

# FORM-I

## (I) Basic Information

Name of the Project	<b>PROPOSED INTEGRATED STEEL PLANT INCLUDING CEMENT &amp; CAPTIVE POWER PLANTS</b>
Location/ site alternatives under consideration	<b>JAI BALAJI INDUSTRIES LIMITED</b> Village - Durmut, Raghunathpur Block I Dist - Purulia, West Bengal
Size of the Project*	The proposed mega project comprising of - 5 MTPA Integrated Steel Plant - 3 MTPA Cement Plant - 1215 MW Coal based Captive Power Plant

The name & the capacity of the units for the proposed Integrated Steel Plant will be as below:

SL. NO.	UNIT	CAPACITY
1	COAL WASHERY	15.6 MTPA
2	IRON ORE BENEFICIATION PLANT	16 MTPA
3	SINTER PLANT	3,70,000TPA
4	IRON ORE PELLETISATION PLANT	8.4 MTPA
5	PRODUCER GAS PLANT	1,50,000 Nm <sup>3</sup> / hr
6	DIRECT REDUCTION (DRI) PLANT	39,00,000 TPA
7	COAL GASIFICATION UNIT	2,25,000 Nm <sup>3</sup> / hr
8	WASTE HEAT RECOVERY BOILER CAPTIVE POWER PLANT	125 MW
9	BLAST FURNACE	26,80,000 TPA
10	COKE OVEN & BY-PRODUCTS PLANT	15,19,000 TPA
11	PIG CASTING MACHINE	3,000 TPD
12	INDUCTION FURNACE	0.6 MTPA
13	ELECTRIC ARC FURNACE (EAF)	5.4 MTPA
14	LADLE REFINING FURNACE	6 X 200 T
15	RH-TOP (DEGASSING UNIT)	400 TPD
16	ARGON – OXYGEN DECARBURIZATION (AOD) UNIT	100 TPD
17	VACUUM OXYGEN DE-CARBURIZATION (VOD) UNIT	100 TPD
18	CONTINUOUS CASTER	5.0 MTPA
19	HOT STRIP MILL (ROLLING MILL – I)	2.5 MTPA.
20	PLATE MILL (ROLLING MILL – II)	1.0 MTPA
21	BAR & ROD MILL (ROLLING MILL – III)	1.5 MTPA
22	OXYGEN PLANT	6000 TPD
23	LIME CALCINATION PLANT	5.8 MTPA.
24	CALCINED DOLOMITE PLANT	6,81,800 TPA
25	SUBMERGED ARC FURNACE (FERRO ALLOYS)	0.25 MTPA

Expected cost of the project	Rs. 16,000 crores (approximately)
Contact Information	Mr. Gaurav Jajodia Director JAI BALAJI INDUSTRIES LIMITED 5, Bentink Street, 2 <sup>nd</sup> Floor, Kolkata - 700001 Tele: 91-033-22489808 Fax: 91-033-22430021 Email: jbalaji@vsnl.net www.jaibalajigroup.com
Screening Capacity	<b>Item 3(a) Category (A) of the Schedule - Integrated Steel Plant</b> <b>Item 1(d) Category (A) of the Schedule - Captive Power Plant</b> <b>Item 3(b) Category (A) of the Schedule - Cement Plant</b>

- Capacity corresponding to sectoral activity (such as production capacity for manufacturing, mining lease area and production capacity for mineral production, area for mineral exploration, length for linear transport infrastructure, generation capacity for power generation etc.)

## (II) Activity

1. **Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)**

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land, land use plan)	Yes	<p>The plot measuring 3,800 acres which is allotted by the West Bengal Industrial Development Corporation (WBIDC) to Jai Balaji Industries Limited (JBIL) for the proposed project is located very close to the District town of Purulia. Said plot would be reformed / developed from its existing land use. The land is vacant and barren in nature, apparently having no substantial utility. No diversion of forest land is associated with the project.</p> <p>It is anticipated that the construction activities of the proposed project would hardly have an adverse effect on the land use activities in the neighborhood. Moreover, the planning of the project will be made taking into consideration relevant guidelines/stipulations of the concerned Authorities on development of the area. Development of green belt and other landscape on the proposed</p>

