

EXECUTIVE SUMMARY

- **Introduction:**

M/s Mula Co-op Sugar Factory Ltd. (Mula SSK Ltd.) is an agro based Company focused on the manufacture of sugar, power and allied products. M/s Mula Co-op Sugar Factory Ltd. registered under Companies Act 1956 with due registration in 1970. Project is located at gat no 848 -865, 867-872, 885-890, 896 & 919 to 921 located at Post Sonai, Taluka Newasa, District Ahmednagar, Maharashtra state.

The existing capacity of factory is 5500 TCD sugar, 30 MW cogeneration power plant and 45 KLPD molasses based distillery.

The environment Clearance has been received for 5500TCD, 30 MW cogeneration power plant and 45 KLPD molasses based distillery. MoEF&CC vide letter No. J-11011/131/2014-IA II (I) dated 22.01.2016)

M/s Mula Co-op Sugar Factory Ltd is planning to expand sugar unit from 5500 TCD to 7500 TCD (2000 TCD expansion) at existing premises through modernization of its existing boiling house.

- **Location**

The project is located at Gat no. 848 -865, 867-872, 885-890, 896 & 919 to 921 (partially), at Post Sonai, Tehsil Newasa, District Ahmednagar, Maharashtra state.

The site is located at rural surroundings and is about 17 km from Railway Station (Rahuri) and 40 km from Ahmadnagar. The site is near SH 60 (Nagar-Aurangabad) and on the Ghodegaon-Sonai-Rahuri Road access.

Direction	Latitude	Longitude
East	19°23'0.79"N	74°50'33.25"E
South	19°22'27.75"N	74°50'25.37"E
West	19°23'0.52"N	74°49'47.60"E
North	19°23'17.59"N	74°50'1.71"E
Densely populated or built-up area		village Sonai ~ 2 Km
Nearest Railway Station		Rahuri ~ 17 Km
No Wild Life sanctuary , National park located within 15 Km		
Patches of reserved forest are present within 15Km		

Geographic Location:



