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GOA STATE BIODIVERSITY BOARD

C/o Department of Environment & Climate Change

Opp. Saligao Seminary, Saligao, Bardez, Goa – 403511.

Website: www.gsbb.goa.gov.in E-mail: goanbiodiversity@gmail.com

No. 7-1-2024/GSBB/Legal/ 785

Dated: 09/01/2025

To,
The Member Secretary,
Goa Coastal Zone Management Authority,
4th Floor, Dempo Tower, Patto Plaza,
Panaji- 403001

Sub: Report of the joint site inspection held on 20/12/2024 from 11:15 am onwards at the property bearing survey no.16/7 of Sernabatim, Salcete, Goa.

Sir,

Kindly find attached herewith the report (16 pages) of joint site inspection held on 20/01/2025 at the property bearing survey no. 16/7 of village Semabatim, Salcete- Goa.

This is for your kind information.

Thanking you.



Yours faithfully,

Dr. Pradip Sarmokadam
Member Secretary, GSBB

ध्यानसेसंवर्धनजैव-विविधताका
उज्वलभवितव्यहोगाअगलीपीढीका

जीववैविध्यरक्षास्यात्जनानांभाविभूतये
जतनायेनसांबाळजैव-विविधतायेचो
परजळीतफुडारफुडलेपिळगेचो

काळजीपूर्वकजतनजैव-विविधतेचं
उज्वलभवितव्यपुढच्यापिढीचं

Careful Conservation of Biodiversity
Bright Future for Prosperity!



REPORT OF THE JOINT SITE INSPECTION HELD ON 20/12/2024 FROM 11:15 AM ONWARDS AT THE PROPERTY BEARING SURVEY NO.16/7 OF SERNABATIM, SALCETE, GOA.

Site address: Survey No.16/7 of Sernabatim, Salcete, Goa

Date of inspection: 20/12/2024

Time: From 11:15 am onwards

Case reference and details:

This site inspection has a reference to Misc. Application No. 10/2024(WZ) in Execution Applicant No. 05/2023(WZ) in Appeal No. 16/2022(WZ) of Hon'ble National Green Tribunal, Western Zone Bench, Pune. Goa Coastal Zone Management Authority (GCZMA) passed an order of demolition dated 25.03.2023 of all the existing structures located in survey no. 16/7, Sernabatim, Salcete, Goa and restore the land to its original condition.

Based on the request received from GCZMA to inspect the site on 20/12/2024, Goa State Biodiversity Board (GSBB) carried out the joint site inspection along with GCZMA, representative from applicants' side and respondent to assess the amount which would be needed for restoration work.

Members present for the inspection:

1. Shri. Keshav Naik, Engineer, GCZMA
2. Shri. Vighnesh Naik, Field Surveyor, GCZMA
3. Smt. Reshma Kerker, Scientific & Administrative Officer, GSBB
4. Dr. Varsha Raikar Hoble, Project Assistant I, GSBB
5. Adv. Shailesh Henriques, representative from applicants' side
6. Shri. Jovek Cardozo, respondent

Description of the site and observations:

1. GSBB accompanied by officials of GCZMA, applicant and respondent inspected the site.
2. Survey numbers were verified and confirmed by GCZMA surveyor.
3. The area is sandy in nature with Arabian sea towards the west. The area is fenced on all the sides with wood, coconut palm leaves, green nets, etc. except for cement fencing on the northern side of the property. (As informed by the respondent this cement fence is not constructed by the respondent). On the western side of the property a permanent retaining wall like structure with stairs was seen.
4. It was observed that septic tanks, plinths exist at the site. It was also noticed that plumbing pipes; underground pipes, wooden logs, PVC water storage tanks, construction debris, etc. lying in the inspected area (Photos attached). Lateritic stones, Mangalore roof tiles were seen stacked in the property; temporary tent like structure covered with plastic sheet is used to stack wooden planks and other materials.

5. Plantation of *Cocus nucifera* (coconut palms), couple of *Acassia auriculiformis*, *Anacardium occidentale*, *Azadirachta indica* along with the growth of ornamental plants, herbs, shrubs, creepers was observed at the site (photos attached).

Some of the flora encountered during the site inspection are as below (Photos attached):

- | | | |
|-------------------------------------|----------------------------------|-----------------------------------------------|
| 1) <i>Acacia auriculiformis</i> | 15) <i>Cocos nucifera</i> | 30) <i>Psidium guajava</i> |
| 2) <i>Allamanda cathartica</i> | 16) <i>Codiaeum variegatum</i> | 31) <i>Senna occidentalis</i> |
| 3) <i>Alternanthera sessilis</i> | 17) <i>Crotalaria sp.</i> | 32) <i>Sesamum indicum</i> |
| 4) <i>Alysicarpus monilifer</i> | 18) <i>Cynodon dactylon</i> | 33) <i>Sida acuta</i> |
| 5) <i>Anacardium occidentale</i> | 19) <i>Diodia radula</i> | 34) <i>Synedrella nodiflora</i> |
| 6) <i>Azadirachta indica</i> | 20) <i>Dracaena trifasciata</i> | 35) <i>Tridax procumbens</i> |
| 7) <i>Boerhavia diffusa</i> | 21) <i>Euphorbia hirta</i> | 36) <i>Urena lobata</i> |
| 8) <i>Cajanus scarabaeoides</i> | 22) <i>Grewia nervosa</i> | 37) <i>Vinca alba</i> |
| 9) <i>Caryota urens</i> | 23) <i>Indigofera hirsuta</i> | 38) <i>Vitex negundo</i> |
| 10) <i>Cassia tora</i> | 24) <i>Ipomoea pes capre</i> | 39) <i>Vitis trifolia</i> |
| 11) <i>Celosia argentea</i> | 25) <i>Leucas aspera</i> | 40) Some species belonging to family Poaceae. |
| 12) <i>Chamaedorea cataractarum</i> | 26) <i>Mangifera indica</i> | |
| 13) <i>Chromolaena odorata</i> | 27) <i>Mimosa pudica</i> | |
| 14) <i>Coccinia grandis</i> | 28) <i>Phyllanthus niruri</i> | |
| | 29) <i>Polyalthia longifolia</i> | |

