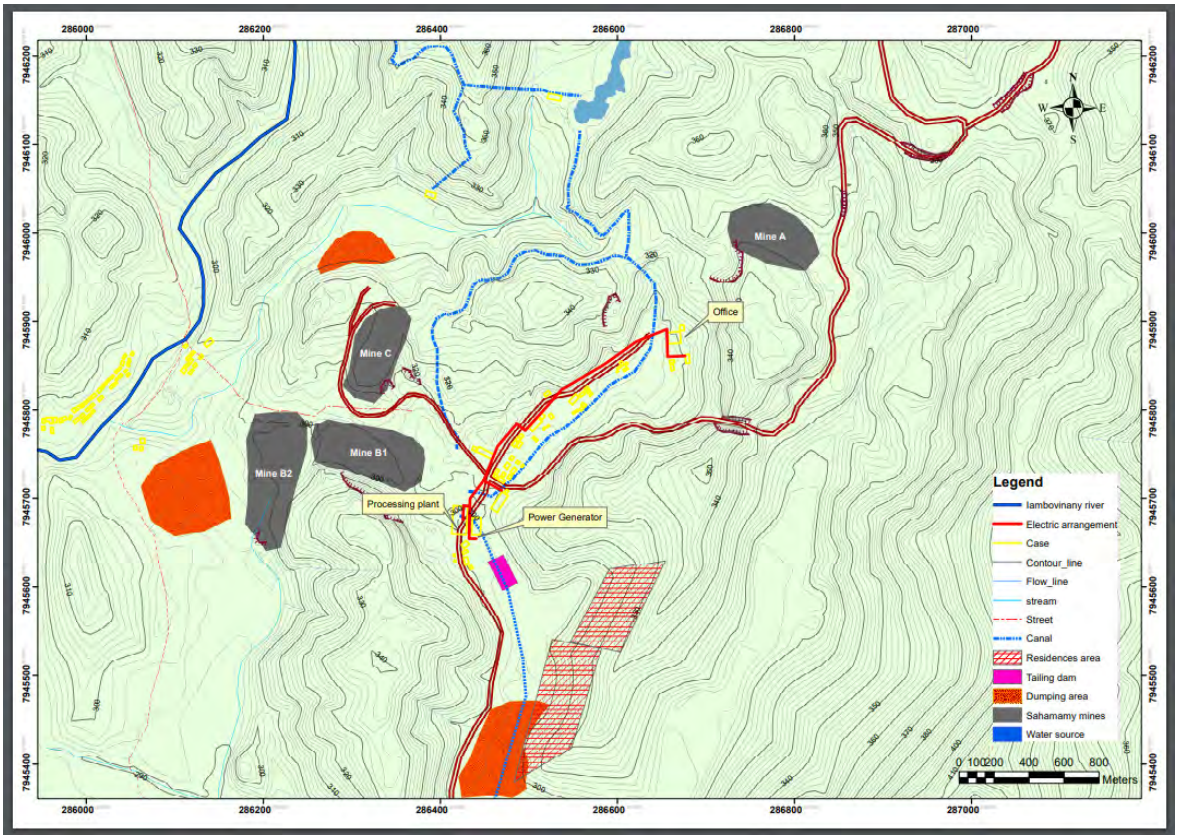


Figure 8-2: Site layout-Sahamamy (source: Tirupati)

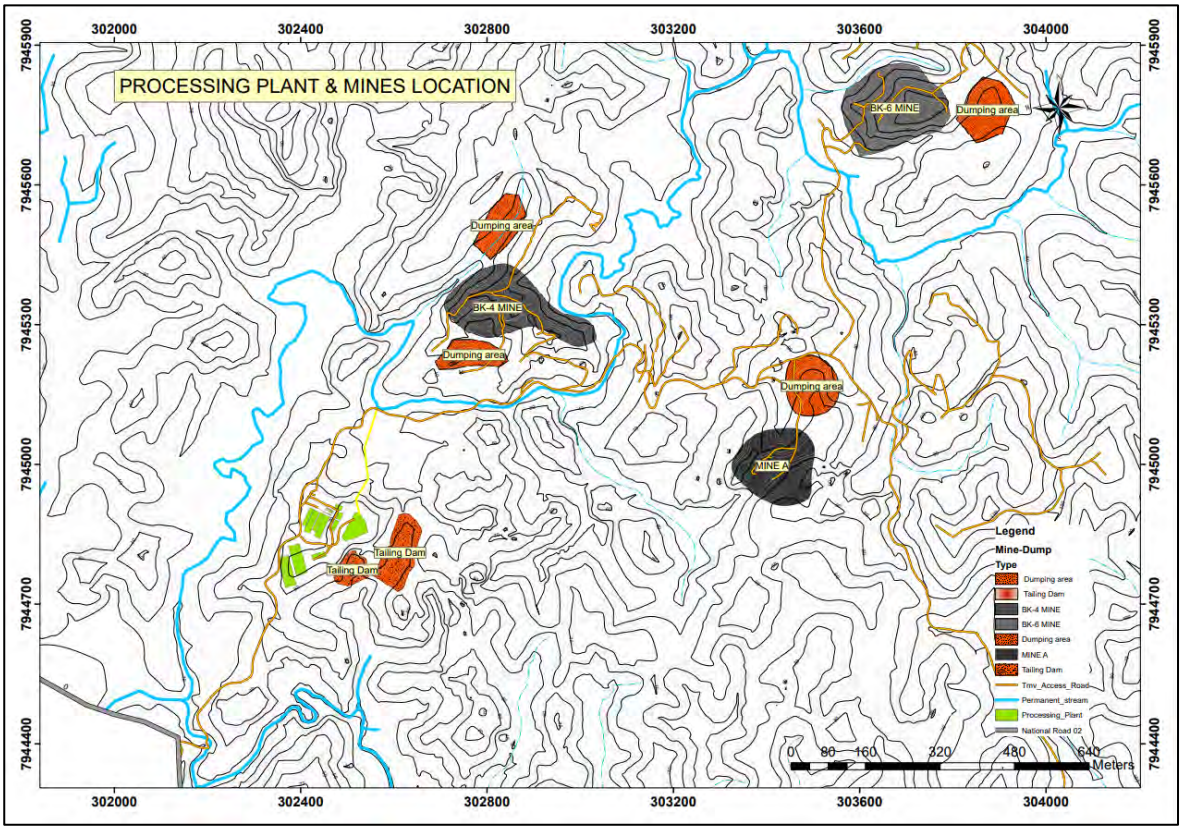


Figure 8-3: Site Layout-Vatomina (source: Tirupati)

8.2 Sahamamy

The Sahamamy project was acquired with existing infrastructure which included an approach road, a base camp, the existing residential facilities along with an old processing plant. The project also had infrastructure for a hydro power plant, consisting of a reservoir, turbine house, and other infrastructure, which reportedly operated at a capacity of 50 Kw. The Company is investigating if the hydro power plant could be recommissioned and put into use in due course.

Since acquisition, Tirupati have upgraded some of the old infrastructure that were available in Sahamamy and as of this Report, has set up and commissioned a new process plant of 3,000 tpa. The Company is in the process of developing the final layout for the next stage development which will be based on further exploration and geological mapping to be completed by end of 2019 so that the constructions are made on the non-mineralized areas.

Other new facilities built since acquisition include a laboratory, fabrication centre, additional residential units for the management team and diesel-based power generation arrangements. A dedicated approach road of about 13 km was also widened to +6 m and strengthened with drains and slope stabilisation; Figure 8-4.

Figure 8-4: Dedicated approach road to Sahamamy was widened (to 6m) and strengthened

Figure 8-5: New laboratory set up in Sahamamy developed post acquisition

Figure 8-6: New Generator installed in Sahamamy replacing the old unit inherited with the acquisition

In addition to the full capacity DG sets planned as prime source of power, smaller capacity DG sets are planned to provide the power requirements of the engineering centre, office and camp. Tirupati has also informed SRK that it has appointed a consultant to evaluate the existing hydro power setup at the site and to evaluate ways to revive the hydro power facilities at Sahamamy. SRK has not studied the facility at site so is not able to comment further on it at this stage.

Figure 8-7: Reservoir and pipeline for an old hydro power plant (now non-operational) at Sahamamy; Tirupati proposes to revive the hydro power plant in due course

Figure 8-8: Turbine and other equipment at the old Hydro power plant (now non-operational)

The Sahamamy project is presently connected from Brickaville to Gismay by boat on river, a 45 minutes ride on the river. The Company proposes to develop a new road connecting it to Vatomina to support its operations and has planned for a 11 km road working with an in-country specialist consultant. To date, a detailed layout has been designed as well as an environmental impact assessment report produced upon which the Company has approached the environment department for permission to initiate construction of the road.

The water requirements in Sahamamy is presently sourced from an existing water reservoir arrangement which has been in place and operating prior to the acquisition.

8.3 Vatomina

The Vatomina project, which is a greenfield property, is situated close to the N2 national highway, the main road connecting the capital city, Antananarivo and the main seaport at Toamasina. Since acquiring the property, along with exploration works, the Company undertook earth and site preparation works to advance the Project to the present state of development awaiting the initial 6,000 tpa process plant installation.

A concrete 11mx4m bridge was constructed by the Company to cross over a stream at the entrance of the permit area from the N2 to gain access to the site area. The bridge is an all weather, reinforced concrete construction designed to carry up to 35 tonne loads.

Figure 8-9: Newly constructed bridge connecting Vatomina site to the National Highway

Internal roads connecting from the N2 national highway to the base camp, processing plant site, and a network to reach the extensive mineralised zone in hilly terrain totalling about 15km was built by the Company to provide access within the project area.

For road management, Tirupati has recently introduced a Compactor; Figure 8-10.

Figure 8-10: Compactor (introduced in August 2019) at work in Vatomina; to be used for road management

A management camp area constituting boarding, lodging, dining and recreation facilities for the resident management and technicians' team has been created to accommodate 20 persons considering the requirement of trained personnel to be stationed at the facility and for visiting senior management and other guests. Guest visitors include customer teams, consultants, auditors, analysts and service providers. The Base Camp is powered by solar energy; **Figure 8-11 and Figure 8-12**

Figure 8-11: A view of the Base Camp and office area; Vatomina

Figure 8-12: Store and a Solar power pack at the Vatomina Base Camp

The Company completed the process of land acquisitions for the mineralized areas as well as areas required for various activities and infrastructural development. The area development of the initial 6,000 tpa process plant has begun and Tirupati informs SRK as of the date of this Report that it is waiting for the erection of the superstructure to install process plant equipment.

Tirupati has undertaken detailed topographical mapping of the area using total station at a scale of 1:5000. A site plan has been prepared for the development of the project to the three-year capacity

target of 60,000 tpa graphite concentrate in a 10 hectares non-mineralized area taking into consideration the topography. Figure 8-13 provides a sketch plan.

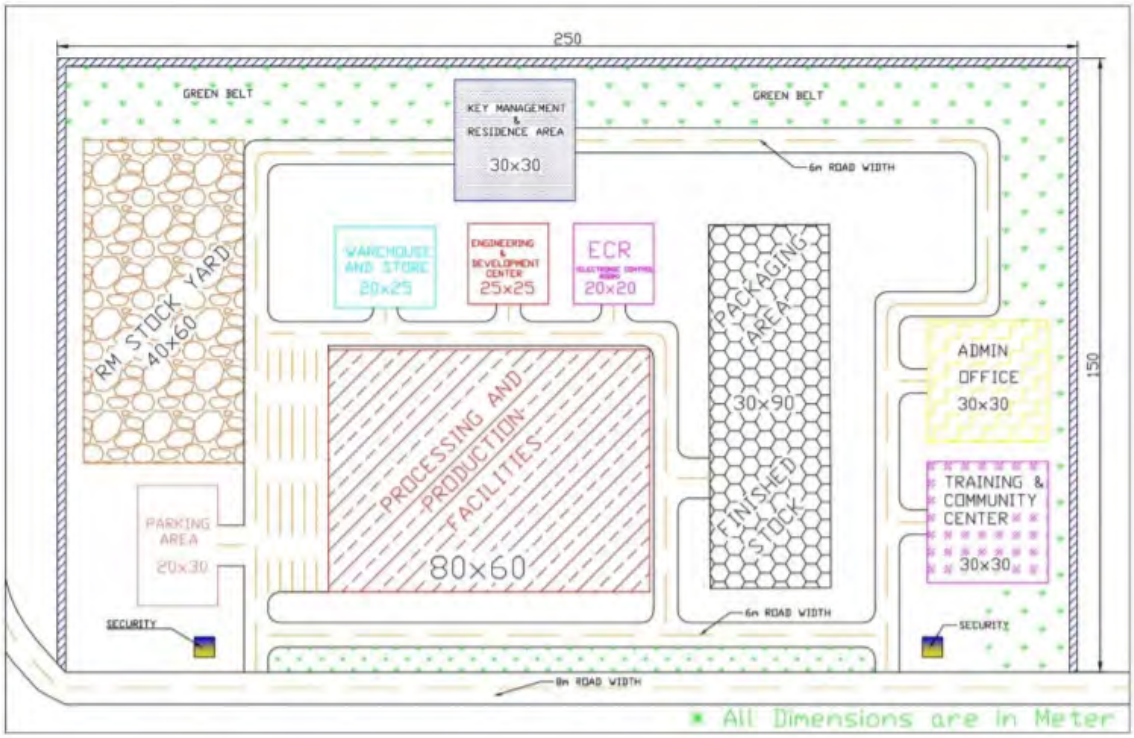


Figure 8-13: Site Layout Plan, as conceptualised by Tirupati, for a total 60,000 tpa Process Plant infrastructure

As indicated, the capacity build-up is proposed to be undertaken in stages, with the present plan to install a 6,000 tpa plant at the 1st stage, to be followed by three modular units of 18,000 tpa capacity plant each. The processing area requirement for each module is estimated at approximately 14m x48m shed area. Each shed will be installed as the plant capacities are installed. Once the Company completes the 1st stage of development at Vatomina, the site area would be considered a brownfield development with each subsequent expansion phase.

Similarly, the raw material stock yard requires area grading for storing raw material for at least 3 months. The area will be developed to its total capacity alongside the modular units.

Figure 8-14: Area where the 1st Stage Processing Plant (6,000 tpa) is planned; picture taken by SRK during site visit

Figure 8-15: Area where the 1st Stage Processing Plant (6,000 tpa) is planned; update shared by Tirupati

The water requirement in Vatomina is expected to be met from perennial stream adjoining the plant area in Vatomina. At Vatomina, the process plant water is planned to be 100% recycled thus only about 20% of the total water use in the process being required. The average per ton water flow in the process, common across the total capacity created, is 30,000 litres.

The water flow circuit shall include facilities as per the topography and source at each project and include storage tanks for input water for the processing plant, a water treatment plant for removal of suspended solids and pumping the same to the input water tank and an overhead fresh water tank for finishing section flotation cells and appropriate pumping arrangements with backup facilities for 24/7 operations.

For drinking and other human use, underground water from deep bore wells shall be the preferred source with required water treatment facilities. Treated drinking water shall also be provided to the community at the community centre in a facilitative manner.

Initially, power for the Vatomina Project would be sourced using diesel-based DG sets as no grid power is available in the area. In addition to the full capacity DG sets planned, smaller capacity DG sets are also planned to provide the power requirements for the engineering centre, office and camp.

In its objective of achieving longer term green power, the Company initiated a pre-feasibility study for hydro power generation in the Vatomina area and prospects for an up to 350 kw hydro power generation was reported in the western part of the permit area. Since the area is still unexplored, the Company has initially planned DG power and in due course, proposes to further explore hydro power generation or other green energy possibilities at the Vatomina Project as well.

8.4 Management Information System (MIS)

For over 12 months, Tirupati has been developing a formal MIS / Performance measurement system called GRID that aims to cover all areas of the organisation, including operation, manufacturing, sales and in time, ESG aspects as well. The main items that the MIS would cover are:

- Provide a common platform to capture, measure, analyse and manage Company performance across the various business units of Tirupati and countries; Madagascar and India;
- Provide a transparent IT system to a distributed management team such that goals of each could be tracked in a transparent way;
- Avoid ambiguities in reporting; and
- Compare performance of different business units across countries.

In this regard, Tirupati has been working with its data technology partner, Pragyaam Technologies Pvt Ltd, a start-up from India, since August 2018. Pragyaam is a specialist IT services company based out of India that provides customised decision-making tools including mobile data collection applications and workflow management solutions embedded with powerful analytics to accomplish day-to-day activities and streamline processes.

GRID, is designed to be a cloud based, fully customisable, real-time MIS that would covers every aspect of the operations from mining of ore and waste through to sales and delivery to our buyers and end-users. The entire operating processes was explained to Pragyaam including exploration activities, construction, mining operations, operations of the process facilities, production, infrastructure, sales, logistics as well as day-to-day management requirements. With this information from Tirupati, Pragyaam applied their understanding of user-experience ("UE") and user-interface ("UI") and designed the MIS for the Company using all relevant data points across each operating activity from the Company's historical experience and real-time operating statistics that had already been collected. Data analytics was then embedded, and management reporting structures were developed.

GRID was officially launched for implementation by the Company in September 2019. The system is currently being integrated across the Company's operations at Sahamamy with continual improvements and refinements being made as the MIS is rolled out fully by the Company.

9 ENVIRONMENTAL AND SOCIAL

The mining of graphite, construction and processing plant activities will have impact on the physical and biological environment of the area. The effect on the various aspects of the environment though can be significantly minimised by taking necessary steps of mitigation and following proper monitoring plan.

This section presents SRK's review findings prepared based on a visit to the mine, multiple email and phone exchanges SRK had with the Company, and a desktop review of the following key documents:

- CPR (2018) which provides an account of the environmental baseline data generated, environmental monitoring plan and provides a summary of mitigation and impact optimization measures proposed in environmental report;
- A document from the Company related to its CSR activities and community engagement plan;
- An Environmental Compliance document on Sahamamy translated in English; and
- Official translation of Certificates related to Environmental Permit, Mining Permit and Lease Contract
- A host of other EIA and environmental document in French and Malagasy

9.1 Environmental Management

Mines-Environment Joint Inter-Ministerial Order, No:12032/2000 (6th November 2000) sets the regulation of the mining sector as far as environment protection is concerned, and defines and specifies central and provincial procedures.

Tirupati has full legal responsibility for complying with all country legislation in terms of the environment including protection of air, water, land and rehabilitation. Tirupati must obtain all the environmental permits for activities that will take place throughout the life of the Project, make payments for environmental pollution as required by law, and submit compliance reports (as per environmental requirements).

The Project is currently small with relatively small surface footprint that should have limited impact on the local environment provided that the environmental and social management measures are appropriately implemented. The major environmental management risk is dealing with water quality related issues such as sediment and erosion control.

Environmental management at Tirupati mainly consists of the following key activities:

- ensuring that water from processing operations laden with silt does not reach local water courses; and 100% of the non-consumed water from processing is treated, recycled and reused;
- mined out areas are backfilled with waste; and non-mineralized mined material is used in land-filling and for earthwork in the projects;
- following good industry practice with regard to general environmental housekeeping on site including for example slope stabilization activities in areas where internal roads were made or had erosion tendencies; plantation of local vegetation, grasses; use of geotextiles where needed; use of Solar Energy in mine Base camps etc.
- employees are provided with safety gear and are first trained for the activity to be performed;
- regular camps for awareness on health and safety practices are carried out;

- equipment is checked and repaired regularly as per maintenance schedule.

An on-site environmental manager is available at each site who mainly operate under the guidance of a local Environmental Consultant. SRK is not in a position at this stage to comment whether this arrangement is sufficient for the current operation, however, it is suggested that the Project will require a stronger on-site team going forward, especially when it has ramped up its production which widens its area of impact.

Management of social issues at the Project primarily consists of:

- assessment of surface occupancy of land and determination of a mutually acceptable mechanism for compensation for land use and access;
- providing local and regional communities with direct and indirect employment opportunities that includes a range of social benefits such as schooling and healthcare;
- investing in some key local projects such as roads, schools, clinics and vocational training centre.

9.2 Land Settlement

Given the way the Project is progressing with its construction work in and around Vatomina, its evident that the Company has been able to establish healthy relations with stakeholders and has made efforts to engage and inform them about the Project developments and its benefits. Due to the efforts being made to engage and develop good relations with local communities, there is increasing approval of the project development amongst communities and others which is resulting in a social licence to operate.

An example of pro-active engagement with communities is the formation of a 28-member committee, which assesses surface occupancy of land and determined a mechanism for payment of compensation to land rights holders. Having determined the requirements for land for the Project, the following agreements and activities have been concluded for land required for the processing facilities and mineralized areas:

- A parcel of 10 Hectares land lying in between the N2 national highway and the mineralized zone in Vatomina within the Permit area has been acquired on a long term lease conterminous with the Mining Permit for setting up the processing facilities.
- Approximately 50 Hectares of the mineralized zone identified for mining operations based on exploration findings have been settled on long term leases for the mining operations, with a principle laid for settlement of any further areas as may be required by the Project.
- The Company has engaged with the land rights recording institutions for awarding formal land certificates to complete the legal procedures for recording of surface rights, an activity that has resulted in huge support from the community.

Due to efforts such as these and other activities being made by the Company to engage and develop strong relations with local communities resulting in increasing approval of the Project amongst communities and others, the Company can be expected to continuing maintaining its social licence to develop and operate at Vatomina.

9.3 Community Engagement Programme

Tirupati is committed to maintaining strong positive relationships with stakeholders throughout the Project's lifecycle. As part of such endeavours, the Company has conceived a continuous engagement programme, which it has titled "Shakuntalam", which represents motherhood.

The Project is located in an underdeveloped area with minimum infrastructure available. The Company has taken upon itself as their social responsibility to improve the quality of the lives of people surrounding the project area alongside the development of the Company. Some of these key initiatives, either already initiated and/or planned includes:

- Building a Health and Hygiene Centre where a full-time primary doctor will be appointed by the Company with sufficient supply of free basic medication distribution;
- Providing emergency First Aid and primary health care accessible by the local and regional population;
- Primary health care to expecting mothers of workers and villagers in the mine area including free distribution of supplements and nutrients etc.;
- Arrangements of clean drinking water for the entire community living around the Project;
- Developing a Sports Development Centre to promote various sports in the surrounding areas with football and volleyball grounds development for use by workers and the surrounding population, a badminton court development and allied facilities of different indoor and outdoor games;
- Assist with child education programmes including providing transport to schools, education inputs, study materials and improving school infrastructure to support local schools to improve child attendance and overall, to promote educational awareness and its importance; and
- Developing a vocational training centre with proposals to include an agriculture and horticulture training centre, dairy products development centre and artificial insemination for improvement of cattle breeding.

In its financial model, Tirupati has budgeted 0.9% of gross revenue from the Project towards local community development programmes, building of facilities and related activities.

9.4 Permit

The Company has Environmental Clearance (EC) for 3,000 tpa graphite concentrate production in Sahamamy with the permit received in 2013. The EC for Vatomina was received in October 2016. Currently the permit for Vatomina is for 12,000 tpa of graphite concentrate. Tirupati is now pursuing permits for building a connecting road between the two projects, application for which has already been made with concerned department. As communicated, Tirupati will subsequently submit its application for its 2nd process plant in Sahamamy, which it has planned of 18,000 tpa capacity.

9.5 SRK Comment

The Project has the required environmental permits for its initial development plans, both for Sahamamy and Vatomina. This would mean Vatomina could go into commercial production as soon as the 6,000 tpa processing plant is constructed and commissioned.

With the Company planning to enhance its production capacity over five times from its existing permit, SRK recommends that the Project should submit to a formal risk assessment early on in the process, and preferably undertake a quantitative risk analysis, which will help to define and measure exposures and weaknesses.

SRK notes that in general, work undertaken to meet local permitting conditions may not necessarily give enough support for a project's economical assessments within all topic areas. Therefore, it is advisable to conduct a risk assessment exercise which would help to critically define and communicate a level of confidence in the estimates and the Project's development schedule.

10 STRATEGIC PLAN

10.1 Strategic Development Plan

The Company's overall strategy is to establish a combined production capacity of 81,000 tpa of flake graphite within 2023, with 21,000 tpa processing capacity in Sahamamy and 60,000 tpa processing capacity in Vatomina, respectively. An internal feasibility study, termed "Combined Feasibility Study - All Projects with Development Plans & Concepts abridged for External Sharing" (herein after referred as "Combined Feasibility Study"), presents Tirupati's strategy for the mining projects in Madagascar and its downstream projects in India. Tirupati's strategic plan comprises of a capital expenditure plan of US$24M in its mining projects, to be spent between 2019 and 2023.

The "Combined Feasibility Study" and expenditure plan, comprises of multiple phases, defined by modular capacity additions in its processing facility; Table 10-1.

Table 10-1: Strategic Development Plan

Process Plant Throughput Capacity	Projected Date of Commercial Production
3,000 tpa (Sahamamy)	April 2019
6,000 tpa (Vatomina)	Q2 2020
18,000 tpa (Vatomina)	Q2 2021
18,000 tpa (Sahamamy)	Q2 2022
18,000 tpa (Vatomina)	Q2 2022
18,000 tpa (Vatomina)	Q1 2023

The Company presently has environmental clearance for a combined production of 15,000 tpa of graphite concentrate, with 3,000 tpa for Sahamamy and 12,000 tpa at Vatomina, respectively. Sahamamy was acquired with an old processing plant with authorization for 3,000 tpa flake graphite production. As a first step, Tirupati implemented the redevelopment of Sahamamy to its permitted capacity of 3,000 tpa by building a new processing plant. This phase was completed as scheduled and production was initiated by the Company in April 2019, with commercial production declared from 11 January 2020. Once the initial 3,000 tpa production stabilises and detailed exploration in the property is undertaken, Tirupati proposes to expand production capacity from Sahamamy.

The second phase in Sahamamy, as envisaged, will encompass the addition of an 18,000 tpa processing plant module, in 2022, thereby expanding the total production capacity in Sahamamy up to 21,000 tpa. Based on information available, the Company will initiate the permit process for capacity expansion in Sahamamy immediately after the permit for a road connecting Sahamamy and Vatomina is received.

Sahamamy had an existing hydro power generation setup which is non-operational at present. Tirupati proposes to recondition the hydro power facility going forward to recommission this up to the maximum possible power generation capacity. Tirupati has also undertaken a detailed assessment to build a connecting road with Vatomina and surveyed and mapped out an ~11 km route for the connecting road. The permitting process for this road has already been initiated by the Company.

Vatomina which covers an area of 25km^2, has geological potential to prove a larger resource base, as it appears from available data. Based on the presently defined Mineral Resources and exploration potential, Tirupati strategy is to develop a total production capacity of 60,000 tpa flake graphite at Vatomina. In the initial phase, a 6,000 tpa plant is being constructed, with the area development, equipment manufacturing and procurement, internal roads, construction of ancillary and processing

building for first stage ongoing and largely completed awaiting the installation of the process plant. Subsequently, capacity expansion is proposed by adding three 18,000 tpa plants. Tirupati plan will be dependent on the market condition and it successfully establishing the required Mineral Resource base to support its expanded plant capacities progressively over time.

An independent market analysis commissioned through Fastmarkets, provides an idea of flake graphite demand-supply trends and a price forecasts for graphite products over the coming decade.

10.2 Production Schedule

Tirupati's development plan assumes a production schedule of flake graphite for the first 15 years of production; a summary of which is presented in Table 10-2

Table 10-2: Preliminary Production & Ramp-up Schedule (source: Tirupati)

Financial Year	Vatomina – TMV (tpa)	Rostang – Sahamamy (tpa)	Total Graphite Concentrate Production (tpa)
2019	0	0	0
2020	450	2100	2550
2021	5250	3000	8250
2022	21,000	3000	24,000
2023	40,800	18,000	58,800
2024	59,700	21,000	80,700
2025	60,000	21,000	81,000
2026	60,000	21,000	81,000
2027	60,000	21,000	81,000
2028	60,000	21,000	81,000
2029	60,000	21,000	81,000
2030	60,000	21,000	81,000
2031	60,000	21,000	81,000
2032	60,000	21,000	81,000
2033	60,000	21,000	81,000
2034	60,000	21,000	81,000
Total (tonnes)	727,200	257,100	984,300

In developing the production schedule, Tirupati has made the following assumptions:

- Effective processing plant capacity considered maximum 80% of installed capacity (i.e. 20% redundancy built-into plant design by the Company);
- That the 6,000 tpa process plant planned in Vatomina will take (3) three quarters to ramp-up operations to reach its peak, steady state capacity with the first quarter of production during the ramp-up phase considered to start at 30% of its steady state production capacity;
- Given the learnings it would take from stabilising operations at its initial 3,000 tpa and 6,000 tpa plants, that the 18,000 tpa plants planned in the subsequent phases in Vatomina and Sahamamy, will take two quarters to ramp-up operations to reach their peak, steady state capacity with the first quarter of production during the ramp-up phase considered to start at 40% of steady state production capacity;

- Yield for each process plant is assumed at 4.5% of ore feed tonnes; accordingly, the ore requirement to achieve the peak production of 81000tpa flake graphite would be 1.8Mtpa;
- The mining capital expenditure estimates considers a stripping ratio of 1:2 (ore: waste) for Sahamamy and Vatomina based on the existing operation in Sahamamy and exploration data from Vatomina;
- Mining activity is planned to be performed on a 6 days per week basis with maximum 16 hours of operations per day and total days assumed as 300 days per annum of operation;
- The plant ore feed grade is assumed to be of 5-5.5% Cg, with product output expected as in Table 10-3:

Table 10-3: Projected Product Quality

Product Classification	Proportion (%)	Grade (% FC)
+50 mesh (Jumbo)	50%	Up to 96%
-50 mesh +80 mesh (Large)	30%	Up to 96%
-80 mesh (Small)	20%	Up to 96%

The projected product mix is based on operating results from the Sahamamy Project which on average, has produced 55-60% Jumbo flakes, 30-40% Medium size flakes and the rest are Small flakes.

SRK notes that the metallurgical test work results on bulk samples from Vatomina also provided a coarser (i.e. larger sized) distribution.

