2. PRE-FEASIBILITY REPORT

Executive Summary
Sri Saheba Gowda, has applied for a quarry lease for extraction of Shahabad stone in Sy No. 67/4, Gandhi Nagar Village, Chittapur Taluk, Kalburgi District, Karnataka over an extent of 3-00 Acres for production capacity of 9,184.52 Sq.m. Per Annum (aggregate).

Department of Mines and Geology, Kalburgi has notified the area in the name of Sri Saheba Gowda to an extent of 3-00 Acres in Sy No. 67/4, Gandhi Nagar Village, Chittapur Taluk, Kalburgi District, Karnataka. The sketch showing the demarcated area to be granted under Quarrying Lease, is enclosed as Plate No.2.
Copy of Notification is herewith attached in the Quarrying Plan.

As per the statutory obligation this project needs Environmental Clearance from DEIAA Kalburgi for Quarrying. Accordingly submitting 1) Form- IM, 2) Pre-Feasibility Report, 3) Quarry Plan approved by District Mines and Geology, 4) Land documents, 5) Notification, 6) Statutory Clearances, 7) Survey of India Toposheet duly marking the project site. To the District Level Environment Assessment Authority of Kalaburgi constituted by MoEFCC, GoI for issuing Environment Clearance as per EIA September 14, 2006 and S.O. 141(E) notification on 15th January 2016.

Introduction of the project/ Background information
i) Identification of project and project proponent. In case of mining project, a copy of mining lease/ letter of intent should be given:

Identification of project:
Extent: 3-00 Acres
“Shahabad Stone Quarry” Of
Sri Saheba Gowda at Sy No: 67/4, Gandhi Nagar Village, Chittapur Taluk, Kalburgi District, Karnataka

Project proponent
Sri Saheba Gowda
s/o Chandra Reddy,
Malipatil, Yaddalli Post,
Hattingkuni,
Yadgiri Taluk & District

It is a Shahabad Stone Quarry, and copy of Notification from Department of Mines & Geology is enclosed.

ii) Brief description of nature of the project:

Shahabad Stone Quarry in Sy No. 67/4, Gandhi Nagar Village, Chittapur Taluk, Kalburgi District,
It is a Shahabad Stone Quarry. It is a project of 3-00 Acres with average production of capacity of – 9,184.52 Sq.m. Per Annum.

iii) Need for the project and its importance to the country and or region:
Although, the project is small it plays important role in the development of the region and country as Shahabad Stone.

iv) Demand- Supply Gap:
There is a good demand for Shahabad Stone.

v) Imports vs. Indigenous production:
Not applicable.

vi) Export Possibility:
Not applicable.

vii) Domestic/ export Markets:
Domestic market – Gulbarga, Bengaluru, etc.

viii) Employment Generation (Direct and Indirect) due to the project.
About 9 people will get direct employment and equal number will get indirect Employment.

Project Description
i) Type of project including interlinked and interdependent projects, if any:
It is only Quarry and there will not be any interlinked and interdependent projects.

ii) Location (map showing general location, specific location, and project boundary & project site layout) with coordinates:
Location of the project issued by the Department of Mines & Geology and Toposheet on 1:50,000 scale is enclosed. In the quarry plan.

iii) Details of alternate sites, considered and the basis of selecting the proposed site, particularly the environmental considerations gone into should, be highlighted:
Shahabad Stone quarry is site specific.

iv) Size or magnitude of operation:
   It is only a small scale Shahabad Stone quarrying with capacity of ~ 9,184.52 Cu.m. Per Annum.