Suggestions:

- GCZMA may verify ownership and legalities regarding survey No.16/7.
- All the extraneous material such as plinths, stacked lateritic stones, Mangalore tiles, etc existing in the inspected property should be removed in such a way that there should be no leftovers which will interfere in the restoration process. Temporary tent like structures existing in this area should also be removed.
- Area should be restored with local vegetation or should be allowed to rejuvenate naturally.
- Existing Acacia trees should be periodically managed and such species should not be allowed to propagate. Vegetation suitable for coastal ecosystem such as *Ipomoea pes capre*, *Cocos nucifera*, *Vitex negundo*, *Calotropis sp.*, *Thespesia populnea*, *Spinifex sp.*, *Crotalaria sp.*, *Pandanus sp.*, etc. are some of the promising sand dune species that could be considered for plantation during restoration.
- GSBB will be able to proceed with the restoration process only if the above is complied.
- Cost estimates for restoration prepared by DRDA is attached.

Prepared by: Dr. Varsha Raikar Hoble, Project Assistant I, GSBB

Approved by: Dr. Pradip Sarmokadam, Member Secretary, GSBB



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Annexure: (A) Photos of the site and (B) some of the flora encountered during the site inspection

(A) Some of the photos of the site clicked during the site inspection



Pic 1: Officials from GSBB, GCZMA inspecting the site along with the respondent and representative of the applicant.



Pic 2: Dense growth of herbs, shrubs and creepers over a well on the eastern side of the property.



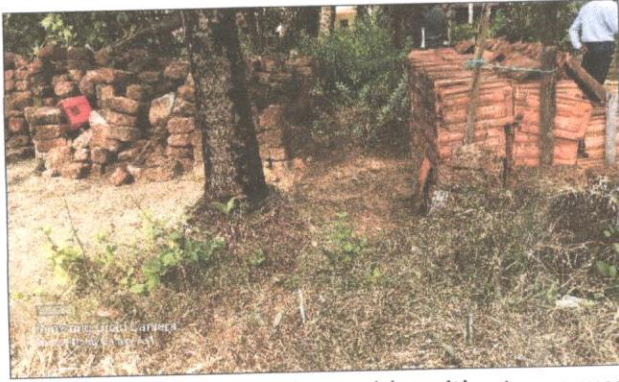
Pic 3: A well in use on the southern side of the property.



Pic 4: Overgrowth of dried diverse vegetation was observed at the site.



Pic 5: Lateritic stones were seen stacked at the site.



Pic 6: Mangalore roof tiles and lateritic stones were seen stacked at the site.



Pic 7: Plastic water storage tank and other materials are kept in the property



(a)



(b)

Pics 8: Photos (a) & (b) shows the presence of plumbing pipes, septic tanks and underground pipes.



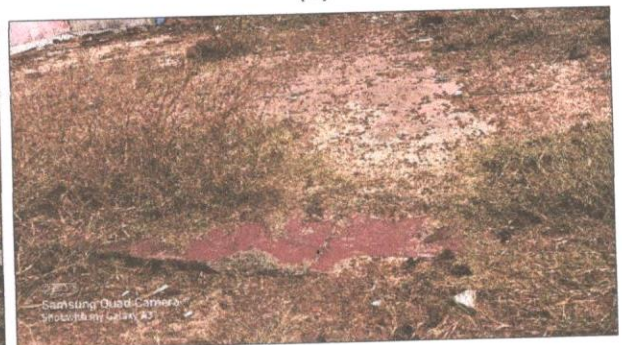
(c)



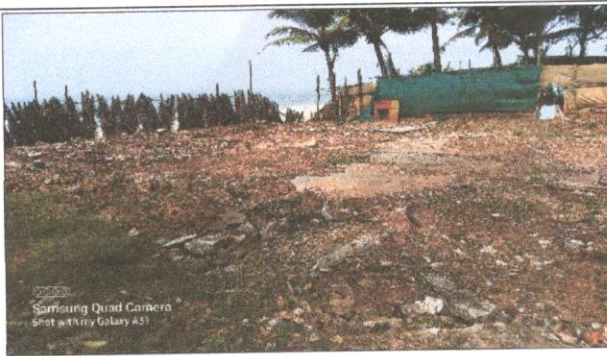
(d)



(e)