10.2.1 SRK Comment

The Strategic Plan assumes substantive increases in production from 2022 with the proposed peak flake graphite production of 81,000 tpa achieved within 2024. The plan will be reliant on the market condition and Tirupati successfully increasing the level of geoscientific knowledge and confidence in the mineral resource estimates through its planned exploration programme. Specific items to be addressed in implementing the development plan are:

- Increased application and documentation of exploration Quality Control and Quality Assurance procedures, under the guidance of a Competent Person;
- Increase production reconciliation, specifically with respect to Sahamamy which is under production;
- Commissioning further technical assessments including completion of multi-disciplinary pre-feasibility studies (‘‘PFS’’) to demonstrate the technical feasibility and economic viability of its expansion programmes in Sahamamy and Vatomina

SRK is aware of the Company’s initiatives in respect of introducing formalised geological processes and the focus on capturing project information introducing a formal IT based MIS. The current focus in these areas must be continued to further develop the Company’s management systems, thereby establish the appropriate multi-disciplinary focus required to ensure continued success.

The Company has stated its intention to commission a multi-disciplinary Bankable Feasibility Study (BFS) for the projects. SRK notes that taking a staged approach would be better and that the Company should initiate with a minimum PFS level study. The scope of the PFS should include the generation of quarterly and annual mining and processing schedules to enable detailing of the operating and capital expenditure requirements. Such a multi-disciplinary study will help identify data

gaps thereby refining its exploration programme and its expenditure plan, as required, before a BFS level study is commissioned.

10.3 Graphite Market & Demand

Tirupati commissioned an independent market study at the end of 2018, through Fastmarkets (formerly Metal Bulletin Group), an independent research and consultancy arm of Euromoney Institutional Investor PLC, to study the prospects of the natural graphite market and provide an outlook on graphite prices which can be expected over the coming decade. A summary from the Fastmarkets report is provided in this section for reference.

10.3.1 Natural Graphite Demand

Demand for natural graphite has historically been driven by the refractory, foundry and crucible sector. Refractory, foundry and crucible demand accounts for approximately 46% of global demand for natural graphite. The refractory industry drives most of this demand, whilst the foundry and crucible sectors consume smaller volumes of higher purity graphite products. Graphite price is historically driven by steel and industrial applications. Today and into the future, graphite prices are expected to be driven more by battery storage and other high growth sector demand.

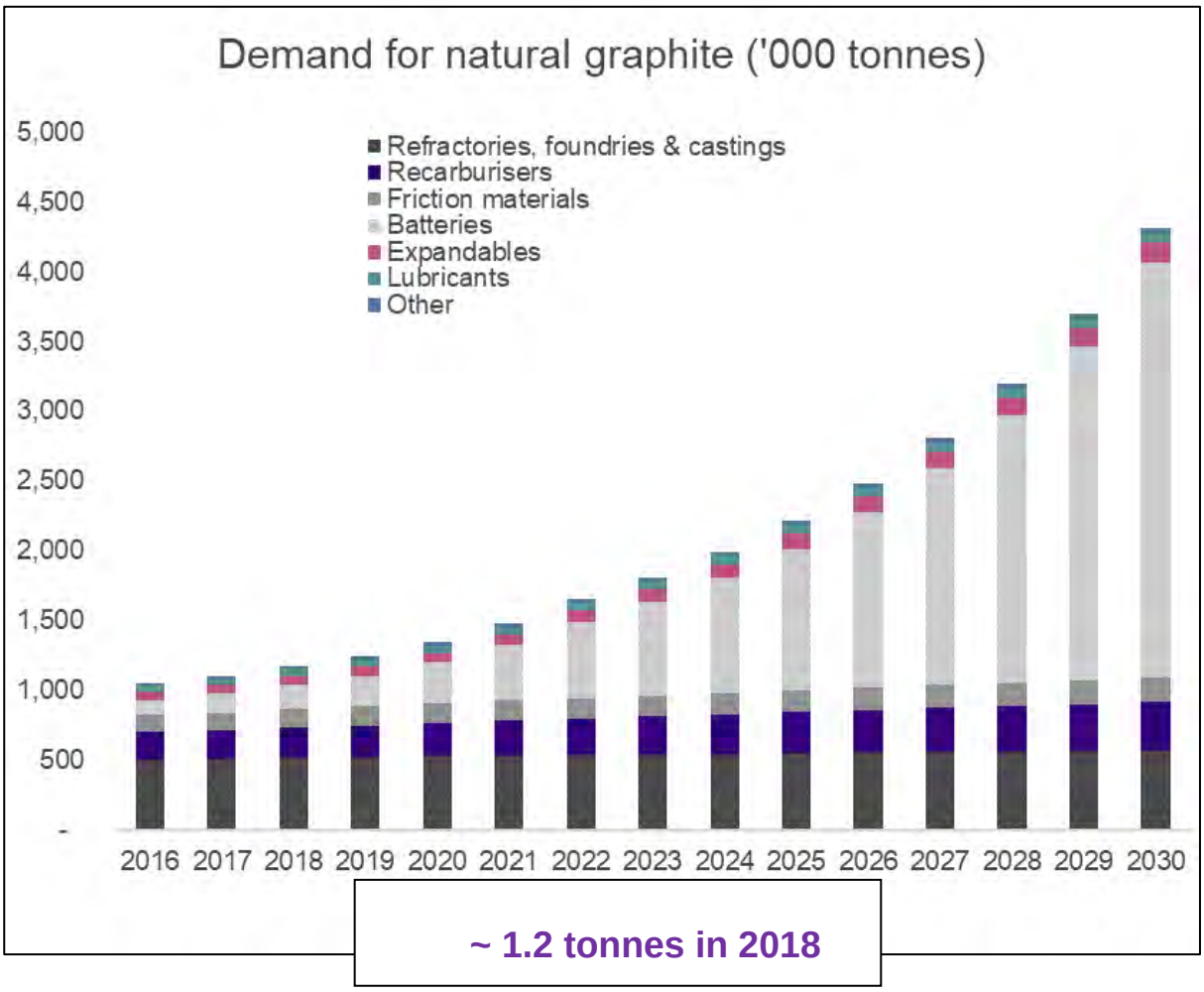


Figure 10-1:Demand for Natural Graphite

The battery sector is comparatively small presently, but it is rapidly growing. In 2017, Fastmarkets estimate that the battery sector accounted for 13% of overall global consumption of natural graphite. The graphite consumption within batteries for electric vehicles ("EVs"), is forecasted to change significantly in the coming years.

Given the rapid increases in EVs and storage facilities projected globally, the global demand share of graphite in the battery sector is projected to grow substantially, from a 13% share in 2017 to 56% by 2027; Fastmarkets (2018).

Including battery application, the demand for graphite is expected by experts to experience unprecedented growth.

Large Flake 20 –80 mesh	Medium Flake 80 –150 mesh	Small Flake 100 mesh to Micronized
Gaskets and Seals	Basic Refractory:	Paintings & Coatings
Flame Retardants	Magnesia Carbon	Pencils
Thermal sheets	Alumina Carbon	**Dry & Ni MH Batteries**
Fuel cells	Unshaped Refractory	Lubrication
Plugging Agents	**Flame Retardants**	Friction Materials
Expandable Graphite	**Li-ion Batteries**	**Composites**
Thermal Management		**Li-ion Batteries**
Li-ion Batteries		**Aviation & Space Technology**
		Nuclear Technology

Sectors = High growth, over 7% CAGR projected

10.3.2 Price Forecast

Table 10-4 provides for a price forecast from Fastmarkets.

Table 10-4: Price forecast

Grade		CIF Europe								
		2017	2018	2019	2020	2021	2022	2023	2024	2025
+32Mesh	92	1,932	2,070	2,174	2,282	2,378	2,478	2,582	2,690	2,803
+32Mesh	94	2,100	2,210	2,323	2,441	2,551	2,666	2,786	2,911	3,042
+32Mesh	95	2,150	2,270	2,406	2,551	2,699	2,855	3,021	3,196	3,381
+32Mesh	96	2,200	2,360	2,549	2,753	2,962	3,187	3,429	3,690	3,970
+32Mesh	97	2,350	2,470	2,668	2,881	3,111	3,360	3,629	3,920	4,233
+48Mesh	92	1,564	1,670	1,770	1,876	1,980	2,088	2,203	2,325	2,452
+48Mesh	94	1,700	1,810	1,919	2,034	2,146	2,264	2,388	2,519	2,658
+48Mesh	95	1,750	1,855	1,985	2,124	2,251	2,386	2,529	2,681	2,842
+48Mesh	96	1,800	1,915	2,049	2,192	2,346	2,510	2,686	2,874	3,075
+48Mesh	97	1,850	1,970	2,128	2,298	2,482	2,680	2,895	3,126	3,376
+80Mesh	92	741	900	927	955	983	1,013	1,043	1,075	1,107
+80Mesh	94	790	960	1,008	1,058	1,111	1,167	1,225	1,286	1,351
+80Mesh	95	820	1,030	1,102	1,179	1,262	1,350	1,445	1,546	1,654

+80Mesh	96	880	1,150	1,242	1,341	1,449	1,565	1,690	1,825	1,971
+80Mesh	97	900	1,250	1,363	1,485	1,619	1,764	1,923	2,096	2,285
+100 -80Mesh	92	808	850	893	901	906	910	915	920	924
+100 -80Mesh	94	878	920	929	938	943	948	953	957	962
+100 -80Mesh	95	976	960	979	999	1,009	1,019	1,029	1,039	1,050
+100 -80Mesh	96	969	970	999	1,029	1,060	1,086	1,114	1,141	1,170
+100 -80Mesh	97	1,040	1,065	1,097	1,130	1,164	1,193	1,223	1,253	1,285
+200Mesh	92	745	800	816	832	849	866	883	901	919
+200Mesh	94	810	830	847	864	881	898	916	935	953
+200Mesh	95	803	845	862	879	897	915	933	952	971
+200Mesh	96	847	870	887	905	923	942	961	980	999
+200Mesh	97	950	970	989	1,009	1,029	1,050	1,071	1,092	1,114
-200Mesh	92	386	550	532	510	485	455	435	415	400
-200Mesh	94	420	570	576	551	522	489	463	443	429
-200Mesh	95	400	470	549	520	498	482	467	447	437
-200Mesh	96	450	570	641	634	621	588	576	552	534
-200Mesh	97	500	635	692	685	670	635	622	596	577

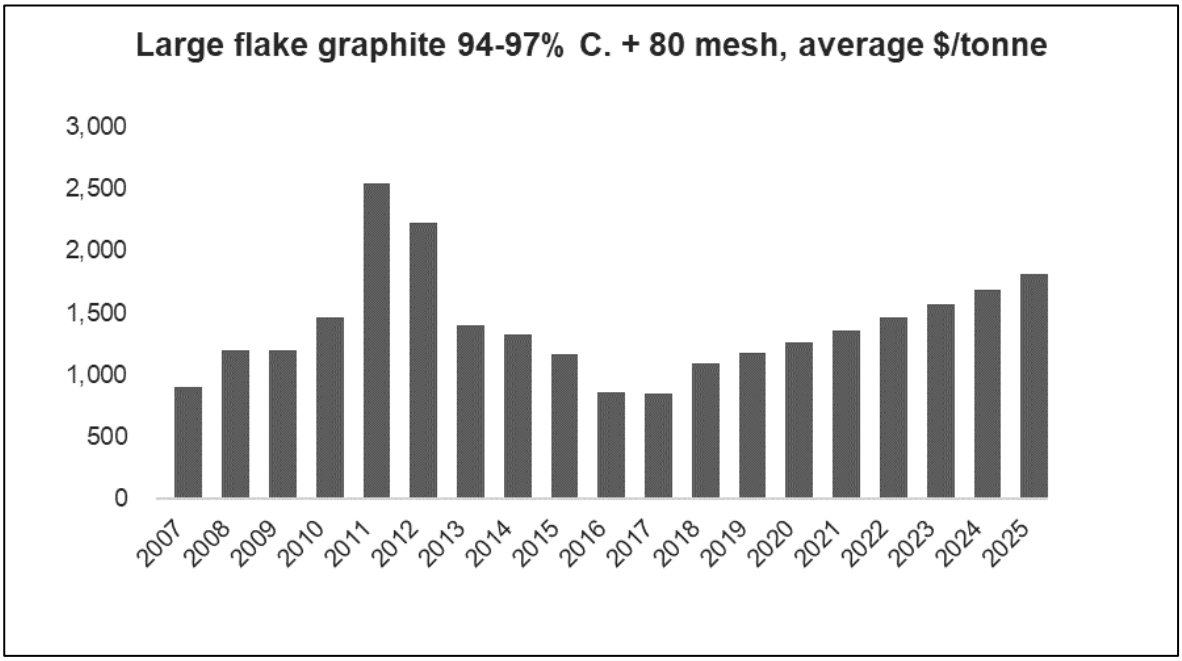


Figure 10-2: Price forecast for Large flake graphite (Fastmarkets)

Significant global production deficits particularly in large flake and battery application areas, is anticipated by Fastmarkets, which would likely put an upward pressure on market prices.

10.3.3 Sales and Marketing Strategy

Tirupati's sales and marketing strategy is partly based on a direct customer sales model in which graphite concentrate produced from the Project will be sold for end use applications like crucibles,

refractories of various kinds, copper wire industry, continuous casting, lubrication, recarburisers, to mention a few. In addition, part of the graphite concentrate produced from the Project is proposed to be used at its own downstream facilities Tirupati is developing in India.

Some of Tirupati's customers for products from Sahamamy includes manufacturers of Crucibles & Foundry Products in Germany, European Trader in Flake Graphite & Expandable Graphite, Indian Trader/Manufacturer of Natural Graphite, to mention a few.

10.3.4 SRK Comment

World demand for graphite continues to increase, particularly due to increased production of electric vehicles which require graphite within batteries. There is minimal new supply entering the market in the short term (Fastmarkets), with many potential mines around the world still seeking financing, which must then be followed by construction. As an existing producer of material with increasing production levels planned in the near term, Tirupati is well positioned to benefit from any short-term tightening of global supply.

Graphite production and processing is still dominated by China, although China produces limited quantities of +50 mesh (large) flake with the majority of its production made up of +80 mesh (small) flake. Besides China, there is currently a shortage of both +50 mesh (large) and +32 mesh (jumbo) material in the rest of Asia as well as in Europe. Tirupati's location in Madagascar may be strategically beneficial to graphite consumers looking for alternative sources of supply, particularly if the global market in the coming years is affected by some of the trade tariffs and restrictions recently announced by the United States and China. Otherwise, SRK understands that Tirupati is strategically developing capabilities for processing graphite concentrate into higher value downstream products with facilities planned to be developed in India for such manufacturing, however these facilities are not part of this CPR assessment.

11 EXPENDITURE PROGRAMME

This section describes the operating and capital expenditure programme Tirupati has outlined in support of its strategic plan. The expenditure programme is based on the production profile that the Company has conceived from Sahamamy and Vatomina, with combined peak graphite concentrate production of 81,000 tpa planned within 2024.

11.1 Capital Expenditure

Tirupati's strategic plan comprises of a capital expenditure plan of US$24M for its planned peak capacity of 81,000 tpa flake graphite production, to be spent between 2019 and 2023. The estimate includes capital expenditure already made for its 3,000 tpa capacity project in Sahamamy including expenses for mining equipment, process plant and supporting utilities, the 6,000 tpa capacity project planned in the first phase in Vatomina, expenditure for additional mining equipment and modular process plant of 18,000 tpa capacity each. While preparing this estimate, Tirupati has assumed an average stripping ratio of 1:2 (ore: waste) and have accordingly estimated the mining equipment requirements. The stripping ratio assumption is based on Tirupati's experience operating its mines in Sahamamy. Table 11-1 provides a summary of the estimate.

Table 11-1: Capital Expenditure forecast for 81000 tpa production

Initial Capital Expenditure (US$)	Total	2019	2020	2021	2022	2023

Initial Capital Expenditure (US$)	Total	2019	2020	2021	2022	2023
Capex Spending for 3000 tpa capacity						
Mining Equipment	452,900	297,900	155,000	-	-	-
Processing Plant & Material Handling	360,800	254,800	106,000	-	-	-
Utility Equipment & Facilities	75,000	55,000	20,000	-	-	-
Plant Buildings	125,000	100,000	25,000	-	-	-
Plant Construction Support	60,000	30,000	30,000	-	-	-
Capex Spending for 6000 tpa capacity						
Mining Equipment	625,000	-	625,000	-	-	-
Processing Plant & Material Handling	699,850	-	699,850	-	-	-
Utility Equipment & Facilities	129,000	-	129,000	-	-	-
Plant Buildings	189,000	-	189,000	-	-	-
Plant Construction Support	75,000	-	75,000	-	-	-
Onetime Capex Spent for Vatomina						
Utility Equipment & Facilities	504,000	60,000	167,000	277,000	-	-
Plant Construction Support	550,000	-	-	550,000	-	-
Engineering tools & equipment	256,000	-	50,000	206,000	-	-
Onetime Capex Spent for Sahamamy						
Utility Equipment & Facilities	157,500	-	-	157,500	-	-
Laboratory Equipment	54,000	30,000	24,000	-	-	-
Construction works	475,000	-	300,000	125,000	50,000	-
Capex Spending for 18000tpa - Unit 1						
Mining Equipment	1,036,500	-	-	1,036,500	-	-
Processing Plant & Material Handling	2,021,000	-	-	2,021,000	-	-
Utility Equipment & Facilities	534,000	-	-	534,000	-	-
Plant Buildings	575,000	-	-	575,000	-	-
Plant Construction Support	725,000	-	-	725,000	-	-
Capex Spending for 18000tpa- Unit 2						
Mining Equipment	1,036,500	-	-	-	1,036,500	-
Processing Plant & Material Handling	2,021,000	-	-	-	2,021,000	-
Utility Equipment & Facilities	534,000	-	-	-	534,000	-
Plant Buildings	575,000	-	-	-	575,000	-
Plant Construction Support	725,000	-	-	-	725,000	-
Capex Spending for 18000tpa- Unit 3						
Mining Equipment	1,036,500	-	-	-	1,036,500	-
Processing Plant & Material Handling	2,021,000	-	-	-	2,021,000	-
Utility Equipment & Facilities	534,000	-	-	-	534,000	-
Plant Buildings	575,000	-	-	-	575,000	-
Plant Construction Support	725,000	-	-	-	725,000	-
Capex Spending for 18000tpa- Unit 4						
Mining Equipment	1,036,500	-	-	-	-	1,036,500
Processing Plant & Material Handling	2,021,000	-	-	-	-	2,021,000

Initial Capital Expenditure (US$)	Total	2019	2020	2021	2022	2023
Utility Equipment & Facilities	534,000	-	-	-	-	534,000
Plant Buildings	575,000	-	-	-	-	575,000
Plant Construction Support	725,000	-	-	-	-	725,000
Total initial capital investment	**24,354,050**	**827,700**	**2,594,850**	**6,207,000**	**9,833,000**	**4,891,500**

SRK makes the following comments regarding Tirupati's projected capital expenditures:

- Processing plant capital is significantly low when compared with projects under development in Madagascar; SRK estimates this is owing to Tirupati's in-house expertise and resources available in manufacturing and/or procuring much of the equipment from India and assembling it in Madagascar. The Company has confirmed that the expenditure incurred for setting up the 3,000 tpa plant at Sahamamy was within its budgets, which give a degree of confidence in the budget estimated for its higher capacity plants, viz. 6,000 tpa and 18,000 tpa;
- Tirupati has considered contingencies which SRK rates is on the lower side;
- Tirupati has considered an average stripping ratio of 1:2 (ore: waste) in its model and have accordingly estimated the mining equipment requirements. SRK notes that the stripping ratio assumption is based on Tirupati's experience operating Sahamamy. Notwithstanding, detailed mine planning work would be required for both the deposits to develop a better idea of year-on-year stripping ratios, which could have a bearing on the equipment requirement and therefore, the capital requirement;
- The mineral processing and plant design aspect is much more well defined for the Projects at this stage in comparison to the mining aspect; mining aspects are conceptual in nature and is primarily based on experience, which needs to be confirmed through proper technical study; expenditure plan would have to refined accordingly, as justified;
- The Company has confirmed to SRK that it shall continue exploration activities required to expand the resource base and upgrade the confidence of its Mineral Resource Estimate.

11.2 Operating Expenditure

Table 11-2 presents a summary of the operating cost forecast for a 81,000 tpa graphite concentrate production scenario, which Tirupati has conceived.

Table 11-2: Operating expenditure forecast for 81,000 tpa Graphite Concentrate Production

Operating Cost (US$/t of Graphite Concentrate)	Total	2019	2020	2021	2022	2023	2024	2025-2034
Variable Expenses								
Mining & Raw Material Cost	59.74	-	49.51	58.41	56.71	56.51	59.47	60.14
Processing Cost	134.52	-	125.47	143.2	131.11	127.66	133.66	135.14
Total Variable Expenses	**194.26**	**-**	**174.98**	**201.61**	**187.81**	**184.18**	**193.13**	**195.28**
Administration & Overheads								
Utility Centres	0.64	-	11.29	5.24	1.8	0.73	0.54	0.53
Senior Operations Management	3.39	-	36.41	16.87	9.95	4.06	2.96	2.95
Dining and other Camp maintenance Expenses	2.02	-	5.88	2.91	2	2.07	2.01	2
Vehicles Maintenance & Fuel	3.03	-	8.82	4.36	3	3.1	3.01	3
Travelling including expat travel	3.88	-	29.41	14.55	6.25	4.24	3.63	3.62
Others like legal, bank charges, Insurance etc	6.07	-	17.65	8.73	6	6.2	6.02	6
Tana & Tamatave Offices including rents	0.55	-	14.12	4.36	1.5	0.61	0.45	0.44
Land Titles and annual pay-outs	0.69	-	4.71	5.82	2	0.82	0.59	0.59
CSR - Health, Education and Agricultural services	1.84	-	8.24	5.82	3	2.03	1.74	1.74
Import Logistics	4.04	-	11.76	5.82	4	4.13	4.01	4
Communication	2.02	-	5.88	2.91	2	2.07	2.01	2
Contingency	4.14	-	21.18	13.09	6.75	4.57	3.92	3.91
Other Administration Expenses	4.04	-	11.76	5.82	4	4.13	4.01	4
Total Administration & Overheads	**36.36**	**-**	**187.12**	**96.29**	**52.25**	**38.76**	**34.91**	**34.78**
Logistics & Packaging Expenses								
Mine to Port Transport	9.93	-	8.43	9.58	9.38	9.39	9.89	10
Port Handling	15.89	-	13.49	15.32	15	15.02	15.82	16
Royalty & Duty	17.88	-	15.18	17.24	16.88	16.9	17.8	18
Packaging	27.31	-	23.19	26.33	25.78	25.82	27.19	27.5
Total Logistics & Packaging Expenses	**71.01**	**-**	**60.28**	**68.47**	**67.03**	**67.12**	**70.7**	**71.5**
Total Operating Cost	**301.63**	**-**	**422.38**	**366.37**	**307.09**	**290.06**	**298.74**	**301.56**

The planned expenditure includes drilling and exploration programmes to grow and refine resources figures. A total of US$4.25 M is planned for exploration starting from 2022. Study of their expenditure model shows that Tirupati has assumed US$5/t under exploration and drilling when estimating the operating cost for 18 000 tpa capacity process plant. Exploration expenditure would, however, be required for upgrading the presently defined Inferred resources in both the properties and before capacity expansion. Additionally, an appropriate level of technical study would need to be undertaken to report Ore Reserve, as the term is defined in the JORC (2012) code through a minimum multi-disciplinary PFS level study.

12 RISKS AND OPPORTUNITIES

12.1 Introduction

The following section includes a summary of the principal risks and opportunities as they may relate to the Projects in Madagascar. Both generic and specific risks and opportunities to the graphite projects are summarised.

12.2 General Risks and Opportunities

The Project is subject to certain inherent risks that apply to any international mineral exploration or mining project. These include:

12.2.1 Commodity price fluctuations

These may be influenced, inter alia, by demand for all the graphite, actual or expected sales and production cost levels for the commodity;

12.2.2 Exchange rate fluctuations

Specifically, relative to the strength of the US$, the currency in which the commodity prices are generally quoted;

12.2.3 Inflation rate fluctuations

Specifically related to the macro-economic policies of Madagascar;

12.2.4 Country risk

Specific country risk including political, economic, legal, tax, operational and security risks;

12.2.5 Regulatory risk

Specifically changes to future legislation which can impact the tenure of permits and rights, mining activity, labour and industrial relations, occupational health, safety and environmental regulations within Madagascar;

12.2.6 Exploration risk

Resulting from the elapsed time between proving of deposits at the deeper level and/or outside of the currently explored area, development of technically feasible and economically viable feasibility studies to bankable standards and the associated uncertainty of outcome;

12.2.7 Environmental risk

The environmental impact to date is largely limited to small scale mining and processing activities at Sahamamy and construction activity in Vatomina. The ultimate development of the Project, as it has been currently conceived by Tirupati, will inevitably impart positive aspects on the local economy in respect of employment and the potential for taxation revenues to be used for further social development, but also runs the risk of causing negative impact on the physical and/or biological environment which has certain unique and environmentally important characteristics if mismanaged by the Company;

12.2.8 Development project risk

Specifically, technical risks associated with green-field projects, as Vatomina for which Preliminary Feasibility level Study (Pre-Feasibility Study) or Feasibility level study (as it is defined in JORC (2012)) have not been completed.

12.3 Asset Specific Risks and Opportunities

12.3.1 Geology

A lot of work was completed during this CPR to de-risk the previous Mineral Resource model through reinterpretation of the geological control. However, for the classification of the Mineral Resource to be improved, Tirupati must ensure more in-fill data generation with all data collected systematically and in accordance with industry best practices, particularly with regards to sample Quality Control and Quality Assurance (QAQC) procedures. Else the present risk is reflected by SRK in the Mineral Resource classification applied to both the deposits as defined in the JORC (2012) code.

To date, only a limited area of Vatomina has been explored. There is therefore considered to be significant upside potential for the discovery of additional graphite resources in Vatomina.

12.4 Mining

Tirupati proposes to ramp up its combined production from Sahamamy and Vatomina to 81,000 tpa of graphite concentrate within the coming 3 years. This would require about 1.8 Mtpa to 2.0 Mtpa of run-of-mine ore production from the two deposits. While this does not appear too ambitious, there is an opportunity to improve this with the Mineral Resource update to be undertaken in the next phase.

Notwithstanding the fact that mining in the area would be an opencast operation, it is imperative for a new project to undertake mine planning of a minimum PFS level study, as the study level is defined in JORC (2012).

Mine scheduling adds maximum value to a mining project. To be able to undertake a robust production scheduling exercise it is paramount to have a resource model of higher confidence, preferably with the initial 5 years of Measured category and the following 5 years of Indicated category.

12.5 Metallurgy and Process Design

IMMT has done an appropriate level of laboratory and pilot scale test work on the bulk samples it was provided with. However, there is a definite need to capture the variability across the deposit. Therefore, more extensive test work will be required to de-risk the process design. Understandably, any major change in feed grade will have bearing on the concentrate produced.

12.6 Environmental

Tirupati already has the required environmental permit for both Sahamamy and Vatomina. It also has dedicated personnel who works under the supervision of an expert Environmental Consultant.

While CPR (2018) mentions of a monitoring plan, SRK is not aware if a hydrogeological impact assessment was specifically undertaken by Tirupati. While local regulations do not have any specific requirement for such, SRK recommends that such an assessment is undertaken to evaluate impact of water usage and any adverse impact on the surroundings, as part of best practice and any unknown future risk is avoided through appropriate monitoring programs.

Stakeholder engagement is an ongoing activity, and it is apparent that relations are good. Developing the stakeholder engagement plan timeously will enable Tirupati to build on the relationships and continue to maintain the social licence to operate which they enjoy today.

Tailings disposal plan including its beneficial utilisation locally is conceptual in nature. Appropriate geochemical study is warranted to avoid any risk of contamination both to the people handling it and to the environment where it is disposed.

12.7 Infrastructure/Services

The overall hydrological characterisation of the project area requires further development supported by fieldwork and observational data. This is particularly relevant to the hydrogeological characterisation of the project which SRK considers is currently requires further development. Such characterisation work is important as it feeds into specific studies including; mine water inflow estimation, hydrogeological impact assessment, storm water infrastructure design etc.

12.8 Strategic Plan and Expenditure Projections

The strategy that Tirupati has formulated and described in their internal “Combined feasibility study” and the expenditure estimates prepared represent forward looking information. The plan is subject to several known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here. Information that is forward-looking includes:

- the expectation that further exploration would prove enough Resource to support the Company’s development plan;
- assumed commodity prices;
- projected recovery rates;
- operating cost estimates;
- assumptions as to environmental, permitting and social risks

Additional risks to the forward-looking information include:

- changes to costs of production from what is assumed;
- unrecognized environmental risks;
- unexpected grade variability, or process recovery rates; and
- failure of plant, equipment, or processes to operate as anticipated.

13 CONCLUDING REMARKS

SRK has conducted a comprehensive review and assessment of all material issues likely to influence the development of Sahamamy and Vatomina, The base data upon which the Mineral Resources (Section 5) are defined and Expenditure Programme (Section 11) as stated herein, as provided and taken in good faith by SRK, have been thoroughly reviewed with resource estimate adjusted where considered appropriate.

Regional geological study demonstrates that the Sahamamy and Vatomina projects lies within graphitic horizons of the prospective geological belt of Anaboriana and Manampotsy formation, with graphite mineralisation occurring predominantly in quartzo-feldspathic gneisses that have been variably weathered into Saprolite. Present data demonstrates that Sahamamy and Vatomina are saprolite hosted graphite deposit.

