Inspection Report

Sub: NGT Matter in original application no. 48/2018 (M.A. no. 181/2018), Earlier O.A. no. 37/2014 (WZ).

As directed, the undersigned Shri. Rohan Nagvekar (JEE) & Shri. Devesh Gholkar (JEE) carried out joint inspection of the site located at Maulinguem Village of Bicholim Taluka on 09/10/2020 with regards to verification of the present status of the Laterite stone quarries.

Shri. Deepak P. Vaigankar (Dy. Collector, Bicholim), Shri. Sapresh Verekar (Talathi, Office of Mamlatdar, Bicholim) and Shri. Sahadev Mote (Circle Inspector, Office of Mamlatdar, Bicholim) were present at the time of inspection.

During inspection the following was observed:

1. At the time of inspection of laterite stone quarries at Maulinguem, no active quarrying operations were observed in survey nos. 115/1, 102/1, 99/1, 70/4, 70/1, 74/1, 74/2, 21/1, 22/1 & 23/1 of village Maulinguem. The site for inspection was identified by the officials of Dy. Collector (Bicholim) & Mamlatdar (Bicholim).
2. Some of the laterite stone quarry pits were partly filled with water & growth of vegetation was observed in the pit.
3. It is observed that backfilling or reclamation of the existing quarry pits has not been carried out as yet.
4. As per the office records the laterite quarry operations was carried out without the consent of the Board.
5. The approach road leading towards the laterite stones quarries at Maulinguem village was not motorable due to growth of bushes & shrubs.
6. As per the Directorate of Mines & Geology the number of laterite stones extracted from quarries is approximately 8,22,023 nos. (*refer pg. no. 27/c of Directorate of Mines & Geology Report*) and as per the survey conducted by NITK Surathkal the number of laterite stones extracted from quarries is approximately 28,40,880 nos. (*refer page no. 63/c of NITK Surthkal report*)
7. Earlier a joint inspection was carried out with the officials of the Deputy collector & Mamlatdar Bicholim on 11/11/2019 w.r.t letter from Office of the District magistrate,

North Goa bearing letter no. 20/2/2014-MAG/NGT.4222 dated 06/11/2019. However it may be noted that the quarry site shown by the officials of the Deputy collector & Mamlatdar Bicholim at the time of inspection was of curchirem and Ona Village of Bicholim taluka instead of Maulinguem quarry pits.

Conclusion and Recommendation:

1. At the time of inspection of laterite stone quarries at Maulinguem, no active quarrying operations were observed.
2. It was observed that the laterite stone quarry pits have not been backfilled/reclaimed and were partially filled with water. Also scattered growth of vegetation was observed in the quarry pits.
3. As per the Directorate of Mines & Geology the number of laterite stones extracted from quarries is approximately 8,22,023 nos. and as per the survey conducted by NITK Surathkal the number of laterite stones extracted from quarries is approximately 28,40,880 nos.. Hence in order to assess the actual extraction of laterite stones a fresh survey may be undertaken through mining department of Goa Engineering College to identify the actual quantity of extraction of laterite stones and to ascertain environmental compensation.
4. The area in question should be Bio-fenced immediately and to be backfilled.

Photographs for reference

Fig 1.

Fig 2

RohanNagvekar
Junior Environmental Engineer

DeveshGholkar
Junior Environmental Engineer

Deepak P. Vaigankar
Dy. Collector (Bicholim)

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INSPECTION REPORT

In pursuance to the National Green Tribunal order in connection to the application No.37/2014 of Jayshri Nanasaheb Rajebhosale Vs. State of Goa & Others, accordingly the team comprising of Shri Ramnath Shetgaonkar (Asst. Geologist), Shri Jaiwant A. Kamat (Surveying Officer), Shri Sankalp Shet Dessai (Asstt. Geologist), Shri Shyam V. Sawant (Technical Assistant), Shri Snehal Sangelkar (Head Surveyor), Shri Satyawan Gaude (Talathi of Mauliguem Village Panchayat) inspected the site of illegal extraction of laterite stones on 20/11/2014 at Mauliguem Village of Bicholim taluka.

The inspecting team contacted on the landline phone number 2415550 mentioned on the complaint of Shri Jaydeep N. Rajebhosale but one person named Suvarna replied the phone and told that Shri Jaydeep N. Rajebhosale was not contactable. Shri Jaydeep N. Rajebhosale who is a complainant in the above said matter was contacted on 19/11/2014 (one date prior to inspection) on mobile number 9822102557 indicated on the complaint and was intimated regarding the inspection and it was replied by him that he will be deputing his representative to accompany the team for the inspection, but when contacted on the day of inspection i.e 20/11/2014 in morning he replied that he cannot accompany nor depute any representative with the inspection team for inspection.

The team moved to the illegal extraction sites/pits with the help of talathi .Further the GPS readings of the pits was recorded at the site with the help of survey instrument that is GPS using datum WGS 84:-

1. Survey Number 115/1:-

   The pit is irregular in shape and it is seen that no laterite stones are stacked in the pit. The approximate area extracted of the pit is 2044 Sq. mts. The average height of the pit is 2.5 mts. out of which 1.5 mts is dept (average)of hard lateritic strata, wherein stones/bricks can be cut , average height of rejection material is 1mts.Volume of mineral extracted=3066 m^3.