Year wise development for next five years:

The Shahabad Stone deposit is an Undulating terrain which is sloping gently south and is well exposed in the entire area. The deposit is wide enough for opening along the strike. An open cast Other than fully Mechanised method will be adopted to operate the area. Since, the annual production is 9,184.52 Cu.m. Per Annum; the Open cast method will be followed during the plan period. The Tonnages of saleable stone and intercalated waste during the plan period is as given below:

Table 2-1 Details of production and waste

<table>
<thead>
<tr>
<th>Year</th>
<th>Cu.m.</th>
<th>Saleable In Cu.m. (70%)</th>
<th>Wastage In (30%) Cu.m.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I year</td>
<td>13171.48</td>
<td>9220.36</td>
<td>3954.44</td>
</tr>
<tr>
<td>II Year</td>
<td>13171.48</td>
<td>9220.04</td>
<td>3951.44</td>
</tr>
<tr>
<td>III Year</td>
<td>12917.80</td>
<td>9042.46</td>
<td>3875.34</td>
</tr>
<tr>
<td>IV Year</td>
<td>13171.48</td>
<td>9220.04</td>
<td>3951.44</td>
</tr>
<tr>
<td>V Year</td>
<td>13171.48</td>
<td>9220.04</td>
<td>3951.44</td>
</tr>
<tr>
<td>Total</td>
<td>65603.72</td>
<td>45922.60</td>
<td>19681.12</td>
</tr>
</tbody>
</table>

Proposed method of quarrying: Quarrying will be carried out by open cast semi mechanization method by using compressor operated jack-hammer drills, truck dumpers etc. As the rock is exposed the open cast quarrying will be sufficient.

ev) Project description with process details (a schematic diagram/ flow chart showing the project layout, components of the project etc. should be given):
   It is only a Shahabad Stone quarrying no processing is involved, the details of quarrying is detailed in quarrying plan.

vi) Raw material required along with estimated quantity, likely source, marketing area of final product/s, Mode of transport of raw material and finished product:
   No raw materials required. Broken Shahabad Stone rock will be transported by tippers/trucks.
Environmental Clearance Application

vii) Resource optimization /recycling and reuse envisaged in the project, if any, should be briefly outlined:
No recycling and reuse of material is envisaged.

viii) Availability of water its source, Energy /power requirement and source should be given:
Water will be availed from nearby bore wells. No energy /power requirement.

ix) Quantity of wastes to be generated (liquid and solid) and scheme for their Management /disposal:
No wastes to be generated (liquid and solid). The waste material is dumped in the waste dump yard as shown in Quarrying plan.

x) Schematic representations of the feasibility drawing which give information of EIA purpose: NA

Site Analysis
i) Connectivity:
The granted area is easily workable in all seasonal conditions. The area is 0.5 Km SW of Dhangarwadi Village. The land is Patta land consisting mainly of Shahabad Stone. All facilities such as, post and telegraph office, Hospital, Police Station, Schools and Colleges are available at Chittapur.

ii) Land Form, Land use and Land ownership:
Land is a Patta Land. The entire area is nonagricultural barren land.

iii) Topography( along with map):
A view at a Topo sheet No 56 G/4 following topo graphic features can be observed (Topo map enclosed).
- The applied area is waste land.
- The terrain is undulated and has a gentle slope towards South.
- No major roads pass through the applied area.
• No human settlements within or in the vicinity of the applied area. The nearest village is at a distance 0.5 Km.
• The general elevation of the area is 405 m above MSL. The nallahs flow in the North South direction and act as channels during rainy season.

iv) Existing land use pattern (agriculture, non-agriculture, forest, water bodies (including area under CRZ)), shortest distances from the periphery of the project to periphery of the forests, national park, wild life sanctuary, eco sensitive areas, water bodies (distance from, the HFL of the river), CRZ, In case of notified industrial area, a copy of the Gazette notification should be given:

Land use and break up is given as follows:
About 0.18 Acres of land will be used for quarrying in the plan period. The present land use pattern and proposed after 5 years are given bellow. Statutory buildings will be away from the lease area