The drilling to date has proved useful in identifying 2-3 graphite bands with thickness totalling 20-30m. Diamond drilling should continue with the objective of further defining the shape and true thickness of the lodes in order to further refine the volume model. As at 1st June 2020 the projects in Madagascar has the following Mineral Resources in accordance with the JORC Code:

- At Sahamamy: An Indicated Mineral Resource of 1.4Mt grading 4.10 GC% and an Inferred Mineral Resource of 5.7 Mt grading 4.20 GC%; and
- At Vatomina: An Indicated Mineral Resource of 3.2 Mt grading 4.30 GC% and an Inferred Mineral Resource of 15.2 Mt grading 4.70 GC%

Potential exists to expand the Mineral Resource base at both projects following further exploration for which Tirupati has budgeted for US$4.25 M. Accordingly, SRK makes the following recommendations:

- Drilling should continue to be conducted using diamond drilling methods as this will allow for a more refined model of the geology and graphite mineralization to be constructed;
- Tirupati should conduct some infill drilling in Vatomina together with implementation of appropriate field protocols for logging, sampling, sub-sampling, sample preparation, assay and QAQC, to further outline any variability within the mineralization (grade and thickness) and potentially upgrade the confidence in the classification categories for the defined mineral resources;
- Tirupati should conduct further exploration drilling outside of the presently drilled areas in Vatomina and Sahamamy to outline the true extent of the property which could be included in any future resource update;
- In Sahamamy, Tirupati should undertake a structured exploration programme, preferably under the guidance of a CP, initially by drilling the targets that was defined by the auger drilling; in addition Tirupati should continue to investigate for the mineralised bodies using auger drilling and contingent to the outcome of the results identify the targets for diamond core drilling programme together with appropriate geological logging, sampling, sample preparation, assay and QAQC protocols;
- Modelling the spatial variability of metallurgical recovery is important for a feasibility level study; accordingly, Tirupati should further its metallurgical test work program from both Sahamamy and Vatomina; such would be required to potentially optimize the areas that could be blended together but more importantly determine the extent and variability of the flake size within the mineralized zones.

The results from Sahamamy and Vatomina are sufficiently encouraging for the CP to recommend that the project proceed to the next phase. Consequently, it is recommended that Tirupati should commission a multi-disciplinary pre-feasibility studies (PFS) to demonstrate the technical feasibility and economic viability of Tirupati's current conceptual study in support of the proposed expansion at both projects. Accordingly, SRK considers that completing the following is critical to assess the achievability of an expansion:

- Assessing through appropriate reconciliation the production in Sahamamy and undertaking the necessary technical work to demonstrate the achievability of increased production without impairing the quality of the flake graphite being produced and what Tirupati proposes to achieve. This would inevitably lead to capturing the spatial variability of grades in the mining area and an indication of an appropriate production rate as well as schedule the mining in advance to support the planned production increase; it is estimated that a structured reconciliation program would not only help developing a better idea of the deposit but will help organisational learning which should help Tirupati with developing Vatomina operation;
- Refining the geological/resource model including the results of samples to be analysed and any drilling information generated in between;
- Mining studies to establish ultimate pits based on optimised shells for the various open-pits, following appropriate engineering designs, mining production schedules for both waste and ore on a minimum quarterly basis until full production is reached and annually thereafter; this would also include the location and design of all waste rock dump facilities in order to ensure sufficient capacity for the anticipated life-of-mine plan;
- A key factor in substantiating the increased ore production rate is the extent to which multiple pits need to be operating simultaneously, the number of ore faces operating at any given time; this will in turn govern the build-up as well as the waste stripping profile including the advanced waste to be mined prior to establishing full production;
- Hydrogeological and geotechnical studies to ensure that slope stability and pit operations are not impaired by the ingress of water and weak ground;
- Mineral processing studies to further the engineering designs for the plant and associated infrastructure;
- Infrastructure studies to refine the requirements in respect of water, power and other services to support the expanded operation; in addition, focus should include the associated services needed to support the significant increase in labour;
- Refining, as appropriate, the operating expenditures based on the mining and processing production schedules including activity and element costing analysis for both the mining, processing and general/administration expenditures;
- Refining, as appropriate, the capital expenditure for both the initial expansion capital and the sustaining capital, thereafter, following development of appropriate engineering designs and equipment selection and scheduling;
- Environmental studies addressing both bio-physical and social aspects of the expanded scenario as well as addressing any current deficiencies in respect of environmental management, monitoring and closure costs;
- Notwithstanding the Market study conducted through Fastmarkets, undertake additional Market

studies to demonstrate that the projected increase in production is supportable in respect of current market share and assumed supply demand analysis; and

- Financial modelling to encompass all technical and financial elements and demonstrate the economic viability of the proposed expansion.

For and behalf of **SRK Mining Services (India) Private Limited**

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Certificate of Competent Person

I, Shameek Chattopadhyay, confirm that I am the Competent Person for the Reporting of Mineral Resource and I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).

I am a Competent Person as defined by the JORC Code 2012 Edition, having more than five years experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.

I am a Member of The Australasian Institute of Mining and Metallurgy.

I have reviewed the Report to which this Consent Statement applies.

I am a full-time employee of SRK Mining Services (India) Private Limited and have been engaged by Tirupati Graphite Plc to prepare the documentation for Vatomina and Sahamamy Graphite Project on which the Report is based, for the period ended 1st June 2020.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Mineral Resources.

I consent to the release of the Report and this Consent Statement by the directors of Tirupati Graphite Plc.

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

Shameek Chattopadhyay

Date: 1 June 2020

Professional Membership:
Australasian Institute of Mining and Metallurgy

Membership Number:
304459

PART III

REGULATORY REGIME

PART A

MADAGASGAR – EXPLORATION AND EXPLOITATION PERMITS

Mining exploration and exploitation in Madagascar requires a mining permit and are governed by law n°99-022 dated 19 August 1999, as amended by law n° 2005-021 dated 17 October 2005 (hereafter, collectively referred to as the "**Mining Code**").

1. The exploration permits

1.1 The "R" Permit or exploration permit entitles its holder within the limits of its perimeter and during the period of its validity, the exclusive right to search for the substances for which the permit has been granted in accordance with the commitments contained in the plan annexed to the application. However, a prior approval of the competent authorities (i.e. Environment Ministry and Ministry in charge of Mines) is required before starting the exploration.

1.2 The validity of the exploration permit is five (5) years, renewable two (2) times for a period of three (3) years at each renewal. Subject to the prior consent of the landowner, the right conferred by the exploration permit includes the right to build temporary or permanent infrastructure and to use the wood and water in the perimeter in accordance with the laws and regulations in force.

1.3 The holder of an exploration permit has the right to dispose of the mineral substances extracted in the research for use in laboratory analysis or as a sample for the purpose of prospection, or for industrial tests.

1.4 The exploration permit also entitles its holder, within the limits of its perimeter and during the period of its validity, a right of priority to apply for an exploitation permit or Permit "E" covering all or part of the perimeter.

1.5 As long as a perimeter is covered by an exploration permit, no mining permit, no exclusive authorization for perimeter reservation can be granted, except the exploitation permit requested by the holder of the said research permit

2. The exploitation permits

2.1 The "E" Permit or exploitation permit entitles its holder within the limits of its perimeter and during the period of its validity, the exclusive right to exploit the substance(s) for which the permit has been granted, as well as to continue prospecting and search for these substances in accordance with the commitments contained in the plan annexed to its application. However, a prior approval of the competent authorities (i.e. Environment Ministry and the Ministry of Mines) is required before starting the exploitation and new exploration.

2.2 The period of validity of the operating license is forty (40) years, it is renewable once or several times for a period of twenty (20) years for each renewal. Subject to the prior consent of the landowner, the right conferred by the exploitation permit includes the right to build the necessary infrastructure and to use the wood and water found in the land in the perimeter in accordance with the laws and regulations in force.

3. Compliance with legal requirements

3.1 Activity report

(a) Pursuant to the Mining Code, any Permit holder is required to file reports at the relevant departments of the Ministry of Mines where the mining activities are carried out. These reports are:

- an annual activity report covering (i) work progress, (ii) results of the exploration activities, (iii) workforce details, and (iv) quantity of extracted and/or transformed and/or sold substances.
- a semi-annual report in relation to statement of its extraction register.

(b) Any failure to file reports within the statutory deadline leads to the payment of penalties amounting to MGA 50,000 (approx. USD15) per late month further to an unsuccessful notice from the relevant departments of the Ministry in charge of Mines.

4. Renewal of an exploration permit:

4.1 Broadly, the process of renewal of an exploration Permit consists of the following steps:

- Filing of the renewal application form at the BCMM, forty-five (45) working days before the expiry of the Permit; and
- Issuance of an acknowledgement of receipt by the BCMM further to the filing of the application and payment of the renewal fees.

4.2 The BCMM issues its decision within thirty (30) days after the filing of the application at the BCMM. In practice, the issuance of the decision may take several months to few years.

4.3 The failure to file the application on time is considered by the BCMM as a voluntary relinquishment of the Permit area.

4.4 The renewal application is filed with the following documents:

- Application form available at the BCMM duly completed and signed by the applicant;
- Original copy of the initial Permit;
- Legalised "plan type" form available at the BCMM;
- Localisation map from the BCMM;
- Spotting map from the BCMM (*Carte de repérage*);
- Copy of the environmental clearance;
- Copy of the environmental authorization;
- Activity report;
- Power of attorney in favour of the representative or the person in charge of the filing formalities;
- Criminal record of the representative of the Companies less than three months;
- Certified copy of ID card or passport or resident card of the representative of the Companies;
- Three (3) ID photo of the representative of Companies;
- Certificate of residence of the representative less than three months;
- Extract from the Company Registry;
- Tax card of the current year; and
- Certified copy of the Memorandum and Articles of Association of the Companies.

4.5 An exploration permit is granted for an initial period of 5 years and can be renewed twice for a period of three (3) years each.

4.6 An exploitation permit is granted for an initial period of 40 years and can be renewed for periods of twenty (20) years each. The renewal is subject to the payment of the following:

- MGA 2 600 (approx. US$ 1) per mining square; and
- MGA 205,000 (approx. US$ 58) per renewal.

4.7 Unless the companies have benefited from any specific regime available under Malagasy laws (*e.g. Loi sur Grands Investissements dans le secteur Minier (LGIM)* or law on large scale investment projects which allows large scale projects to benefit from certain incentives measures if they meet certain conditions and particularly if the project investment amount exceeds MGA 50 billion (approx. US$15 millions)), there should not be any minimum expenditure requirements. We understand that TMV and Rostaing do not benefit from any specific regime so far.

4.8 If the renewal application is not filed on time (i.e. 45 days prior to the expiry date), the permit holder is considered to have relinquished the entire mining area the day after the expiry date. The BCMM will then inform the permit holder of its remaining environmental liability and the permit holder must rehabilitate the mining area.

4.9 If the permit holder has not started any activities authorised under its exploration or exploitation permit, the renewal can only be granted for up to the half of the size of the initial area.

5. Moratorium Period

5.1 Due to the political crisis that affected Madagascar during the period 2009-2013, the BCMM has only been operating a limited service. BCMM does not currently receive any application for new permits in respect of new projects after 29 November 2010 until further decisions are taken by its management or the Minister in charge of Mines.

5.2 However, BCMM receives and processes any application for transfer, transformation (e.g. transformation of a PR into a PE) and renewal. Before issuing the transferred/transformed/renewed Permits, the BCMM must obtain the approval of the Minister in charge of Mines (by way of a ministerial order or Arrêté) in respect of each type of application. In short, three main conditions must be satisfied in order for the transferred/transformed/renewed Permits to be valid:

- the obtaining of the ministerial order (Arrêté) duly signed by the Minister in charge of Mines;
- the updated transferred/transformed/renewed Permits duly signed by the managing director of BCMM; and
- the continued payment of mining fees.

5.3 In practice, the obtaining of the ministerial order (Arrêté) takes longer than prescribed by law. From a strict legal point of view, no work can be carried out before the obtaining of the ministerial order and the transferred/transformed/renewed Permits. However, as there are significant delays in processing mining Permits in Madagascar, with a back-log of some thousands of permits due to political instability and related issues, most operators have in practice continued operations unhindered.

5.4 BCMM receives and processes any application for addition of non-radioactive minerals. They are allowed by the Mining Code to add the new minerals to the annex of the initial original permit. The stamp and the signature of BCMM's managing director must appear beside the list of newly added minerals. However, this simplified procedure is only applicable to non-radioactive minerals.

5.5 In all cases, the transfer/transformation/renewal/extension processes are administration formalities, which provided the relevant application protocol has been followed and the annual administration fees paid, will in almost all cases always be approved.

6. Governmental consent/approval

6.1 The BCMM always remains entitled to carry out an investigation and request any document in relation to the new ultimate company. This is mainly to ascertain that the new owner of the group company is not blacklisted somewhere.

PART B

INDIA

CORPORATE NATURE

India project is developed as a start-up flake graphite based flame retardant additive manufacturing unit and is also intending to develop a comprehensive downstream flake graphite processing plant and a graphene production facility which houses cutting edge research & development and technology centres. This requires to be incorporated as a private limited or limited company with the respective Registrar of Companies, under the Companies Act, 2013. Accordingly, Tirupati Specialty Graphite Private Limited is incorporated as a Private Limited Company with the Registrar of Companies, Mumbai having a corporate identity number (CIN) number U26994MH2018PTC308347 on 20 April 2018.

OTHER STATUTORY REGISTRATIONS

Other statutory/business registrations required to run the Company are following registrations duly obtained under various tax and other regulations:

- Permanent Account Number under the IT Act – AAGCT7356K
- Taxpayers Account Number under the IT Act – MUMT22478B
- GST registration under the Goods & Services Act – 27AAGCT7356K1ZR
- Importer Exporter Code Number – AAGCT7356K
- Registration cum Membership Certificate from Federation of Indian Export Organisations, the umbrella export promotion body for benefits under export promotion schemes

FOREIGN EXCHANGE MANAGEMENT ACT COMPLIANCES

In terms of RBI/FED/2017-18/60 FED Master Direction No. 11/2017-18 issued under Foreign Exchange Management Act, 1999 (FEMA) read with Foreign Exchange Management (Transfer or Issue of a Security by a Person resident Outside India) Regulations, 2017; there are two Entry routes through which the Foreign Direct Investment (FDI) can come into Indian Companies. First is Automatic route wherein the FDI does not require the prior Reserve Bank approval or Government Approval. Another route is Government approval wherein FDI requires prior Government approval. The Entry route depends on the business activity of the Company and the list of the same is give into the above referred regulation. Accordingly, the business activity of TSG falls under Automatic route of FDI which does not require prior Reserve Bank approval.

ACQUISITION OF INDIAN COMPANY

Condition 4 of Schedule I of the mentioned Regulation stipulates that an Indian company may issue capital instruments to a person resident outside India against a swap of capital instruments, if the Indian investee company is engaged in an automatic route sector. Therefore, a swap of shares wherein the Indian company issues shares (instead of transfer of shares by existing shareholders) in consideration of acquisition of capital instruments of a company outside India is permitted.

Acquisition of TSG by the Company contemplates transfer of shares whereby a non-resident entity ie. the Company would issue equity shares in consideration for acquisition of existing equity shares of the TSG from its shareholders. This would require prior approval of Reserve Bank of India for which TSG is taking necessary steps to obtain.

PART IV

FINANCIAL INFORMATION

PART A

UNAUDITED INTERIM FINANCIAL INFORMATION OF THE GROUP

Consolidated Income Statement
For nine months ended 31 December 2019

	Notes	2019 £	2018 £
Continuing operations			
Revenue		509,874	145,195
Cost of Sales		(239,039)	(174,328)
Gross profit		**270,835**	**(29,134)**
Administrative expenses		(936,937)	(846,374)
Operating loss		**(666,101)**	**(875,508)**
Finance costs		(12,114)	-
Loss before income tax		**(678,215)**	**(875,508)**
Income tax expense		(12,534)	6,326
Loss for the period		**(690,749)**	**(869,182)**
Loss per share		Pence per share	Pence per share
From continuing operations:			
Basic & diluted		**1.16 p**	**1.64 p**

Consolidated Statement of Comprehensive Income
For nine months ended 31 December 2019

	2019 £	2018 £
Loss for the period	**(690,749)**	**(869,182)**
Forex exchange gain/loss	2,180	1,304
Total comprehensive loss for the period	**(688,569)**	**(867,878)**

The accompanying accounting policies and notes are an integral part of the financial information

Consolidated and Company Statement of Financial Position
As at 31 December 2019 and 31 March 2019

		Group		Company	
	Notes	31 Dec 2019 £	31 Mar 2019 £	31 Dec 2019 £	31 Mar 2019 £
Non-current assets					
Investments in subsidiaries		—	—	3,580,418	3,539,448
Property, plant and equipment		1,940,908	1,134,406	545,203	220,400
Deferred tax & other		46,410	33,498	22,13,534	—
Intangible assets		3,953,800	3,902,234	—	116,842
Total non-current assets		**5,941,118**	**5,070,138**	**6,339,155**	**3,876,690**
Current assets					
Trade and other receivables		405,869	431,244	316,779	2,095,413
Inventory		174,153	56,501	—	—
Cash and cash equivalents		58,963	44,681	918	8,289
Total current assets		**638,985**	**532,426**	**317,697**	**2,103,702**
Current liabilities					
Trade and other payables		471,732	701,983	303,629	768,897
Total current liabilities		**471,732**	**701,983**	**303,629**	**768,897**
Net current assets/(liabilities)		**167,253**	**(169,557)**	**14,068**	**1,334,805**
Non-current liabilities					
12% Convertible Loan Notes		610,000	—	610,000	—
Other payables		593,495	43,907	551,015	—
Total non-current liabilities		**1,203,459**	**43,907**	**1,161,015**	**—**
NET ASSETS		**4,904,912**	**4,856,674**	**5,192,209**	**5,211,495**
Equity					
Share capital		1,498,132	1,470,275	1,498,132	1,470,275
Share premium account		5,328,518	5,024,524	5,328,518	4,974,524
Foreign exchange reserve		6,894	4,714	—	—
Retained losses		(1,928,631)	(1,642,839)	(1,634,441)	(1,233,304)
TOTAL EQUITY		**4,904,912**	**4,856,674**	**5,192,209**	**5,221,495**

The accompanying accounting policies and notes are an integral part of the financial information

Consolidated Statement of Changes in Equity
For nine months ended 31 December 2019 & 31 December 2018

	Share capital £	Share premium £	Foreign exchange reserve £	Retained losses £	TOTAL EQUITY £
Balance at 1 April 2018	**1,125,065**	**3,025,166**	**—**	**(529,131)**	**3,621,100**
Loss for the period	—	—	—	(867,878)	(867,878)
Shares issued	321,638	1,717,929	—	—	2,039,567
Cost of shares issued	—	(75,000)	—	—	(75,000)
Forex Gain / (Loss)	—	—	1,304	—	1,304
Balance at 31 December 2018	**1,446,703**	**4,668,095**	**1,304**	**(1,397,009)**	**4,719,093**
Balance at 1 April 2019	**1,470,275**	**5,024,524**	**4,714**	**(1,642,839)**	**4,856,674**
Shares issued	27,857	362,144	—	—	390,001
Cost of shares issued	—	(8,150)	—	—	(8,150)
Share subscription allotment	—	(50,000)	—	—	(50,000)
Prior period reclassifications	—	—	—	404,956	404,956
Loss for the period	—	—	—	(690,749)	(690,749)
Forex exchange gain/loss	—	—	2,180	—	2,180
Balance at 31 December 2019	**1,498,132**	**5,328,518**	**6,894**	**(1,928,632)**	**4,904,912**

The accompanying accounting policies and notes are an integral part of the financial information.

Company Statement of Changes in Equity
For nine months ended 31 December 2019 & 31 December 2018

	Share capital £	Share premium £	Retained losses £	TOTAL EQUITY £
Balance at 1 April 2018	**1,125,065**	**3,025,166**	**(313,154)**	**3,837,077**
Loss for the period	—	—	(461,874)	(461,874)
Shares issued	321,638	1,717,929	—	2,039,567
Cost of shares issued	—	(75,000)	—	(75,000)
Balance at 31 December 2018	**1,446,703**	**4,668,095**	**(775,028)**	**5,339,770**
Balance at 1 April 2019	**1,470,275**	**4,974,524**	**(1,233,304)**	**5,211,495**
Loss for the period	—	—	(401,137)	(401,137)
Shares issued	27,857	362,144	—	390,001
Cost of shares issued	—	(8,150)	—	(8,150)
Balance at 31 December 2019	**1,498,132**	**5,328,518**	**(1,634,441)**	**5,192,209**

The accompanying accounting policies and notes are an integral part of the financial information.

Consolidated Statement of Cash Flows
For nine months ended 31 December 2019

	2019 £	2018 £
Loss before income tax	**(678,215)**	**(875,508)**
Adjustment for:		
Depreciation	123,929	87,042
(Increase) in inventories	(145,586)	(1,276)
Decrease in receivables	25,375	207,877
(Decrease) in payables	(230,251)	(230,958)
Fund Raising Costs	42,700	—
Finance costs	12,114	—
Income tax	(12.534)	6,326
Net cash used in operating activities	**(862,469)**	**(806,496)**
Cash flows from investing activities:		
Purchase of tangible assets	(806,502)	(906,012)
Purchase of other assets	(12,912)	(116,638)
Purchase of intangible assets	(51,566)	(817,851)
Net advances received	261,142	273,857
Net cash from investing activities	**(609,838)**	**(1,566,645)**
Cash flows from financing activities		
Increase / (decrease) in other non-current liabilities	549,552	(46,808)
Issue of 12% Convertible Loan Notes	610,000	—
Finance Cost	(12,114)	—
Fund Raising Costs	(42,700)	—
Shares issued	390,001	2,039,567
Costs of shares issued	(8,150)	(75,000)
Net cash from financing activities	**1,486,589**	**1,917,759**
Net increase/(decrease) in cash and cash equivalents	**14,282**	**(455,382)**
Cash and cash equivalents brought forward	**44,681**	**504,122**
Cash and cash equivalents carried forward	**58,963**	**48,740**

The accompanying accounting policies and notes are an integral part of the financial information.

1. General information

Tirupati Graphite plc (the "Company") is incorporated in England and Wales, under the Companies Act 2006. The address of the registered office is 49 Berkeley Square, Mayfair, London W1J 5AZ.

The principal activities of the Company and its subsidiaries (the "Group") and the nature of the Group's operations is the exploration, mining, processing and production of natural flake graphite.

The consolidated financial information is presented in pounds sterling since that is the currency of the primary economic environment in which the Group operates.

2. Adoption of new and revised International Financial Reporting Standards (IFRSs)

New and revised IFRSs in issue but not yet effective

At date of authorisation of the financial information, the Group has not applied the following new and revised IFRSs that have been issued but are not yet effective and not early adopted.

IFRS 16	Leases
IFRIC 23	Uncertainty over Income Tax Treatments
Amendments to IFRS 9	Prepayment features with negative compensation
Amendments to IAS 28	Long-term interests in Associates and Joint Ventures
Annual improvements to IFRS Standards 2015-2017 cycle	Annual improvements
Amendments to IAS 19	Plan Amendment, Curtailment or Settlement

The directors do not expect that the adoption of the Standards listed above will have a material impact on the financial information of the Group.

New standards

(i) IFRS 9

IFRS 9 (2014) "Financial Instruments" supersedes IFRS 9 (2009), IFRS 9 (2010) and IFRS 9 (2013). The finalised version of IFRS 9 contains accounting requirements for financial instruments, replacing IAS 39 "Financial Instruments: Recognition and Measurement". The content of IFRS 9 (2014) includes:

- *Classification and measurement* – financial assets are classified by reference to the business model within which they are held and their contractual cash flow characteristics. The standard introduces a fair value through other comprehensive income category for certain debt instruments. Financial liabilities are classified in a similar manner to that under IAS 39 however there are differences in the requirements applying to the measurement of an entity's own risk.
- *Impairment* – The standard introduces an expected credit loss model for the measurement of the impairment of financial assets so it is no longer necessary for a credit event to have occurred before a credit loss is recognised
- *Hedge accounting* – The standard introduces a new hedge accounting model that is designed to be more closely aligned with how entities undertake risk management activities when hedging financial and non-financial risk exposures.
- *Derecognition* – the requirements for the derecognition of financial assets and liabilities are carried forward from IAS 39.

(ii) IFRS 15

IFRS 15 "Revenue from Contracts with Customers" provides a single, principles based five-step model to be applied to all contracts with customers. The standard includes guidance on the point in which revenue is recognised, accounting for variable consideration, costs of fulfilling and obtaining a contract and various related matters. IFRS 15 also introduces new disclosures about revenue.

There is no impact on the financial information upon adopting IFRS 9 and IFRS 15.

3. Significant accounting policies

Basis of preparation

This Financial Information of the Group has been prepared for the sole purpose of publication within this Prospectus. It has been prepared in accordance with the requirements of the Listing Rules and has been prepared in accordance with International Financial Reporting Standards and IFRS interpretations Committee (IFRS IC) interpretations as adopted by the European Union ("IFRS") and the policies stated elsewhere within the Financial Information. The Financial Information does not constitute statutory accounts within the meaning of section 434 of the Companies Act 2006.

The principal accounting policies adopted are set out on the following pages.

Going concern

The Group's business activities, together with the factors likely to affect its future development, performance and position are set out in the financial information. In addition, note 19 includes the Group's objectives, policies and processes for managing its capital; its financial risk management objectives; details of its financial instruments; and its exposure to credit risk and liquidity risk. The Group meets their day to day working capital requirements through its ability to raise either share capital or borrowings.

The Historical Financial Information has been prepared on a going concern basis. The directors have a reasonable expectation that the Group have adequate resources to continue in operational existence for the foreseeable future. Thus, they continue to adopt the going concern basis of accounting in preparing the Historical Financial Information.

Basis of consolidation

The Group financial information consolidate the financial information of the Company and all its subsidiaries. Subsidiaries include all entities over which the Company has the power to govern financial and operating policies. The existence and effect of potential voting rights that are currently exercisable or convertible are considered when assessing whether the Group controls another entity. Subsidiaries are consolidated from the date on which control commences until the date that control ceases. Intra-group balances and any unrealised gains and losses on income or expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial information.

The acquisition method of accounting is used to account for business combinations. The cost of an acquisition is measured as the fair value of the assets given, equity instruments issued, and liabilities incurred or assumed at the date of exchange, plus costs directly attributable to the acquisition. Identifiable assets acquired, and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair value at the acquisition date, irrespective of the extent of any minority interest.

Goodwill

Goodwill on acquisition of subsidiaries represents the excess of the cost of acquisition over the fair value of the Group's share of the identifiable net assets and contingent liabilities acquired. Identifiable assets are those which can be sold separately, or which arise from legal rights regardless of whether those rights are separable. Goodwill on acquisition of subsidiaries is included in intangible assets. Goodwill is not amortised but is tested annually, or when trigger events occur, for impairment and is carried at cost less accumulated impairment losses.

Segment reporting

An operating segment is a component of the Group that engages in business activity from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with and of the Group's other components. All operating segments' operating results, for which discrete financial information is available, are reviewed regularly by the Group's Board to make decisions about resources to be allocated to the segment and assess its performance. As a result of the acquisition during the year, the Group reports on a three-segment basis – holding company expenses, mining exploration and development and graphite mining extraction.

Revenue recognition

Revenue is measures at the fair value of the consideration received or receivable and represents amounts receivable for goods and services provide in the normal course of business, net of discounts, VAT and other sales-related taxes.

Sale of goods

Revenue from the sale of goods is recognised when all the following conditions are satisfied:

- The Group has transferred to the buyer the significant risks and rewards of ownership of the goods;
- The Group retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- The amount of revenue can be measured reliably;
- It is probable that the economic benefits associated with the transaction will flow to the entity; and
- The costs incurred or to be incurred in respect of the transaction can be measured reliably.

Foreign currencies

For the purposes of the consolidated financial information, the results and financial position of each group companies are presented in pounds sterling, which is the functional currency of the Group. At balance sheet date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at the rates prevailing at that date. Income and expense items are translated at the average exchange rates for the period.

Operating profit

Operating profit is stated after charging restructuring costs and after the share of result of associates but before investment income and finance costs.

Taxation

The tax expense represents the sum of the tax currently payable and deferred tax.

Current tax

The tax currently payable is based on taxable profit for the year. Taxable profit differs from net profit as reported in the income statement because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the balance sheet date.

A provision is recognised for those matters for which the tax determination is uncertain, but it is considered probable that there will be a future outflow of funds to a tax authority. The provisions are measured at the best estimate of the amount expected to become payable. The assessment is based on the judgement of tax professionals within the Group supported by previous experience in respect of such activities and in certain cases based on specialist independent tax advice.

Deferred tax

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the financial information and the corresponding tax bases used in the computation of taxable profit and is accounted for using the balance sheet liability method.

Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. Such assets and liabilities are not recognised if the temporary difference arises from the initial recognition of goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled, or the asset is realised based on tax laws and rates that have been enacted or substantively enacted at the balance sheet date. Deferred tax is charged or credited in the income statement, except when it relates to items charged or credited in other comprehensive income, in which case the deferred tax is also dealt with in other comprehensive income.

The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and liabilities on a net basis.

Current tax and deferred tax for the year

Current and deferred tax are recognised in profit or loss, except when they relate to items that are recognised in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognised in other comprehensive income or directly in equity respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

Property, plant and equipment

Property, plant and equipment in the course of construction for production, supply or administrative purposes, or for purposes not yet determined, are carried at cost, less any recognised impairment loss. Cost includes professional fees and, for qualifying assets, borrowing costs capitalised in accordance with the group's accounting policy. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

Fixtures and equipment are stated at cost less accumulated depreciation and any recognised impairment loss.

Depreciation is recognised so as to write off the cost or valuation of assets (other than freehold land and properties under construction) less their residual values over their useful. lives, using the straight-line method, on the following bases:

Plant and machinery	10%-25% per annum
Fixtures and fittings	10%-25% per annum

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. The gain or loss arising on the disposal or scrappage of an asset is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in income.

Internally-generated intangible assets — research and development expenditure

Expenditure on research activities is recognised as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from development (or from the development phase of an internal project) is recognised if, and only if all of the following conditions have been demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- the intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognised for internally-generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed above. Where no internally-generated intangible asset can be recognised, development expenditure is recognised in profit or loss in the period in which it is incurred.

Subsequent to initial recognition, internally-generated intangible assets are reported at cost less accumulated amortisation and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

Intangible assets acquired in a business combination

Intangible assets acquired in a business combination and recognised separately from goodwill are initially recognised at their fair value at the acquisition date (which is regarded as their cost).

Subsequent to initial recognition, intangible assets acquired in a business combination are reported at cost less accumulated amortisation and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

Derecognition of intangible assets

An intangible asset is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognised in profit or loss when the asset is derecognised.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method. Net realisable value represents the estimated selling price less all estimated costs of completion and costs to be incurred in marketing, selling and distribution.

Investments

Investments in subsidiaries are held at cost less any impairment.

Financial instruments

Financial assets and financial liabilities are recognised in the Group's balance sheet when the Group becomes a party to the contractual provisions of the instrument.