(f)



(g)



(h)



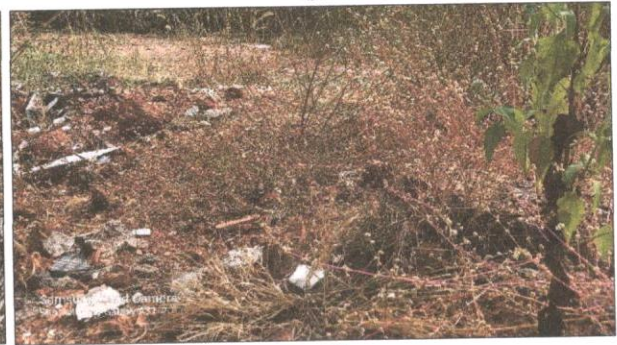
(i)



(j)



(k)



(l)

Pics 9: Photos (c) to (l) shows the presence of plinths and construction debris at various locations at the site



Pic 10: Temporary tent like structures (02 nos.) covered with plastic sheet (with some materials inside) were present at the site.



(m)



(n)



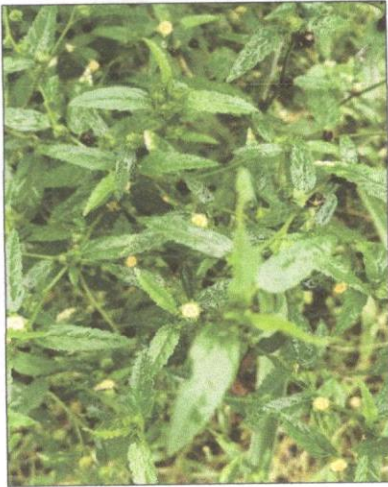
(o)

Pics 11: Photos (m) to (o) show retaining wall like structure with stairs existing on the western side of the property.

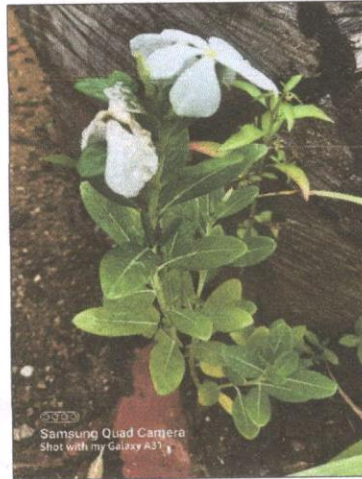


Pic 11: Metal frame existing at the site.

