

**Site inspection report on five proposals for limestone mining outside the Barda Wildlife Sanctuary, Gujarat**



**Pic: The view of Barda Wildlife Sanctuary**

**by  
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Pursuant to the decision taken during the 28th meeting of the Standing Committee (SC) of the NBWL, the two undersigned members of the SC carried out a spot inspection of 5 sites where the project proponent, M/S.Saurashtra Chemicals Limited, Porbandar propose to renew limestone mining leases, within the radius of 10kms of the Barda and Porbandar Wildlife Sanctuaries of Gujarat. They are listed below, mentioning the distances from the boundary of the *Barda* Sanctuary.

1. Proposal for lime stone mining project of Saurashtra Chemicals Ltd. for captive consumption in Soda Ash Plant. Limestone mining lease area of 87.33ha. at a distance of 7.27 km from the boundary of Barda Wildlife Sanctuary.
2. Proposal for Dharampur-Khajawadii limestone mine of M/s Saurashtra Chemicals Ltd., on 18.21 ha at a distance of 6.55 km from Barda Wildlife Sanctuary, Gujarat.
3. Proposal for Dharampur-Khajawadri limestone mine lease area of 9.31 ha at a distance of 6.55 km from Barda Wildlife Sanctuary, Gujarat in favour of Saurashtra Chemicals Ltd.
4. Proposal for Dharampur-Khajawadri limestone mine of M/s Saurashtra Chemicals Ltd. of 14.61 ha at a distance of 5.18 km from Barda Wildlife Sanctuary, Gujarat.

5. Proposal for Dharampur-Khajawadri limestone mine of M/s Saurashtra Chemicals Ltd., 40.46 ha at a distance of 6.55 km from Barda Wildlife Sanctuary, Gujarat.

The project proponent wants to renew these limestone mining leases for captive use for their soda ash plant at Porbandar and for another plant of theirs in Bhavnagar. All the five sites are located near village Dharmapur in Tehsil Ranavav of Porbandar District. The total lease area of these five mines is 162.92 ha and the 10 km radius buffer zone of all five mines include Ranavav town and Porbandar city, along with 18 villages.

The mining lease area is a part of Government “wasteland”. These are the old leases granted during 1959 to 1979 (see table-1). Total annual production of the five mines will be 1,19,525 tonnes and their life varies from 11 to 34 years. Every day they will be transporting 395 tonnes of limestone, each truck carrying up to 12 tonnes of material.

Table1:-Details of five proposals

Lease Survey No	Status (Existing since Year)	Total Lease Area (ha)	Actual area to be mined (Ha)	Annual Production (TPA)	Life of Lease (years)	Total limestone to be extracted (m3)	Transportation (TPD)	Depth (below ground level)	Distance from Barda WL (km)	Distance from Porbandar BS(km)
2/5p	1966	87.33	32.68	24000	11	26400	80	2.5 M	7.27	8
2/9p	1964	18.21	12.36	24000	14	33,600	80	2.5 M	6.55	8.5
2/9p	1979	9.31	4.93	9525	24	10477	30	3M	6.55	8.5
2/9p	1975	14.61	9.7	22000	34	15400	75	3M	5.18	9.5
2/9p	1959	40.46	36.52	40000	14	164000	130	2.5M	6.55	9
		<b>169.92</b>		<b>119525</b>		<b>249877</b>	<b>395</b>			

All the five sites were inspected on 11.07.2013, in the presence of the CCF, Junagarh Shri G. Yadaiah, the DFO Porbandar Shri L. Parmar and other officers and staff of the Forest Dept. of Gujarat. From the M/S.Saurashtra Chemicals limited, Porbandar, which has been now taken over by Nirma Limited (as per the Nirma officers), was Shri A.R.Khanna and other officers and staff of the Company.



*Pictures: The core of mining lease area. The abandoned mines filled up with water.*

The limestone was exposed at most of these abandoned mines. As they were open-cast in nature, there were pits as deep as six to eight feet, filled up with rain water/underground water, attracting some water birds. It was evident that the mines were not restored after the lease period had previously expired.

The Wildlife Assessment and Conservation Action Plans that the project proponent has submitted, for the five proposals are identical, except for the locations of the five sites. The plan has also mentioned the presence of nilgai at the core of these mines, along with the Indian hare, Grey Mongoose, wild pig and rodents. The team could also see the indirect evidences of nilgai (pellets) at the core of the mining site. They have regarded the actual mining lease areas / sites as the core zones and the adjacent areas as the buffer zones and have addressed the entire assessments on this basis.

The main purpose of assessment by the Standing Committee is to evaluate the impact on the protected areas which fall within the radius of 10kms of the proposed sites and for this purpose, therefore, the assessment reports were of little value. The two - member team, however, was able to assess the possibility or otherwise of impact on the two protected areas that fall within a radius of 10kms of the proposed five mining sites, after a visit to each of these sites and the two protected areas (PA) in question, namely, the Barda Wildlife Sanctuary and the Porbandar Bird Sanctuary.

The Barda sanctuary is 192.31 sq.km. The Porbandar bird sanctuary is less than 1 sq.km. The committee visited the Barda WLS which is home to leopard, ratel and striped hyena, as well as the Porbandar bird sanctuary(PBS). The PBS has been an important feeding ground for Lesser and Greater Flamingo and many other migratory water bird species.

As for noise pollution affecting the two PAs, this is not a problem at all as the distances from the two PAs is very substantial.