Financial assets

Financial assets are initially measured at fair value, net of transaction costs except for those financial assets classified as fair value through profit or loss which are initially measured at fair value. Other financial assets are classified into the following specified categories: financial assets as "at fair value through profit and loss" and "loans and receivables". The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

Loans and receivables

These assets are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. The principal financial assets of the Group are loans and receivables, which arise principally through the provision of goods and services to customers (e.g. trade receivables) but also incorporate other types of contractual monetary assets. They are included in current assets, except for maturities greater than twelve months after the balance sheet date. These are classified as non-current assets.

The Group's loans and receivables are recognised and carried at the lower of their original amount less an allowance for any doubtful amounts. An allowance is made when collection of the full amount is no longer considered possible.

The Group's loans and receivables comprise trade and other receivables and cash and cash equivalents in the Consolidated Statement of Financial Position.

Cash and cash equivalents

Cash and cash equivalents includes cash in hand, deposits held at call with banks and other short-term highly liquid investments with maturities of three months or less. Bank overdrafts that are repayable on demand and form an integral part of the Group's cash management are included as a component of cash and cash equivalents in the consolidated cash flow statement.

Financial assets – impairment

A financial asset is assessed at each reporting date to determine whether there is any evidence that it is impaired. A financial asset is considered impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset. Individual significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics. All impairment losses are recognised in the consolidated income statement.

Non-financial assets – impairment

At each balance sheet date, the Group reviews the carrying amounts of its tangible and intangible assets, including Goodwill, to determine whether there is any indication that these assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated to determine the extent of the impairment loss (if any). Provision is made for any impairment and immediately expensed in the period.

The recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised as an expense immediately, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease.

Financial liabilities and equity instruments issued by the group

Financial liabilities and equity instruments are classified according to the substance of the contractual arrangements entered into. An equity instrument is any contract that evidences a residual interest in the assets of the Group after deducting all of its liabilities. Equity instruments issued by the Group are recorded at the proceeds received, net of direct issued costs.

Trade payables

Trade payables are initially measured at fair value, and are subsequently measured at amortised costs, using the effective interest rate method.

Other financial liabilities

Other financial liabilities are initially measured at fair value, net of transaction costs. Other financial liabilities are subsequently measured at amortised cost using the effective interest method, as set out above, with interest expense recognised on an effective yield basis.

Share capital

Ordinary shares

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of Ordinary shares and share options are recognised as a deduction from equity, net of any tax effects.

4. Critical accounting estimates and judgements

The preparation of financial information in conformity with adopted IFRSs requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial information and the reported amounts of sales and expenses during the reporting period. Although these estimates are based on management's best knowledge of the amount, event or action, actual results ultimately may differ from those estimates.

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial period are discussed below.

a. Going concern basis of preparation

The adoption of the going concern basis by the Directors is following a review of the current position of the Group and the forecasts for the next 18 months from the date of approving the financial information.

However, after making enquiries, the Directors have formed a judgement that there is a reasonable expectation that the Group can secure further adequate resources, to enable it to continue in operational existence for the foreseeable future. Thus, adequate arrangements will be in place to enable the settlement of their financial commitments.

For this reason, the Directors continue to adopt the going concern basis in preparing the financial information.

Whilst there are inherent uncertainties in relation to future events, and therefore no certainty over the outcome of the matters described, the Directors consider that, based upon financial projections and dependent on the success of their efforts to complete these activities, the Group will be a going concern for the next twelve months. If it is not possible for the Directors to realise their plans, over which there is significant uncertainty, the carrying value of the assets of the Group is likely to be impaired.

b. Impairment of assets

The Group assesses at each reporting date whether there is an indication that an asset may be impaired. If any such indication exists, or when annual impairment testing for an asset is required, the Group makes an estimate of the asset's recoverable amount.

An asset's recoverable amount is the higher of its fair value less costs to sell and its value in use. This is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets, and the asset's value in use cannot be estimated to be close to its fair value. In such cases, the asset is tested for impairment as part of the cash-generating unit to which it belongs. When the carrying amount of an asset or cash-generating unit exceeds its recoverable amount, it is considered impaired and is written down to its recoverable amount.

In assessing value in use, estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Impairment losses relating to continuing operations are recognised in those expense categories consistent with the function of the impaired asset, unless the asset is carried at revalued amount (in which case the impairment loss is treated as a revaluation decrease).

An assessment is also made at each reporting date as to whether there is any indication that previously recognised impairment losses may no longer exist or may have decreased. If such indication exists, the recoverable amount is estimated. A previously recognised impairment loss is reversed only if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. If that is the case, the carrying amount of the asset is increased to its recoverable amount. That increased amount cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the Statement of Comprehensive Income unless the asset is carried at revalued amount, in which case the reversal is treated as a revaluation increase. After such a reversal, the depreciation charge is adjusted in future periods to allocate the asset's revised carrying amount, less any residual value, on a systematic basis over its remaining useful life.

c. Accounting for provisions

The Directors consider the nature of any outstanding legal or constructive claims on the Group to determine the accounting treatment required in accordance with note above.

5. Revenue from contracts with customers

The group derives revenue from the transfer of goods at a point in time in the following major product lines and geographical regions:

(i)	2019	(ii)	USA	(iii)	Europe	(iv)	India	(v)	Total
(vi)	Revenue from external customers	(vii)	21,402	(viii)	86,337	(ix)	401,266	(x)	509,005
(xi)	Timing of recognition:	(xii)		(xiii)		(xiv)		(xv)	
(xvi)	At a point in time	**(xvii)**	21,402	**(xviii)**	86,337	**(xix)**	401,266	**(xx)**	509,005

(xxi)	2018	(xxii)	USA	(xxiii)	Europe	(xxiv)	India	(xxv)	Total
(xxvi)	Revenue from external customers	(xxvii)	—	(xxviii)	—	(xxix)	145,102	(xxx)	145,102
(xxxi)	Timing of recognition:	(xxxii)		(xxxiii)		(xxxiv)		(xxxv)	
(xxxvi)	At a point in time	**(xxxvii)**	—	**(xxxviii)**	—	**(xxxix)**	145,102	**(xl)**	**145,102**

6. Segmental analysis

The Directors believe, under IFRS 8 – "Operating Segments", the Group operated in three primary business segments in 2018, being holding company expenses, mining exploration and development and graphite mining extraction.

Segmentation by continuing businesses

Segment results

	2019 £	2018 £
Revenue to external customers		
Holding Companies	**509,005**	145,172
Mining Exploration and Development	**—**	–
Graphite Mining Extraction	**869**	23
Profit / (Loss) before income tax		
Holding Companies	**(585,907)**	(673,460)
Mining Exploration and Development	**(284,069)**	(176,022)
Graphite Mining Extraction	**191,761**	(154,301)
Net assets		
Holding Company	**3,300,397**	3,675,109
Mining Exploration and Development	**714,114**	473,966
Graphite Mining Extraction	**890,401**	706,814

Segmentation by geographical area:

	2019 £	2018 £
Revenue to external customers		
UK	**509,005**	145,172
Mauritius	**—**	–
Madagascar	**869**	23
Profit / (Loss) before income tax		
UK	**(575,237)**	(640,726)
Mauritius	**(10,670)**	(32,734)
Madagascar	**(92,308)**	(330,323)
Net assets		
UK	**3,298,178**	3,673,737
Mauritius	**2,219**	1,372
Madagascar	**1,604,515**	1,180,384

7. Earnings per share

Basic and diluted

Earnings per share is calculated by dividing the loss attributable to the equity holders of the Company by the weighted average number of Ordinary shares in issue during the period.

	2019	2018
Continuing operations:		
Total loss for the year	**(690,749)**	(997,457)
Weighted average number of shares in issue	**59,700,405**	53,059,321
Loss per share (pence)	**1.16 p**	1.88 p

There was no dilutive effect from the options outstanding during the period or in the previous period.

8. Investments

	Investments 2019 £
Cost	
At 1 April 2019	3,539,448
Additions	40,970
At 31 December 2019	**3,580,418**
Net book value	
At 1 April 2019	3,539,448
At 31 December 2019	**3,580,418**

The Company's investments at the Statement of Financial Position date in the share capital of companies include the following:

Subsidiaries

Tirupati Resources Mauritius
Registered: Mauritius
Nature of business: Holding and administrative entity

Class of share	% Holding
Ordinary shares	100

Tirupati Madagascar Ventures
Registered: Madagascar
Nature of business: Evaluation and exploration of mining operations

Class of share	% Holding
Ordinary shares	100

Establissements Rostaing
Registered: Madagascar
Nature of business: Graphite mining extraction

Class of share	% Holding
Ordinary shares	100

9. Property, plant and equipment

Group	Plant and Machinery £	Fixtures and Fittings £	Assets under construction £	Total £
Cost				
At 1 April 2019	773,167	82,518	439,961	1,295,646
Additions	321,494	(15,068)	584,181	890,607
At 31 December 2019	**1,094,661**	**67,450**	**1,024,142**	**2,186,253**
Accumulated depreciation and impairment				
At 1 April 2019	151,263	9,977	—	161,240
Depreciation	74,276	9,829	—	84,105
At 31 December 2019	**225,539**	**19,806**	**—**	**245,345**
Carrying amount				
As at 1 April 2019	621,904	72,541	439,961	1,134,406
As at 31 December 2019	**869,122**	**47,644**	**1,024,142**	**1,940,908**

Company	Assets under construction £	Total £
Cost		
At 1 April 2019	220,400	220,400
Additions	324,803	324,803
At 31 December 2019	**545,203**	**545,203**
At 1 April 2018	—	—
Depreciation	—	—
At 31 December 2019	—	—
Carrying amount		
As at 1 April 2018	220,400	220,400
At 31 December 2019	**545,203**	**545,203**

10. Share capital

	2019 Number	2019 £	2018 Number	2018 £
Allotted, called up and fully paid				
Ordinary shares of 2.5p each	**59,925,275**	**1,498,132**	57,868,120	1,446,703
Ordinary "A" Shares	**59,925,275**	**1,498,132**	57,868,120	1,446,703

11. Financial instruments

Financial risk management

The Group has exposure to the following risks from its use of financial instruments:

- Capital risk management
- Market risk
- Credit risk
- Liquidity risk
- Currency risk

This note presents information about the Group's exposure to each of the above risks, the Group's management of capital, and the Group's objectives, policies and procedures for measuring and managing risk.

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework.

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities.

The Group Audit Committee oversees how management monitors compliance with the Group's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the Group.

Capital risk management

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern while maximising the return to stakeholders as well as sustaining the future development of the business. In order to maintain or adjust the capital structure, the Group may adjust dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

The capital structure of the Group consists of net debt, which includes loans, cash and cash equivalents, and equity attributable to equity holders of the parent, comprising issued capital and retained earnings.

Fair value of financial assets and liabilities

	Valuation, methodology and hierarchy	Book value Dec 2019 £	Fair value Dec 2019 £	Book value Mar 2019 £	Fair value Mar 2019 £
Financial assets					
Cash and cash equivalents	(a)	**58,963**	**58,963**	**44,681**	**44,681**
Loans and receivables, net of impairment	(a)	**405,869**	**405,869**	**431,244**	**431,244**
Total at amortised cost		**464,832**	**464,832**	**475,925**	**475,925**
Financial liabilities					
Trade and other payables	(a)	**471,732**	**471,732**	**701,983**	**701,983**
Borrowings and provisions	(a)	**1,203,459**	**1,203,459**	**43,907**	**43,907**
Total at amortised cost		**1,675,191**	**1,675,191**	**745,890**	**745,890**

Valuation, methodology and hierarchy

(a) The carrying amounts of cash and cash equivalents, trade and other receivables, trade and other payables and deferred income, and Borrowings are all stated at book value. All have the same fair value due to their short-term nature.

Market risk

Market price risk arises from uncertainty about the future valuations of financial instruments held in accordance with the Group's investment objectives. These future valuations are determined by many factors but include the operational and financial performance of the underlying investee companies, as well as market perceptions of the future of the economy and its impact upon the economic environment in which these companies operate.

Credit risk

Credit risk is the risk that counterparties to financial instruments do not perform their obligations according to the terms of the contract or instrument. The Group is exposed to counterparty credit risk when dealing with its customers and certain financing activities.

The immediate credit exposure of financial instruments is represented by those financial instruments that have a net positive fair value by counterparty at 31 December 2019. The Group considers its maximum exposure to be:

	Dec 2019 £	Mar 2019 £
Financial assets		
Cash and cash equivalents	**58,963**	**44,681**
Loans and receivables, net of impairment	**405,869**	**431,244**
	464,832	**475,925**

All cash balances are held with an investment grade bank who is our principal banker. Although the Group has seen no direct evidence of changes to the credit risk of its counterparties, the current focus on financial liquidity in all markets has introduced increased financial volatility. The Group continues to monitor the changes to its counterparties' credit risk.

Liquidity risk

Liquidity risk is the risk the Group will encounter difficulty in meeting its obligations associated with financial liabilities as they fall due. The Board are jointly responsible for monitoring and managing liquidity and ensures that the Group has sufficient liquid resources to meet unforeseen and abnormal requirements. The current forecast suggests that the Group has sufficient liquid resources.

Available liquid resources and cash requirements are monitored using detailed cash flow and profit forecasts these are reviewed at least quarterly, or more often as required. The Directors decision to prepare these accounts on a going concern basis is based on assumptions which are discussed in the going concern note above.

Cash flow management

The Group produces an annual budget which it updates quarterly with actual results and forecasts for future periods for profit and loss, financial position and cash flows. The Group uses these forecasts to report against and monitor its cash position. If the Group becomes aware of a situation in which it would exceed its current available liquid resources, it would apply mitigating actions involving reduction of its cost base. The Group would also employ working capital management techniques to manage the cash flow in periods of peak usage.

Currency risk

The Group currently has minimal exposure to foreign currency and thus does not engage in any hedging activity. The Group liquidated its overseas subsidiaries during 2010 and therefore has no exposure to foreign exchange gains or losses.

PART B

ACCOUNTANT'S REPORT ON THE HISTORICAL FINANCIAL INFORMATION OF THE GROUP

The Directors
Tirupati Graphite Plc
5 Fleet Place
London
EC4M 7RD

The Directors
Optiva Securities Limited
49 Berkeley Square
Mayfair
W1J 5AZ

28 September 2020

Dear Sirs

Tirupati Graphite Plc ("Tirupati" or the "Company")

Introduction

We report on the financial information of Tirupati and its subsidiaries (the "Group") for the period from 26 April 2017 to 31 March 2019 which comprises the statement of financial position, the statement of comprehensive income, the statement of changes in equity, the cash flow statement, and the related notes. This financial information has been prepared for inclusion in the Registration Document of the Company dated 28 September 2020 on the basis of the accounting policies set out in the financial information. The report is required by Annex 1, Section 18, Item 18.3.1 of Commission Delegated Regulation (EU) 2019/980 and is given for the purpose of complying with that paragraph and for no other purpose.

Responsibilities

The Directors of the Company are responsible for preparing the financial information on the basis of preparation set out in note 3 to the financial information and in accordance with International Financial Reporting Standards as adopted by the European Union ('IFRS').

It is our responsibility to form an opinion on the financial information as to whether the financial information gives a true and fair view, for the purposes of the Registration Document, and to report our opinion to you.

Save for any responsibility arising under PRR 5.3.2R(2)(f) to any person as and to the extent there provided, to the fullest extent permitted by law we do not assume any responsibility and will not accept any liability to any other person for any loss suffered by any such other person as a result of, arising out of, or in connection with this report or our statement, required by and given solely for the purposes of complying with Annex 1, Section 1, Item 1.3 of Commission Delegated Regulation (EU) 2019/980, consenting to its inclusion in the Registration Document.

Basis of opinion

We conducted our work in accordance with Standards of Investment Reporting issued by the Auditing Practices Board in the United Kingdom. Our work included an assessment of evidence relevant to the amounts and disclosures in the financial information. It also included an assessment of the significant estimates and judgements made by those responsible for the preparation of the financial information and whether the accounting policies are appropriate to the entity's circumstances, consistently applied and adequately disclosed.

We planned and performed our work so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the

financial information is free from material misstatement, whether caused by fraud or other irregularity or error.

Our work has not been carried out in accordance with auditing or other standards and practices generally accepted in jurisdictions outside the United Kingdom, including the United States of America, and accordingly should not be relied upon as if it had been carried out in accordance with those standards and practices.

Opinion

In our opinion the financial information set out below gives, for the purposes of the Registration Document dated 28 September 2020, a true and fair view of the state of affairs of the Company as at 31 March 2019 and of the results, cash flows and changes in equity for the period then ended in accordance with IFRS and has been prepared in a form that is consistent with the accounting policies adopted by the Company.

Declaration

For the purposes of PRR 5.3.2R(2)(f) we are responsible for this report as part of the Registration Document and declare that the information contained in this report is, to the best of our knowledge, in accordance with the facts and contains no omission likely to affect its import. This declaration is included in the Registration Document in compliance with Annex 1, Section 1, Item 1.2 of Commission Delegated Regulation (EU) 2019/980.

Yours faithfully

PKF Littlejohn LLP

PKF Littlejohn LLP
Reporting Accountant

15 Westferry Circus
Canary Wharf
London E14 4HD

28 September 2020

Consolidated Income Statement
For the year ended 31 March 2019

	Notes	2019 £	2018 £
Continuing operations			
Revenue		145,207	28,001
Cost of Sales		(150,325)	(14,293)
Gross profit		**(5,118)**	**13,708**
Administrative expenses		(1,139,320)	(560,483)
Operating loss	**7**	**(1,144,438)**	**(546,775)**
Finance costs		(2,827)	(114)
Loss before income tax		**(1,147,265)**	**(546,889)**
Income tax expense	**9**	33,557	17,758
Loss for the year		**(1,113,708)**	**(529,131)**
Loss per share		Pence per share	Pence per share
From continuing operations:			
Basic & diluted	**10**	**2.04p**	**1.68p**

Consolidated Statement of Comprehensive Income
For the year ended 31 March 2018

	2019 £	2018 £
Loss for the period	**(1,113,708)**	**(529,131)**
Forex exchange gain/loss	**4,714**	—
Total comprehensive loss for the year	**(1,108,994)**	**(529,131)**

The accompanying accounting policies and notes are an integral part of the financial information.

Consolidated and Company Statement of Financial Position
As at 31 March 2019

		Group		Company	
	Notes	2019 £	2018 £	2019 £	2018 £
Non-current assets					
Goodwill	**11**	—	2,900,310	40,970	—
Investments in subsidiaries	**13**	—	—	3,539,448	3,000,000
Property, plant and equipment	**14**	1,134,406	312,852	220,400	—
Deferred tax other		33,498	19,794	—	—
Intangible assets	**12**	3,902,234	506	75,872	—
Total non-current assets		**5,070,138**	**3,233,462**	**3,876,690**	**3,000,000**
Current assets					
Trade and other receivables	**15**	431,244	644,538	2,095,413	1,127,005
Inventory		56,501	2,158	—	—
Cash and cash equivalents		44,681	504,122	8,289	373,022
Total current assets		**532,426**	**1,150,818**	**2,103,702**	**1,500,027**
Current liabilities					
Trade and other payables	**16**	701,983	763,180	768,897	662,950
Total current liabilities		**701,983**	**763,180**	**768,897**	**662,950**
Net current assets/(liabilities)		**(169,557)**	**387,638**	**1,334,805**	**837,077**
Non-current liabilities					
Other payables	**16**	43,907	—	—	—
Total non-current liabilities		**43,907**	**—**	**—**	**—**
NET ASSETS		**4,856,674**	**3,621,100**	**5,221,495**	**3,837,077**
Equity					
Share capital	**18**	1,470,275	1,125,065	1,470,275	1,125,065
Share premium account		5,024,524	3,025,166	4,974,524	3,025,166
Foreign exchange reserve		4,714	—	—	—
Retained losses		(1,642,839)	(529,131)	(1,233,304)	(313,154)
TOTAL EQUITY		**4,856,674**	**3,621,100**	**5,221,495**	**3,837,077**

The accompanying accounting policies and notes are an integral part of the financial information.

Consolidated Statement of Changes in Equity
For the year ended 31 March 2019

	Share capital £	Share premium £	Foreign exchange reserve £	Retained losses £	TOTAL EQUITY £
Balance at 1 April 2017	—	—	—	—	—
Loss for the period	—	—	—	(529,131)	(529,131)
Shares issued	1,125,065	3,075,166	—	—	4,200,231
Cost of shares issued	—	(50,000)	—	—	(50,000)
Balance at 31 March 2018	**1,125,065**	**3,025,166**	**—**	**(529,131)**	**3,621,100**
Loss for the period	—	—	—	(1,113,708)	(1,113,708)
Shares issued	345,210	2,024,358	—	—	2,369,568
Cost of shares issued	—	(75,000)	—	—	(75,000)
Share subscription received pending allotment	—	50,000		—	50,000
Forex exchange gain/loss	—	—	4,714	—	4,714
Balance at 31 March 2019	**1,470,275**	**5,024,524**	**4,714**	**(1,642,839)**	**4,856,674**

The accompanying accounting policies and notes are an integral part of the financial information.

Company Statement of Changes in Equity
For the year ended 31 March 2019

	Share capital £	Share premium £	Retained losses £	TOTAL EQUITY £
Balance at 1 April 2017	—	—	—	—
Loss for the period	—	—	(313,154)	(313,154)
Shares issued	1,125,065	3,075,166	—	4,200,231
Cost of shares issued	—	(50,000)	—	(50,000)
Balance at 31 March 2018	**1,125,065**	**3,025,166**	**(313,154)**	**3,837,077**
Loss for the period	—	—	(920,150)	(920,150)
Shares issued	345,210	2,024,358	—	2,369,568
Cost of shares issued	—	(75,000)	—	(75,000)
Balance at 31 March 2018	**1,470,275**	**4,974,524**	**(1,233,304)**	**5,211,495**

The accompanying accounting policies and notes are an integral part of the financial information.

Consolidated Statement of Cash Flows
For the year ended 31 March 2019

	2019 £	2018 £
Loss before income tax	**(1,147,265)**	**(546,889)**
Adjustment for:		
Depreciation	105,645	5,089
Foreign exchange loss	—	14,088
(Increase) in inventories	(54,343)	(2,158)
(Increase) in receivables	339,233	(644,538)
Increase in payables	8,238	763,180
Finance costs	2,827	114
Income tax	33,557	(17,778)
Net cash used in operating activities	**(712,108)**	**(428,892)**
Cash flows from investing activities:		
Investment in subsidiary	(801,927)	(3,000,000)
Purchase of tangible assets	(821,554)	(121,005)
Purchase of other assets	(152,265)	(191,847)
Purchase of intangible assets	(415,468)	(506)
Net advances received	99,313	96,141
Net cash from investing activities	**(2,091,901)**	**(3,217,217)**
Cash flows from financing activities		
Shares issued	2,369,568	4,200,231
Share subscription money received	50,000	—
Costs of shares issued	(75,000)	(50,000)
Net cash from financing activities	**2,344,568**	**4,150,231**
Net increase/(decrease) in cash and cash equivalents	**(459,441)**	**504,122**
Cash and cash equivalents brought forward	504,122	—
Cash and cash equivalents carried forward	**44,681**	**504,122**

The accompanying accounting policies and notes are an integral part of the financial information.

1. General information

Tirupati Graphite plc (the "Company") is incorporated in England and Wales, under the Companies Act 2006. The address of the registered office is 49 Berkeley Square, Mayfair, London W1J 5AZ.

The principal activities of the Company and its subsidiaries (the "Group") and the nature of the Group's operations is the exploration, mining, processing and production of natural flake graphite.

The consolidated financial information is presented in pounds sterling since that is the currency of the primary economic environment in which the Group operates.

2. Adoption of new and revised International Financial Reporting Standards (IFRSs)

New and revised IFRSs in issue but not yet effective

At date of authorisation of the financial information, the Group has not applied the following new and revised IFRSs that have been issued but are not yet effective and not early adopted.

IFRS 16	Leases
IFRIC 23	Uncertainty over Income Tax Treatments
Amendments to IFRS 9	Prepayment features with negative compensation
Amendments to IAS 28	Long-term interests in Associates and Joint Ventures
Annual improvements to IFRS Standards 2015-2017 cycle	Annual improvements
Amendments to IAS 19	Plan Amendment, Curtailment or Settlement

The directors do not expect that the adoption of the Standards listed above will have a material impact on the financial information of the Group.

New standards

(i) IFRS 9

IFRS 9 (2014) "Financial Instruments" supersedes IFRS 9 (2009), IFRS 9 (2010) and IFRS 9 (2013). The finalised version of IFRS 9 contains accounting requirements for financial instruments, replacing IAS 39 "Financial Instruments: Recognition and Measurement". The content of IFRS 9 (2014) includes:

- Classification and measurement – financial assets are classified by reference to the business model within which they are held and their contractual cash flow characteristics. The standard introduces a fair value through other comprehensive income category for certain debt instruments. Financial liabilities are classified in a similar manner to that under IAS 39 however there are differences in the requirements applying to the measurement of an entity's own risk.
- Impairment – The standard introduces an expected credit loss model for the measurement of the impairment of financial assets so it is no longer necessary for a credit event to have occurred before a credit loss is recognised
- Hedge accounting – The standard introduces a new hedge accounting model that is designed to be more closely aligned with how entities undertake risk management activities when hedging financial and non-financial risk exposures.
- Derecognition – the requirements for the derecognition of financial assets and liabilities are carried forward from IAS 39.

(ii) IFRS 15

IFRS 15 "Revenue from Contracts with Customers" provides a single, principles based five-step model to be applied to all contracts with customers. The standard includes guidance on the point in which revenue is recognised, accounting for variable consideration, costs of fulfilling and obtaining a contract and various related matters. IFRS 15 also introduces new disclosures about revenue.

There is no impact on the financial information upon adopting IFRS 9 and IFRS 15.

3. Significant accounting policies

Basis of preparation

This Financial Information of the Group has been prepared for the sole purpose of publication within this Prospectus. It has been prepared in accordance with the requirements of the Listing Rules and has been prepared in accordance with International Financial Reporting Standards and IFRS interpretations Committee (IFRS IC) interpretations as adopted by the European Union ("**IFRS**") and the policies stated elsewhere within the Financial Information. The Financial Information does not constitute statutory accounts within the meaning of section 434 of the Companies Act 2006.

The principal accounting policies adopted are set out on the following pages.

Going concern

The Group's business activities, together with the factors likely to affect its future development, performance and position are set out in the financial information. In addition, note 19 includes the Group's objectives, policies and processes for managing its capital; its financial risk management objectives; details of its financial instruments; and its exposure to credit risk and liquidity risk. The Group and the Company meet their day to day working capital requirements through its ability to raise either share capital or borrowings.

The Historical Financial Information has been prepared on a going concern basis. The directors have a reasonable expectation that the Group have adequate resources to continue in operational existence for the foreseeable future. Thus, they continue to adopt the going concern basis of accounting in preparing the Historical Financial Information.

Basis of consolidation

The Group financial information consolidate the financial information of the Company and all its subsidiaries ("the Group"). Subsidiaries include all entities over which the Company has the power to govern financial and operating policies. The existence and effect of potential voting rights that are currently exercisable or convertible are considered when assessing whether the Group controls another entity. Subsidiaries are consolidated from the date on which control commences until the date that control ceases. Intra-group balances and any unrealised gains and losses on income or expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial information.

The acquisition method of accounting is used to account for business combinations. The cost of an acquisition is measured as the fair value of the assets given, equity instruments issued, and liabilities incurred or assumed at the date of exchange, plus costs directly attributable to the acquisition. Identifiable assets acquired, and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair value at the acquisition date, irrespective of the extent of any minority interest.

Goodwill

Goodwill on acquisition of subsidiaries represents the excess of the cost of acquisition over the fair value of the Group's share of the identifiable net assets and contingent liabilities acquired. Identifiable assets are those which can be sold separately, or which arise from legal rights regardless of whether those rights are separable. Goodwill on acquisition of subsidiaries is included in intangible assets. Goodwill is not amortised but is tested annually, or when trigger events occur, for impairment and is carried at cost less accumulated impairment losses.

Segment reporting

An operating segment is a component of the Group that engages in business activity from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with and of the Group's other components. All operating segments' operating results, for which discrete financial information is available, are reviewed regularly by the Group's Board to make decisions about resources to be allocated to the segment and assess its performance. As a result of the acquisition during the year, the Group reports on a three-segment basis – holding company expenses, mining exploration and development and graphite mining extraction.

Revenue recognition

Revenue is measures at the fair value of the consideration received or receivable and represents amounts receivable for goods and services provide in the normal course of business, net of discounts, VAT and other sales-related taxes.

Sale of goods

Revenue from the sale of goods is recognised when all the following conditions are satisfied:

- The Group has transferred to the buyer the significant risks and rewards of ownership of the goods;
- The Group retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- The amount of revenue can be measured reliably;
- It is probable that the economic benefits associated with the transaction will flow to the entity; and
- The costs incurred or to be incurred in respect of the transaction can be measured reliably.

Foreign currencies

For the purposes of the consolidated financial information, the results and financial position of each group companies are presented in pounds sterling, which is the functional currency of the Group. At balance sheet date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at the rates prevailing at that date. Income and expense items are translated at the average exchange rates for the period.

Operating profit

Operating profit is stated after charging restructuring costs and after the share of result of associates but before investment income and finance costs.

Taxation

The tax expense represents the sum of the tax currently payable and deferred tax.

Current tax

The tax currently payable is based on taxable profit for the year. Taxable profit differs from net profit as reported in the income statement because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the balance sheet date.

A provision is recognised for those matters for which the tax determination is uncertain, but it is considered probable that there will be a future outflow of funds to a tax authority. The provisions are measured at the best estimate of the amount expected to become payable. The assessment is based on the judgement of tax professionals within the Group supported by previous experience in respect of such activities and in certain cases based on specialist independent tax advice.

Deferred tax

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the financial information and the corresponding tax bases used in the computation of taxable profit and is accounted for using the balance sheet liability method.

Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. Such assets and liabilities are not recognised if the temporary difference arises from the initial recognition of goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled, or the asset is realised based on tax laws and rates that have been enacted or substantively enacted at the balance sheet date. Deferred tax is charged or credited in the income statement, except when it relates to items charged or credited in other comprehensive income, in which case the deferred tax is also dealt with in other comprehensive income.

The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and liabilities on a net basis.