Table 2-2 Land use details

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Present Land use (In Acre.Gunta)</th>
<th>Proposed land use (In Acre.Gunta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working area</td>
<td>--</td>
<td>0.18</td>
</tr>
<tr>
<td>Waste Dump Yard</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>--</td>
<td>0.01</td>
</tr>
<tr>
<td>Road</td>
<td>--</td>
<td>0.01</td>
</tr>
<tr>
<td>Top Soil Storage</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Buffer zone</td>
<td>--</td>
<td>0.31</td>
</tr>
<tr>
<td>Area undisturbed</td>
<td>3.00</td>
<td>1.29</td>
</tr>
<tr>
<td>Total</td>
<td>3.00</td>
<td>3.00</td>
</tr>
</tbody>
</table>

v) Existing Infrastructure:
Within the site - Nil.

vi) Climatic data from secondary sources:
The southwest monsoon sets in the middle of June and extends till the end of September. Bulk of the annual rainfall occurs during this season, which constitutes over 75% of the annual rainfall. Significant rainfall occurs during the winter monsoon owing to northeastern monsoon, which constitutes 15% of the annual rainfall. Normal Rainfall of the district is 777 mm (1901 - 70) and actual rainfall is
881.10 mm (2005). Normal rainy days (as per 1901 - 70) are 46. Although, consistent normal rainfall is prevalent, Sedam, Chincholi & Chittapur taluks experience mild drought conditions. Kalaburgi district lies in the northern plains of Karnataka and has semi – arid type of climate. Dry climate prevails for most part of the year. December is the coldest month with mean daily maximum and minimum temperatures being 29.5\(^\circ\)C & 15\(^\circ\)C to 10\(^\circ\)C respectively. During peak summer, temperature shoots up to 45\(^\circ\)C. Relative humidity varies from 26% in summer to 62% in winter.

vii) Social Infrastructure available
Nil.

**Planning Brief**

i) Planning Concept (type of industries, facilities, transportation etc) Town and country Planning/ Development authority classification.

It’s a quarrying project and its material will be used in Aggregate Manufacturing Industry’s crushers for primary, secondary and tertiary crushing. The area characterized with prominent sheet rock exposures and it is planned to work this deposit by adopting semi-mechanized opencast quarrying method. Ultimate pit slope of 45\(^\circ\) shall be maintained. During the plan period production and development details as furnished in quarry plan. At the end of the conceptual period afforestation will be done all along the approach road. Barbed wire fence will be established all around the lease area, safety bunds, fencing shall be constructed as per the directions and guide lines of DMG and DGMS.

ii) Population Projection

The man power required for quarry operations include quarry manager, engineer, skilled, semi-skilled, un – skilled laborers etc., As for the socio-economic is concerned from the quarry activity nearby villagers shall get direct and indirect employment. The proposed quarry activities shall bring positive change in the villages as the quarry proponent shall provide socio-economic activities in the region. Total of 9 persons will be employed.
iii) Land use planning (breakup along with green belt etc.)
    Enclosed in the quarry plan

iv) Assessment of Infrastructure Demand (Physical & Social)
    The existing road network will be sufficient to meet the proposed production capacity. Only approach road formulated to reach the quarry. However, required infrastructure for transport within the quarry area will be further strengthened and improved. No new routes or alternations are required in this regard.

v) Amenities/ Facilities
    Security guard house and a weigh bridge is proposed within 3-00 Acres. Lessee proposes to employ about 9 or more persons directly and around 20 or more number of persons indirectly. This employment has a positive impact on socio economic conditions of the nearby villages as most of the work force will be from the nearby areas. Local persons will be hired for meeting the requirement of quarrying operations like water sprinkling, trucks loading, plantation, establishment of garland drains, gully checks etc. drinking water, rest shelter and first aid will provided to workers at quarry site.