			site would enhance the visual aesthetics of the area.
1.2	Clearance of existing land, vegetation and buildings?	<b>No</b>	The project site is a vacant land. The site clearing and preparation activities will involve removal of only scanty vegetation existing on the proposed plant site. The project site is primarily dominated by undergrowth and unwanted bushes. It is expected that digging of the site before the start of the construction work for the foundation work would not result any significant effect on soil erosion and silt run off, even during the heavy rains.
1.3	Creation of new land uses?	<b>Yes</b>	Proposed project will be developed following a planned land-use plan. As far as possible attempts will be made to create minimum disturbance to the existing land-use of the neighbourhood. However, a change of low order is expected due to the proposed project.
1.4	Pre-construction investigations e.g. bore houses, soil testing?	<b>No</b>	-
1.5	Construction Work?	<b>No</b>	Civil and structural work to set up the proposed project will be confined to the project site.
1.6	Demolition Work?	<b>No</b>	-
1.7	Temporary sites used for construction works or housing of construction workers?	<b>Yes</b>	Suitable temporary accommodation for the construction workers, as required will be made within the project site.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	<b>Yes</b>	During construction earth works and excavation would be done for a short period of time.  For Plant Layout, please refer Pre-feasibility report.
1.9	Underground works including mining or tunneling?	<b>No</b>	-
1.10	Reclamation works?	<b>No</b>	-
1.11	Dredging?	<b>No</b>	-
1.12	Offshore structures?	<b>No</b>	-
1.13	Production and manufacturing processes?	<b>Yes</b>	For details on Products and Manufacturing process please refer the Pre Feasibility Report.
1.14	Facilities for storage of goods or materials?	<b>Yes</b>	All materials (process inputs & products) shall be stored in planned storage yards within the project boundary.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	<b>Yes</b>	<b>Wastewater</b> Entire industrial wastewater after adequate treatment will be reused in

			<p>the plant. – Zero discharge.</p> <p>Domestic effluents after being treated will be used in non-critical purposes within the battery limit of the project.</p> <p><b>Solid waste</b> EAF slag generated (38,000 Tons/year) from the proposed steel plant will be used as road construction material. Balance slag will be dumped as land filing at a separate earmarked area.</p> <p>BF slag generated (6,80,000 Tons/year) will be used in the proposed Cement Plant.</p> <p>Dolochar, generated from DRI plants will be fully utilized in the proposed 1215 MW Captive Power Plant (CPP).</p> <p>Mill scale will be used as raw material for the sinter plant.</p> <p>Fly ash will be used in the company's own Cement plant.</p>
1.16	Facilities for long term housing of operational workers?	<b>No</b>	Major portion of the worker population will be sourced locally.
1.17	New road, rail or sea traffic during construction or operation?	<b>No</b>	<p>Adra-Khargapur Railway Line of SE Railway is running very close to the project site. Purulia-Barakar railway line and Bankura-Bhagudih railway line, is passing approx. 4.5 km &amp; 6.5 km away from the site respectively. The railway sidings of the project will be maximum 5 km away from the site. The state highway (Purulia-Sitarampur) is only about 1 km from the proposed site and is connected to NH 33. All plant &amp; machinery can be transported using these systems.</p> <p>As such, no additional road and rail linkage will be needed for the Project.</p>
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc.	<b>No</b>	-
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic Movements?	<b>No</b>	-

1.20	New or diverted transmission lines or pipelines?	<b>No</b>	-
1.21	Stream crossings?	<b>No</b>	-
1.22	Abstraction or transfers of water from ground or surface waters?	<b>No</b>	<p>No abstraction or transfer of ground water is envisaged in the proposed project.</p> <p>Total make up water requirement for the Steel Plant &amp; township would be around 5980 m<sup>3</sup> / hour, for the Captive Power plant would be around 5500 m<sup>3</sup> / hour and for the Cement Plant would be around 1500 m<sup>3</sup> / hour.</p> <p>JBIL has already addressed to DVC Maithon to draw water (around 12980 cum/hr) from Panchet, under the jurisdiction of Damodar Valley River Reservoir Corporation.</p>
1.23	Changes in water bodies or the land surface affecting drainage or run-off?	<b>No</b>	-
1.24	Transport of personnel or materials for construction, operation or decommissioning?	<b>Yes</b>	The project site is located very close to NH-33 and the railway system of SE railways. As such, both these systems will be used for transportation of personnel & materials for construction and operation of the plant.
1.25	Long-term dismantling or decommissioning or restoration works?	<b>No</b>	-
1.26	Ongoing activity during decommissioning which could have an impact on the environment?	<b>No</b>	-
1.27	Influx of people to an area in either temporarily or permanently?	<b>Yes</b>	<p>Manpower, to the tune of 4459 persons including executives &amp; non-executives will be required during operation of the proposed project.</p> <p>A temporary impact, during construction phase &amp; permanent impact, during operational phase is expected. As the project site is located very close to the district head quarters, it is expected that the employees during the operation stage will be residing in the town of Purulia.</p>
1.28	Introduction of alien species?	<b>No</b>	-
1.29	Loss of native species or genetic diversity?	<b>No</b>	-
1.30	Any other actions?	<b>No</b>	-