Current tax and deferred tax for the year

Current and deferred tax are recognised in profit or loss, except when they relate to items that are recognised in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognised in other comprehensive income or directly in equity respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

Property, plant and equipment

Property, plant and equipment in the course of construction for production, supply or administrative purposes, or for purposes not yet determined, are carried at cost, less any recognised impairment loss. Cost includes professional fees and, for qualifying assets, borrowing costs capitalised in accordance with the group's accounting policy. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

Fixtures and equipment are stated at cost less accumulated depreciation and any recognised impairment loss.

Depreciation is recognised so as to write off the cost or valuation of assets (other than freehold land and properties under construction) less their residual values over their useful. lives, using the straight-line method, on the following bases:

Plant and machinery	10%-25% per annum
Fixtures and fittings	10%-25% per annum

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. The gain or loss arising on the disposal or scrappage of an asset is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in income.

Internally-generated intangible assets — research and development expenditure

Expenditure on research activities is recognised as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from development (or from the development phase of an internal project) is recognised if, and only if all of the following conditions have been demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- the intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognised for internally-generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed above. Where no internally-generated intangible asset can be recognised, development expenditure is recognised in profit or loss in the period in which it is incurred.

Subsequent to initial recognition, internally-generated intangible assets are reported at cost less accumulated amortisation and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

Intangible assets acquired in a business combination

Intangible assets acquired in a business combination and recognised separately from goodwill are initially recognised at their fair value at the acquisition date (which is regarded as their cost).

Subsequent to initial recognition, intangible assets acquired in a business combination are reported at cost less accumulated amortisation and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

Derecognition of intangible assets

An intangible asset is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognised in profit or loss when the asset is derecognised.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method. Net realisable value represents the estimated selling price less all estimated costs of completion and costs to be incurred in marketing, selling and distribution.

Investments

Investments in subsidiaries are held at cost less any impairment.

Financial instruments

Financial assets and financial liabilities are recognised in the Group's balance sheet when the Group becomes a party to the contractual provisions of the instrument.

Financial assets

Financial assets are initially measured at fair value, net of transaction costs except for those financial assets classified as fair value through profit or loss which are initially measured at fair value. Other financial assets are classified into the following specified categories: financial assets as "at fair value through profit and loss" and "loans and receivables". The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

Loans and receivables

These assets are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. The principal financial assets of the Group are loans and receivables, which arise principally through the provision of goods and services to customers (e.g. trade receivables) but also incorporate other types of contractual monetary assets. They are included in current assets, except for maturities greater than twelve months after the balance sheet date. These are classified as non-current assets.

The Group's loans and receivables are recognised and carried at the lower of their original amount less an allowance for any doubtful amounts. An allowance is made when collection of the full amount is no longer considered possible.

The Group's loans and receivables comprise trade and other receivables and cash and cash equivalents in the Consolidated Statement of Financial Position.

Cash and cash equivalents

Cash and cash equivalents includes cash in hand, deposits held at call with banks and other short-term highly liquid investments with maturities of three months or less. Bank overdrafts that are repayable on demand and form an integral part of the Group's cash management are included as a component of cash and cash equivalents in the consolidated cash flow statement.

Financial assets – impairment

A financial asset is assessed at each reporting date to determine whether there is any evidence that it is impaired. A financial asset is considered impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset. Individual significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics. All impairment losses are recognised in the consolidated income statement.

Non-financial assets – impairment

At each balance sheet date, the Group reviews the carrying amounts of its tangible and intangible assets, including Goodwill, to determine whether there is any indication that these assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated to determine the extent of the impairment loss (if any). Provision is made for any impairment and immediately expensed in the period.

The recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised as an expense immediately, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease.

Financial liabilities and equity instruments issued by the group

Financial liabilities and equity instruments are classified according to the substance of the contractual arrangements entered into. An equity instrument is any contract that evidences a residual interest in the assets of the Group after deducting all of its liabilities. Equity instruments issued by the Group are recorded at the proceeds received, net of direct issued costs.

Trade payables

Trade payables are initially measured at fair value, and are subsequently measured at amortised costs, using the effective interest rate method.

Other financial liabilities

Other financial liabilities are initially measured at fair value, net of transaction costs. Other financial liabilities are subsequently measured at amortised cost using the effective interest method, as set out above, with interest expense recognised on an effective yield basis.

Share capital

Ordinary shares

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of Ordinary shares and share options are recognised as a deduction from equity, net of any tax effects.

4. Critical accounting estimates and judgements

The preparation of financial information in conformity with adopted IFRSs requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial information and the reported amounts of sales and expenses during the reporting period. Although these estimates are based on management's best knowledge of the amount, event or action, actual results ultimately may differ from those estimates.

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial period are discussed below.

a. Going concern basis of preparation

The adoption of the going concern basis by the Directors is following a review of the current position of the Group and the forecasts for the next 18 months from the date of approving the financial information.

The Group's continuing activities in 2019 incurred a loss of £1,113,708. In addition, as at 31 March 2019 there was a cash balance of £44,681.

However, after making enquiries, the Directors have formed a judgement that there is a reasonable expectation that the Group can secure further adequate resources, to enable it to continue in operational existence for the foreseeable future. Thus, adequate arrangements will be in place to enable the settlement of their financial commitments.

For this reason, the Directors continue to adopt the going concern basis in preparing the financial information.

Whilst there are inherent uncertainties in relation to future events, and therefore no certainty over the outcome of the matters described, the Directors consider that, based upon financial projections and dependent on the success of their efforts to complete these activities, the Group will be a going concern for the next twelve months. If it is not possible for the Directors to realise their plans, over which there is significant uncertainty, the carrying value of the assets of the Group is likely to be impaired.

b. Impairment of assets

The Group assesses at each reporting date whether there is an indication that an asset may be impaired. If any such indication exists, or when annual impairment testing for an asset is required, the Group makes an estimate of the asset's recoverable amount.

An asset's recoverable amount is the higher of its fair value less costs to sell and its value in use. This is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets, and the asset's value in use cannot be estimated to be close to its fair value. In such cases, the asset is tested for impairment as part of the cash-generating unit to which it belongs. When the carrying amount of an asset or cash-generating unit exceeds its recoverable amount, it is considered impaired and is written down to its recoverable amount.

In assessing value in use, estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Impairment losses relating to continuing operations are recognised in those expense categories consistent with the function of the impaired asset, unless the asset is carried at revalued amount (in which case the impairment loss is treated as a revaluation decrease).

An assessment is also made at each reporting date as to whether there is any indication that previously recognised impairment losses may no longer exist or may have decreased. If such indication exists, the recoverable amount is estimated. A previously recognised impairment loss is reversed only if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. If that is the case, the carrying amount of the asset is increased to its recoverable amount. That increased amount cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the Statement of Comprehensive Income unless the asset is carried at revalued amount, in which case the reversal is treated as a revaluation increase. After such a reversal, the depreciation charge is adjusted in future periods to allocate the asset's revised carrying amount, less any residual value, on a systematic basis over its remaining useful life.

c. Accounting for provisions

The Directors consider the nature of any outstanding legal or constructive claims on the Group to determine the accounting treatment required in accordance with note above.

5. Revenue from contracts with customers

The group derives revenue from the transfer of goods at a point in time in the following major product lines and geographical regions:

2019	UK	Europe	India	Total
Revenue from external customers	—	—	145,207	145,207
Timing of recognition:				
At a point in time	—	—	145,207	145,207

2018	UK	Europe	India	Total
Revenue from external customers	—	—	28,001	28,001
Timing of recognition:				
At a point in time	—	—	28,001	28,001

6. Segmental analysis

The Directors believe, under IFRS 8 – "Operating Segments", the Group operated in three primary business segments in 2018, being holding company expenses, mining exploration and development and graphite mining extraction.

Segmentation by continuing businesses

Segment results

	2019 £	2018 £
Revenue to external customers		
Holding Companies	**145,172**	28,001
Mining Exploration and Development	—	–
Graphite Mining Extraction	—	28,616
Loss before income tax		
Holding Companies	**920,150**	407,053
Mining Exploration and Development	**100,782**	97,317
Graphite Mining Extraction	**126,333**	11,642
Net assets		
Holding Company	**5,336,652**	3,897,165
Mining Exploration and Development	**(306,253)**	(122,128)
Graphite Mining Extraction	**(173,725)**	4,528

Segmentation by geographical area:

7. Finance costs

	2019 £	2018 £
Interest payable	2,827	114

8. Operating loss

	2019 £	2018 £
The following items have been included in arriving at operating loss		
Depreciation	**105,645**	5,089
Net foreign exchange loss	**143,506**	14,088
Auditor's remuneration has been included in arriving at operating loss as follows:		
Fees payable to the Group's auditor and their associates for the audit of the Group's annual accounts	**24,000**	20,000
Total non-audit fees	—	—

9. Employee information

The average monthly number of employees (including Executive Directors) was:

	2019	2018
Number of employees for the year:	120	63
	£	£
Staff costs (for the above employees)	**397,073**	192,000
Wages and salaries	**75,189**	35,400
Social security costs	**10,117**	9,646
	482,379	237,046

Directors' remuneration and transactions

	2019 £	2018 £
Directors' remuneration		
Emoluments and fees	**316,000**	192,000
Remuneration of the highest paid director:		
Emoluments and fees	**180,000**	120,000
Benefits and other fees	—	—

The highest paid director did not exercise any share options in the year (2018: nil).

10. Income tax expense

	2019 £	2018 £
Current tax	—	—
Total current tax	—	—
Deferred tax	—	20
Charge to the income statement	**(33,557)**	(17,778)
	(33,557)	(17,758)

	2019 £	2018 £
Total tax on loss		
The tax assessed for the period is different from the standard rate of income tax, as explained below:		
Loss before tax on continuing operations	**(1,147,265)**	(546,889)
Loss before tax multiplied by the standard rate of income tax of 20%	**(229,453)**	(109,378)
Losses carried forward	**195,896**	91,600
Tax (credit)/charge for period	**(33,557)**	(17,778)

11. Earnings per share

Basic and diluted

Earnings per share is calculated by dividing the loss attributable to the equity holders of the Company by the weighted average number of Ordinary shares in issue during the period.

	2019	2018
Continuing operations:		
Loss for the year	**(1,113,708)**	(529,131)
Weighted average number of shares in issue	**54,514,524**	31,470,412
Loss per share (pence)	**2.04p**	1.68p

There was no dilutive effect from the options outstanding during the period or in the previous period.

12. Goodwill

Group	2019 £
Cost	
At 1 April 2018	2,900,310
Transferred to Intangible	(2,900,310)
At 31 March 2019	—
Net book value	
At 1 April 2018	2,900,310
At 31 March 2019	—

13. Intangible Assets

Group Cost	2019 £
At 1 April 2018	506
Transferred from Goodwill	2,900,310
Additions	1,001,418
At 31 March 2019	**3,902,234**
Accumulated amortisation	
At 1 April 2018	—
Charge for the year	—
At 31 March 2019	**—**
Net book value	
At 1 April 2018	506
At 31 March 2019	**3,902,234**

The intangible assets arise from the incorporation costs which were capitalised in Tirupati Madagascar Ventures.

14. Investments

Company	Shares in group undertaking 2019 £
Cost	
At 1 April 2018	3,000,000
Additions	539,448
At 31 March 2019	**3,539,448**
Net book value	
At 1 April 2018	3,000,000
At 31 March 2019	**3,539,448**

The Company's investments at the Statement of Financial Position date in the share capital of companies include the following:

Subsidiaries

Tirupati Resources Mauritius

Registered: Mauritius

Nature of business: Holding and administrative entity

	%
Class of share	Holding
Ordinary shares	100

Tirupati Madagascar Ventures

Registered: Madagascar

Nature of business: Evaluation and exploration of mining operations

	%
Class of share	Holding
Ordinary shares	100

Establissements Rostaing

Registered: Madagascar

Nature of business: Graphite mining extraction

	%
Class of share	Holding
Ordinary shares	100

15. Property, plant and equipment

Group	Plant and Machinery £	Fixtures and Fittings £	Assets under construction £	Total £
Cost				
At 1 April 2017	—	—	—	—
Additions	166,608	8,423	191,847	366,878
At 1 April 2018	166,608	8,423	191,847	366,878
Additions	606,559	74,095	248,114	928,768
At 31 March 2019	**773,167**	**82,518**	**439,961**	**1,295,646**
Accumulated depreciation and impairment				
At 1 April 2018	—	—	—	—
Depreciation	50,055	3,971	–	54,026
At 1 April 2018	50,055	3,971	–	54,026
Depreciation	101,208	6,006	–	107,214
At 31 March 2019	**151,263**	**9,977**	**—**	**161,240**
Carrying amount				
As at 1 April 2018	116,553	4,452	191,847	312,852
As at 31 March 2019	**621,904**	**72,541**	**439,961**	**1,134,406**

Company	Assets under construction £	Total £
Cost		
At 1 April 2017	—	—
Additions	—	—
At 1 April 2018	–	–
Additions	220,400	220,400
At 31 March 2019	**220,400**	**220,400**
At 1 April 2018	—	—
Depreciation	–	–
At 1 April 2018	–	–
Depreciation	–	–
At 31 March 2019	—	—
Carrying amount		
As at 1 April 2018	-	-
As at 31 March 2019	**220,400**	**220,400**

16. Trade and other receivables

	Group		Company	
	2019	**2018**	**2019**	**2018**
	£	**£**	**£**	**£**
Trade debtors	**13,339**	67,413	**13,043**	28,896
Other debtors	**415,544**	570,352	**159,715**	335,454
Advances to directors for expenses	**1,311**	1,307	**1,311**	1,307
Amounts owed by group undertakings	**—**	—	**1,921,345**	761,348
Prepayments	**1,030**	5,466	**—**	—
	431,224	**644,538**	**2,095,413**	**1,127,005**

In the Directors' opinion, the carrying amounts of receivables is considered a reasonable approximation of fair value. The Group monitors on a monthly basis the receivable balance and makes impairment provisions when debt reaches a certain age. There are no significant known risks as at 31 March 2019.

17. Trade and other payables

Current:

	Group		Company	
	2019	**2018**	**2019**	**2018**
	£	**£**	**£**	**£**
Trade payables	**355,222**	36,803	**163,707**	—
Social security and other taxes	**9,344**	3,842	**3,842**	3,842
Other payables	**50,317**	526,824	**50,000**	465,037
Amounts due from group	**—**	—	**135,779**	—
Accruals	**287,100**	195,711	**415,383**	194,071
Advances to directors for expenses	**—**	—	**186**	—
	701,983	**763,180**	**768,897**	**662,950**

In the Directors' opinion, the carrying amount of payable is considered a reasonable approximation of fair value.

Non-current:

Current:

	Group		Company	
	2019	**2018**	**2019**	**2018**
	£	**£**	**£**	**£**
Emphyteutic lease	**43,907**	—	—	—
	43,907	—	—	—

18. Provisions

There are no provisions as at year end (2018: £nil), nor were there any during the year (2018: £nil).

19. Share capital

	2019 Number	2019 £	2018 Number	2018 £
Allotted, called up and fully paid				
Ordinary shares of 2.5p each	**58,810,955**	**1,470,274**	45,002,609	1,125,065
Ordinary "A" Shares	**58,810,955**	**1,470,274**	45,002,609	1,125,065

Shares were issued during the year as follows:

	Number of shares issued
Shares issued from a placing on 31 May 2018	5,335,300
Shares issued from a placing on 5 June 2018	2,105,000
Shares issued from a placing on 19 July 2018	2,325,187
Shares issued from a placing on 14 September 2018	3,100,000
Shares issued from a placing on 19 February 2019	500,000
Shares issued from a placing on 24 March 2019	442,859
	13,808,346

20. Financial instruments

Financial risk management

The Group has exposure to the following risks from its use of financial instruments:

- Capital risk management
- Market risk
- Credit risk
- Liquidity risk
- Currency risk

This note presents information about the Group's exposure to each of the above risks, the Group's management of capital, and the Group's objectives, policies and procedures for measuring and managing risk.

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework.

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities.

The Group Audit Committee oversees how management monitors compliance with the Group's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the Group.

Capital risk management

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern while maximising the return to stakeholders as well as sustaining the future development of the business. In order to maintain or adjust the capital structure, the Group may adjust dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

The capital structure of the Group consists of net debt, which includes loans, cash and cash equivalents, and equity attributable to equity holders of the parent, comprising issued capital and retained earnings.

Fair value of financial assets and liabilities

	Valuation, methodology and hierarchy	Book value 2019 £	Fair value 2019 £	Book value 2018 £	Fair value 2018 £
Financial assets					
Cash and cash equivalents	(a)	**44,681**	**44,681**	**504,122**	**504,122**
Loans and receivables, net of impairment	(a)	**430,194**	**430,194**	**639,072**	**639,072**
Total at amortised cost		**474,875**	**474,875**	**1,143,194**	**1,143,194**
Financial liabilities					
Trade and other payables	(a)	**701,983**	**701,983**	**763,180**	**763,180**
Borrowings and provisions	(a)	**43,907**	**43,907**	—	—
Total at amortised cost		**745,890**	**745,890**	**763,180**	**763,180**

Valuation, methodology and hierarchy

The carrying amounts of cash and cash equivalents, trade and other receivables, trade and other payables and deferred income, and Borrowings are all stated at book value. All have the same fair value due to their short-term nature.

Market risk

Market price risk arises from uncertainty about the future valuations of financial instruments held in accordance with the Group's investment objectives. These future valuations are determined by many factors but include the operational and financial performance of the underlying investee companies, as well as market perceptions of the future of the economy and its impact upon the economic environment in which these companies operate.

Credit risk

Credit risk is the risk that counterparties to financial instruments do not perform their obligations according to the terms of the contract or instrument. The Group is exposed to counterparty credit risk when dealing with its customers and certain financing activities.

The immediate credit exposure of financial instruments is represented by those financial instruments that have a net positive fair value by counterparty at 31 March 2019. The Group considers its maximum exposure to be:

	2019 £	2018 £
Financial assets		
Cash and cash equivalents	**44,681**	**504,122**
Loans and receivables, net of impairment	**430,194**	**639,072**
	474,875	**1,143,194**

All cash balances are held with an investment grade bank who is our principal banker. Although the Group has seen no direct evidence of changes to the credit risk of its counterparties, the current focus on financial liquidity in all markets has introduced increased financial volatility. The Group continues to monitor the changes to its counterparties' credit risk.

Liquidity risk

Liquidity risk is the risk the Group will encounter difficulty in meeting its obligations associated with financial liabilities as they fall due. The Board are jointly responsible for monitoring and managing liquidity and ensures that the Group has sufficient liquid resources to meet unforeseen and abnormal requirements. The current forecast suggests that the Group has sufficient liquid resources.

Available liquid resources and cash requirements are monitored using detailed cash flow and profit forecasts these are reviewed at least quarterly, or more often as required. The Directors decision to prepare these accounts on a going concern basis is based on assumptions which are discussed in the going concern note above.

The following are the contractual maturities of financial liabilities:

31 March 2019	Carrying amount £	Contractual cash flows £	6 months or less £	6 to 12 months £	1 to 2 years £	2 to 5 years £
Non–derivative financial liabilities						
Trade and other payables	**701,983**	—	**701,983**	—	—	—
Borrowings	**43,907**	—	—	—	—	**43,907**
	745,890	—	**701,983**	—	—	**43,907**

Cash flow management

The Group produces an annual budget which it updates quarterly with actual results and forecasts for future periods for profit and loss, financial position and cash flows. The Group uses these forecasts to report against and monitor its cash position. If the Group becomes aware of a situation in which it would exceed its current available liquid resources, it would apply mitigating actions involving reduction of its cost base. The Group would also employ working capital management techniques to manage the cash flow in periods of peak usage.

Currency risk

The Group currently has minimal exposure to foreign currency and thus does not engage in any hedging activity. The Group liquidated its overseas subsidiaries during 2010 and therefore has no exposure to foreign exchange gains or losses.

21. Operating Lease commitments

The Group leases various areas of land under non-cancellable operating lease agreements. The lease terms are between 10 and 40 years.

The future aggregate minimum lease payments under non-cancellable operating leases are as follows:

Group	**2019**	**2018**
No later than 1 year	**4,366**	—
Later than 1 year and no later than 5 years	**17,463**	—
Later than 5 years	**81,922**	—
Total	**103,751**	

22. Related party transactions

Tirupati Carbons and Chemical Pvt Limited (TCCPL) is an entity incorporated in India. The Company is connected to TCCPL in that both Shishir Poddar and Hemant Poddar were both directors and shareholders of TCCPL during the year. At year end, a net amount was receivable of £Nil (2018 – £125,497) from TCCPL.

23. Events after the reporting period

There are no events to report subsequent to 31 March 2019.

PART C

CAPITALISATION AND INDEBTEDNESS OF THE GROUP

Capitalisation

The table below sets out the capitalisation of the Group as at 31 December 2019. The capitalisation figures have been extracted from the Group's interim financial information as at 31 December 2019 as set out in Part A of Part IV of this Registration Document.

Description	**As at 31 December 2019 (£)**
Total current debt	
— Guaranteed	—
— Secured	—
— Unguaranteed/unsecured	
Total non-current debt (excluding current portion of long- term debt)	
— Guaranteed	—
— Secured	
— Unguaranteed/Unsecured	610,000
Total indebtedness	**610,000**
Shareholder's equity[(1)]	
a. Share capital	1,498,132
b. Legal reserve	—
c. Other reserves	3,406,780
Total Shareholder's Equity	**4,904,912**

There have been no material changes to the capitalisation of the Group since 31 December 2019.

Indebtedness

The table below sets out the indebtedness of the Group as at 31 December 2019. The indebtedness figures have been extracted from the Group's unaudited interim accounts as at 31 December 2019:

Description	**As at 31 December 2019 (£)**
Cash	58,963
Trading Securities	—
Liquidity	**58,963**
Current financial receivable	**58,963**
Current Bank debt	—
Other current financial debt	—
Net current financial indebtedness	—
Non-Current Bank loans	—
Other non current loans	—
Non-Current financial indebtedness	—

Net financial indebtedness

The Group had no indirect or contingent financial indebtedness as at 31 December 2019.

PART D

OPERATING AND FINANCIAL REVIEW

The following operating and financial review should be read in conjunction with the financial information set out in Part IV of this document and the other financial information relating to the Group included elsewhere in this document or incorporated by reference into this document.

This review contains forward-looking statements based on the current expectations and assumptions about the Group's future business. Such statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Forward- looking statements are not guarantees of future performance. The actual investment performance, results of operations, financial condition and dividend policy of the Group, as well as the development of its financing strategies, may differ materially from the impression created by the forward-looking statements contained herein as a result of certain factors including, but not limited to, those discussed in the "Risk Factors" section of this document.

The selected financial information discussed in this Part D has been extracted without material adjustment from the financial information of the Group as at, and for the nine-months ended 31 December 2019 and the two financial years ended 31 March 2018 and 2019, which were prepared in accordance with International Financial Reporting Standards (IFRS).

1 OVERVIEW

1.1 Introduction

Tirupati Graphite Plc ("TG") was incorporated in April 2017 and since that date has focused on developing integrated flake graphite exploration, mining, processing and graphene production. It is promoted by and possesses a strong management team with over 100 years collective experience in flake graphite and graphene operations development, innovation and commercialisation. The Company currently owns and is developing two primary flake graphite mining and processing projects in Madagsacar, namely the Vatomina Project; and the Sahamamy Project. Concurrently, it is developing downstream processing facilities for high purity and specially processed flake graphite at its Patalganga Project in India as well as advancing its high-tech Graphene and mineral and materials technology center which will also be located in India. It has adopted a staged development approach for development of its projects under a medium-term development plan (MTDP).

Post incorporation, the Company acquired the Vatomina project in May 2017, the Sahamamy project in October 2017 and entered into a binding acquisition agreement, subject only to statutory approvals, for the downstream and graphene project. It has raised around £3.3 million before costs in equity capital and £0.6 million in unsecured convertible loan notes to fund its initial development and advanced its projects to construction ready state, ahead of the larger scale developments under its MTDP.

1.2 Presentation of Financial Information

As noted in "Important Information", the Consolidated Financial Statements were prepared in compliance with International Accounting Standards and IFRS. As such, financial information included herein has been derived as follows:

- the financial information as at and for the nine-month period ended 31 December 2019 set forth herein has been derived from the Management Accounts for the nine-months ended 31 December 2019;
- the financial information as at and for the year ended 31 March 2019 set forth herein has been derived from the March 2019 Financial Report. These accounts are audited and reviewed in accordance with IFRS;
- the financial information as at and for the nine-month period ended 31 December 2018 set forth herein has been derived from the annual Report for the year ended 31 March 2019; and
- the financial information as at and for the year ended 31 March 2018 set forth herein has been derived from the March 2018 Financial Report. These accounts are audited and reviewed in accordance with IFRS.

1.3 Principal Activities executed during the period of review April 2017 – Dec 2019

Under its MTDP, the Group plans to reach a total of 81,000 tpa of installed, primary flake graphite production capacity combined, across both the Vatomina and Sahamamy Projects (collectively, the "Madagascar Projects"), over the next three years. Complimentary to its Madagascar Projects, the Group will be developing downstream upgrading and processing facilities for the production of high purity and specially processed flake graphite products, up to an installed capacity of 30,000 tpa, in India. In addition, its graphene manufacturing & minerals and materials technology development center will also be developed which will have an initial 3,000 kilogram per annum graphene production capacity, also to be strategically located in India.

Having successfully undertaken an initial period of development of its projects in Madagascar and India, since April 2019 the Group successfully commissioned and has been operating its first 3,000 tpa primary flake graphite operations at the Sahamamy Project in Madagasacar. Shortly after in July 2019, it also commissioned and has since been operating its first downstream flake graphite operations to produce flame retardant products at its Patalganga Project in India, which has an initial installed production capacity of 1,200 tpa of flame retardant products as well as 1,500 tpa flake graphite finishing capabilities. The start-up of both of these projects is discussed in more detail below.

Primary flake graphite projects in Madagascar

Both the of Group's Madagascar Projects are open cast mining operations for the exploitation of graphite ore followed by a conventional beneficiation process to produce flake graphite of purity (i.e. graphitic content ("GC")) ranging between 90% GC up to 96% GC, in variable particle size distributions (i.e. jumbo, larger and small flakes), in accordance with demand from end-users in traditional/conventional application markets for these flake graphite products. The Group's graphite deposits are bestowed with favorable larger flake size distributions, which provides various technological and commercial advantages to the Group against competitors.

Exploration and development of the Madagascar Projects is being undertaken on a modular basis, initially with the establishment of a first smaller capacity module at each site (i.e. 3,000 tpa at Sahamamy and 6,000 tpa at Vatomina). Subsequently, this will be followed by four larger scale individual modules each with a rated capacity of 18,000 tpa, which will be installed across the two projects (one module at Sahamamy and three modules at Vatomina), which will bring the total installed capacity up to 81,000 tpa over the Group's MTDP. This concept allows for early stage production thereby, lowering startup capital investment requirements and facilitating organic growth opportunities for the Group.

Delivering on its MTDP, the Group implementation its' staged, modular development strategy and established and commissioned its first 3,000 tpa mining and processing operating module at the Sahamamy Project with production commencing from April 2019, which was successfully delivered at a CAPEX spend of £899,928, excluding one-time, site wide expenditures. In addition, construction works for the first 6,000 tpa mining and processing operating module at the Vatomina Project was also progressed and is substantially complete with equipment procurement in progress and construction and commissioning of the processing plant to follow, upon arrival of equipment to site. The total CAPEX spend at Vatomina since acquisition in May 2017 up until 31stDecember 2019 was £1,286,325 and includes exploration and evaluation and intra project infrastructure built. The estimated spend for completion and commissioning of the first module at Vatomina is forecast to be a further approximately £1,432,000 funds for which are planned to be allocated from the Placing Proceeds and which is expected to be completed and in production in 4 months following Admission. With a combined 9,000 tpa of installed capacity in operations between these first two modules in Madagascar, the Group expects to generate annual revenue of between £6 to £7 million.

During the nine months of operations between April to December 2019, the Group undertook various activities including mine development, stripping and overburden removal, graphite ore mining, stockpiling, ramp-up of production, processing plant debottlenecking, staff training and development and overall preparations to commence commercial production at Sahamamy. During this period, 927 MT of sellable flake graphite was produced of which 769 MT was sold and shipped, generating sales revenue of £509,874 at a cost of sales of £239,039 and providing gross profits of £270,835 which represents gross margins of 53.1%. Commercial production at the plant has been deemed to have started from January 2020. The operations at Sahamamy are forecast to produce between 500 to 600 MT of flake graphite during January-March 2020 which is expected to generate revenues of around £365,000 and on cost of sales of £150,000, generating gross margins of around £215,000 for the quarter.

A summary overview of the Vatomina and Sahamamy Projects, milestones achieved, key project statistics and CAPEX are as below:

The Vatomina Project

a. Mining Permit: No 38321 issued with effect from 18.12.2015 covering an area of 25 square kilometers valid for 40 years and renewable.

b. Environment Authorisation: Issued on 10.10.2015 for first stage development with up to 12,000 tpa flake graphite production capacity.

c. Detailed Exploration: 3,125.9 meters diamond core drilling, 4,789 meters augur drilling and 225 meters pitting covering more or less 30% of the permit area, returning a resource of 18.4 Million Tonnes with 846,400 Metric Tonnes contained graphite and additional resource target of 8-10 Million Tonnes.

d. Evaluation and Engineering: Over 1,000 samples from Exploration assayed, Metallurgical tests at lab scale followed by pilot scale, detailed engineering for project development adopting results from tests alongside technology inherited from promoter group, processing technology successfully established with first plant at Sahamamy.

e. Development of internal project Infrastructure: Base camp, network of 20 kms 3.5M wide and 5 kms 6M wide internal roads, bridges and culverts.

f. Progress on land/surface rights and social engagement:

   1) Leasehold acquisition of 10 hectares non mineral bearing land for processing plant, utilities, office and residential complexes, and community center development.

   2) Leasehold acquisition of about 40 hectares land in mineralized and mining utility areas for mine development.

   3) Setting in place a harmonized mechanism for further land acquisition.

   4) Initiation of development of the first 6,000 tpa capacity mining & processing facility: Area grading and land development for processing plant, utilities, office and residential complexes, and community center development, established engineering centre, laboratory, stores and electrical room buildings, completed construction and flooring for 6,000 tpa plant covering more or less 15,000 square feet, plant building superstructure substantially fabricated at plant site.