Proposed Infrastructure

i) Industrial Area(Processing Area)
   Nil

ii) Residential Area (Non Processing Area)
   Nil

iii) Green Belt
    About 150 saplings will be planted every year, along approach road.

iv) Social Infrastructure Connectivity (Traffic and Transportation Road/Rail/Metro /Water ways etc):
    The granted area is easily workable in all seasonal conditions. The area is 0.5 Km SW of Dhangarwadi Village.
v) Drinking Water Management (Source & Supply of water):
Bore well water using a tanker.

vi) Sewerage System:
Sewage generation is minimal - Septic tank.

vii) Industrial Waste Management:
Not applicable.

viii) Solid Waste Management:
There is small quantity of soil cover in the quarry lease area the same will be used for afforestation purpose (Ref. Plate No. 6 of Quarry Plan). Intercalated waste is produced may be of defective material along the emplacements of pegmatite/epidote veins and deformed material along the fractures. It is estimated that 40% of entire will account for intercalated waste, which shall be used for maintenance of haulage/approach roads and used as foundation filling material for minor building constructions. No toxic of hazardous elements are reported in the waste & hence, no effect on the surface/ground water.

ix) Power Requirement & Supply /source:
There will not be any requirement of power supply to the project site. The quarry activities are envisaged to be carried out only during day time. All the equipment shall be operated with diesel as motive power.

Rehabilitation and Resettlement (R & R) Plan
Open cast quarrying operations will alter the topography of the area by way of excavation and formulating pit. As there is no dump proposal within the Quarry Lease area issues of water pollution, silting of agricultural lands, air pollution etc., will be very minimal even though proper preventive measures will be implemented to maintain the natural condition of surrounding environment. The primary objectives of reclamation are to restore the affected area to the original state as near as possible. Various reclamation proposals planned during the plan period as well, rest of the quarry period such as broad working pit with safe angle of slope, establishment of
effective drainage system, prevention of erosion and excessive run off and afforestation.

As the quarry area is concerned, so far none of the quarry area is matured or completely exhausted. Hence, the measures like drainage system and afforestation works etc., shall be taken up.

**Project Schedule & Cost Estimates**

i) Likely date of start of construction and likely date of completion (Time schedule for the project to be given):

Quarrying will start within a month after getting EC clearance.

ii) Estimated project cost along with analysis in terms of economic viability of the project:

Estimated project cost is 87 lakhs (including the cost of machinery and additional preliminary works and working capital etc). It is economically viable as it is quarrying of the Shahabad Stone.

The return on the investment is by way of sale of mineral (Shahabad Stone). Required machineries will be procured or shall be hired on contract basis. The proposed annual production of Shahabad stone is 9,184.52 Sq.m. per Annum. The major components required to the project are:

- Cost of the project

1. **Cost of the project**

The cost of the project consists of the following major components:

<table>
<thead>
<tr>
<th>Water Requirement calculation</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total No of Employees</td>
<td>9</td>
</tr>
<tr>
<td>Domestic water requirement</td>
<td>0.405 KLD</td>
</tr>
<tr>
<td>Waste water generation @ 0.8*domestic</td>
<td>0.324 KLD</td>
</tr>
<tr>
<td>Length of approach road</td>
<td>0.25 km</td>
</tr>
<tr>
<td>Water requirement for dust suppression @5KLD/km</td>
<td>1.25 KLD</td>
</tr>
<tr>
<td>Total Saplings proposed</td>
<td>150 Nos.</td>
</tr>
<tr>
<td>Water requirement for plantation @ 5lpd/sapling</td>
<td>0.75 KLD</td>
</tr>
<tr>
<td>Total water requirement</td>
<td>2.729 KLD</td>
</tr>
</tbody>
</table>
### Analysis of proposal (Final Recommendation)

1. **Financial and social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area.**

   Quarrying activity improves the economic status of the village people working in the area. Overall improvement will be expected in local area.

   The Shahabad stone quarry with proposed annual production of 9,184.52 Cu.m. Per Annum. The financial estimates reveal good rate of returns. The project is economically viable. The estimates have also taken into consideration the occupational health expenses, environmental protective measures, social welfare activities, etc.