**2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):**

<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data</b>
2.1.	Land especially undeveloped or agricultural land (ha)	<b>No</b>	The plot acquired by Jai Balaji Industries Limited (JBIL) for the proposed project is around 3,800 acres which is located very close to the District town of Purulia which would be reformed / developed from its existing land use. The land is vacant and barren in nature, apparently having no substantial utility. No diversion of forest land is associated in the project.
2.2	Water (expected source & competing users) Unit: KLD	<b>Yes</b>	JBIL has addressed to DVC Maithon to draw water (around 12980 cum/hr) from Panchet, under the jurisdiction of Damodar Valley River Reservoir Corporation for meeting its daily water demand.
2.3	Minerals (MT)	<b>Yes</b>	Tentative annual requirements of raw materials:  RoM Non-Coking Coal - 17.00 MTPA Iron ore Fines - 13.80 MTPA Iron ore lump - 2.50 MTPA Coking Coal - 11.00 MTPA Quartzite - 0.136 MTPA Dolomite - 0.788 MTPA Limestone - 0.589 MTPA
2.4	Construction material – stone, aggregates, and/ soil (expected source – MT)	<b>Yes</b>	Will be procured mostly from local sources.
2.5	Forests and timber (source – MT)	<b>No</b>	-
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	<b>Yes</b>	The requirement of power would be about 1215 MW.  Initially the constructional and operational power will be obtained from the grid of West Bengal State Electricity Board. But once the Captive Power Plant is commissioned, the power supply from WBSEB will be discontinued and the plant will be operated on the supply of M/S JBIL's own Captive Thermal Power Plant.
2.7	Any other natural resources (use appropriate standard units)	<b>No</b>	-

**3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.**

<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data</b>
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna and water supplies)	<b>Yes</b>	Heavy fuel oil would be utilised for start up and low load operation of boiler. For this purpose facilities would be provided for unloading, transfer, storage, heating and pressuring units.  Suitable preventive measures will be adopted.
3.2	Changes in occurrence of disease vectors (e.g. insect or water borne diseases)	<b>No</b>	-
3.3	Affect the welfare of people e.g. by changing living conditions?	<b>No</b>	The project is expected to have a strong positive impact on the socioeconomic condition of the population in the area which is likely to improve the living condition of the local people.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.	<b>No</b>	-
3.5	Any other causes	<b>No</b>	-

**4. Production of solid wastes during construction or operation or decommissioning (MT/month)**

<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data</b>
4.1	Spoil, overburden or mine wastes	<b>No</b>	-
4.2	Municipal waste (domestic and or commercial wastes)	<b>Yes</b>	Solid waste of domestic/commercial origin that would be generated in the Plant will be disposed of suitably in consultation with the concerned Civic body.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	<b>No</b>	-
4.4	Other industrial process wastes	<b>Yes</b>	EAF slag (38000 T/year) will be used as road construction material. Balance slag will be dumped as land filing at a separate earmarked area.  BF slag (680000 T/year) will be used in the proposed Cement Plant.  Dolochar, generated from DRI plants will be fully utilized in the proposed 1215 MW Captive Power Plant (CPP).

			Mill scale will be used as raw material for the sinter plant.  Fly ash will be used in the Company's own Cement plant.
4.5	Surplus product	<b>No</b>	-
4.6	Sewage sludge or other sludge from effluent treatment	<b>Yes</b>	Sludge generated would be managed as per statutory requirement as applicable
4.7	Construction or demolition wastes	<b>Yes</b>	Construction site waste will be utilized for land development.
4.8	Redundant machinery or equipment	<b>No</b>	-
4.9	Contaminated soils or other materials	<b>No</b>	-
4.10	Agricultural waste	<b>No</b>	-
4.11	Other solid wastes	<b>No</b>	-

### 5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	<b>No</b>	The main air pollutants from the proposed steel plant process emissions and from the power plant would be SO <sub>2</sub> , NO <sub>x</sub> and SPM while due to different material handling facilities (non- process emission) the main pollutant would be SPM.  Particle matter would be emitted either from the stack or from material handling in the Cement plant.
5.2	Emissions from production processes	<b>Yes</b>	Main air pollutants from the process will include SO <sub>2</sub> , NO <sub>x</sub> , SPM etc. while particulate matter will be the main pollutant from non-process areas. Best possible control measures/systems will be adopted to keep the environmental condition in work zone and the surrounding areas of the plant acceptable to relevant statutory limits.
5.3	Emissions from materials handling including storage or transport	<b>Yes</b>	Suitable Dust suppression system will be used to control the fugitive emission during material handling.
5.4	Emissions from construction activities including plant and equipment	<b>Yes</b>	There will be some emissions from construction activities. However, these emissions will last for a very short period of time, it will be temporary and restricted within the plant boundary. However best management practices will be followed to control emissions during construction phase.