Head of CAPEX	**Investment (£) Up to 31.12.2019**	**Result of investment**
Land Lease payments	49,784	Plant & Mining areas land acquisition
Earthmoving & Drilling equipment procured	271,817	Core drilling, Land development & Infra
Processing Plant & utilities construction	299,090	6,000 tpa plant under development
Infrastructure development & Admin Assets	195,003	Roads & drains, bridges, office automation
Evaluation & Engineering	470,531	Resource definition process design and project development used in both projects
Total Investment	**1,286,325**	

The Sahamamy project

a. Mining Permits: no. E 21 issued with effect from 20.07.1999 covering an area of 1.56 sq km & E 23608 issued on 06.04.2016 covering an area of 6.25 sq km both issued for 40 years and renewable.

b. Environment authorization: Issued for 3,000 tpa flake graphite production from E 21, additional 18,000 tpa flake graphite production authorisation from E 23608 in progress.

c. Exploration Evaluation and engineering: Maiden JORC 2012 resource for the project, detailed studies and planning for development of the project, detailed engineering and planning for development of new 3,000 tpa mining and processing facility, planning for further project development.

d. Strengthening of project infrastructure: About 10 kms dedicated approach road reconditioned, internal roads, camp facilities, office setup, utilities like laboratory, fabrication centre, stores etc established.

e. Development, commissioning and operations ramp up of 3,000 tpa new facilities: New mining fleet deployed and mine developed for feeding raw material for 3,000 tpa processing plant, new processing plant developed installed commissioned and ramped up to commercial production.

f. Implementation, roll-out and refinement of the customized Management Information System

Head of CAPEX	Investment (£) Up to 31.12.2019	Result of investment
Earthmoving Equipment	226,659	Mining of Graphite ore for 3,000 tpa plant
Processing Plant	493,225	3,000 tpa plant set up and operational
Infra & Admin Assets	42,610	Existing Infrastructure strengthened
Exploration Evaluation & Engineering	138,434	Resource definition & project development
Total Investment	**899,928**	

Tirupati Specialty Graphite (P) Ltd. ("TSG")

TSG is a private Indian company promoted by promoters of TCCPL engaged in developing downstream value-added flake graphite processing facilities. The Company entered into a conditional binding agreement dated 10th October 2018 for the acquisition of TSG with its existing shareholders in an equity swap deal. This acquisition is subject only to regulatory approvals (please see paragraph 11.2.4 of Part V of this Registration Document for further information on the conditions). The downstream facilities planned by TSG will produce high purity graphite (up to 99.95% GC), expandable graphite, spherical graphite and micronized graphite products and their derivatives which is consumed in various hi-tech applications including Lithium ion batteries, flame retardants, thermal management, lubrication, composites and polymers etc. and is a forward integration to TG's Madagascar projects.

In addition, TSG holds the development plans for a Graphene manufacturing & minerals and materials technology center which will initially have the capabilities to produce up to 3,000 kilogram of graphene per annum. The development plans of TSG are also staged, aligning with the Group's plans for its primary flake graphite projects in Madagascar. As a precursor to larger scale operations, TSG has established a 2,700 tpa expandable graphite-based flame-retardant graphite manufacturing facility cum primary flake graphite finishing facility which was commissioned at Patalganga near Mumbai in July 2019. The Patalganga project is currently ramping up production and critically at the same time, it is creating markets for its specialty graphite products. During the period July to December 2019, primarily product qualification process was undertaken and in the process a total of 164 MT MT was sold generated revenues of £170,448/-.

In line with its modular development approach, further development of the specialty graphite capacities is planned in 3 modules, first with a throughput capacity of 6,000 tpa, followed by two modules of 12,000 throughput each, culminating to a total of 30,000 tpa of downstream specialty graphite production capacity over the Group's MTDP.

TGMRC will also be developed in three stages. The first stage will be to install Graphene manufacturing facilities capable of producing up to 100 kgs per day of high purity graphite and graphene. The second and third stages will see the establishment of extensive technological development facilities and equipment which enables the Group to commence the provision of professional consulting services to the minerals processing industry providing services such as mineral processing technology development, materials technology development and characterisation.

It should be noted that given the required regulatory approvals for the acquisition are expected to be received after Admission, the financial statements of TSG have not been consolidated with the Group. The

Group has also not made any investment in TSG to date, however, in accordance with the terms of the conditional acquisition agreement, the Group has full access to the activities of TSG.

The key activities performed, and achievements made by TSG up until 31st December 2019 are as below:

a. Establishment of 1,200 tpa flame retardant expandable graphite cum 1,500 tpa flake graphite finishing facilities at the Patalganga Project.

b. Completion of feasibility studies, technology assimilation and development for the comprehensive Specialty Graphite Project.

c. Development of technology for high purity fluorine free flake graphite manufacturing of which exclusive intellectual property rights are held by TSG.

d. Development of technology for manufacture of graphene using a zero-chemical process of which exclusive intellectual property rights are held by TSG.

e. Completion of feasibility studies for the TGMRC.

f. Establishment of initial facilities, project approval by provincial government and acquisition of land.

g. Providing technological assistance to both the primary Madagascar and specialty graphite projects.

h. Creation of human resources pool for all projects.

TSG employs a team of specialists in the activities it is performing which forms part of its intellectual property and competitive advantage. To date, all activities have been internally executed and funded by TSG.

Part I of this Document provides a more detailed overview of the Group's projects and development plans and strategies. Insight on the operational and financial matters in relation to the activities above are provided in the following chapter.

2 PRINCIPAL FACTORS AFFECTING RESULTS OF OPERATIONS

The Directors believe that the factors discussed below have significantly affected, or in the future will significantly affect, the Group's results of operations.

2.1 Progress of Development of Madagascar Projects

The Group has commissioned its first mining and processing facility in Madagascar. It has also executed predevelopment activities including exploration and infrastructure development. These activities demonstrate the Group's ability to successfully establish and operate projects in Madagascar. The size of the group's operations in Madagascar shall depend on further development of its projects in accordance with its defined MTDP. A key differentiator of the group is its ability to develop its projects at low capital intensity in both exploration and evaluation and per MT of annual production capacity created. Its ability to continue to successfully develop its projects with the low capital intensity will impact its future results.

The following table provides key financial statistics in respect of the capital costs incurred and their outcome, derived from the audited and interim financial statements, the Competent Persons Report (CPR) as defined under JORC Code (2012) at Part 2 and corporate operations records:

Sahamamy Project

Head of CAPEX	Investment (£) Up to 31.12.2019	Result of investment
Earthmoving Equipment	226,659	Mining of Graphite ore for 3,000 tpa plant
Processing Plant	493,225	3,000 tpa plant set up and operational
Infra & Admin Assets	42,610	Existing Infrastructure strengthened
Evaluation & Engineering	138,434	Resource definition & project development
Total Investment	**899,928**	

Vatomina Project

Head of CAPEX	Investment (£) Up to 31.12.2019	Result of investment
Land Lease	49,784	Plant & Mining areas land acquisition
Earthmoving & Drilling	271,817	Core drilling, Land development & Infra
Processing Plant	299,090	6,000 tpa plant under development
Infra & Admin Assets	195,003	Roads & drains, bridges, office automation
Evaluation & Engineering	470,531	Resource definition process design and project development used in both projects
Total Investment	**1,286,325**	

The extent of activities executed with the investments made can be reviewed in more detail in Part I & Part II. Continuity of development of the projects to establish planned capacities shall have a bearing on the size and results of operations of the Group.

2.2 Market Price of Flake Graphite

The Group's present revenues totaling £509,874/- in the nine-month period to 31 December 2019, £145,195/- in the year to 31 March 2019 and £28,001/- in the year to 31 March 2018 are derived from the sale of primary flake graphite it produces in Madagascar. The price of flake graphite varies based on two primary characteristics, purity and size of flakes. The bulk of the commercial applications of primary flake graphite require purity in the range of 80% to 96%. Higher purity and larger flake size command higher prices. The basket price realized by the Group for the nine month period April to December 2019 was £663/- per MT sold.

Unlike other exchange traded commodities with terminal markets for example copper, gold and nickel, flake graphite prices are generally derived through negotiations between buyers and sellers with prices typically dependent on the flake size and purity. Market commentators are generally predicting a firming up of flake graphite prices in 2020 and beyond owing to incremental consumption in high growth applications. Sales made by the Group for the nine-month period April to December 2019 varied in purity from 80% to 94% GC and flake size distribution. With the stabilization of its operations and markets, the Group expects to achieve a basket price of around £700/- per MT in commercial operations.

2.3 Production costs and efficiency

The present and long-term profitability of the Madagascar primary flake graphite projects is dependent upon operating costs and efficiency. The key elements of operating costs are for mining and processing, human resources, logistics and administrative costs. For the nine-month period between 1 April to 31 December 2019, the key operating statistics are summarised as follows:

Cost Head / Particulars	Cost Incurred (£) / Outputs (MT) 01.04.2019 to 31.12.2019
Mining & Processing	£189,355/-
Human Resources	£116,272/-
Logistics utilities & plant admin	£53,529/-
Increase / (Decrease) in inventory of inputs	£120,117/-
Total Cost of production	**£239,039/-**
Quantity Produced (MT)	926.70
Cost per ton produced	£257 /mt
Quantity Sold (MT)	769mt
Revenue Generated	£509,874/-
Average Selling price (per MT)	£663/-
Gross Margins (per MT)	£405/-
Gross Margin on sales (%)	53.12%

During the 9 months since commissioning, de-bottlenecking and ramp up activities were successfully completed by the Group. With the declaration of Commercial Production in January 2020, the Group expects the quarterly throughput to increase to the nameplate 750 tons per quarter from the current quarter. The increase in production up to the nameplate capacity will see the operating cost per MT anticipated to reduce compared to the previous 9 months of operations up to the end of December 2019.

With the 3,000 tpa Sahamamy Project successfully ramping up to achieve Commercial Production, the Group has demonstrated its ability to operate profitably from its initial smaller scale operating module. The Group's success at Sahamamy, contributes positively to de-risking the Group's future development plans which will see it ultimately reaching a total of 81,000 tpa installed capacity in Madagascar. The first 3,000 tpa operating module installed at Sahamamy represents 3.7% of the total planned capacity to be developed over the Group's MTDP.

While the current operations provide a sound basis for the assessment of the Group's prospective operations results, its ability to continue to operate at low operating costs as it expands its capacities shall have a bearing on the long-term profitability of the Group.

2.4 Ore Reserves and Mineral Resources

In line with its staged development strategy, the Group is undertaking its exploration activities in stages and thereby spreading the costs to establish resources progressively over time, to match its capacity development plans over its MTDP. Accordingly, to date, the Group has only explored circa 30% of the Permit area in both its projects to a vertical depth of circa 50m. Using its exploration data, the Group has established sufficient mineral resources to underpin its installed and under construction production capacities with the defined resources remaining open in all directions for further delineation upon additional drilling and exploration works to be undertaken. Details of the Group's mineral resources can be reviewed in Part 2.

It is expected that continuing exploration alongside production and development shall continue to enhance the total resources. However, it cannot be guaranteed that continued exploration shall establish additional resources.

2.5 Effect of foreign currency exchange rates

The Group receives proceeds on the sale of its products in US Dollars and operating costs are denominated in Ariary and US Dollars. The Group also incurs corporate costs and receives investments in £. Accordingly, the Group's financial results are affected by fluctuations in exchange rates, in particular, the exchange rate between the US Dollar and £ and US Dollar and Ariary.

Further, the Group has granted loans to the subsidiaries in Madagascar to acquire capital assets for project development. These loans are denominated in US Dollar. The repayment of the same will be in US Dollar once the projects starts generating the cash flows through sale of graphite which also is denominated in US Dollar. Accordingly, there is a natural hedge for these transactions.

2.6 Acquisitions

Since its creation in April 2017, the Group has completed two acquisitions and is in the process of completing the third. With these acquisitions, it has attained its objective of being an integrated flake graphite to Graphene company. The acquisition costs have been settled primarily in equity and thus have not affected the Group's liquidity. In future the Group may consider further acquisitions to grow and diversify its resources and expand its operations in value added products based on the Group's financial resources.

The downstream and Graphene projects are held by Tirupati Specialty Graphite (P) Ltd., an Indian private entity, held by the principle promoters of the Group. The completion of the acquisition is awaiting statutory approvals which are expected to be completed after listing of the Group. The completion of acquisition and development of projects of specialty graphite and graphene shall imply value addition opportunities for the Group's primary flake graphite from Madagascar, and transformation of the Group to materials technology which are expected to have a significant impact on the operations and performance of the Group.

Following table summarizes the consideration paid / determined for the acquisition of the Company's subsidiaries:

Sr. No.	Particulars	Tirupati Resource Mauritius (TRM)	Establissment Roasting SARL (ER)	Tirupati Specialty Graphite (P) Ltd (TSG) – Conditional Acquisition
1	Cash Consideration	—	US$ 200,000/-	—
2	Ordinary Equity Shares of nominal value £ 0.025 each fully paid	30,000,000 shares	4,615,300 shares	10,000,000 shares

2.7 Progress of development of Indian Operations

The current financial statements of TSG have not been consolidated with the Group as this is pending the completion of the acquisition of TSG by the Company. However, a brief account of TSG operations is provided below given it shall have a significant impact on the operating results of the Group post-acquisition. It may be noted that the Group has not made any direct investments into TSG to date. All of the developments of TSG has been given effect to by use of its current equity capital invested by the promoter group, being the equity the Group shall acquire under the terms of the conditional acquisition agreement.

In July 2019 TSG commissioned its initial 1,200 tpa downstream production facility for the production of expandable graphite products and flake graphite finishing facilities in Patalganga, India. This initial smaller-scale production facility is designed to primarily allow the Group to produce expandable graphite products in order to initiate and begin to establish parts of its sales and distribution channels into the markets for expandable graphite such as the flame-retardant industry. Since commissioning, the Group has successfully qualified its expandable graphite products with more than 10 users. The Group has established a variety of expandable graphite products under its own trademarked brand name which it has distributed to various customers in the sector and which has led to wide product acceptance from these customers. A number of these customers are now moving beyond trial orders and becoming long term, strategic commercial customers of the Group. This strategy of pre-developing markets for its products helps to mitigate sales risk in the future, ahead of the Group's planned capital expenditure to develop its larger scale production facilities under its MTDP.

Consistent with this strategy, the Group plans to expand the Patalganga operations to encompass product and production capabilities for high-purity and micronized graphite and to backward integrate its flame retardant expandable graphite treatment process, commencing with high purity flake graphite production which the Group plans to start producing as soon as the expansion is completed. The expanded facilities will also be used to establish sales and distribution channels for the entire products ahead of the larger installation of its 24,000 tpa downstream specialty graphite facilities ("TSG Project") to be located in Maharashtra / Gujarat, India.

The TSG Project will provide the Group with the capabilities to produce a wide range of specialty graphite products which includes high-purity graphite, expandable, micronised and spherodised graphite products, all of which have specific markets with strong growth prospects such as the EVs, batteries and flame retardants.

Significantly, the value addition from primary processed flake graphite to specialty graphite products is a significant multiple and given the eco-friendly processes developed by TSG, it has both techno-commercial advantages.

Regarding the graphene and technology center (called "TGMRC"), the Group also began lab scale manufacturing of graphene using its Madagascan flake graphite, for which it has developed a unique zero-chemical process. It has also been selectively distributing its graphene products to various renowned graphene research institutions as well as selected industrial companies for product testing, characterization work and adoption to specific application development. In addition, the Group is looking at various industrial collaboration arrangements for development of graphene applications in composites and polymers etc.

As stated in the Section "Use of Proceeds", the Group intends to deploy a sum of £2,464,000 for the CAPEX for Patalganga expansion and £1,304,000 for the CAPEX for TGMRC out of the proceeds of the IPO to further the development of the downstream and Graphene sides of its business. The size of the group's operations in India will depend on development of its projects and production capabilities in accordance with its defined MTDP. A key differentiator of the group in its downstream business is its broad product capabilities which cover a wide range OF specialty graphite products and graphene. As the Group's plant designs are modular, it has a good degree of flexibility in determining the configuration of its production capabilities and timing of bringing these on-stream. This means that the Group is better able to target specific graphite markets and applications for its future development and can expand its operations where it believes has the highest growth prospects and opportunities.

3 Description of key line items

3.1 Income Statement

The following sets forth Consolidated Income Statement data for the Group for the nine-months ended 31 December 2019 and 2018 and, for the years ended 31 March 2019 and 2018:

	Nine-months ended 31 Dec		**Year ended 31 March**	
	2019 £	**2018 £**	**2019 £**	**2018 £**
Revenues	509,874	145,195	145,207	28,001
Cost of sales	(239,039)	(174,328)	(150,325)	(14,293)
Gross Profit	**270,835**	**(29,134)**	**(5,118)**	**13,708**
Administrative Expenses	(936,937)	(846,374)	(1,139,320)	(560,483)
Operating Loss	**(666,101)**	**(875,508)**	**(1,144,438)**	**(546,775)**
Finance Cost	(12,114)	—	(2,827)	(114)
Loss before income tax	**(678,215)**	**(875,508)**	**(1,147,265)**	**(546,889)**
Income Tax	(12,534)	6,326	33,557	17,758
Loss of the year	**(690,749)**	**(869,182)**	**(1,113,708)**	**(529,131)**
Loss per share	Pence per share	Pence per share	Pence per share	Pence per share
Basic & Diluted	1.16 p	1.64 p	1.93 p	1.68

Descriptions of each line items in the Group's Consolidated Income Statement are described below.

3.1.1 Revenues

The Group's present revenue is generated from the sale of primary processed flake graphite from the Group's Sahamamy project in Madagascar. The Group took control of the project from January 2018 with a small historical operation as detailed above and rebuilt the project with new facilities with the authorized capacity of 3,000 tpa which was commissioned from April 2019. While building the new facilities the Group continued to operate the old from January 2018 to December 2018.

The revenue from sales for nine month ended 31 Dec 2019 was £ 509,874/- being derived from sale of 769 mt flake graphite from the newly commissioned facilities in its ramp up stage representing an average basket price of £663/- per MT. During the equivalent period ending on 31 Dec 2018 the old facilities were operated and the revenue from sales were £145,195/- being derived from 240 mt flake graphite sold during

the period representing an average basket price of £605/- per mt. Since the facilities were not operated from January to March 2019, transiting to the new facilities, no sales were made in these three months and thus for the 12 months period of April 2018 to March 2019, the sales were the same as the nine month period April 2018 to December 2018. During the financial year April 2017 to March 2018, having taken over control of the Sahamamy project from January 2018, the Group generated revenues of £28001/- by sale of 60 mt flake graphite during the period representing an average basket price of £467/- per mt.

The Group has since declared commercial production with effect from 11thJanuary 2020, and going forward, expects to operate at the installed rated capacity of the plant.

Sales of primary flake graphite can primarily be divided into two types, one being spot market sales and periodically contracted sales. The Group's marketing and sales team are engaged in extensive activities for balancing its sales to maximize the realization price per ton of flake graphite, while securing periodic contracts from key consumers for greater stability of sales and revenues as well as strategically, to continue pre-development of markets for its upcoming capacities being created.

As the projects of the Group are developed and the full amalgamation of TSG is completed post listing, the Group will obtain additional sources of revenues from sales of specialty graphite products, graphene and fee based revenues from the provision of specialist consulting services that it plans to offer.

3.1.2 Costs of Sales

As stated in point 3.1.1, with effect from April 2019 the new facilities set up by the Group came into operation replacing the old obsolete plant it inherited. The cost structure thus underwent a transformation with the new facilities. The total cost of sales for nine month ended 31 Dec 2019 was £239,039/- representing £311/- per ton sold as compared to £174,328/- representing £726/- per ton sold during the equivalent period or nine months ending December 2018 representing the transformation in the cost structure with its newly built operations. For the year ended 31.3.2018 the cost of sales was £14,293/- with operations only for 3 months and being the transition period, as compared to £150,325/- during the twelve months period in the following year when the building of the new plant was ongoing alongside continuing operations of the historical facilities.

The principal components of costs of sales are costs incurred for mining and processing activities and labour costs. Mining costs relate to operating earthmoving equipment for excavation and transport of overburden (waste) and graphite ore and processing costs are mainly for power, reagents, maintenance costs and labour costs related to the entire operations. The details thereof are as per table below:

Particulars	**Nine Months ended 31 December 2019 (£)**	**Nine Months ended 31 December 2018 (£)**
Mining & Geology	61,931	30,449
Processing Cost	135,532	60,829
Employee Cost	116,272	68,896
Logistics & Packaging	45,421	15,433
Change in Inventory	(120,117)	(1,279)
Cost of Sales	**239,039**	**174,328**

3.1.3 Administrative Expenses

The administrative expenses for nine month ended 31 Dec 2019 was £936,937/- as compared to £846,374/- for the equivalent period ending on 31 Dec 2018, representing an 11% increase. This includes significant increase foreign currency related losses primarily due to fluctuations in the British pound values and additional cost of capital raise by way of convertible loan notes incurred in the year 2019. The key costs in the Administrative Expenses include Board and Corporate management remunerations, product market development and investor relations development, listing preparations and related advisors' costs, pre-IPO fund raising costs, exchange rate fluctuations and depreciation. The details thereof are as per table below. .

Particulars	**Nine Months ended 31 December 2019 (£)**	**Nine Months ended 31 December 2018 (£)**
Board & Corporate Management Remuneration	280,269	256,889
Product Market and Investor relations Development	126,181	100,202
Fund Raising Cost (CLN issue)	42,700	—
Other Administrative Costs	123,622	232,036
Listing Related Costs	60,768	78,562
Forex Translation Loss	179,468	91,643
Depreciation	123,929	87,042
Administrative Cost	**936,937**	**846,374**

The Company was incorporated in April 2017 and the period ending 31stMarch 2018 was its first year. Post incorporation, the Company structured its business and completed two acquisitions in the period. This being the startup year, the total administrative cost was £546,775/- with its projects being shaped up with a smaller team building step by step. In the following year, the Group extensively developed its business case, shaped up the development of the projects acquired, built an extensive team of senior and middle management, expanded its Board and in accordance with the growth and development of the Group's assets, its corporate and management structure were also expanded to ensure appropriate long term capabilities are in place for building its planned projects.:

3.1.4 Finance Costs

Finance costs principally consists of interest expense related to the unsecured convertible loan notes which were issued by the Group during the period June to December 2019.

The Finance Cost for nine month ended 31 Dec 2019 were £ 12,114/- as compared to Nil for the equivalent period ending on 31 Dec 2018. During the year April 2018 to March 2019 there were no finance costs capered to a small £114/- during the year April 2017 to March 2018.

3.1.5 Taxation

The Group is in its early stage with tax payable on income at one of its two subsidiaries.

Taxes for nine month ended 31 Dec 2019 were £12,534/- as compared to £ (6,326) for the equivalent period ending on 31 Dec 2018.

3.2 Net Current Assets

The following sets forth the Net Current Assets for the Group for the nine-months ended 31 December 2019 and in the years, ended 31 March 2019 and 2018:

	Nine-months ended 31 December	Year ended 31 March	
	2019 £	2019 £	2018 £
Trade & Other Receivables	405,869	431,244	644,538
Inventories	174,153	56,501	2,158
Cash & Cash Equivalents	58,963	44,681	504,122
Total Current Assets	**638,985**	**532,426**	**1,150,818**
Trade & Other Liabilities	(471,732)	(701,983)	(763,180)
Net Current Assets	**167,253**	**(169,557)**	**387,638**

Descriptions of each line item in Net Current Assets are described below.

3.2.1 Trade & other receivables

Trade and other receivables include receivables towards sale of goods to customers, eligible VAT refunds and advances paid towards supply of goods and services. Variance between year ending 31 March 2018 to 31 March 2019 was -33%, which represents a reduction in trade receivables and receipts from VAT outstanding to the Group transpiring in the ordinary course of business with no notable exceptions. For the nine month period ending 31 December 2019, it remained similar to the level at 31 March 2019. With the Group entering commercial production phase it is expected to increase further with increasing sales.

3.2.2 Inventories

Inventory includes mined Graphite ore at plant stockpile, various inputs, stores and spares used at the plant and finished products produced and in stock awaiting sales. The material increases in the Groups inventories between year ending 31 March 2018 to 31 March 2019 reflects the fact that during the period April 2018 to March 2019, the Group prepared itself for smooth operations of the new plant it commissioned in a remote area. By the end of December 2019, ramping up of operations at the the Sahamamy project resulted in increased inventories of Run-Of-Mine (ROM) stockpiles, input materials for mining and processing activities, stores and spare parts and finished products, which were required to be built up to maintain smooth and prudent operations and the stablilisation of production during plant ramp-up to rated capacity, setting the case for the Group to declare commercial production from January 2020.

3.2.3 Cash and Cash Equivalents

From the incorporation to the end of its second year on 31 March 2019, the primary source of cash for the Group has bee equity capital raised through placing. As the Group has been developing its projects, it ahs been raising equity capital for ongoing capital investments made during the period to develop the Group's projects and funding its working capital. The lower cash as at 31 March 2019 as compared to 31 March 2018 signifies continues investments. As at 31 December 2019 the cash and cash equivalent was slightly higher than 31 March 2019. During this period, the Group received cash from revenue from sales and and by way of equity and quassi equity capital raised. The Group plans to raise sufficient capital at the time of IPO of continue the development of its projects as per plans and fund its working capital to maintain prudent levels of cash and cash equivalents. Significantly, the revenues from sales is also expected to steadily increase with start of commercial operations and as the Group completes the next stages of its development plans.

3.2.4 Trade and other Liabilities

Trade and other Liabilites represent outstanding payables against goods and services procured at the subsidiary and corporate levels. The variance in Trade and other Liabilities between year ending 31 March 2018 to 31 March 2019 was relatively minor at about -8%, which represents changes in the ordinary course

of business of the Group. This was in spite of the fact that it undertook production ramp-up at its projects during the period. As at 31 December 2019, the fall is significant signifying reduced current liabilities of the Group even as it was ramping up its operations.

4. LIQUIDITY AND CAPITAL RESOURCES

4.1 Overview

The Company was incorporated in April 2017 and since then, its principal source of liquidity has been from issuing equity along with a small portion by way of an unsecured convertible loan note offering. The Group's principal uses of cash has to date been on making acquisitions, capital expenditures on the explorations and development of its operations, corporate, marketing and general administrative costs. After successfully commissioning and throughout the production ramp up at its initial production module at Sahamamy since April 2019, the Group has begun generating revenues from sale of its products and delivering positive gross margins from its operations. The capital to be raised at the time of IPO and beyond, is substantially allocated towards ongoing development of the Group's projects in both Madagascar and India. As the Group expands its operations by establishing additional production capacities at its projects, it expects to continue deriving positive cash flow from its operations and reaching profitability within the next 12 months.

4.2 Dividends

No dividends have been declared or paid by the Company to date. The Company has adopted a dividend policy for prospective distribution to its shareholders, which is dependent upon profitability of the operations. However, this is not expected to be enacted by the Company until its developments and operations has stablised sufficiently.

4.3 Cash flow information

	Nine-months ended 31 Dec		Year ended 31st March	
	2019	**2018**	**2019**	**2018**
	£	**£**	**£**	**£**
Net cash used in Operating Activities	(862,469)	(806,496)	(712,108)	(428,892)
Net cash used in Investing Activities	(609,838)	(1,566,645)	(2,091,901)	(3,217,217)
Net cash from Financing Activities	1,486,589	1,917,759	2,344,568	4,150,231
Net Increase / (Decrease) in Cash & Cash Equivalents	**14,282**	**(455,382)**	**(459,441)**	**504,122**
Cash & Cash Equivalents brought forward	44,681	504,122	504,122	—
Cash & Cash Equivalents carried forward	58,963	48,740	44,681	504,122

4.3.1 Operating Activities

Net cash used in operating activities for nine month ended 31 Dec 2019 was £ 862,469/- as compared to £806,496/- for the equivalent period ending on 31 Dec 2018, representing an increase of 7%, as per details in the table below:

Loss before income tax	**(678,215)**	**(875,508)**
Adjustment for:		
Depreciation	123,929	87,042
(Increase) in inventories	(145,586)	(1,276)
Decrease in receivables	25,375	207,877
(Decrease) in payables	(230,251)	(230,958)
Fund Raising Costs	42,700	—
Finance costs	12,114	—
Income tax	(12.534)	6,326
Net cash used in operating activities	**(862,469)**	**(806,496)**

Significantly, the Loss before income tax reduced from £875,508/- for the nine months period ending 31 December 2018 to £678,215/- reflecting the operating profits achieved by the Group in the ramp up stage of its rebuilt first plant. The net cash used in increase in inventory for the 2019 period contributed significantly to the cash used in operating activities in operations providing the inventories for the Group at the Sahamamy project to progress to commercial production from January 2020.

For the year ended 31 March 2018, being the first year of the Company, it structured its business by executing acquisitions of its projects in Madagascar and being the first year of formative period, the negative cash flow in operating activities was limited to £428,892/-. As the Company embarked on building its business creating management team and executing various activities the negative cash flow from operating activities for the yerar ended 31 March 2019 increased to £712,108/-.

4.3.2 Investing Activities

Net cash used in investing activities for nine month ended 31 Dec 2019 was £ 609,838/- as compared to £ 1,566,645/- for the equivalent period ending on 31 Dec 2018. The difference primarily is an outcome of investment resulting for acquisition during the 2018 period.

For the year ending 31 March 2018 the cash used in investing activities includes the acquisition cost of the Vatomina project whereas that for the year ending 31 March 2019 includes the acquisition cost of the Sahamamy project. The variance primarily reflect the difference in acquisition costs for the two projects and increased investment for building of the projects in the year endin 31 March 2019.

4.3.3 Financing Activities

Net cash generated from financing activities for nine month ended 31 Dec 2019 was £ 1,486,589/- as compared to £ 1,917,759/- for the equivalent period ending on 31 Dec 2018. For the 2019 period, the cash generated from financing activities includes funds raised through the sale of equity of £390,001/-, the issue of convertible loan notes totaling £610,000/-; and an increase in non-current liabilities of £549,552/-. Whereas for 2018 the cash generated from financing activities in this period primarily related to funds raised through sale of equity of £2,039,567/-.

For the years ending on 31 March 2018 & 2019, the cash generated from investing activities includes equity capital raised by the Company and acquisitions made and settled in equity.