(B) Some of the flora encountered during the site inspection



Sida acuta



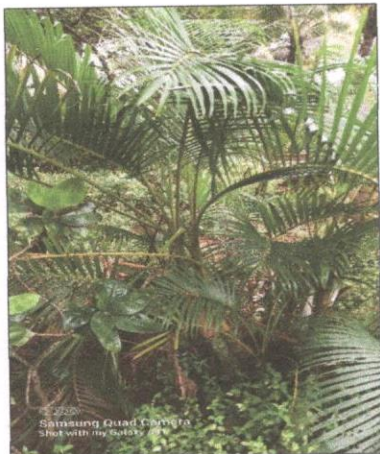
Vinca alba



Allamanda cathartica



Unidentified



Chamaedorea cataractarum



Dracaena trifasciata



Tridax procumbens



Synedrella nodiflora



Chromolaena odorata



Vitex nigundo



Family: Poaceae



Cynodon dactylon



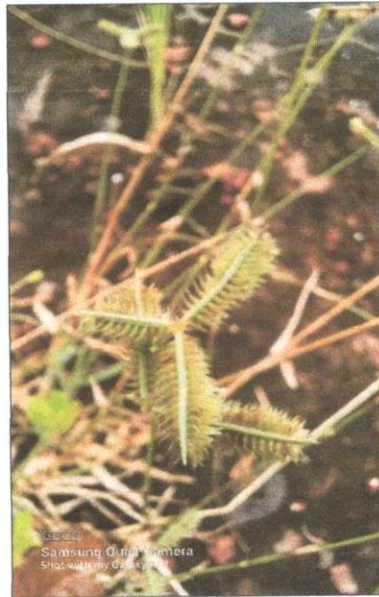
Euphorbia tithymaloides



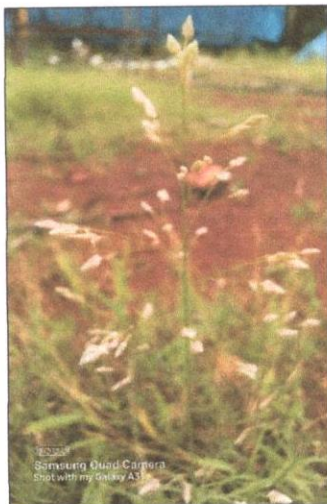
Polyscias fruticosa



Pennisetum setaceum



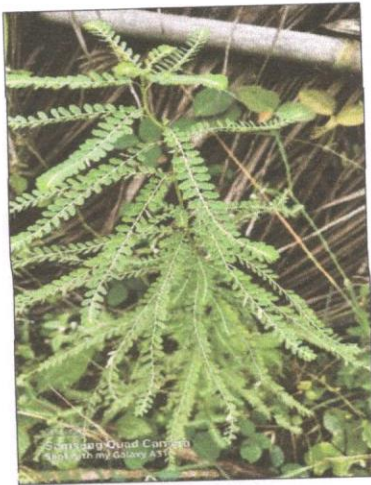
Dactyloctenium aegyptium



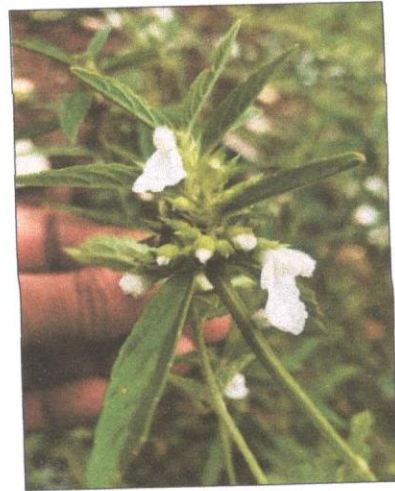
Eragrostis pilosa



Cyperus sp.