			Water sprinkling system will be used to control fugitive emissions during different construction activities.
5.5	Dust or odors from handling of materials including construction materials, sewage and waste	<b>Yes</b>	Dust is likely to be generated during excavation, back-filling and hauling operations along with transportation activities during the construction phase. This will be water sprinkled, and tarpaulin cover will be provided over stored raw material to reduce the dust emission.
5.6	Emissions from incineration of waste	<b>No</b>	-
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	<b>No</b>	-
5.8	Emissions from any other sources	<b>No</b>	-

#### 6. Generation of Noise and Vibration and Emissions of Light and Heat

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	<b>Yes</b>	All the machinery will be of highest standard of reputed make and will comply with national / international standards that take care of air and noise pollution control / vibration control. Hence, no significant impact due to operation of such machineries is anticipated.
6.2	From industrial or similar processes	<b>No</b>	-
6.3	From construction or demolition	<b>Yes</b>	During construction phase some construction machineries may generate sound within factory boundary. However best practices will be followed to maintain noise level within 80 db (A).
6.4	From blasting or piling	<b>Yes</b>	Pilling noise will be limited to 80 db (A).
6.5	From construction or operational traffic	<b>Yes</b>	Traffic movement will generate sound. However best practices will be followed to maintain noise level within 80 db (A).
6.6	From lighting or cooling systems	<b>Yes</b>	From the cooling towers around 80 dB (A) of noise will be generated. Suitable noise abatement methods will be adopted.
6.7	From any other sources	<b>No</b>	-

**7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea**

<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data</b>
7.1	From handling, storage, use or spillage of hazardous materials	<b>No</b>	-
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	<b>Yes</b>	Domestic effluents after being treated will be used in non-critical purposes within the plant.
7.3	By deposition of pollutants emitted to air into the land or into water	<b>Yes</b>	Dust will be generated during construction phase from earthworks, movement of vehicles and by wind erosion of areas cleared of vegetation. Appropriate fugitive dust control measures, including watering, water sprinkling of exposed areas and dust covers for trucks, would be employed to minimize any impacts. No significant air quality impacts from fugitive dust emissions are anticipated during construction and operation phase of the project.
7.4	From any other sources	<b>No</b>	-
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	<b>No</b>	-

**8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment**

<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data</b>
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	<b>No</b>	-
8.2	From any other causes	<b>No</b>	-
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc.)?	<b>No</b>	-

**9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality**

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
9.1	Lead to development of supporting, utilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: <ul style="list-style-type: none"> <li>• Supporting infrastructure (roads, power supply waste or waste water treatment, etc.)</li> <li>• Housing development</li> <li>• Extractive industries</li> <li>• Supply industries</li> <li>• Other</li> </ul>	No	The proposed project under consideration will take place within the boundary of the project site. Moreover the project under consideration will be undertaken following best management practices in the trade and the requirements / stipulations / relevant guidelines of the concerned Authorities - as such this programme is not expected to have any detrimental impact on the overall environmental quality of the area.
9.2	Lead to after-use of the site, which could have an impact on the environment	No	-
9.3	Set a precedent for later developments	Yes	It may later enhance the possibility of developing supporting industrial activities in the neighbourhood.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	-

**(III) Environmental Sensitivity**

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for the ecological, landscape, cultural or other related value	None	-
2	Areas which are important or sensitive for ecological reasons – Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Panchet Reserve Forest/ Panchkot Hill	8 kms.
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	None	-
4	Inland, coastal, marine or underground waters	Yes	Panchet Dam - 15 km. approx.
5	State, National boundaries	No	-

6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	-
7	Defence installations	No	-
8	Densely populated or built-up area	Raghunathpur	Near the project site
9	Areas occupied by sensitive man-made land uses ( <i>hospitals, schools, places of worship, community facilities</i> )	Yes	Raghunathpur College - within 5 km Guniara M M High School - within 10 km
10	Areas containing important, high quality or scarce resources ( <i>ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals</i> )	None	-
11	Areas already subjected to pollution or environmental damage, ( <i>those where existing legal environmental standards are exceeded</i> )	None	-
12	Areas susceptible to natural hazard which could cause the project to present environmental problems ( <i>earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions</i> )	None	-

(IV) **Proposed Terms of Reference for EIA studies:**

Refer ToR.