5. FINANCING ARRANGEMENTS

5.1 Borrowings of the Group

The Group neither historically nor currently, has any external borrowing facilities in place. As the Group's operations are developed and expanded, it may choose to leverage its cashflows from operations by securing external borrowing facilities to fund its follow on developments which it would do in a prudent manner.

5.2 Other financing arrangements

The Group's financing arrangements to date has been limited to equity and the unsecured convertible loan note issuances. The Company intends to raise further funds through equity at present through its IPO and may consider other debt and/or equity financing arrangements, leveraging its current and future cashflows, as its projects continue to be developed.

PART V

ADDITIONAL INFORMATION

1. Responsibility

1.1 To the best of the knowledge of the Directors (whose names, business address and functions appear on page 11 of this Registration Document) and the Company (whose registered office address appears on page 11 of this Registration Document), the information contained in this Registration Document is in accordance with the facts and this Registration Document makes no omission likely to affect its import.

1.2 The Competent Person, whose name appears on page 12 of this Registration Document, accepts responsibility for the information contained in the Competent Person's Report which is set out in Part II of this Registration Document. To the best of the knowledge of the Competent Person, the information contained in this Registration Document is in accordance with the facts and this Registration Document makes no omission likely to affect its import.

2. History and Development

2.1 The Company's full name is Tirupati Graphite Plc. The Company is registered in England and Wales under company registration number 10742540. The Company was incorporated on 26 April 2017 as a public limited company.

2.2 The Company is domiciled in the United Kingdom and operates under English law. The Company is governed by the provisions of the Articles (a summary of which is set out in paragraph 4.1 of Part V of this Registration Document) and the principal legislation under which the Company operates is the Companies Act 2006.

2.3 The Company's registered office is at 49 Berkeley Square, London, W1J 5AZ. It's principal place of business is TMV, Lot II N95 SB B15 E, Amatobe, Antananrio, Madagascar 103. The Company's telephone number is +44 20 3137 1902 and its website is www.tirupatigraphite.co.uk.

2.4 The Ordinary Shares are sterling denominated Ordinary Shares of 0.025 p each in capital of the Company.

2.5 As at the date of this Registration Document, the Company has no administrative, management or supervisory bodies other than the Board, the Audit Committee, the Remuneration Committee and the Nominations Committee.

2.6 The Company's auditor is PKF Littlejohn, London. PKF Littlejohn is registered to carry out audit work by the Institute of Chartered Accountants of England and Wales.

2.7 The accounting reference date of the Company was shortened so as to end on 31 March on 20 July 2018.

3. Subsidiaries

3.1 The Company is the ultimate holding company of the Group and it has the following subsidiaries:

Name of Subsidiary	Country of incorporation and operation	Principal activity	Proportion of ownership of share capital and voting power held
Tirupati Resources Mauritius	Mauritius	Exploration	100%
Tirupati Madagascar Ventures SARL	Madagascar	Exploration and processing	98%
Etablissements Rostaing SARL	Madagascar	Exploration and processing	100%
Tirupati Specialty Graphite Private Limited*	India	Processing	100%

* Under a conditional binding agreement, which is subject only to regulatory approvals, the Company has entered into an agreement for the acquisition of 100% equity of Tirupati Specialty Graphite (P) Ltd.

3.2 Tirupati Resources Mauritius was incorporated on 23 July 2013. It was registered in Mauritius with company number 117625 C1/GBL. The registered office is at c/o Alliance Financial Services Limited, Level 2, Standard Chartered Tower, Cybercity, Ebene, Republic of Mauritius.

3.3 Tirupati Madagascar Ventures SARL was incorporated on 27 September 2013. It was registered in Madagascar with company number RCS Antananarivo 2013 B 00682. The registered office is at Mining Business Centre Lot K7, Mamory Ivato Analamanga 10519, Ivato Firaisana, Madagascar.

3.4 Etablissements Rostaing SARL was incorporated on 5 January 1942. It was registered in Madagascar with company number RCS Antananarivo 2004B00025. The registered office is at Lot MS 57 Bis Masinandriana Ankadikely, Analamanga, 103 Antananarivo Avaradrano, Madagascar.

3.5 Tirupati Specialty Graphite Private Limited was incorporated on 20 April 2018. It was registered in India with company number U26994MH2018PTC308347. The registered office is at B1503, Floor15, Plot FP 616 (PT) Naman Mid-Town Senapati Bapat Marg, near Indiabull, Dadar (W) Mumbai City Maharashtra 400028.

3.6 Save as disclosed in this paragraph 3, there are no undertakings in which the Company holds a proportion of the capital which is likely to have a significant effect on the assessment of its own assets and liabilities, financial position and profits.

3.7 The Ordinary Shares may be held in certificated form or uncertificated form and traded on CREST, which is a paperless settlement procedure enabling securities to be evidenced and transferred otherwise than by a written instrument in accordance with the CREST Regulations.

4. Share Capital

4.1 Share capital history

4.1.1 The allotted share capital of the Company on incorporation was £50,000 divided into 2,000,000 ordinary shares of £0.025 each.

4.1.2 The issued share capital of the Company as at the date of this Registration Document and as it will be immediately following Admission is as follows:

	Amount fully paid up (£)	Number
As the date of this Registration Document:		
Ordinary Shares	£1,535,527	61,421,100

4.1.3 As at 31 March 2020, being the most recent balance sheet date, the issued share capital of the Company was 59,925,243 fully paid up Ordinary Shares.

4.1.4 At a general meeting held on 5 November 2019, the Company passed, *inter alia*, the following resolutions:

4.1.4.1 That the Directors be and are hereby generally and unconditionally authorised to exercise all powers of the Company, pursuant to Section 551 of the Act, to allot equity securities (within the meaning of Section 560 of the Act) up to an aggregate nominal amount of £2,000,000 provided that this power shall be limited to the allotment of equity securities:

(a) up to an aggregate nominal amount of £750,000 prior to or in conjunction with the application for admission of the whole of the existing issued share capital of the Company to the Official List of the UK Listing Authority (by way of a standard listing under Chapter 14 of the listing rules published by the UK Listing Authority under section 73A of the Financial Services Markets Act 2001, as amended from time to time) and to trading on the London Stock Exchange plc (the "**Listing**") or following the Listing to raise further working capital for the Company;

(b) without accepting an undertaking to do work for the Company as mentioned in section 585 Companies Act 2006 and in lieu of remuneration to any Directors, employees or consultants of the Company as approved by the Board and/or pursuant to any equity incentive arrangements approved from time to time by the Board;

(c) otherwise than pursuant to sub-paragraphs (a) and (b) above, up to an aggregate nominal amount equal to one third of the nominal value of the issued ordinary share capital of the Company at the time of the Listing (taking into account any shares issued pursuant to the authority contained in paragraph (a) at the time of the Listing),

and that this authority, unless renewed, varied or revoked by the Company in a general meeting, shall expire on the earlier of 15 months after the passing of this resolution or the conclusion of the annual general meeting of the Company to be held in 2020, save that the Company may before such expiry make an offer or agreement which would or might require equity securities to be allotted after such expiry and the Directors may allot equity securities in pursuance of such an offer or agreement as if the authority conferred hereby had not expired. This authority is in substitution for all previous authorities conferred upon the Directors pursuant to Section 551 of the Act, but without prejudice to the allotment of any equity securities already made or to be made pursuant to such authorities.

4.1.4.2 That, subject to the passing of the above resolution, the Directors be empowered in accordance with Section 570 of the Act to allot equity securities (within the meaning of Section 560 of the Act) wholly for cash pursuant to the authority conferred on them pursuant to the above resolution as if Section 561(1) of the Act or any pre-emption provisions contained in the Articles did not apply to any such allotment, provided that this power shall be limited to the allotment of equity securities:

(a) up to an aggregate nominal amount of £750,000 prior to or in conjunction with the application for the Listing or following the Listing to raise further working capital for the Company;

(b) without accepting an undertaking to do work for the Company as mentioned in section 585 Companies Act 2006 and in lieu of remuneration to any Directors, employees or consultants of the Company as approved by the Board and/or pursuant to any equity incentive arrangements approved from time to time by the Board;

(c) in connection with an open offer of equity securities by way of rights issue to holders of equity securities in proportion (as nearly as may be practicable) to their respective holdings of such equity securities, but subject to such exclusions or other arrangements as the Directors may consider appropriate to deal with fractional entitlements or problems arising in any territory or with the requirements of any recognised regulatory body or stock exchange in any territory; and

(d) otherwise than pursuant to sub-paragraphs (a) to (c) above, following the Listing up to an aggregate nominal amount equal to 10% of the nominal value of the issued ordinary share capital of the Company at the time of the Listing (taking into account any shares issued pursuant to the authority contained in paragraph (a) of the above resolution at the time of Listing),

and such power shall expire on the earlier of 15 months after the passing of this resolution or the conclusion of the annual general meeting of the Company to be held in 2020, save that the Company may before such expiry make an offer or agreement which would or might require equity securities to be allotted after such expiry and the Board may allot equity securities in pursuance of such an offer or agreement as if the authority conferred hereby had not expired.

4.1.5 The following changes have taken place in the issued share capital of the Company during the three years prior to the date of this Registration Document:

Date	Number of Ordinary Shares issued	Total Number of Ordinary Shares in issue	Reason for issue
2 October 2017	3,000,602	£875,015	Capital Raise
2 October 2017	10,002,007	£1,125,065	Capital Raise
31 May 2018	5,335,300	£1,258,448	Acquisition Costs and Board dues
5 June 2018	2,105,000	£1,311,073	Capital Raise
19 July 2018	2,325,187	£1,369,202	Capital Raise
14 September 2018	3,100,000	£1,446,702	Capital Raise
19 February 2019	500,000	£1,459,202	Capital Raise
18 April 2019	1,057,146	£1,485,631	Capital Raise
15 May 2019	142,858	£1,489,203	Capital Raise
13 August 2019	357,143	£1,498,131	Capital Raise
15 July 2020	995,757	£1,523,025	Board & Management dues

4.1.6 As at the date of this Registration Document, the Company has issued the following convertible securities in the form of loan notes:

Subscriber	No. Issued	Date of issue	Date of expiry	Exercise price
Optiva Securities Ltd	200,000	13/06/2019	12/06/2022	IPO price
Optiva Securities Ltd	150,000	1/08/2019	31/07/2022	IPO price
Optiva Securities Ltd	40,000	10/09/2019	9/09/2022	IPO price
Optiva Securities Ltd	100,000	31/10/2019	30/10/2022	IPO price
Optiva Securities Ltd	120,000	29/11/2019	28/11/2022	IPO price
Optiva Securities Ltd	100,000	4/02/2020	3/02/2023	IPO price
Optiva Securities Ltd	100,000	27/02/2020	26/02/2023	IPO price
Optiva Securities Ltd	100,000	22/05/2020	22/05/2023	IPO price
Optiva Securities Ltd	185,000	29/05/2020	29/05/2023	IPO price
John Geoffrey Bolitho	160,000	16/06/2020	16/06/2023	IPO price
Andrew Jones	40,000	16/06/2020	16/06/2023	IPO price
Optiva Securities Ltd	28,000	1/07/2020	1/07/2023	IPO price

4.1.7 In addition to the warrants issued to Directors and Optiva as described in paragraph 6 of Part 1 on pages 43-44 of this Registration Document, the Company has issued the following warrants:

Name	Number of Warrants Issued	Exercise Price	Deemed Issue date
Puruvi Poddar	320,000	£0.40	31/03/2019
Kien Hyunh	160,000	£0.40	31/03/2019
Puruvi Poddar	480,000	£0.40	31/03/2020
Kien Hyunh	480,000	£0.40	31/03/2020

4.1.8 No shares in the capital of the Company are held by or on behalf of the Company or the Group.

4.1.9 Save for the warrants and convertible securities detailed at paragraphs 4.1.6 and 4.1.7 above, the Company has not granted acquisition rights and/or obligations over its unissued capital.

4.1.10 The Company has not issued any shares which do not represent capital.

4.1.11 Save as otherwise disclosed in this Registration Document, the Company has not granted commissions, discounts, brokerages or other special terms in connection with the issue or sale of shares or loan capital in the Company in the three years preceding the date of this Registration Document.

4.1.112 No capital of any member of the Group is under option or agreed conditionally to be put under option.

4.1.113 Save as otherwise disclosed in this Registration Document, the Company has not issued any preferential subscription rights for any share capital of the Company.

5. Articles of the Company

5.1 Articles of Association

The Articles contain provisions, *inter alia*, to the following effect:

5.1.1 *Limited liability*

The liability of the members of the Company is limited to the amount, if any, unpaid on the Ordinary Shares held by them.

5.1.2 *Change of Name*

The Company may change its name by resolution of the Board.

5.1.3 *Share Capital*

Subject to the Companies Acts and to any rights attaching to existing shares, any share may be issued with or have attached to it such rights and restrictions as the Company may by ordinary resolution determine, or if no ordinary resolution has been passed or so far as the resolutions does not make specific provision, as the Board may determine.

Subject to the Companies Acts and to any rights attaching to existing shares, any share may be issued which can be redeemed or is liable to be redeemed at the option of the Company or the holder. The Board may determine the terms, conditions and manner of redemption of any redeemable shares which are issued.

5.1.4 *Voting Rights*

On a vote on a resolution on a show of hands at a meeting, every holder of Ordinary Shares who (being an individual) is present in person or by one or more proxies or (being a corporation) is present by one or more duly authorised representatives or proxies shall have one vote, and on a poll every holder of Ordinary Shares shall have one vote for every Ordinary Share he holds.

5.1.5 *Variation of Rights*

Subject to the Companies Acts, the rights attached to any class of shares may be varied or abrogated either with the consent in writing of the holders of three-quarters in nominal value of the issued shares of the class (excluding any shares of that class held as treasury shares) or with the authority of a special resolution passed at a separate class meeting.

The quorum at such a class meeting shall not be less than two persons holding or representing by proxy at least one-third of the nominal amount paid up on the issued share of the class (excluding any shares of that class held as treasury shares).

5.1.6 *Transfer of shares*

A share held in certificated form may be transferred by an instrument of transfer in writing in any usual form or in any form approved by the Board, which shall be executed by or on behalf of the transferor and, unless the share is fully paid, by or on behalf of the transferee. A share held in uncertificated form may be transferred by means of a relevant system in such manner provided for in the uncertificated securities rules. The transferor shall be deemed to remain the holder of the relevant share until the transferee is entered in the Register in respect of it.

The Board may also refuse to register a transfer of shares held in certificated form unless:

(a) it is for a share which is fully paid up;

(b) it is for a share on which the Company has no lien;

(c) it is only one class of shares;

(d) it is in favour of a single transferee or not more than four joint transferees;

(e) it is duly stamped or is duly certificated or otherwise shown to the satisfaction of the Board to be exempt from stamp duty (if so required); and

(f) delivered for registration to the Office, or such other place as the Board may determine, accompanied (except in the case of a transfer by a person to whom the Company is not required by law to issue a certificate and to whom a certificate has not been issued or in the case of a renunciation) by the certificate for the shares to which it relates and such other evidence as the Board may reasonably require to prove the title of the transferor (or person

renouncing) and the due execution of the transfer or renunciation by him or, if the transfer or renunciation is executed by some other person on his behalf, the authority of that person to do so, provided that such discretion may not be exercised in such a way as to prevent dealings in such shares from taking place on an open and proper basis.

Where a member, or any other person appearing to be interested in shares held by that member, has been issued with a noticed under section 793 of the Act ("section 793 notice") and has failed in relation to any shares ("default shares") to give the Company the information required by the section 793 notice within the prescribed period from the service of the notice, then no transfer, other than an excepted transfer, of any shares held by the member shall be registered unless the member himself is not in default of supplying the required information and the member proves to the satisfaction of the Board that no person in default of supplying such information is interested in any of the shares that are subject to the transfer.

5.1.7 *Dividends*

Subject to the provisions of the Act and the Articles, the Company may by ordinary resolution declare dividends in accordance with the respective rights and interests of the members, but no dividend shall exceed the amount recommended by the Board. Subject to the provisions of the Act, the Board may pay interim dividends if it appears to the Board that they are justified by the profits of the Company available for distribution.

The Board may, by ordinary resolution of the Company direct, or in the case of an interim dividend may without the authority of an ordinary resolution direct, that payment of any dividend declared may be satisfied wholly or partly by the distribution of assets, and in particular of paid up shares or debentures of any other company, or in any one or more of such ways.

5.1.8 *Winding Up*

If the Company is wound up, the liquidator may, by the authority of special resolution of the Company and any other authority required by law, divide among the members in specie the whole or any part of the assets of the Company. This applies whether the assets shall consist of property of one kind or different kinds. For this purpose, the liquidator may set such value as the liquidator considers fair on any asset or assets and may determine how to divide it between the members or different classes of members. The Liquidator may, with the authority of a special resolution and any other authority required by the law, transfer all or any part of the assets to trustees on such trusts for the benefit of members as the liquidator decides. Where the liquidator divides or transfers any assets in pursuance of the powers in this article, no member shall be required to accept any asset in respect of which there is a liability.

5.1.9 *Untraced Shareholders*

The Company shall be entitled to sell at the best price reasonably obtainable any share of a member or any share to which a person is entitled by virtue of transmission, and to give notice of the same if an provided that:(i) during the period of twelve years before the date of sending of the notice, no cheque, order or warrant in respect of such share sent by the Company through the post in a pre-paid envelope addressed to the member or to the person entitled by transmission to the share, at his address on the Register or other last known address given by the member or the person to which cheques, orders or warrants in respect of such share are to be sent has been cashed and no communications in respect of such share from such member or person entitled, provided that during such period of twelve years the Company has paid at least three dividends (whether interim or final) and no such dividend has been claimed by the person entitled to it; (ii) on or after expiry of the 12 year period, the Company has given notice of its intention to sell such share by sending a notice to the member or person entitled by transmission to the share at his address on the Register or other last known address given by the member or person entitled by transmission to the share and before sending such a notice to the member or other person entitled by transmission, the Company must have used reasonable efforts to trace the member or other person entitled, engaging, if considered appropriate, a professional asset reunification company or other tracing agent and/or giving notice of its intention to sell the share by advertisement in a national newspaper and in a newspaper circulating in the area of the address of the member or person entitled by transmission to the share shown in the Register; (iii) during the further period of three months following the date of such notice and prior to the exercise of the power of sale the Company has not received any communication in respect of such share from the member or person

entitled by transmission; and (iv) the Company has given notice to the UKLA of its intention to make such sale, if shares of the class concerned are listed on the Official List or dealt in on the London Stock Exchange.

The Company shall account to the member or other person entitled to the share for the net proceeds of a sale by transferring the proceeds to a separate account. The Company shall be deemed to be a debtor, not a trustee, to such member or other person. Such monies may be employed in the business of the Company or invested in investments as the Board sees fit. No interest is payable on such monies.

5.1.10 *Provisions relating to Directors*

Unless otherwise determined by ordinary resolution of the Company, the number of Directors shall not be less than 2.

Subject to the Articles, the Company may by ordinary resolution appoint a person who is willing to act as a Director, either to fill a vacancy or as an additional Director.

Subject to the Articles, the Board may appoint any person who is willing to act as a Director, either to fill a vacancy or as an additional Director. Any Director so appointed shall retire at the next annual general meeting of the Company following such appointment and shall be eligible for re-appointment thereat but is not taken into account when deciding the number of directors who are to retire by rotation.

Other than a retiring Director, no person may be appointed or re-appointed a Director at a general meeting unless (i) he is recommended by the Board; or (ii) the Company has received notice at least seven but no more than 42 clear days before the date of the general meeting from a member (other than the person proposed) of his intention to propose a resolution of such appointment or reappointment.

Each Director shall retire from office and shall be eligible for reappointment at each annual general meeting if: (i) he has been appointed by the board since the previous annual general meeting; or (ii) it is his third annual general meeting following the annual general meeting at which he was elected or last re-elected; or (iii) he has held office with the Company as a non-executive Director for a continuous period of nine years or more at the date of the meeting.

Each Director may be paid a fee at such rate as may be determined by the Board from time to time but must not exceed £200,000 per annum or such higher amount as may be decided from time to time by ordinary resolution of the Company. Such fees are distinct from any salary, remuneration or any other amounts payable to a Director. Each Director may be paid reasonable travelling, hotel and other expenses properly incurred in relation to his duties as a Director. A Director may be paid additional remuneration if such Director performs or renders any special duties or services outside his ordinary duties as a Director.

The remuneration or salary of any executive Director may be fixed or otherwise determined by the Board and may be in addition to or instead of any fee payable to him for his services as a Director.

Subject to the provisions of the Companies Acts, the Articles and to any directions given by special resolution, the business of the Company shall be managed by the Board which may exercise all the powers of the Company. The Board may delegate its powers to any committee consisting of one or more Directors and (if thought fit) one or more other persons provided: (i) a majority of the committee shall be Directors; and (ii) no resolution of a committee shall be effective unless a majority of those present when it is passed are Directors or alternate Directors.

The Board or any committee so authorised may delegate or entrust to any executive Director its powers, authorities and discretions (with power to sub-delegate) for such time and on such terms as it thinks fit and revoke, withdraw or vary such powers. The Board may establish and local or divisional boards or agencies and delegate any of its powers to such boards or agencies for the purpose of managing the affairs of the Company.

The Board may, by power of attorney or otherwise, appoint and delegate any of its powers (with powers to sub-delegate) to a person or persons to be an agent or attorney of the Company.

A Director may, and the Secretary at the request of a Director shall, call a meeting of the Board. The quorum for the transaction of the business of the Board may be determined by the Board and unless otherwise determined at any other number shall be 2.

Questions arising at a meeting shall be decided by a majority of votes. In the case of an equality of votes the chairman shall have a second or casting vote.

The Directors may (in accordance with the Articles) authorise (in writing) any matter or situation proposed to them by any Director which would, if not authorised, involve a Director (an "Interested Director") breaching his duty under the Act to avoid conflicts of interest.

Authorisation of such a matter is effective only if:

(a) the matter in question shall have been proposed by any Director for consideration in the same way that any other matter may be proposed to the Directors under the Articles;

(b) any requirement as to quorum at the meeting of the Directors at which the matter is considered is met without counting the Interested Director in question and any other interested Director; and

(c) the matter has been agreed to without the Interested voting or would have been agreed to if the Interested Director's votes had not been counted.

5.1.11 *Borrowing powers*

The Board may exercise all the powers of the Company to borrow money, to guarantee, to indemnify, to mortgage or charge all or any part of the undertaking, property and assets (present and future) and uncalled capital of the Company, to issue debentures and other securities and to give security, either outright or as collateral security, for any debt, liability or obligation of the Company or of any third party.

5.1.12 *Uncertificated Shares*

The Company may issue shares and other securities which do not have certificates, permit existing shares and other securities to be held without certificates, and permit any shares or other securities held without certificate to be transferred by means of relevant system and may make arrangements for a class of shares to become a participating class. Title to shares of a particular class may only be evidenced otherwise than by a certificate where that class of shares is a participating class.

5.1.13 *Calls*

Subject to the Articles and the terms on which the shares are allotted, the Board may make calls on the members regarding any monies unpaid on their shares (whether in respect of nominal value or premium) and not payable on a date fixed by or in accordance with the terms of issue. Each member shall pay to the Company as require by the notice the amount called on for his shares. A call is made at the time of the passing of the Board resolution authorising the call was passed. The joint holders of a share shall be jointly and severally liable to pay all calls in respect of the share.

5.1.14 *General Meetings*

All meetings other than annual general meetings shall be called general meetings. The Board may call general meetings and, on the requisition of members pursuant to the provisions of the Companies Acts, shall proceed to convene a general meeting.

An annual general meeting shall be held once a year at such time (consistent with the terms of the Companies Acts) and place as may be determined by the Board.

Every notice of meeting shall specify the place, the day and the time of the meeting and there shall appear with reasonable prominence in every notice a statement that member entitled to attend and vote is entitled to a proxy or (if he has more than one share) proxies to exercise all and any of his rights to attend, speak and vote and that a proxy need not be a member of the Company.

The notice shall specify the general nature of the business to be transacted and shall set out the text of all resolutions to be considered by the meeting and shall state in each case whether it is proposed as an ordinary or a special resolution. In the case of an annual general meeting, the notice shall specify the meeting as such.

Two members present in person or by proxy and entitled to vote upon the business to be transacted at the meeting shall be a quorum. A Director (and any other person invited by the chairman to do so) shall be entitled to attend and speak at any general meeting and at any separate meeting of the holders of any class of shares in the Company, whether or not he is a member.

5.1.15 *Disclosure of Interests in Shares*

Notwithstanding anything in the Articles to the contrary, if a disclosure notice under section 794 of the Act (a "**section 793 notice**") has been served on a member or any other person appearing to be interested in the specified shares, and that person has failed in relation to any shares ("**default shares**") to give the Company the information required by the section 793 notice within 14 days from the service of the notice, then the following sanctions shall apply unless otherwise determined by the Board:

(a) the member cannot, in respect of the default shares, be present or vote (in person or by proxy) at any general meeting or separate class meeting or on any poll;

(b) where the default shares represent at least 0.25%. of the issued shares of the relevant class (exclusive of treasury shares held):

(i) the payment of dividends in respect of such shares may be withheld; and

(ii) such holder shall not be entitled to transfer, other than an excepted transfer, such shares.

If the shares are held in uncertificated form, the Company may in accordance with the CREST Regulations, issue a written notification to the Operator requiring conversion into certificated form of any share held by the member in uncertificated form.

5.1.16 There are no conditions imposed by the Articles regarding changes in the Company's capital which are more stringent than required by the laws of England and Wales.

6. Directors and other Interests in Ordinary Shares

6.1 The Directors hold or have held the following directorships or have been partners in the following partnerships within the five years prior to the date of this Registration Document:

Name	*Current Directorships/Partnerships*	*Past Directorships/Partnerships*
Shishir Kumar Poddar	Tirupati Carbons & Chemicals (P) Ltd Safearth Clean Technologies (P) Ltd Tirupati Resources Mauritius Tirupati Madagascar Ventures SARL Tirupati Speciality Graphite Private Limited	Stratmin Global Resources plc Graphmada Mauritius
Christian St. John-Dennis	Optiva Securities Limited Optiva Resources Limited	ECR Minerals plc Tobin Bronze PLC SB Newco 240212 Ltd Primus Resources Ltd Upland Resources Limited Upland (KSAR Hadada) Ltd Upland (N Tunisia) Ltd Upland (S Tunisia) Ltd Upland (El Fahs) Ltd CD Tempco Limited CSD Consultancy Limited Bengkulu Coal (BVI) Limited
Hemant Kumar Poddar	Tirupati Carbons & Chemicals (P) Ltd Safearth Clean Technologies (P) Ltd Tirupati Resources Mauritius Tirupati Madagascar Ventures SARL Tirupati Speciality Graphite Private Limited JSIA Industrial Infrastructure Private Limited	

Name	*Current Directorships/Partnerships*	*Past Directorships/Partnerships*
Rajesh Kedia	None	IGC Kalpavriksha Limited
Lincoln Moore	Dekel Agri-Vision plc Royal Work Club Ltd Firering Holdings Ltd	Ragnar Capital Ltd Pearside Holdings Ltd Ragnar Capital Partners LLP Moreno Resources Ltd Everest Energy Ltd Stellar Resources Plc

6.2 Save as disclosed above, none of the Directors has been a director or member of any administrative, management or supervisory body of any companies or partner in any partnerships at any time in the period of five years immediately preceding the date of this Registration Document.

6.3 As at the date of this Registration Document the interests (all of which are beneficial unless otherwise stated) of the Directors and persons connected with them (within the meaning of sections 252 to 255 of the Companies Act) in the issued share capital of the Company are as set out below:

Name of Director	**Number of Ordinary Shares**	**% of Issued Share Capital**
Shishir Kumar Poddar	1,611,472	2.62%
Christian St. John-Dennis	1,136,988	1.85%
Hemant Kumar Poddar	927,857	1.51%
Rajesh Kedia	396,894	0.65%

6.4 None of the Directors has had any convictions in relation to fraudulent or indictable offences in the five years preceding the date of this Registration Document.

6.5 None of the Directors has been bankrupt or entered into an individual voluntary arrangement. None of the Directors has owned an asset over which a receiver has been appointed. Save as disclosed in this paragraph 7, none of the Directors acting in a capacity of director or senior manager has been associated with any bankruptcies, receiverships, compulsory liquidations, creditors, voluntary liquidations, company voluntary liquidations or any company's composition or arrangements with its creditors generally or any class of its creditors in the five years preceding the date of this Registration Document.

6.6 There have been no public official incriminations and/or sanctions of any of the Directors nor any public criticism of any of the Directors, by any statutory or regulatory authority (including designated professional bodies) and none of the Directors has ever been disqualified by a court from acting as a director of a company or from acting in the management or conduct of the affairs of any company within the five years preceding the date of this Registration Document.

6.7 There are no conflicts of interest between any duties to the Company of the Directors and their private interests or other duties.

6.8 During the period April 2019 and ending March 2020, the Directors were granted the following remuneration (including contingent or deferred compensation) and benefits in kind by the Company and the Subsidiaries for services in all capacities to the Company and the Subsidiaries:

Name	**Salary £**	**Bonus £**	**Benefit in kind £**	**Total (Excl pension) £**	**Pension £**
Shishir Kumar Poddar	180,000	Nil	Nil	180,000	Nil
Christian St. John-Dennis	48,000	Nil	Nil	48,000	Nil
Hemant Kumar Poddar	48,000	Nil	Nil	48,000	Nil
Rajesh Kedia	48,000	Nil	Nil	48,000	Nil
Total	324,000	Nil	Nil	324,000	Nil

6.9 No sums have been set aside or accrued by the Company and its Subsidiaries to provide pension, retirement and similar benefits for the Directors.

6.10 There are no outstanding loans granted or guarantees provided by any member of the Group to or for the benefit of any of the Directors nor are there any outstanding loans or guarantees provided by the Directors to or for the benefit of any member of the Group.

6.11 No Director has any interest, whether direct or indirect, in any transaction which is or was unusual in its nature or conditions or was significant to the business of the Company taken as a whole and which was effected by the Company during the current or immediately preceding financial year, or during any earlier financial year and which remains in any respect outstanding or unperformed.