Figure 1: Google Image

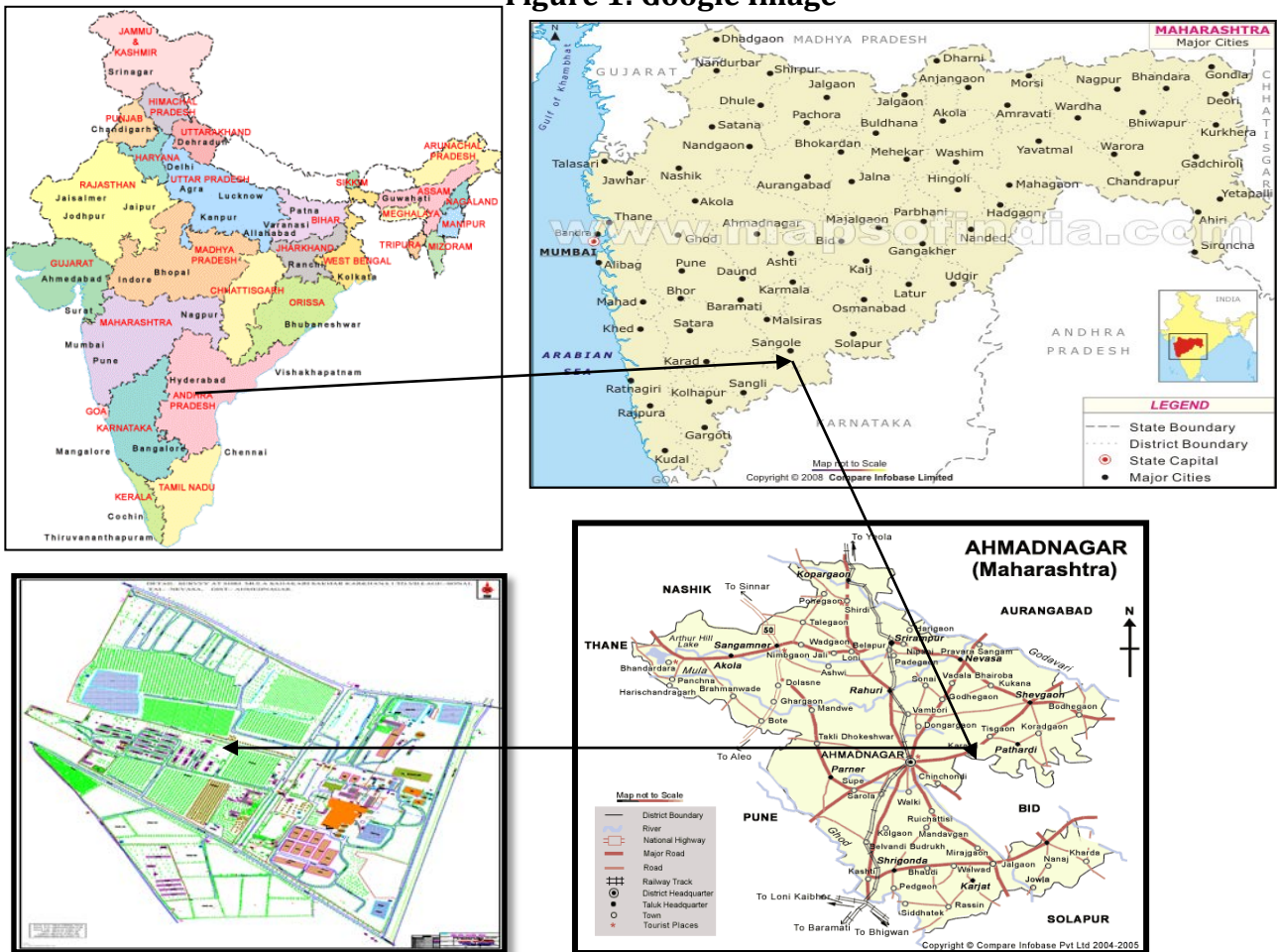


Figure 2: Project Location

- The plot utilization is as under:

Table 1: Area Statement

No.	Land Utilization For	Land Area (Acres)
1	Factory sheds & Buildings	12.25
2	Open space utilized for Bagasse storage, WTP, ETP, Molasses storage tank, Cooling tower, spray pond, switch yard & 15days storage for ETP treated Effluent	31.15
3	Roads	10.85
4	Reservoir (water storage tank)	2.05
5	Parking and cane yard	55.20
6	Open space for green belt	96.00
7	Area for Cane cultivation for sugar cane seed plot	72.64
	Total	280.14

Table 2:Project Details

SN	Particulars	Description
1	Name and address of project Proponent	M/s Mula SSK Ltd. Gat no. 848 -865, 867-872, 885-890, 896 & 919 to 921(some partially), At Post Sonai, Tal. Newasa, Dist. Ahmednagar, Maharashtra state.
2	Railway Station	17 km Rahuri
3	Road	Nagar - Aurangabad highway SH 60 is 5 Km away from the project site.
4	Nearest Town	Newasa :30 km NE from the site
5	Project capacity	Sugar Unit: Existing: 5500 TCD, Expansion: 2000 TCD Existing 30 MW Cogeneration : 30 MW Existing 45KLPDDistillery : 45 KLPD
6	New/expansion/modernization	Expansion through modernization (Addition of Boiling House)
7	Existing Environmental Clearance	EC received from MoEF&CC vide letter No. J-11011/131/2014-IA II (I) dated 22.01.2016 for 5500 TCD sugar, 30 MW cogeneration power plant and 45 KLPD molasses based distillery.
8	Constitution of the organization	Co-Operative Limited Company
9	No. of working days in a year	Sugar plant : Season-180 days Cogeneration-210 days, Distillery:=270 days