2. Survey Number 102/1:- The pit is irregular in shape and it is seen that no laterite stones are stacked in the pit. The approximate area extracted of the pit is 1439 Sq. mts. The average height of the pit is 1.5 mts out of which 1mts is dept (average) of hard lateritic strata, wherein stones/bricks can be cut , average height of rejection material is 0.5mts.Volume of mineral extracted=1439 m^3.
3. Survey number 99/1:- Pits are irregular in shape which are partly backfilled & some very old quarries are seen. It is seen that no laterite stones are stacked in the pit. The approximate area extracted of the pit is 4496 Sq. The average height of the pit is 2.5 mts. out of which 2mts is dept (average) of hard lateritic strata, wherein stones/bricks can be cut , average height of rejection material is 0.5mts.Volume of mineral extracted=8992 m^3.
4. Survey Number 70/4:- The area seen which is located behind a shop is backfilled with rejection material and banana plantations are grown on it .
5. Survey Number 70/1:- No extraction of laterite stones are seen.
6. Survey Number 74/1 and 74/2:- Pits are irregular in shape which are partly backfilled & some very old quarries are seen. It is seen that no laterite stones

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are stacked in the pit. The approximate area extracted of the pits is 3116 Sq. mts The average height of the pits is 3 mts. out of which 2mts is dept of hard lateritic strata(average), wherein stones/bricks can be cut , average height of rejection material is 1mts.Volume of mineral extracted=6232 m^3.

7. Survey Number 23/1, 22/1 and 21/1:- No extraction of laterite stones seen.

However as per calculations total Volume of pits the per above measurements =19,729m^3.

Total volume extracted in quarriable lateritic strata=19,729m^3

Considering 30% as average rejection in lateritic stones i.e. waste

Total volume extraction (approx.) = 19,729m^3 – 30% of rejection (5919m^3)

Volume of actual laterite stones extacted (approx.) =13810m^3

Considering the size in Pwd GSR Rate per chira size as 35x30x16 (cms) =0.0168 m3.

Therefore 13810m^3/0.0168m3=8,22,023 Nos.of laterite Stones (approx.) extracted .

During the time of inspection no work of extraction was in progress nor any machineries/trucks were seen at the site. It is seen in the pits above mentioned that no laterite stones are stacked within the pit nor near the pit boundary.Local inquiries revealed that this extractions has been going on over last 10 to 15 years on smaller scale which appears to be so, as vegetal growth is seen in some of the pits. From the texture of black colour seen on the surface of the strata and vegetations/bushes growth in some of the pits indicates that workings appears to be more then 10 years old. Also, the mineral extracted is laterite which is a minor mineral specified under the Goa Minor Mineral Concession Rules, 1985 and this hard lateritic strata is cut into bricks of various sizes and used for construction purpose and not as an Ore.In some of the pits there are stacks of overburden/rejection soil scattered.Overall strata is brownish/reddish lateritic silt mixed with gravels up to depth of 1 to 2 mts average and lateritic quarriable strata is to a dept of 2-3 mts average.Photographs clicked during time of inspection are enclosed herewith.

21/11/2014

Shri Ramnath Shetgaonkar
(Asstt. Geologist)

21/11/2014

Shri Jaiwant A. Kamat
(Surveying Officer)

21/11/14

Shri Sankalp Shet Dessai
(Asstt. Geologist)

25/11/2014

Shri Shyam V. Sawant
(Technical Assistant)

21/11/2014

Shri Snehal Sangelkar
(Head Surveyor)

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REPORT

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ASSESSMENT OF EXCAVATION OF LATERITE AT VILLAGE MAULINGUEM, BICHOLIM, GOA

INVESTIGATORS

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October - 2015

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INTRODUCTION

Based on the request given by Mrs. Jayashri Rajebhasale, Plot No. 114, PDA Colony, Alto-Porvorim, Bardez, Goa to National Institute of Technology Karnataka (NITK), Surathkal, studies were taken up to assess the excavation of laterite at village Maulinguem, Bicholim, Goa. Investigation was carried out by the team of NITK during 2 - 4 September, 2015. During this investigation, the team of NITK was accompanied by the officials of Department of Mines & Geology, Goa and village Talathi. Baseline data were collected from all the sites with photographs after thorough discussion with the officials of Department of Mines & Geology, Goa and village Talathi.

ABOUT THE STUDY AREA

The pits were scattered over an area of approximately 25 acres. Further, the pits are located in different survey numbers, as given in Table-1 and they are in the form of clusters. The pits were not in regular shapes and the thickness of surface soil (i.e. capping above the hard rock) was varying from place to place.

METHODOLOGY

Initially using DGPS, bench marks/control points were established and its coordinates were determined after processing the data for 24 hours. The total station survey was continued from these established DGPS control points. Field points were considered all along the pit boundary at the levels where the hard rock was exposed, and also in the pit bottom (wherever there was level difference). Since the pits were not in regular shapes and their depth was varying, sections (Annexure – I) were prepared for entire cluster of pits and the total volume of pits were calculated.

Table :1 Survey number of various pits in the study area

Sl. No.	Survey No.	No. of pits (approx.)	Pit nos.	Volume (m^3)
1	21/1; 22/1; 23/1	03	P1 – P3	1209.951
2	70/1; 70/4	01	P4	133.133
3	74/1; 74/2	08	P5 – P12	6816.512
4	102/1; 115/1	06	P13 - P18	7796.234
5	99/1	26	P19 - P44	40193.332
Total				56149.162

RESULTS

Details of estimation of volume of excavation from each cluster of pits (Annexure – II) are given in this report. As observed in the field, there were extensive alteration and change in land

topography due to removal of laterite stones in this area. In some locations a huge dump of waste is also evidenced near the pits (Annexure – III). The quantification of laterite stones extracted based on the standard size of stones is given below.

The total volume of extraction of laterite = 56149.162 m^3

Volume after considering average wastage of 15 % = 47726.787 m^3
(based on nature of rock)

Volume of each laterite brick = 35 cm x 30 cm x 16 cm
= 0.0168 m^3

Number of laterite stones excavated = 2840880

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