7. Major shareholders

7.1 Save as set out below, the Company is not aware of any person (other than the Directors) who, directly or indirectly, has an interest representing 3 per cent. or more of the existing share capital of the Company (being the threshold at or above which, in accordance with the Disclosure Guidance and Transparency Rules, an interest must be disclosed to the Company). So far as the Company is aware the disclosable interests prior to and on Admission will be:

Shareholder	Number of Ordinary Shares	% of Issued Share Capital
Huntress (CI) Nominees Limited	3,560,869	5.80%
Momentous Investments Ltd	2,360,000	3.84%
Optiva Securities Limited	3,062,544	4.98%
Tirupati Carbons & Chemicals Private Limited	29,565,778	48.13%
Nicolas Petitjean	4,615,300	7.51%

7.2 As at 25 September 2020 (being the latest practicable date prior to the publication of this Registration Document), the Company is not aware of any persons who directly or indirectly, own or control the Company.

7.3 None of the holders of Ordinary Shares listed in paragraph 7.1 above has in respect of his holding of Ordinary Shares voting rights different from the other holders of Ordinary Shares.

7.4 The Company is not aware of any arrangements the operation of which may at a date subsequent to this Registration Document result in a change in control of the Company.

8. Directors' Service Contracts

8.1 ***Executive Service Contract Terms***

Shishir Kumar Poddar, Executive Director

Pursuant to the incorporation of the company on 26 April 2017, Mr Shishir Kumar Poddar, being the principle strategist and promoter of the Company was appointed as the executive chairman and managing director of the Company. Mr Poddar's remuneration for the period April 2019 to March 2020 was £180,000 and Mr Poddar has been granted 900,000 warrants exercisable at £0.40 for his services for the period.

Mr Poddar is required to devote such time as is necessary for the proper performance of his duties, however, it is acknowledged that Mr Poddar is an entrepreneur and shall have liberty to continue with his previous engagements provided that he shall protect the interests of the Company in the event of any conflict.

Mr Poddar's remuneration is comprised of three elements totalling £264,000 per annum. With effect from April 2020, he shall be paid a director's sitting fee of £60,000, annual remuneration of £180,000 and £24,000 in relation to covering his long-term social security (being a non-UK resident), including but not limited to life and health insurances, pension and post-retirement social security. Mr Poddar is also entitled to an annual bonus determined by the Remuneration Committee, subject to a maximum of 100% o fhis total remuneration. Mr Poddar is also entitled to receive warrants to subscribe for Ordinary Shares in each financial year, capped at 7.5% of the total number of Ordinary Shares in issue at any time.

Mr Poddar's employment can be terminated on twelve (12) months' notice, or with immediate effect by the Company by making a payment in lieu of notice. Upon termination by the Company, Mr Poddar is entitled to a one-time break fee of £264,000 in acknowledgement of his contribution to the development of the Company's intellectual property.

Mr Poddar is also subject to a twelve (12) month non-compete restriction following termination of his appointment.

The service agreement is governed by English law.

8.2 Non-Executive Appointment Terms

Christian St. John-Dennis, Non-Executive Director

Pursuant to the terms of a letter of appointment dated 26 April 2017, Mr Christian St. John-Dennis was appointed as a non-executive Director of the Company.

Mr Dennis's fee for the period April 2019 to March 2020 is £48,000 per annum, payable in monthly arrears, and Mr Dennis is eligible for additional renumeration of £24,000 per annum. He has been granted 240,000 warrants exercisable at £0.40 for the period. Mr Dennis must spend a minimum of 3 days per month on work for the Company. The Company has not granted any benefits to Mr Dennis on termination of his directorship, however, Mr Dennis is subject to a 12 month non-compete restriction. The appointment is governed by the laws of England and Wales.

Hemant Kumar Poddar, Non-Executive Director

Pursuant to the terms of a letter of appointment dated 26 April 2017, Mr Hemant Kumar Poddar was appointed as a non-executive Director of the Company.

Mr Poddar's fee for the period April 2019 to March 2020 is £48,000 per annum, payable in monthly arrears and Mr Poddar has been granted 240,000 warrants exercisable at £0.40 for the period. Mr Poddar must spend a minimum of 3 days per month on work for the Company. The Company has not granted any benefits to Mr Poddar on termination of his employment, however, Mr Poddar is subject to a 12 month non-compete restriction, except in relation to the previously existing business. The appointment is governed by the laws of England and Wales.

Rajesh Kedia, Non-Executive Director

Pursuant to the terms of a letter of appointment dated 31 May 2018, Mr Rajesh Kedia was appointed as a non-executive Director of the Company.

Mr Kedia's fee for the period April 2019 to March 2020 is £48,000 per annum, payable in monthly arrears, and Mr Kedia has been granted 240,000 warrants exercisable at £0.40 for the period. Mr Kedia must spend a minimum of 3 days per month on work for the Company. The Company has not granted any benefits to Mr Kedia on termination of his directorship, however, Mr Kedia is subject to a 12 month non-compete restriction. The appointment is governed by the laws of England and Wales.

Lincoln Moore, Non-exectuive Director

Pursuant to the terms of a letter of appointment dated 3 August 2020, Mr Lincoln Moore was appointed as a non-executive Director of the Company.

Mr Moore's fee is £36,000 per annum, payable in monthly arrears. Mr Moore must spend a minimum of 3 days per month on work for the Company. The Company has not granted any benefits to Mr Moore on termination of his directorship, however, Mr Moore is subject to a 12 month non-compete restriction. The appointment is governed by the laws of England and Wales.

8.3 Save as disclosed above, there are no existing or proposed service agreements between any of the Directors and the Company. Save as disclosed above, none of the service agreement contain a right to benefits upon termination.

9. Investments

Save as disclosed in Part I of this Registration Document, the Company has not made any other major investments from incorporation and up to the date of this Registration Document.

10. Principal Establishments

10.1 The following is a summary of the principal establishments occupied by the Group:

10.1.1 Alliance Financial Services Limited, Level 2, Standard Chartered Tower, Cybercity, Ebene, Republic of Mauritius;

10.1.2 Mining Business Centre Lot K7, Mamory Ivato Analamanga 10519, Ivato Firaisana, Madagascar;

10.1.3 Lot MS 57 Bis Masinandriana Ankadikely, Analamanga, 103 Antananarivo Avaradrano, Madagascar; and

10.1.4 B1503, Floor 15, Plotfp616 (Pt) Naman Mid-Town Senapati Bapat Marg, Near Indiabull Dadar (W), Mumbai City, MH 400028 India.

10.2 There are no material environmental issues affecting the Group's utilisation of the properties referred to above.

11. Material Contracts

11.1 The following is a summary of those material contracts, not being contracts entered into in the ordinary course of business, which have been entered into by the Company or any member of the Group within the two years immediately preceding the date of this Registration Document and of those other contracts, not being contracts entered into in the ordinary course of business by any member of the Group, that contain provisions under which the Company and/or any member of the Group has an obligation or entitlement which is or may be material to the Group as at the date of this Registration Document:

11.2

11.2.1 *Vatomina SPA*

On 11 May 2017, the Company acquired the entire issued share capital of TRM from TCCPL and Stratmin Global Resources plc, in exchange for which they were issued, in aggregate, 30,000,000 Ordinary Shares at an issue price of £0.10 per Ordinary Share.

11.2.2 *Rostaing SPA*

On 26 October 2017, the Company entered into a definitive agreement to acquire the entire issued share capital of Rostaing from its two existing shareholders. The acquisition cost was US$800,000, of which 25% was payable in cash and the balance payable by issuing 4,615,300 Ordinary Shares at an issue price of £0.10 per Ordinary Share.

11.2.3 *Patalganga SPA*

On 10 October 2018, the Company entered into a conditional agreement for the acquisition of 100% of the equity shares of TSG from the Concert Parties, excluding TCCPL. The consideration for the acquisition was £2,000,000, which was agreed to be satisfied by the issue of 10,000,000 Ordinary Shares at an issue price of £0.20 per share. The completion of the acquisition is expected after Admission as it is subject to regulatory approvals as further described below.

Capital account transactions are regulated in India and under FEMA, RBI is the regulator.

An investment made from outside of India is defined as Overseas Direct Investment ("**ODI**"). The Company is considered to be an ODI under FEMA. For that purpose and because the acquisition constitutes a share swap, the prior approval of RBI must be obtained in relation to the transaction.

All transactions under FEMA that are required to be reported to, or approvals sought from, RBI must be made through "Authorised Dealers" of Foreign Exchange under FEMA. TSG's banker, Yes Bank, is considered to be the Authorised Dealer.

Having consulted its legal counsel and the Authorised Dealer, it has been determined that the transaction is of an unusual nature from a FEMA perspective and to ensure success in securing RBI's approval, the Company and TSG must establish:

- Bona fide purpose. The two clinching factors are integration and capital for development.
- There is 'no round tripping' (i.e. the flow of Foreign Exchange from India as an ODI and return of the funds back to India as Foreign Direct Investment).
- The Company is a "foreign" entity and is well regulated, which will be best demonstrated on Admission.

It has therefore been determined that the application to RBI for approval of the acquisition should be made upon achieving the following conditions:

- The Company has sufficient funds to deploy as investment in TSG and has access to further capital for further development. Following Admission and the Placing, the Company will be in a position to satisfy this condition.
- Following the Placing, the list of Placees will establish that the funds available to the Company are not investments having flown out from India, and therefore there is no round tripping.
- Admission, while not a condition under the FEMA regulations, further demonstrates that the Company is an regulated entity and the approval shall pave the way for a progressive FDI into India.

The Company anticipates that the application for approval will be filed with the RBI within 4 weeks from Admission and that approval will be granted within 10 weeks.

11.2.4 *Vatomina Environmental Permit*

TMVSARL was granted environmental permit n°29/16-MEEF/ONE/DG/PE dated 10 October 2016, from the government agency *Office National pour l'Environnement* for the exploitation of graphite according to the mining permit E n°38321.

11.2.5 *Vatomina Mining Permit*

TMVSARL was granted exploitation permit n°38321 by decision n°36479/2015. The grant of the permit was made in respect of graphite, chrome, gold, crystal, copper, basalt, beryl, with an initial perimeter of 64 mining squares. The permit has been issued for a period of 40 years starting from 18 December 2015 and will expire on 17 December 2055.

11.2.6 *Sahamamy Sahasoa Environmental Permit*

Rostaing was granted environmental permit n°12/13-MEF/ONE/DG/CCF dated 9 July 2013, from the government agency *Office National pour l'Environnement* for exploitation of graphite according to the mining permit E n°21.

11.2.7 *Sahamamy Sahasoa Mining Permits*

Rostaing was granted exploitation permit n°21 by order n°19353/2007. The grant of the permit is made in respect of graphite, with an initial perimeter of 16 mining squares. The permit has been issued for a period of 40 years starting from 28 July 1999 and will expire on 27 July 2039. Further to order n°/registration n° 21-2, and further to the declaration (partial renunciation) dated 24 July 2007, the permit was reduced to 12 mining squares.

Rostaing was also granted exploitation permit n°23608 by order n°7780/2016. The grant of the permit is made in respect of crystal, quartz and graphite, with an initial perimeter of 16 mining squares. The permit has been issued for a period of 40 years starting from 6 April 2016 and will expire on 5 April 2056. Further to the order n°/registration n° 21-3, and further to the declaration (partial renunciation) dated 31 March 2010, the permit was reduced to 4 mining squares.}

11.2.8 *Sahamamy Sahasoa Environmental Permit*

Rostaing was granted environmental permit n°12120 - MEDD/ONE/DG/PE dated 6 April 2020, from the government agency *Office National pour l'Environnement* for exploitation of graphite according to the mining permit E n°23608.

11.2.9 *Registrar Agreement*

The Company entered into an agreement with Share Registrars Limited (the "**Registrar**") dated 1 February 2018. The Registrar has agreed to provide share registration services to the Company for an initial period of 12 months following Admission. The agreement can be terminated by either party serving at least 6 months' written notice or immediately in the case of persistent material breach or occurrence of an insolvency event of a party.

12. Employees

As at 25 September 2020, the Group employed approximately 75 employees. The split of employees and contractors by area of activity is as follows:

Activity	Number of Employees
Lead management	14
Administration and finance	24
Technical and supervision	22
Operators and assistants	114

13. Legal And Arbitration Proceedings

There are no governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which the Company is aware) which may have or have had during the 12 months prior to the date of this Registration Document a significant effect on the financial position or profitability of the Group.

14. Related party transactions

The Company was not party to any related party transactions during the period covered by the historical financial information contained in Part IV of this Registration Document up to the date of this Registration Document.

15. United Kingdom Taxation

15.1 General

The following summary is intended as a general guide for UK tax resident Shareholders as to their tax position under current UK tax legislation and HMRC practice as at the date of this Registration Document. Such law and practice (including, without limitation, rates of tax) is in principle subject to change at any time. The Company is at the date of this Registration Document resident for tax purposes in the United Kingdom and the following is based on that status.

This summary is not a complete and exhaustive analysis of all the potential UK tax consequences for holders of Ordinary Shares. It addresses certain limited aspects of the UK taxation position applicable to Shareholders resident and domiciled for tax purposes in the UK (except in so far as express reference is made to the treatment of non-UK residents) and who are absolute beneficial owners of their Ordinary Shares and who hold their Ordinary Shares as an investment. This summary does not address the position of certain classes of Shareholders who (together with associates) have a 5 per cent. or greater interest in the Company, or, such as dealers in securities, market makers, brokers, intermediaries, collective investment schemes, pension funds, charities or UK insurance companies or whose shares are held under a personal equity plan or an individual savings account or are "employment related securities" as defined in section 421B of the Income Tax (Earnings and Pensions) Act 2003. Any person who is in any doubt as to his tax position or who is subject to taxation in a jurisdiction other than the UK should consult his professional advisers immediately as to the taxation consequences of their purchase, ownership and disposition of Ordinary Shares.

This summary is based on current United Kingdom tax legislation. Shareholders should be aware that future legislative, administrative and judicial changes could affect the taxation consequences described below.

15.2 Taxation of dividends

(A) United Kingdom resident shareholders

UK resident individuals are entitled to a £2,000 annual dividend allowance. Dividends received and not exceeding this allowance will not be subject to income tax. Dividends received in excess of this allowance will be taxed at 7.5 per cent up to the limit of the basic rate income tax band. Dividends received in excess of the basic tax income tax band will be taxed at 32.5% up to the limit of the higher rate income tax band. Where dividends are received in excess of the higher rate income tax band, then the excess will be taxed at 38.1% being at the additional rate of income tax.

Dividends received by the trustees of discretionary or accumulation trusts and not exceeding the first band will be taxed at 7.5%. The first band is established by taking £1,000 and dividing this amount by the number of settlements formed by the settlor up to a maximum of 5. The minimum first band is £200. Any dividends received by such trusts in excess of the first band will be taxed at 38.1%. If the shareholder is in doubt as to the amount of the first band, then independent professional advice should be sort.

United Kingdom pension funds and charities are generally exempt from tax on dividends which they receive.

(B) Companies

Subject to UK dividend exemption rules, a corporate Shareholder resident in the UK (for tax purposes) should generally not be subject to corporation tax or income tax on dividend payments received from the Company.

(C) Non-residents

In general, the right of non-UK resident Shareholders to reclaim tax credits attaching to dividend payments by the Company will depend upon the existence and the terms of an applicable double tax treaty between their jurisdiction of residence and the UK. In most cases, the amount of tax credit that can be claimed by non-UK resident Shareholders from HMRC will be nil. They may also be liable to tax on the dividend income under the tax law of their jurisdiction of residence. Non-UK resident Shareholders should consult their own tax advisers in respect of their liabilities on dividend payments, whether they are entitled to claim any part of the tax credit and, if so, the procedure for doing so.

Persons who are not resident in the UK should consult their own tax advisers on whether or not they can benefit from all or part of any tax credit and what relief or credit may be claimed in the jurisdiction in which they are resident.

15.3 Taxation of chargeable gains

(A) United Kingdom resident shareholders

A disposal of Ordinary Shares by a Shareholder, who is resident for tax purposes in the UK, will in general be subject to UK taxation on the chargeable gain arising on a disposal of Ordinary Shares.

UK resident individuals are entitled to an annual allowance to be deducted from any chargeable gain that would otherwise be taxable in the relevant tax year. The annual allowance for the tax year to 5 April 2021 is £12,300. Generally speaking, where the individual's taxable chargeable gains exceed the allowance, then these gains will be taxed at 10%, but only to the extent that the individual's taxable income and chargeable gains do not exceed the basic rate income tax band. Where the individual's taxable income and chargeable gains exceeds the basic rate income tax band and then the remaining chargeable gain will be taxed at 20%.

The trustees of discretionary or accumulation trusts may be able to claim an annual allowance being one-half of the allowance available to individuals. For the tax year ended 5 April 2021 the allowance is £6,150. Independent professional advice should be sort before claiming this allowance. Where the allowance is claimed then chargeable gains in excess of this amount will be liable to tax at 20%. Where the allowance is not claimed then the whole chargeable gain will be liable to tax at 20%.

(B) Non-residents

A Shareholder who is not resident in the UK for tax purposes, but who carries on a trade, profession or vocation in the UK through a permanent establishment (where the Shareholder is a company) or through a branch or agency (where the Shareholder is not a company) and has used, held or acquired the Ordinary Shares for the purposes of such trade, profession or vocation through such permanent establishment, branch or agency (as appropriate) will be subject to UK tax on capital gains on the disposal of Ordinary Shares.

In addition, any holders of Ordinary Shares who are individuals and who dispose of shares while they are temporarily non-resident may be treated as disposing of them in the tax year in which they again become resident in the UK.

All non-resident or non-domiciled shareholders should seek professional before considering a transaction which be considered a chargeable gain.

(C) Companies

For UK corporates, capital gains are currently chargeable at the rate of 19 per cent subject to indexation which may apply to reduce any such gain, although indexation cannot create or increase a capital loss (indexation is no longer available to individuals and trustees). Other reliefs may be relevant.

15.4 Stamp Duty and Stamp Duty Reserve Tax ("SDRT")

The statements below (which apply whether or not a Shareholder is resident or domiciled in the UK) summarise the current position and are intended as a general guide only to stamp duty and SDRT. Certain categories of person are not liable to stamp duty or SDRT, and special rules apply to agreements made by broker dealers and market makers in the ordinary course of their business and to certain categories of person (such as depositaries and clearance services) who may be liable to stamp duty or SDRT at a higher rate or who may, although not primarily liable for tax, be required to notify and account for SDRT under the Stamp Duty Reserve Tax Regulations 1986.

No UK stamp duty or SDRT will be payable on the issue of New Shares pursuant to the Placing, other than as explained below.

Dealings in New Shares will generally be subject to stamp duty or SDRT in the normal way. An instrument effecting the transfer on sale of New Shares will generally be liable to stamp duty at the rate of 0.5 per cent. (rounded up, if necessary, to the nearest multiple of £5) of the amount or value of the consideration payable. However, where the amount or value of the consideration is £1,000 or less, and provided that the transfer does not form part of a larger transaction or series of transactions where the combined consideration exceeds £1,000, such instrument should be exempt from charge upon certification of such facts.

An unconditional agreement to transfer New Shares will generally be liable to SDRT at the rate of 0.5 per cent. of the amount or value of the consideration payable, but such liability will be cancelled, or a right to a repayment (generally, with interest) in respect of the payment of such SDRT liability will arise, if the agreement is completed by a duly stamped or exempt transfer within six years of the agreement having become unconditional. Stamp duty and SDRT are normally the liability of the purchaser.

Subject to certain exemptions, a charge to stamp duty or SDRT will arise on the transfer of New Shares to a person providing a clearance service, its nominee or agent, or to an issuer of depositary receipts, its nominee or agent, where that transfer is not an integral part of an issue of share capital. The rate of stamp duty or SDRT, as the case may be, in such circumstances will generally be 1.5 per cent. of the amount or value of the consideration for the transfer or, in some circumstances, the value of the New Shares concerned, in the case of stamp duty rounded up, if necessary, to the nearest multiple of £5.

No stamp duty or SDRT will arise on a transfer of New Shares into the CREST system provided that the transfer is not for money or money's worth. Paperless transfers of New Shares within CREST are liable to SDRT (at a rate of 0.5 per cent. of the amount or value of the consideration payable) rather than stamp duty, and SDRT arising on the agreement to transfer New Shares under relevant transactions settled within the system or reported through it for regulatory purposes will generally be collected by CREST.

15.5 Inheritance tax

Shareholders regardless of their tax status should seek independent professional advice when considering any event which may give rise to an inheritance tax charge.

Ordinary Shares beneficially owned by an individual Shareholder will be subject to UK inheritance tax on the death of the Shareholder (even if the Shareholder is not domiciled or deemed domiciled in the UK); although the availability of exemptions and reliefs may mean that in some circumstances there is no actual tax liability. A lifetime transfer of assets to another individual or trust may also be subject to UK inheritance tax based on the loss of value to the donor, although again exemptions and reliefs may be relevant. Particular rules apply to gifts where the donor reserves or retains some benefit.

16. Takeovers

Mandatory Bids

Under Rule 9 of the Takeover Code, if:

(a) a person acquires an interest in shares in the Company which, when taken together with shares already held by him or persons acting in concert with him, carry 30 per cent. or more of the voting rights in the Company; or

(b) a person who, together with persons acting in concert with him, is interested in not less than 30 per cent. and not more than 50 per cent. of the voting rights in the Company acquires additional interests in shares which increase the percentage of shares carrying voting rights in which that person is interested,

the acquirer and, depending on the circumstances, his concert parties, would be required (except with the consent of the Panel on Takeovers and Mergers) to make a cash offer for the outstanding shares in the Company at a price not less than the highest price paid for any interests in the Ordinary Shares by the acquirer or his concert parties during the previous 12 months.

Squeeze-Out rules

Under the Companies Act, if an offeror were to acquire 90 per cent. or more of the Ordinary Shares within the period specified by the Companies Act, it could then compulsorily acquire the remaining Ordinary Shares. It would do so by sending a notice to the relevant Shareholders telling them that it will compulsorily acquire their shares and then, six weeks later, it would execute a transfer of the outstanding shares in its favour and pay the consideration to the Company, which would hold such consideration on trust for such Shareholders. The consideration offered to Shareholders whose Ordinary Shares are compulsorily acquired under the Companies Act must, in general, be the same as the consideration that was available under the relevant takeover offer, unless such Shareholders can show that the offer value is unfair.

Sell-out rules

The Companies Act also gives minority Shareholders a right to be bought out in certain circumstances by an offeror who has made a takeover offer. If a takeover offer relates to all of the Ordinary Shares and at any time before the end of the period within which the offer could be accepted the offeror holds or has agreed to acquire not less than 90 per cent. of the Ordinary Shares, any holder of the Ordinary Shares to which such offer relates who has not accepted the offer can by written communication to the offeror require it to acquire those Ordinary Shares. The offeror would be required to give any Shareholder notice of his right to be bought out within one month of that right arising. If a Shareholder exercises its right to be bought out, the offeror is bound to acquire the relevant Ordinary Shares on the terms of the offer or on such other terms as may be agreed.

17. Further Information

17.1 There has been no significant change in the financial position and financial performance of the Group since 31 December 2019, being the last financial period for which interim financial information has been published.

17.2 Save as disclosed in Part I of this Registration Document, the Directors are not aware of any patents or other intellectual property rights, licenses, industrial, commercial or financial contracts or new manufacturing processes which are or may be of fundamental importance to the Group's business.

17.3 Save for the remuneration payable in respect of its role as reporting accountant and auditor to the Company, the Reporting Accountant does not have a material interest in the Company.

17.4 Save for the remuneration payable in respect of its role as Competent Person, SRK Consulting does not have a material interest in the Company.

17.5 No public takeover bids have been made by third parties in respect of the Company's issued share capital since incorporation.

17.6 The Company does not have any restriction on borrowings that may materially affect its operations under its Articles.

17.7 In the event a takeover offer is made for Ordinary Shares in accordance with sections 974 to 991 of the Companies Act, the offeror may become entitled to acquire any Ordinary Shares which are not accepted by the offerees to the takeover offer in accordance with the provisions set out in the Companies Act.

17.8 Within this Registration Document, where information has been sourced from a third party, the Company confirms that this information has been accurately reproduced and, insofar as the Company is aware and is able to ascertain from information published by that party, no facts have been omitted which would render the reproduced information inaccurate or misleading. Where information has been sourced from a third party, the source of the information has been identified in this Registration Document.

17.9 The Ordinary Shares have all been issued in registered form (in either certificated or uncertificated form) and rank pari passu amongst themselves for all dividends and other distributions which may be declared, paid or made by the Company. All of the Ordinary Shares, which have been issued pursuant to the provisions of the Act and the Articles, have equal voting rights.

17.10 There are no restrictions on the transferability of the existing Ordinary Shares.

17.11 The Directors may permit the holding of Ordinary Shares in certificated and uncertificated form. Subject to the provisions of the CREST Regulations, title to such shares may be transferred by means of a relevant system (as defined in the CREST Regulations). The Registrar has responsibility for maintaining the Company's register of members.

17.12 The Competent Person has given and not withdrawn its written consent to the issue of this Registration Document with the inclusion herein of the references to his name and the CPR in the form and context in which they appear and has authorised the contents of those parts of this Registration Document which comprise the CPR for the purposes of Rule 5.5.3R(2)(F) of the Prospectus Regulation Rules.

17.13 The Reporting Accountant has given and not withdrawn its written consent to the issue of this Registration Document with the inclusion herein of the references to its name in the form and context in which they appear and has authorised the contents of those parts of this Registration Document which comprise the audited financial information for the purposes of Rule 5.5.3R(2)(F) of the Prospectus Regulation Rules.

18. Documents available for inspection

Copies of the following documents may be inspected, during normal business hours on working days, at the offices of Optiva Securities Limited during the life of this Registration Document:

(a) this Registration Document;

(b) the Articles;

(c) the audited consolidated accounts of the Group for the financial periods beginning from the incorporation of the Company and ending 31 March 2019; and

(d) the CPR.

28 September 2020

PART VI

DEFINITIONS

"**Acts**"	means, for the purposes of the Articles, the Companies Acts (as defined in section 2 of the Companies Act 2006) insofar as they apply to the Company.
"**Admission**"	means the admission to trading of the Ordinary Shares to trading on the London Stock Exchange's main market for listed securities.
"**An Arm's Length Sale**"	means a sale to an unconnected party under which the beneficial ownership of the shares in question passes and shall include (but without limitation) a sale through a recognised investment exchange (as defined in the FSMA) or other recognised market or sale in connection with acceptance of a takeover offer for the Company (as defined in section 974 of the Acts).
"**Articles**"	means the articles of association of the Company as at the date of this Registration Document.
"**Board**"	means the board of directors of the Company, from time to time.
"**Takeover Code**"	means the Takeover Code on Takeovers and Mergers issued and administered by the Panel on Takeovers and Mergers.
"**Code**"	means the UK Corporate Governance Code 2018 issued by the Financial Reporting Council.
"**Company**"	means Tirupati Graphite plc, company number 10742540 a public limited company incorporated in England and Wales.
"**Companies Act**" or "**Act**"	means the UK Companies Act 2006, as amended.
"**Competent Person**"	means SRK Consulting.
"**Concert Parties**"	means each of TCCPL, Shishir Poddar, Hammant Poddar, Puruvi Poddar, Paridui Poddar, Madhu Poddar and Trupti Poddar.
"**CREST Regulations**"	means the Uncertificated Securities Regulations 2001, as amended.
"**Disclosure Guidance and Transparency Rules**"	means the FCA disclosure guidance and transparency rules made in accordance with section 73A of FSMA as amended from time to time.
"**Directors**"	means the directors of the Company from time to time.
"**Downstream Speciality Graphite Projects**"	means the Patalganga Project and Speciality Graphite Project.
"**EEA States**"	means the States of the European Economic Area.
"**FCA**"	means the Financial Conduct Authority.
"**Financial Statements**"	means the 2019 financial statements.
"**FSMA**"	means the Financial Services and Markets Act 2000 (as amended).
"**IFRS**"	means the International Financial Reporting Standards as issued by the International Accounting Standards Board.
"**Graphite Projects**"	means each of the Vatomina Project, the Sahamamy Project and the Patalganga Project.
"**Group**"	means the Company and the Subsidiaries.
"**Listing Rules**"	means the listing rules published by the UK Listing Authority.
"**London Stock Exchange**"	means London Stock Exchange plc.
"**Madagascar Primary Graphite Projects**"	means the Vatomina Project and the Sahamamy Project.

"**Market Abuse Regulation**"	means the Market Abuse Regulation (EU) No 596/2014.
"**Non-Executive Director**"	means the non-executive Directors of the Company.
"**Official List**"	means the Official List of the FCA.
"**Optiva**"	means Optiva Securities Limited, broker to the Company.
"**Ordinary Shares**"	means ordinary shares of £0.025 each in the share capital of the Company.
"**Patalganga Project**"	means the Group's flame retardants plant in India held under its subsidiary, TSGO.
"**Prospectus Regulation Rules**"	means the Prospectus Regulation Rules made by the Financial Conduct Authority.
"**Relevant Control Proposal**"	means an "Offer" (as that term is defined in the Takeover Code), or other proposal or transaction for control of the Company.
"**Rostaing**"	means Etablissements Rostaing SARL.
"**Sahamamy Project**"	means Sahamamy Sahasoa Project including the mining permit nos. 21 & 23608 for graphite at Sahamamy Sahasoa, Madagascar.
"**Securities Act**"	means the US Securities Act of 1933, as amended.
"**Shareholder**"	means a shareholder of the Company, from time to time.
"**Speciality Graphite Project**"	means the Group's proposed downstream specialty graphite processing plant in India.
"**Statutes**"	means the CREST Regulations and all other statutes, orders, rules, regulations and other subordinate legislation for the time being in force concerning companies so far as they apply to the Company.
"**Subsidiaries**"	means the subsidiaries of the Company, as set out in paragraph 3.1 of Part V of this Registration Document.
"**TCCPL**"	means Tirupati Chemicals and Carbons Private Limited.
"**TGMRC**"	means the Group's proposed Graphene and Mintech Research Centre in India.
"**TRM**"	means Tirupati Resources Mauritius.
"**TMVSARL**"	means Tirupati Madagascar Ventures SARL.
"**TSG**"	means Tirupati Specialty Graphite Private Limited.
"**US$**"	means US dollars.
"**Vatomina Project**"	means mining permit no 38321 to mine Graphite in Vatomina, Madagascar.
"**£**"	means Pounds Sterling.