COST BENEFIT ANALYSIS REPORT

FOR

DIVERSION OF FOREST LAND
Area of 382.131Ha

Villages Sagoria, Tilai, Shehpura, Dardonia, Barator and Gadhoi,
Teshil Buxwaha, District Chhatarpur (MP)

BUNDER DIAMOND BLOCK

Working as per the MoEF & CC Guideline No 7-69/2011- FC(Pt.) dated 1st August 2017

For

ESSEL MINING & INDUSTRIES LIMITED

(AN ADITYA BIRLA GROUP COMPANY)

COST BENEFIT ANALYSIS

Table A: Cases under which a cost-benefit analysis for forest diversion are required

Sr. No	Nature of Proposal	Applicable/ Not Applicable	Remarks
1	All categories of proposals involving forest land up to 20 hectares in plain and up to 5 hectares in hills	Not applicable	These proposals may be considered on case to case basis and value judgment
2	Proposal for defence installation purposes and oil prospecting (prospecting only)	Not applicable	In view of national priority accorded to these sectors, the proposals would be critically assessed to help ascertain that the utmost minimum forestland is diverted for non-forest use
3	Habitation, establishment of industrial units, tourist lodges complex and other building construction.	Not applicable	These activities being detrimental to protection and conservation of forest, as a matter of policy, such proposal would be rarely entertained.
4	All other proposals involving forestland more than 20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor, medium and major irrigation projects, hydro projects, mining activity, railway lines, location specific installations like microwave stations, auto repeater centre TV tower etc.	Applicable	The proposed project is for diversion of forest land for 382.131 Ha. of forest land for mining of Kimberlite (Diamond bearing ore) from Bunder Diamond Block in villages of Sagoria, Tilai, Shehpura, Dardonia, Barator and Gadhoi, Tehsil Buxwaha, District Chhatarpur, (MP)

Table B: Estimation of Cost of Forest Diversion

Sr. No	Parameters	Remarks
1	Ecosystem services losses due to proposed forest diversion (NPV of forest)	Economic value of loss of eco-system services due to diversion of forests at proposed villages in Buxwaha Tehsil, Chhatrapur District of Madhya Pradesh shall be Rs. 8.03 Lakh/Ha (NPV rate as per ECO Value of Class III Forest as per Handbook Guideline of MoEF&CC, GoI dated 28/03/2019). As prescribed by Central Government (MoEF&CC). 1. Total Forest area: 382.131 Ha. 2. Environmental loss: 382.131 Ha X 8.03 Lakh **= Rs. 3068.511 Lakhs**
2	Loss of Animal Husbandry, loss of fodder10% of NPV (As per Cost Benefit Guideline)	= 10% X Rs 8.03 lakhs X 382.131 **= Rs. 306.851 Lakhs**
3	Cost of Human Settlement (As per approved R&R plan)	**Not Applicable** (No R&R involve)
4	Loss of public facilities & infrastructure (on actual cost)	Not applicable (There is no public facilities within project area)
5	Possession value of forest land diverted (30% of NPV)	= 30% X 8.03 X 382.131 **= Rs. 920.553 Lakhs**
6	Cost of Suffering to oustees (1.5 times have earned in last 2 yrs)	**Not Applicable** (No R&R involve)
7	Habitat Fragmentation Cost	Habitat fragmentation cost taken as 50% of NPV = 50% X 8.03 X 382.131 **= Rs. 1534.255 Lakhs**
8	Compensatory afforestation and soil & moisture conservation (Rs. 4.00 Lakh/ha)	= 4 X 382.131 Ha **= Rs. 1528.524 Lakhs**
Total cost due to diversion of forest land		=(3068.511+306.851+920.553+1534.259+1528.524) **= Rs. 7358.698 Lakhs**

Total cost due to diversion of forest land:

= (3068.511+306.851+920.553+1534.259+1528.524)

= Rs. 7358.698 Lakhs

= Rs 73.58 crores

Table C: Existing guidelines for estimating benefits for Forest Diversion

Sr. No	Parameters	Remarks
1	Increase in Productivity attribute to the specific project	Gross revenue from sale of rough diamonds 34.2 Million Carats @ **Rs. 6227/Carat *** **Rs. 21296.3 Crore**
2	Benefits to economy due to the specific project	**Rs. 10788.2 Crores**** in terms of Royalty, DMF, NMET, Cess, GST, Taxes and Revenue Sharing
3	No of population benefited due to specific project	400 people will be directly and Indirectly. Further the project will have a positive impact on of nearby 15 villages and tehsil headquarters Buxwaha through local business.
4	Economic benefits due to direct and indirect employment due to the project	Direct Employment (25%) – **Rs 225 Crores** Indirect Employment (75%) – **Rs.247.5 Crores** Total over 14 years – **Rs. 472.5 Crores**
5	Economic benefits due to compensatory afforestation	Compensatory afforestation of 382.131 ha of Land @1000 no of sapling = survival rate @80% The sapling/ 382.131 ha = 382131 trees Survival trees@80% = 305705 Economic benefits of one tree accruing over next 50 years monetized in terms of providing oxygen, water, soil, moisture conservation, etc. + timber & firewood= 2.00 lakh Future benefits of 305705 nos. of trees @ 2.00 lakh = **6114.9 crore**

Total Benefit due to diversion of forest land for non-forestry activity

= Rs 21296.3 crore + Rs 10788.2 crore + Rs 472.5 crore + Rs 6114.9 crore

= **Rs 38671.9 crore**

Note:

***** - Price/carat, taken as per the Geological Report provided by the Madhya Pradesh Government in the tender document

****** - Royalty@11.5% - Rs 2449.1 crores
DMF@10% of Royalty – Rs 244.9 crores
NMET@2% of Royalty – Rs 49 crores
Revenue Share@ 30.05% of sale price – Rs 6399.6
GST @18% - Rs 1645.7 crores

ADITYA BIRLA
EMIL

Cost Benefit Analysis

Based on value of products:

A) Total Benefit to the Society = Rs 38671.9 crore
B) Total Cost to the Society = Rs 73.58 crore

$$\text{Cost Benefit Ratio} = \frac{\text{Total Benefit}}{\text{Total Cost}}$$

$$= \frac{38671.9}{73.58}$$

$$= \mathbf{526}$$

For Essel Mining & Industries Limited

Krishan Kant Sinha
General Manager
Date: 6th June 2020
Place: Bhopal