Green Valliey Industries Limited

ABSTRACT OF BENEFIT/COST ANALYSIS
(Forest Land – 11.09 ha.)

(A) CALCULATION FOR NET BENEFITS

(Rs. in Lakh)

- Total Benefits from the project   =   56,639.49
  (see Table VI-c)

- Total loss of forest land of 11.09 ha.   =   345.80
  (see Table – VI b)

  Net Benefit of Project   =   56,639.49– 345.80

  56,293.69

  Net benefit of project per hectare   =   56,293.69 / 11.09
  of forest land   **5,076.07**

  Loss of forest per hectare   =   345.80 / 11.09

  31.18

(B) BENEFIT COST RATIO

- Benefit cost ratio of the project   =   56,639.49/ 345.80

  =   163.79

Note: *See details further*

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(C) PARAMETERS OF LOSSES OF 11.09 ha. FOREST LAND

{Table – VI (b)}

SUM OF LOSSES

- Parameter No.1   -   Rs. 5.13 Lakh

  Loss of timber, poles etc.

- Parameter No. 2   -   Nil

- Parameter No. 3   -   Nil

- Parameter No. 4   -   Nil

- Parameter No. 5   -   Rs.340.67 Lakh

- Parameter no. 6   -   Nil

Total Loss	-	Rs. 345.80 Lakh

Parameter - 1:

Loss of value of timber, small timber (poles) and bamboo on an annual basis including loss of man-hours per annum of people who deprived livelihood and wages from the harvest of these commodities.

- It will be opencast mining of limestone over 10.71 ha. ML area out of which safety zone will be 1.11 ha and area sought for diversion is 11.09 ha. {(Mining Lease Area (10.71 Ha.) + Approach Road to mines (0.38 Ha.)}. Therefore forest losses are assessed for 9.60 ha. (10.71 ha – 1.11 ha). All mining activities will be confined within forest area as such the loss of forest e.g.

  (a) Timber   -   Rs. 41,39,73/- (Details as below)

Class	Girth Class (M)	Volume of 1 Ha (m³)	Volume of 9.60 Ha (m³)	Rate per (m³)	Amount (Rs.)
B	0.45 – 1.20 m	12.87	123.55	Rs.2280/-	281694.00/-
D	0.45 – 1.20 m	19.49	187.10	Rs.910/-	170261.00/-
E	0.45 – 1.20 m	1.05	10.08	Rs.560/-	5644.80/-
	Total:	33.41	322.39	-	457599.80/-

10 % less due to bark measurement ------------------------------------= Rs. 41, 18, 39/-

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(b) Small Timber (Pole) - Rs.36,205/- (Details as below)

Size	Nos	Rate	Amount (Rs)
Pole of 0-30 cm Girth	965	Rs. 20/- each	19300/-
Pole of 30-45 cm Girth	483	Rs. 35/- each	16905/-
		Total:	36,205/-

(c) Pole size Bamboo- - Nil

Total = Rs. 4,11,839/- + Rs. 36,205/- = Rs. 4,48,044/-

VAT @ 14.5 % = Rs. 64,966/-

Grand Total = Rs. 5, 13,010/-

Parameter-2:

Loss of animal husbandry productivity, including loss of fodder etc - Nil.

Parameter-3:

Cost of human resettlement

- There is no habitation over the area proposed for diversion, therefore loss on this account will be - Nil

Parameter-4

Loss of public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railways etc.) on forest land, or which would require forest land if these facilities were diverted due to the project.

- There is no public facilities like road, building, school etc. as such there is no question of their diversion at other alternative place due to project, therefore loss on this account shall be - Nil

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Parameter-5

Environmental losses: (soil erosion, effect on hydrological cycle, a wildlife habitat, microclimate upsetting of ecological balance)

- ** Though technical judgment would be primarily applied in determining the losses, as a thumb rule the environmental value of one hectare of fully stocked forest (density 1.0) would be taken as Rs. 126.74 lakhs to accrue over a period of 50 years. The value will reduce with density, for example, if density is 0.4, the value will work out at Rs. 50.696 lakhs. So if a project which requires deforestation of 1 hectare of forest of density 0.4 gives monetary returns worth over Rs. 50.696 lakhs over a period of 50 years, may be considered to give a positive cost benefit ratio. The figure of assumed environmental value will change if there is an increase in bank rate; the change will be proportional to percentage increase in the bank rate.*