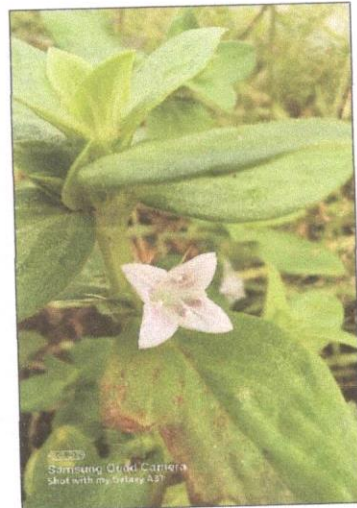
Phyllanthus niruri



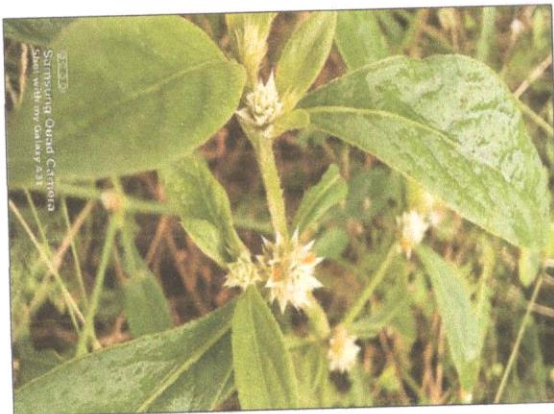
Leucas aspera



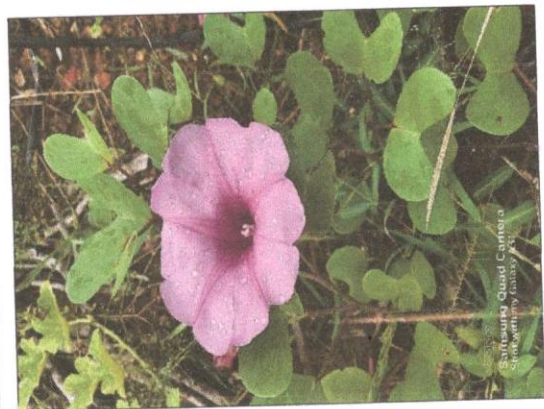
Diodia radula



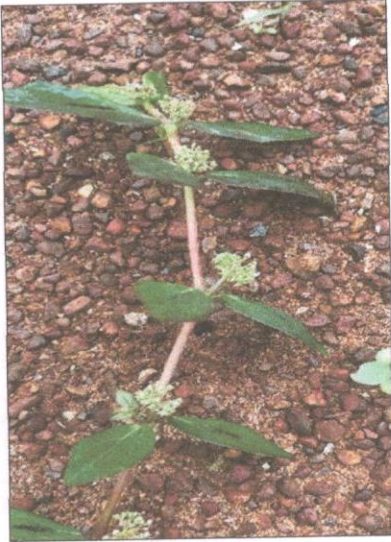
Flower of *Diodia radula*



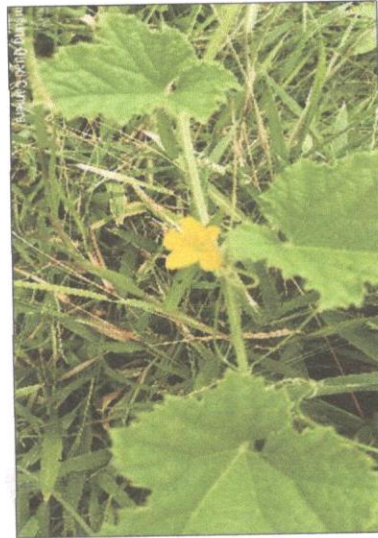
Alternanthera sessilis



Ipomoea pes capre



Euphorbia hirta



Family: Cucurbitaceae



Senna occidentalis



Flowers of *Senna occidentalis*



Coccinia grandis



Grewia nervosa



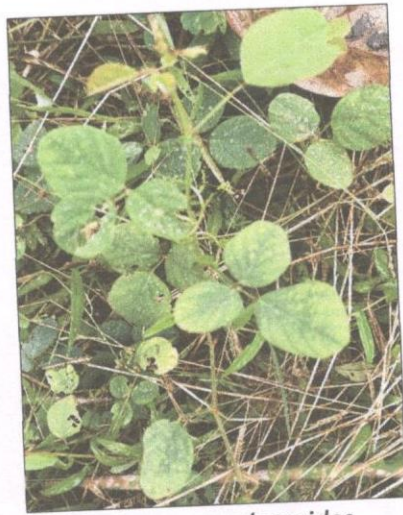
Vitis trifolia



Alysicarpus monilifer



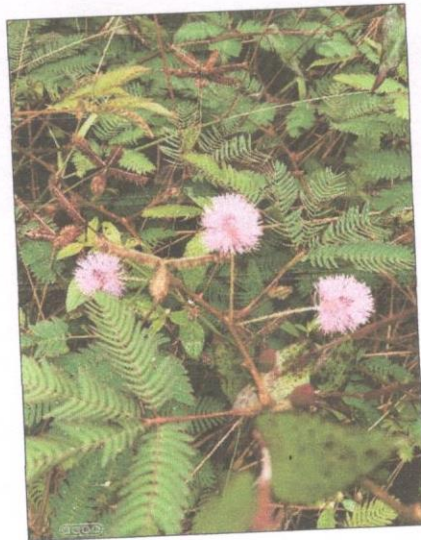
Physalis minima



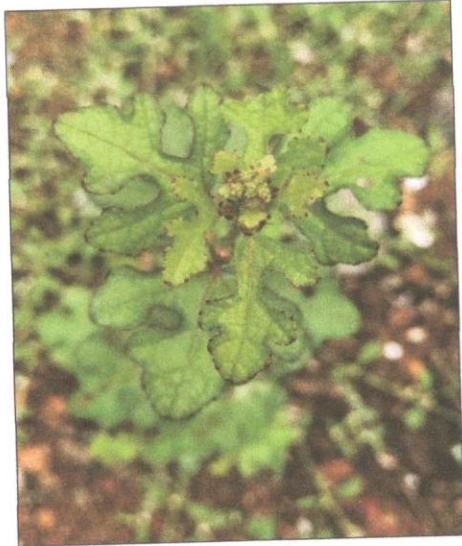
Cajanus scarabaeoides



Boerhavia diffusa



Mimosa pudica



Urena lobata

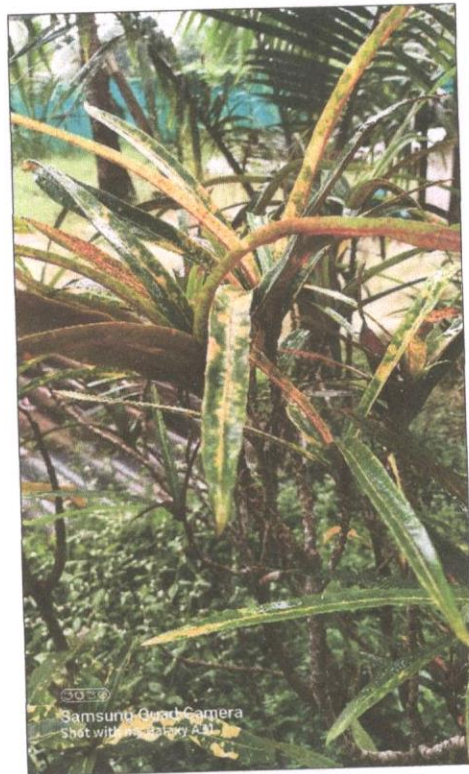


Flower of *Urena lobata*



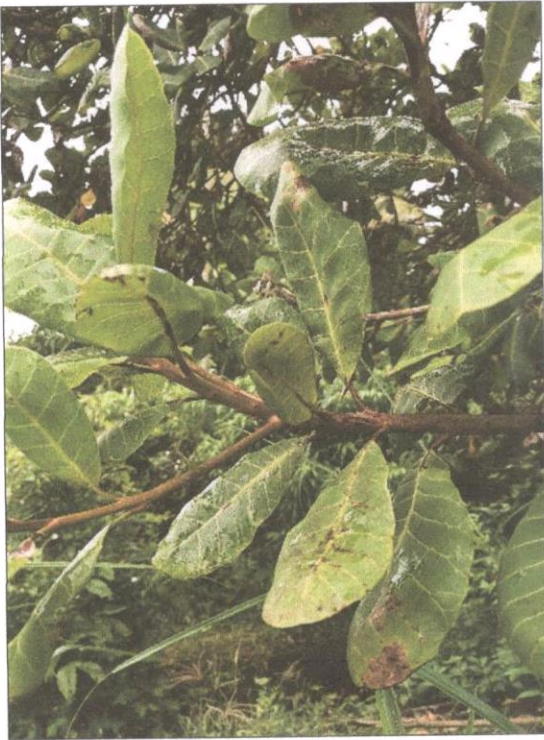
Samsung Quad Camera
Shot with my Galaxy A31