As regards water pollution, the mining operations, would be on mine sites which have already been worked before and where pits have already occurred wherein water remains stored, creating monsoonal wetlands. The run-off from these pit mines is not likely to be significant and there is

no possibility of it affecting either the Barda Sanctuary which is uphill of the mine sites, nor the Porbandar Sanctuary which is cut off and entirely surrounded by the Porbandar city.

The mine working will be opencast by semi-mechanized methods involving drilling and blasting. The working depth of the mine would be 2.5 m to three meter below the ground level, though all the five mines presently seems six to eight feet deep due to mining operations conducted earlier.

With regard to air pollution vis-à-vis the 2 PAs, the limestone proposed to be extracted from the five sites, is to be supplied to the factory owned by the project proponent in Porbandar city and for another plant in Bhavnagar a long way away. The Porbandar bird sanctuary (PBS) is located at around 8.5 to 9.5 km distance in west and southwest directions of the Dharmapur mines. This Sanctuary was declared in 1988 and today it is surrounded by the Porbandar town and receives sewage water from the township. This is really shocking and sewage water needs to be stopped immediately from polluting the Sanctuary waters.



*Picture: Porbandar bird sanctuary surrounded by city and receiving sewage of adjoining colonies.*

Though the proposed mines are far from the PBS, the limestone which will be supplied to the factory in Porbandar is within a one kilometer from Bird Sanctuary. The road and the residential colony has divided the Sanctuary lake into two parts.

The Porbandar factory is already in operation and it is releasing its liquid effluents into the Chaya Chauki Rann Talao/lake, just adjoining the PBS.(See the picture below) and the two water bodies would have underground linkage. Many migratory water birds including the greater and lesser flamingo, feed in this polluted lake. The factory also releases gases/dust particles in the atmosphere and the PBS is also adversely affected due to this air pollution



*Pictures: Saurashtra Chemicals ltd. factory touching the lake close to PBS. Three cement pipes releasing liquid effluents in the lake.*



Factory can be seen along with the Lesser flamingo.

What would be also important is to control the pollution from the existing cement factories which have long been in operation in Ranavav town, which is adjacent to the southern boundary of the Barda Sanctuary. The five proposed mines in nearby Dharampur, however, would not be supplying material to these factories in Ranavav.

The Arabian seacoast is located at a distance of around 9 km from the mine lease boundary. The Dobaliya Nala flows in the buffer zone of the mine, at a distance of 0.5 km from the mine lease boundary. However the five proposed mining sites are also not a corridor of connectivity with other habitats that could link with either of the two PAs. However, there is an area of approximately 2800ha. which is mostly covered with thorn forest and is a Reserved Forest under the control of the Forest Dept. and from where wild lions that were moving into the Barda Sanctuary to recolonize their former habitat, had been captured and taken away some years ago. This is called Mokur nu Ran and is adjacent to an outstanding wetland of some 10000ha.

The team members after taking all factors into account, would recommend the granting of the five leases that have been applied for, with the following conditions, which would over and above, the conditions stipulated by the Chief Wildlife Warden of Gujarat.

1. SC-NBWL clearance should be subject to the applicability to it of the final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation vs Union of India in writ Petition (Civil) No.460 of 2004.
2. As the five mines would be supplying limestone to a factory run by this project proponent in Porbandar and which is actually polluting a lake (Chaya Chauki Rann Talao) adjacent to and ecologically interlinked with the Porbandar Bird Sanctuary, by releasing polluted liquid effluents and by depositing atmospheric dust particles from the factory, the project proponent should first stop releasing liquid effluents and air pollution into the adjoining lake and PBS respectively. They should treat the liquid effluents at the effluent treatment plant within the factory premises and get it inspected by the State Pollution Control Board, and the Chief Wildlife Warden of Gujarat, who should certify that the pollution has ceased. The Municipal Corporation also should stop releasing sewage into the PBS. ***The following recommendations would be applicable only after implementing these two most important measures.***
3. In proposal no. 1 above, concerning the mining site of 87.33ha, the approach road branching from the Porbandar – Rajkot highway, bisects the concerned site into two parts. The larger eastern portion has been mined and mining could be permitted to continue there. The smaller segment of this area to the west of the road, has been planted over and trees are growing upon it. This portion to the west of the road should not be given for mining purposes and should be excluded from the total area of 87.33ha. The remainder of the area of this site to the east of the road, could be leased out for mining. The site, therefore, needs to be measured again and the portion under plantation to the west of the road needs to be excluded from the leased site. This will be ensured by the State Govt. before giving this site on lease for mining. The remaining four sites could be given out on lease in their present size and configuration.
4. The appropriate method of restoration of the mine sites after the mining takes place, is to first restore into the open pit area the rubble that would be stored separately and then to cover it up with top soil, so that the land would again be productive. This would imply that the mining operation would begin by first scraping the top soil and storing it separately, then remove the underlying mooram and rubble and storing it separately and then remove the limestone which would be carried away. When the mining operation stops at the site, the restoration would be done as indicated above, which is why the top soil and the underlying rubble should be stored separately. The mining operators do not follow this practice because of the cost involved and that is why the empty mined pits look like sterile moonscapes. The State authorities should ensure the above recommendation and if it is not followed, further operation of the mines should be stopped.
5. The Mokur wetland and its adjacent thorn forest mentioned above, should be notified as a sanctuary or a conservation reserve .
6. Further expansion of the factories situated in Ranavav town should be strictly curbed, as it would have its adverse impact on the Barda Sanctuary, due to their close proximity.