10	Basic raw material	For Sugar Unit: Sugarcane 7500 TCD and allied chemicals				
		S. No.	Raw Material	Quantity/day		
				Existing	Proposed	Total
		1.	Sugarcane TPD	5500	2000	7500
		2.	Sulfur T	3	1	4
		3.	Lime T	11	4	15
4.	Phosphoric acid T	0.5	0.2	0.7		
5.	Bagasse T	1650	350	2000		
	Requirement of land area	No additional land required for proposed project. Existing 280 acres is available				
11	Man power for proposed project	During construction : 100 For proposed Expansion no additional manpower required.=1081				
16	Boiler capacity and fuel	Existing : 80 TPH & 85 TPH - 2 Nos. with stack height 70 & 75 respectively. Proposed : Not required				
17	Water Supply	From Mula Right bank canal, permission available.				
18	Water requirement, m ³ /d	Existing: Sugar unit:965 KLD, Co gen Unit:798 KLD,Distillery Unit:604 KLD Total: 2367 KLD For Expansion:760 KLD (For Sugar unit, after expansion), Co gen Unit:798 KLD, Distillery Unit:604 KLD Total: 2162KLD				
19	Effluent Treatment Plant	Existing ETP having capacity 700 m ³ and primary ETP -130 m ³ which is sufficient for the expansion.				
20	Green Belt Area	Existing:280 Acre, Proposed: No additional proposed. the number of standing trees is 60,668, additionally proposed number of plantation is 4,000 per year during next 5 years				
21	Project cost	Cost of proposed project Rs. 11 Crores for expansion				

Baseline Monitoring

S. No.	Component	Study
1	Land	Land use- Present and planned, Contour and drainage pattern
2	Air	Secondary 1 year IMD data Primary, in 10 km baseline, 8 stations
3	Noise	Day & Night, 8 stations
4	Water	Surface water & ground water parameters studied
5	Soil	8 locations

6	Biology	Baseline, Both Flora and Fauna, terrestrial and aquatic
7	Socio Economic	Demography, Livelihood avenues

- **Air Environment**

- **Particulate Matter(PM₁₀)**

The average maximum 24 hourly concentration for PM₁₀ was found to be 84 µg/m³ at Sonai while minimum concentration was recorded 50 µg/m³ at Lohgaon and Dhangarwadi Village. However, all the readings are within CPCB limits.

- **Particulate Matter(PM_{2.5})**

The average maximum 24 hourly concentration for PM_{2.5} was found to be 47 µg/m³ at Sonai village while minimum concentration was recorded 20 µg/m³ at Dhangarwadi Village

- **Sulphur Dioxide(SO₂)**

The average maximum 24 hourly concentration for SO₂ was found to be 33 µg/m³ at Project site while minimum concentration was recorded 11 µg/m³ at Dhangarwadi village.

- **Oxide of Nitrogen (NO_x)**

The average maximum 24 hourly concentration for NO_x was found to be 38 µg/m³ at Sonai Village while minimum concentration was recorded 17 µg/m³ at Lohgaon Village.

- **Carbon Mono-oxide (CO):**

The average maximum 8 hourly concentration for CO was found to be 2.5 mg/m³ at Project site while minimum concentration was recorded 0.5 mg/m³ at Ganeshwadi, Kanguni, Lohgaon and Dhangarwadi Village.

All the parameters were found to be within the desired limits specified by NAAQ Standard, CPCB.

- **Noise Environment**

Noise Monitoring is done at 8 stations, Noise levels are within CPCB limit for all locations.

- **Surface Water Environment**

After detailed assessment of water sample, it was concluded that: All canal and dam falls under the "Class of Water B", i.e. Outdoor bathing (Organised)

- **Ground Water Environment**

After detailed assessment of near site bore well water sample, it was concluded that:

1 In comparison to IS 10500:2012 (drinking water), all the values are within limit at Sonai Village Nr-Grampanchayat (Borewell Water) and Lohgaon Nr-ZP School (Well Water)

2 All the values are within limit at except turbidity at Shanishingnapur Nr-Grampanchayat (Well Water)

3. All the values are within limit at except turbidity , Total Dissolved Solids, Calcium as Ca, Magnesium as Mg at Kanguni Village Nr-ZP School (Borewell Water) & Ghodegaon Nr- Sent Anis Hospital (Borewell Water)

4.All the values are within limit at except turbidity , Total Dissolved Solids, Calcium as Ca, Magnesium as Mg, Boron as B at Ganeshwadi Nr-Krushni Sewa Kendra (Borewell Water)

- **Biological Environment**

Floral, phytoplankton, zooplankton study has been carried out, detailing of the same is covered in chapter 3

- **Socioeconomic Environment**

Demographic profile, sex ratio, population, occupation studied.