Codiaeum variegatum



Samsung Quad Camera
Shot with my Galaxy A31

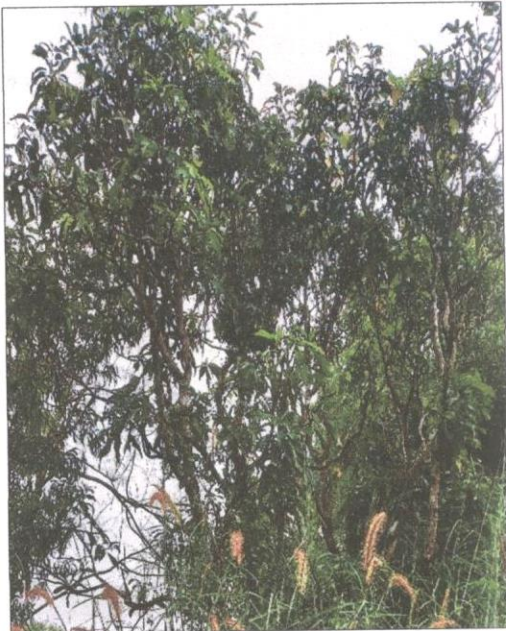
Codiaeum variegatum



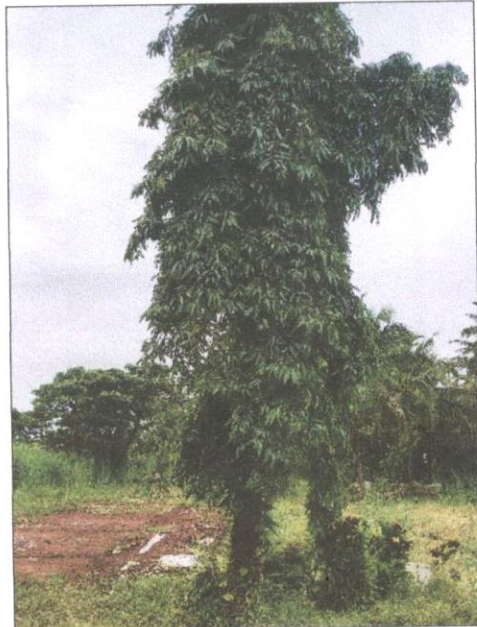
Twig of *Anacardium occidentale*



Fully grown cashew tree



Mangifera indica

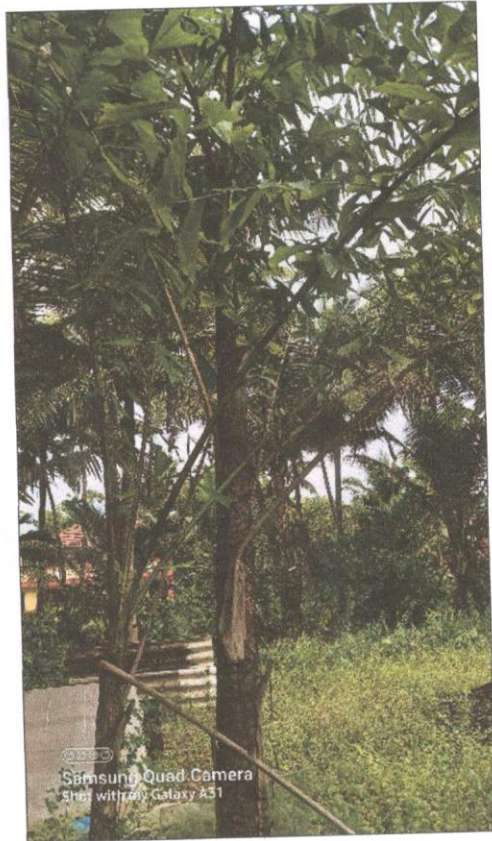


Polyalthia longifolia



Samsung Quad Camera
Shot with my Galaxy A31

Acacia auriculiformis



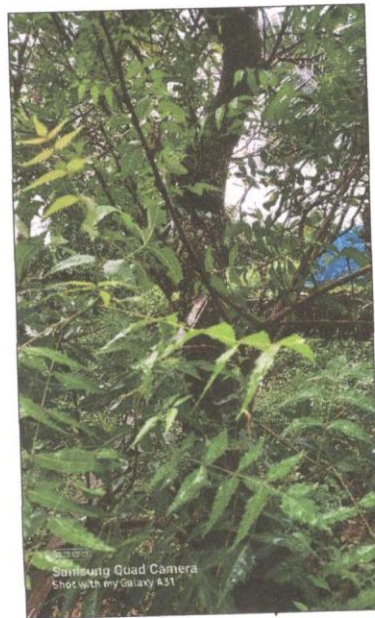
Samsung Quad Camera
Shot with my Galaxy A31

Caryota urens



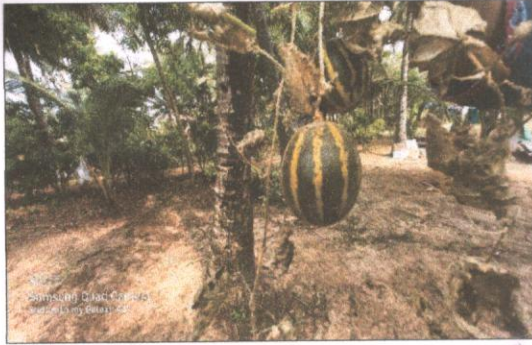
Samsung Quad Camera
Shot with my Galaxy A31

