



Government of Karnataka
GRAMA PANCHAYAT GOKARNA

Phone No: 08386-256126 E-mail : gokarna.kum.utt@gmail.com

S.No/GPG/2021-22/ 263

Date : 15-09-2021

To,

Deputy Conservator of Forest,
Honnvara Division, Honnavar
581334

Sir,

Sublect : Diversion of 0.98 Hectare of Forest land in Gokarna Village F.Sy. No. 1492A/1A, Gokarna Hobli, Kumta Taluk, Uttara Kannada District (Honnavar Forest Division) for establishment of Solid and Liquid Waste Disposal Unit in favour of the Panchayath Development Officer, Gram Panchayath, Gokarna
Proposal No. FP/KA/OTHERS/36295/2018

Ref : Office of the Deputy Conservator of forests, Honavar division, Honavar – 581334 office letter no. B2/GFL/FCA/CR-17/2020-21, Dated: 27-08-2021

Adverting to the above, the Stage-1 forest clearance proposal for diversion of 0.98 ha of forest land Honnavar divisions of Uttarakannada district for "Diversion of 0.98 ha of forest land in F.Sy. No. 1492/A, Gokarna Village, Gokarna hobli, kumta Taluk, Uttara kannada District(Honnavar Forest Division) for establishment of Solid and Liquid waste disposal Unit in favour of Panchayat Development Officer, Gram Panchayat, Gokarna" has been submitted to Central Government from State Government for Stage-1 approval. The Committee vide letter cited under ref has directed to furnish compliances for the following clarifications for further processing of the proposal. The Compliance to the clarifications are as follows:-

Sl No.	Clarifications	Compliances
1.	If the User agency is planning to treat sewage as the prime liquid waste, the proposal may be renamed as 'Sewage Treatment Plant' instead of Liquid waste disposal unit'	The proposal has been renamed as 'Faecal Sludge Treatment Plant' instead of Liquid disposal unit
2.	Method of sourcing of sewage, its transportation to the plant and approximate quantity to be collected per day for treatment	Sourcing and Transportation of Faecal Sludge will be done through a Desludging Vehicle . Approximate quantity of sludge collected will be 12 Cubic metres per week

Kannayyappa
Panchayat Development Officer
Grama Panchayat, Gokarna

3.	Type of technology and treatment proposed in the plant	The Proposed technology includes Planted Drying Beds followed by DEWATS technology. The Treatment method involves Stabilization and dewatering of sludge in Planted Drying Beds. The Percolate is then treated in DEWATS using Settler, Anaerobic Filters, Planted Gravel Filter and Soak Pit.
4.	Plan of disposal of treated sewage and its re-use	The by-products such as bio-solids can be reused in agriculture as a soil conditioner and the treated wastewater can be used for irrigation or safely disposed through percolation
5.	Source of fresh water to be used in treatment plant	Borewell will be used as a source of fresh water
6.	If it is proposed to treat solid waste in the same location, it is suggested to provide a separate component in the existing proposal	A separate component for handling of Solid waste at the proposed location has been mentioned in the proposal
7.	The handling bio-medical waste should not be done in the proposed area	Justification for not handling of Bio-medical waste at the proposed area attached
8.	In the REC meeting dated 20.07.2021, it has been decided that the area should not be used as a waste dumping yard and only to be used for treatment and processing of liquid waste and to obtain undertaking from User agency to this effect	Undertaking regarding usage of area for solid and liquid waste management from Gokarna Gram Panchayat attached


Panchayat Development Officer
 Grama Panchayat, Gokarna



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Deputy Conservator of Forest,
Honnvara Division, Honnavar
581334

Sir,

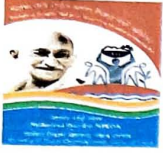
Subject : Non handling of Bio Medical Waste at the proposed area

Ref : Office of the Deputy Conservator of forests, Honavar division, Honavar – 581334
office letter no. B2/GFL/FCA/CR-17/2020-21, Dated: 27-08-2021

This is to justify that there will not be any processing of Bio Medical waste at the Proposed site of Gokarna Grama panchayath.

Your's faithfully,


Panchayat Development Officer
Grama Panchayat, Gokarna



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Underatking for not using the proposed Land as a waste Dumping yard

Name of the proposal : Diversion of 0.98 Hectare of Forest land in Gokarna Village F.Sy. No. 1492A/1A, Gokarna Hobli, Kumta Taluk, Uttara Kannada District (Honnavar Forest Division) for establishment of 'Faecal Sludge Treatment Plant' in favour of the Panchayath Development Officer, Gram Panchayath, Gokarna
Proposal No. FP/KA/OTHERS/36295/2018

I/We Grama Panchayath Gokarna hereby undertake for using thr proposed area only for treatment and processing of Soild waste and Faecal Sludge and Not as a waste dumping yard.

Kannayalamma
Panchayat Dev.
Grama Panchayat, Gokarna
Officer

Prasanna
President
Grama Panchayat, Gokarna

1. Design Description of the Faecal Sludge Treatment plant

1.1. Treatment Concept

The treatment concept proposed for faecal sludge treatment in Gokarna has been developed considering mainly

- Area availability for treatment plant
- Reusability of by-products
- Implementation cost
- Operations and Maintenance requirements
- Aesthetics

As shared human resource is adopted for solid waste and liquid waste in Gokarna, the design ensures minimal energy consumption as well as low operation and maintenance requirements.

1.2. Treatment Stages and Modules Adopted

S. No.	Treatment Stages	Treatment Modules
1.	Pre-treatment	Screen Chamber
2.	Sludge Stabilisation/Dewatering	Planted Drying Beds
3.	Liquid Wastewater Treatment	Integrated Settler and Anaerobic Filter
4.	Post Treatment and Disposal	Planted Gravel Filter and Soak pit
5.	Supporting civil infrastructure	Approach road, Operators Room, Toilet Block and Sludge storage house

Table 3: Treatment stages and Module adopted

This faecal sludge treatment plant is designed for **12 cum /week** capacity. The septage/faecal sludge (FS) is first passed through the screen for the retention of coarse materials/ inorganic solid waste present in the FS, and then conveyed to Planted Drying Bed (PDB). The PDBs are loaded with layers of sludge that are dewatered and stabilised through multiple physical and biological processes. A planted drying bed has the added benefit of transpiration and enhanced sludge treatment due to the plants. The key improvement of the planted bed over the unplanted bed is that the filter beds do not need to be desludged after each feeding cycle. Fresh sludge can be directly applied onto the previous layer, the plants and their root systems maintain the porosity in the filter.

This technology has the benefit of dewatering and stabilizing the sludge. Also, the roots of the plants create pathways through the thickened sludge that allow water to easily escape. Instead of effluent, sludge is applied to the surface and the filtrate flows down through the subsurface where it is collected in drains. The dried sludge from the planted drying beds is removed after a year of loading and a 6- month dormancy period.

The percolate is then treated in two stages (primary and secondary stage) in DEWATS modules. The primary stage i.e., Settler is mainly meant for the settling of any solids that may have entered the modules along with the percolate. The secondary stage i.e., Anaerobic Filter is for the anaerobic degradation of any dissolved and suspended organic matter. The partially treated wastewater from the secondary treatment unit would be conveyed into the Planted Gravel Filter where the plants take in nutrients and the gravel helps in aeration of the secondary treated wastewater to eliminate any odour. The treated water flows to the soak pit and infiltrates into the ground.

Process flow diagram for proposed faecal sludge treatment plant is shown in fig. below.