- Hence, Environmental losses assuming forest density of 0.7 being Eco-Class-I forest land of 9.60 ha. over 50 years = 9.60 x 126.74 x 0.7 = Rs 851.69 Lakh

    Therefore   Environmental losses over 20 years (life of the mine) =

    $$= 851.69/50 \times 20 = Rs\ 340.67\ Lakh$$

Parameter – 6:

Suffering to oustees :

- There is no habitation on the forest land, thus the question of oustees does not arise.

    The cost on this account -   Nil

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*Standard as per Forest (Conservation) Act, 1980 and MoEF Guidelines/Clarification

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(D) **PARAMETERS OF EVALUATION OF BENEFIT**
     NOT WITHSTANDING LOSS OF FOREST

Table – VI (c)

S.No.	Parameters	Benefits of Forests (Rs. in Lakh)
1.	Increase in productivity attributed to the specific project	44640.00
2.	Benefit to economy	6349.89
3.	No. of population benefitted	40.00
4.	Employment potential	5600.00
5.	Cost of acquisition of facilities	9.60
6.	Loss of (a) agriculture (b) animal husbandry production due to diversion of forest land	Nil
7.	Cost of rehabilitating the displaced persons as different from compensatory amount given for displacement	Nil
8.	Cost of supply of free fuel wood to workers residing in or near forest area during the period of construction	Nil
	Total Benefits of Project	56,639.49

Parameter – 1:

Increase in productivity attributed to the project:

(a) Quantity of mineable reserves of   :   7.44 million tonnes

    Limestone in the area   or 74.4 Lakh tonnes

(b) Value of mineral @Rs.600/Tonnes   :   Rs. 600 x 74.4 Lakh

                                         :   Rs. 44640 Lakh

Parameter – 2:

Benefit to economy

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Social benefits arising from the project constitute royalty of limestone, taxes and duty which form the considerable component. It is calculated as under:

(a) Royalty of limestone @Rs. 84/T   :   Rs. 84 x 74.4 Lakh

                                        :   Rs.6249.6 Lakh

(b) NPV of the forest land of 9.60 ha.   :   Rs. 9.39 Lakh x 9.60

     (Eco-Value Class I, Dense Forest   :   Rs. 90.14 Lakh

     @ Rs. 9,39,000.00 per ha...)

(c) Compensatory afforestation charges   :   Rs 5.12 Lakh

     over 9.60 ha. area

(d) Safety zone area – 1.11 ha.   :   Rs. 0.88 Lakh

     Afforestation on 1½ times of

     Safety zone area (1.66 ha.)

(e) Cutting and felling of trees   :   Rs. 4.15 Lakh

Thus Total (6249.6 + 90.14 + 5.12 + 0.88 + 4.15) :   Rs 6349.89 Lakh

Parameter-3
No. of population benefitted

- There are about 500 persons near about the area. Considering 5 members in a family, there will be about 100 families benefited from the project. Assuming an amount of Rs. 2000 per year being benefit to each family, the total benefit for 20 year will be -

         =   Rs. 2000 x 100 x 20

         =   Rs. 40.00 Lakh

Parameter-4
Employment potential

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- The total employment including management and work force will be nearly 70 and taking average annual emoluments for 20 years @ Rs. 4.00 Lakh/annum will

  be   =   Rs. 4.0 Lakh x 70 x 20

          =   Rs. 5600 Lakh

Parameter-5

Cost of acquisition of facilities on non-forest land wherever feasible

- Cost of acquiring private land of   :   Rs. 1 Lakh x 9.60
  9.60 ha. @ Rs. 1.00 Lakh/ha.   :   Rs. 9.60 Lakh

Place: Shillong, Meghalaya
Date: 10/10/2019

For Green Valliey Industries Ltd.

Green Valliey Industries Ltd.

Authorised Signatory
(Pawan Kumar Joshi)
Authorized Signatory

Madan Pyrda, Chiehruphi (Block -2)