Psidium guajava



Samsung Quad Camera
Shot with my Galaxy A31

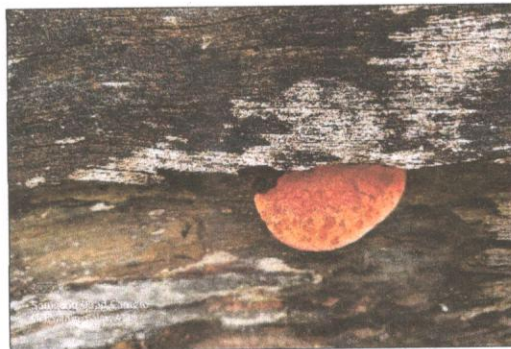
Azadirachta indica



Family: Cucurbitacea



Dead crotons and other plants



Fungi growing on dead wood



GOA STATE BIODIVERSITY BOARD (GSBB)
C/o Department of Science, Technology & Environment
Opp. Saligao Seminary, Saligao, Bardez, Goa – 403511.
Website: www.gsbb.goa.gov.in E-mail:- goanbiodiversity@gmail.com
Phone No-(0832)2407032 Fax-2407033

Annexure-III

Name of Work: Proposed restoration work in the property bearing Survey No. 16/7, of Sernabhathi village in Salcete.

In continuation to estimate given by District Rural Development Agency, Placed at Annexure II (copy enclosed) , there shall be an additional cost of 20% of the amount of Rs. 7,97,500/- estimated by DRDA.

Sr.No	Description	Amount in (Rs.)
1.	Amount estimated by DRDA	7,97,500.00
2.	Additional cost of 20% of Rs. 7,97,500.00 for execution , supervision & monitoring and other costs such as report preparation, handling charges, institutional costs)	1,59,500.00
3.	Total : (Rupees nine lakh fifty seven thousand only	9,57,000.00

Prepared by:
Accounts Clerk,GSBB

Checked by:
Scientific & Administrative Officer, GSBB

Authorised by:
Member Secretary,GSBB

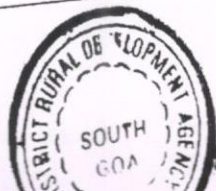


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GOA STATE BIO-DIVERSITY BOARD
GROUND FLOOR, GOA STATE POLLUTION CONTROL BOARD
OPPOSITE SALIGAO SEMINARY
SALIGAO, BARDEZ-GOA

Name of work: Proposed Restoration work in the property bearing survey no: 16/7 of Sernabhati village in Salcete taluka

ABSTRACT SHEET

Sr.No.	Description	Unit	Qty	Rate	Amount
1	Preparation of area for restoration by using manual labour and ecological methods thereby removal of Unserviceable Soil with disposal upto 1000 metres (Removal of unserviceable soil including excavation, loading and disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid separately as per clause 305.) vide GSR2023 Roads/Item No:3.11	cu.m	690.30	18.00	12425.40
2	Removal of cementitious material & concrete items and responsible disposal and demolishing laterite stone masonry in cement mortar including stacking of serviceable material & disposal of unserviceable material within 50 mts. Lead vide GSR 2023 Buildings/ Item No: 12038	cu.m	107.30	1136.00	121897.80
3	Removal of cementitious material & concrete items and responsible disposal at designated site including Demolishing R.C.C. work including stacking of steel bars & disposal of unserviceable within 50 mts. lead. vide GSR 2023 Buildings/ Item NO: 12030	cu.m	2.30	1618.00	3721.40
4	By Manual Labour including Loading, Unloading stacking for a lead less than 0.50 kms vide GSR 2023 Buildings/ Item No: 3349-50/ 3351-52/ 3355-56				
iv)	Excavated debris	cu.m	109.60	123.00	13480.80
5	Transportation and Carriage of cementitious materials & concrete items or any other waste material like Lime, Building rubbish, manure sludge, moorum, excavated rock by Tipper Truck including loading and unloading upto a distance of 32 km vide Rate Analysis	cu.m	799.90	280.00	223972.00
6	Machined and manual removal of cementitious materials & concrete items by hiring hydraulic excavator for removing unserviceable soil and loading it in tipper truck for transporting it to the designated site for disposing vide Market Rate	Hours	40.00	1400.00	56000.00
7	Making structure with traditionally preventive methods and wherever inevitable only mechanical methods by using random rubble masonry of laterite/ basalt stone not less than 20 cm laid dry in pitching rivetment etc. as directed by GSBB officiale vide GSR 2023 Buildings/ Item No: 5037	cu.m	25.00	2587.00	64675.00
8	Restoration of land and adjoining area using natural sand by supplying and filling in plinth under floors, trenches or area specified by GSBB officiale including watering ramming consolidating, dressing, complete vide GSR 2023 Buildings/ Item No: 4017				
a)	Sand	cu.m	7.20	2314.00	16660.80
b)	Moorum	cu.m	44.60	662.00	29525.20
9	Restoration of greenery and local vegetation by means of plantation thereby digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in ratio of 2: 1 by volume (2 parts or stacked volume of earth after reduction by 20% and 1 part of stacked volume of manure after reduction by 40%) flooding with water, dressing including removal of rubbish & surplus earth if any with all leads & lifts (cost of manure or sludge of extra good earth if needed to be paid for separately) vide GSR 2023 Buildings/ Item No: 13006				
	Holes 1.2m dia and 1.2m deep	each	35.00	550.00	19250.00
10	Responsible disposal of C&D waste at designated site ie. Tuem Industrial Estate by Tipper truck of 8m3 vide Rate Analysis	Nos	80.00	500.00	40000.00
11	Supplying of various varieties of plant saplings on site to restore the land as per direction of the GSBB officiale vide Market Rate	Nos	35.00	1200.00	42000.00
		Total		Rs.	643603.40
		Add 5% Contingencies		Rs.	32180.17
		Total		Rs.	675783.57
		Add 18% G.S.T.		Rs.	121641.04
		Total		Rs.	797424.61
		Rounding		Rs.	797500.00