- **Impact & Mitigation**

- **Air Environment**

Ambient air quality will be within NAAQS 2009 as mentioned above.ESP provided for air pollution control measure. Also, stack of adequate height, 70 and 75m is proposed to disperse the flue gases.

- **Water Environment**

SN	Particulars	Input Fresh	Input Recycled	Loss	Water recycled	Waste Water
1	Process	356	2331	159	2239	289
2	Cooling	143	834	93	780	104
3	Floor/ Vessel washing	191	0	19	0	172
4	Boiler	70	3752	186	3571	65
	Total	760	6917	457	6590	630

- **Land and Soil Environment**

The unit has developed green belt in the area admeasuring 96 Acre within the premises, (approx. 33%of total plot area). The green belt area will not only improve the landscape and environment but also enhance soil conditioning, prevent soil erosion give slight beneficial impact on the land usage. . Proposed: No additional proposed. the number of standing trees is 60,668, additionally proposed number of plantation is 4,000 per year during next 5 years

- **Noise Environment**

Noise levels at the project site were noted 60 dB during the day, however, this location is in a designated industrial area due to which the noise levels are within the CPCB limits. Noise levels at the surrounding villages were found well within the allowable CPCB limits for residential areas.

- **Biological Environment**

Existing: 280 Acre, Proposed: No additional proposed. the number of standing trees is 60,668, additionally proposed number of plantation is 4,000 per year during next 5 years

Mitigation

Biodiversity will be increased by developing green belt by plantation of varieties of trees and shrubs, besides a remarkable area of grassland development. Plantation within the project site will remarkably enhance biodiversity of flora and fauna.

- **Socioeconomic Environment**

Employing local people for construction work to the maximum extent possible. Providing proper facilities for domestic supply, sanitation, domestic fuel, education, transportation etc. for the construction workers.

Barricades, fences and necessary personnel protective equipment such as safety helmet, hoes, goggles, harness etc. will be provided to the workers and employees.

Control dust pollution from the construction.

- **Risk Assessment**

In case of emergency there should be availability of the fire fighting system to control fire and also the vehicles to escape from hazardous area.

In above QRA study we found that this industry stored hazardous material like flammable material, corrosive and toxic acids etc. in case of fire & explosion, damage distance and affected area around 15m from the object during worst case.

Follow disaster management plan/procedure in case of any spillage, release and fire of hazardous material. Provide specific active and passive fire fighting system.

1. Onsite emergency response plan will be prepared and implemented.
2. Trained employees will be deployed for operation.
3. Adequate personal protective equipment will be provided to all working personnel.
4. Fire hydrant system and fire extinguishers will be installed.
5. Regular training programs will be conducted for enhancement of employees' competence.

6. Flame proof electric fitting will be installed in solvent storage area.
7. Earthing and bonding will be provided to all the storage tanks and pipeline to prevent accumulation of static charge.
8. Safe operating procedures will be developed and implemented.
9. National / International engineering standards in the Design, Construction and testing of the storage tanks, equipments and other hardware will be adhered.
10. Visual display signage will be provided.
11. Material safety sheet and SOP will be displayed.
12. Safety appliances and equipments (Self-contained breathing apparatus, safety shower etc.) will be provided.

- **Conclusion**

Both tangible and non-tangible benefits will result from this activity and many of those are described above. Apart from direct employment, many other benefits will accrue like

- Aesthetics improvement by general greening with emphasis on biodiversity
- Developed economy strengthens democratic set-up.
- Developed economy brings with it literacy and healthful living
- Improved safety-security in surrounding with better Law and Order.

Symbiosis and sustainable development will be the ultimate objective.