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GOA STATE BIO-DIVERSITY BOARD
GROUND FLOOR, GOA STATE POLLUTION CONTROL BOARD
OPPOSITE SALIGAO SEMINARY
SALIGAO, BARDEZ-GOA

Name of work: Proposed Restoration work in the property bearing survey no: 16/7 of Sernabhati village in Salcete taluka

MEASUREMENT SHEET

Sr.No.	Description	No.	L	B	H	Qty	
1	Preparation of area for restoration by using manual labour and ecological methods thereby removal of Unserviceable Soil with Disposal upto 1000 metres (Removal of unserviceable soil including excavation, loading and disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid separately as per clause 305.) vide GSR2023 Roads/ Item No:3.11						
	Front side	1	22.00	16.00	1.10	387.20	
	Back side	1	22.00	9.00	0.70	138.60	
	"	1	23.00	11.00	0.65	164.45	
						690.25	
					say	690.30	cu.m
2	Removal of cementitious material, concrete items from site and responsible disposal of it and demolishing laterite stone masonry in cement mortar including stacking of serviceable material & disposal of unserviceable material within 50 mts. Lead vide GSR 2023 Buildings/ Item No: 12038						
	Well1	2	3.14	1.25	5.00	39.25	
	Well2	1	1.50	1.00	5.00	7.50	
	Laterite mas.wall at Front side	1	16.00	2.50	1.00	40.00	
	Laterite masonry wall in the property	4	10.00	0.30	0.40	4.80	
	Existing ST1	1	8.00	0.30	2.00	4.80	
	Existing ST2	1	10.00	0.30	2.00	6.00	
	Existing ST3	1	9.00	0.30	2.00	5.40	
						107.75	
					say	107.30	cu.m
3	Removal of cementitious material & concrete items and responsible disposal at designated site including Demolishing R.C.C. work including stacking of steel bars & disposal of unserviceable within 50 mts. lead. vide GSR 2023 Buildings/ Item NO: 12030						
	Existing ST1	1	2.00	2.00	0.15	0.60	
	Existing ST2	1	3.00	2.00	0.15	0.90	
	Existing ST3	1	2.50	2.00	0.15	0.75	
						2.25	
					say	2.30	cu.m
4	By Manual Labour including Loading, Unloading stacking for a lead less than 0.50 kms vide GSR 2023 Buildings/ Item No: 3349-50/ 3351-52/ 3355-56						
iv)	Exacavated debris						
	Quantity to be carried [Item No:2, 3]					109.60	
						109.60	cu.m
5	Transportation and Carriage of cementitious materials & concrete items or any other waste material by Tipper Truck like Lime, Building rubbish, manure sludge,						

7	Making structure with traditionally preventive methods and wherever inevitable only mechanical methods by using random rubble masonry of laterite/ basalt stone not less than 20 cm laid dry in pitching rivetment etc. as directed by Engineer incharge vide GSR 2023 Buildings/ Item No: 5037						
		1	25.00	1.00	1.00	25.00	
						25.00	cu.m

8	Restoration of land and adjoining area using natural sand by supplying and filling in plinth under floors, trenches or area specified by Engineer incharge including watering ramming consolidating, dressing, complete vide GSR 2023 Buildings/ Item No: 4017						
a)	Sand						
	Well1	2	3.14	1.25	0.50	3.93	
	Well2	1	1.50	1.00	0.50	0.75	
	Restoration area	1	5.00	5.00	0.10	2.50	
						7.18	
						say	7.20 cu.m
b)	Moorum						
	Well1	2	3.14	1.25	4.50	35.33	
	Well2	1	1.50	1.00	4.50	6.75	
	Restoration area	1	5.00	5.00	0.10	2.50	
						44.58	
						say	44.60 cu.m
9	Restoration of greenery and local vegetation by means of plantation thereby digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in ratio of 2: 1 by volume (2 parts or stacked volume of earth after reduction by 20% and 1 part of stacked volume of manure after reduction by 40%) flooding with water, dressing including removal of rubbish & surplus earth if any with all leads & lifts (cost of manure or sludge of extra good earth if needed to be paid for separately) vide GSR 2023 Buildings/ Item No: 13006						
	Holes 1.2m dia and 1.2m deep						
	For tree plantation	35				35.00	
						35.00	each
10	Responsible disposal of C&D waste at designated site ie. Tuem Industrial Estate by Tipper truck of 8m3 vide Rate Analysis	80				80.00	
						80.00	Nos
11	Supplying of various varieties of plant saplings on site to restore the land as per direction of the GSBB officials vide Market Rate	35				35.00	
						35.00	Nos

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