

From
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To
✓ The Chairman,
AAA Committee &
District Revenue Officer,
Udhagamandalam,
The Nilgiris.

RC.No. 98 / GTC / 2016 Dated 16.06.2016


Sir,


Sub: Geo Technical Report – Department of Geology and Mining – Nilgiris District – Udhagamandalam Taluk – S.F.No. 630/2A1, 2B, 2C, 2D, 2E, 2F & 629 of Doddabetta village panchayat – Proposed for the construction of cottages, restaurant, administration block, staff quarters, health club, child care centre, summer camp, pet care clinic buildings by Tvl. Total Environment Habitat Private Limited, Bangalore – report sent – reg.

Ref: 1. Commissioner of Geology & Mining Chennai, Letter No. RC.No.4947/MM6/2013 dated 06.05.2016
2. Chairman, AAA Committee & District Revenue Officer, Udhagamandalam, letter no.DRO/PCE8/2016 dated 31.05.2016.

I invite kind attention to the references cited, wherein Tvl. Total Environment Habitat Private Limited, Bangalore have proposed for the construction of cottages, restaurant, administration block, staff quarters, health club, child care centre, summer camp, pet care clinic buildings (Total Plinth area - 19941.96 sq.m) in SF No. 630/2A1, 2B, 2C, 2D, 2E, 2F and 629 of Doddabetta village Panchayat, Ooty taluk, The Nilgiris district. The above area was inspected by the Deputy Director (i/c), Mines, Ooty and the geotechnical report is enclosed herewith for further action.

Encl: Geo technical report


Deputy Director (i/c),
Geotechnical Cell,
Dept. of Geology & Mining,
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Copy submitted to the commissioner of Geology & Mining, Chennai 32 for information.

GEO – TECHNICAL REPORT FOR THE PROPOSED CONSTRUCTION OF COTTAGES, RESTAURANT, ADMINISTRATION BLOCK, STAFF QUARTERS, HEALTH CLUB, CHILD CARE CENTRE, SUMMER CAMP, PET CARE CLINIC BUILDINGS (TOTAL PLINTH AREA – 19941.96 SQUARE METER) IN S.F.NO.630/2A1, 2B, 2C, 2D, 2E, 2F TOTALLY OVER AN EXTENT OF 10.12.60 HECTARES AND 629 OVER AN EXTENT OF 6.88.5 HECTARES OF DODDABETTA VILLAGE PANCHAYAT, OOTY TALUK, NILGIRIS DISTRICT BY TVL. TOTAL ENVIRONMENT HABITAT PRIVATE LIMITED, BANGALORE.

Ref : 1. Commissioner of Geology & Mining, Chennai Letter No. RC.4947/ MM6 /2013 dated 06.05.2016

2. Chairman, AAA committee and District Revenue Officer, Udhagamandalam. Letter No.DRO/PC F8/ 2016 dated 31.05.2016.

Kind attention is invited to the references cited above, wherein Tvl. Total Environment Habitat Private Limited, Bangalore has submitted the revised construction plan to the Chairman of the AAA Committee & District Revenue Officer, Udhagamandalam for the construction of cottages, restaurant, administration block, staff quarters, health club, child care centre, summer camp, pet care clinic buildings (Total Plinth area - 19941.96 Square Meter) in SF No. 630/2A1,2B,2C,2D,2E,2F totally over an extent of 10.12.60 hectares and 629 over an extent of 6.88.5 hectares of Doddabetta village Panchayat, Ooty taluk, The Nilgiris District.

In the reference 2nd cited, the Chairman of the AAA Committee & District Revenue Officer, Udhagamandalam has requested the Assistant Director of Geology and Mining, Coimbatore to inspect the proposed construction area as per revised plan and to offer the Geotechnical report for the above area.

LOCATION

The area proposed for construction of buildings in S.F.No. 630/2A1,2B, 2C,2D,2E,2F and 629 is located about 100 mtrs down slope of Doddabetta to Kenthorai road.

DESCRIPTION OF THE AREA

I. PROPOSED CONSTRUCTION AREA IN S.F.NO.630/2A1, 2B, 2C, 2D, 2E, 2F totally over an extent of 10.12.60 hectares.

Previously the area in S.F.No. 630/2A1, 2B, 2C, 2D, 2E, 2F (Old S.F.No.199/1B) is recommended for the construction of Tea Factory Building and the geotechnical report for the above area has already sent to Deputy Director of Town & Country Planning in vide letter no.146/A1/2000 dt. 09.11.2000 of Deputy Director, Geo technical cell, Coonoor.

SLOPE

The proposed area is at present levelled as plain ground and the dismantled building debris are remaining in the site. The general slope of the area is 15° towards south west and North east. The central portion of the terrain shows gentle slope. The landslide susceptibility index value for the slope is 8.00.

SOIL COVER

The proposed area is covered with lithomargic clay soil having thickness is expected about 5 – 7 mtrs underlain by laterite and gneissic rock. Few rock outcrops are noticed in this field. The landslide susceptibility index value for the soil thickness is 2.50.

DRAINAGE

Two low lying valley portion are seen on the north and south western portions of the area applied. The surface run off from the upper elevated portion passes through these valley portions to downstream area which runs in the West to East direction. The drainage pattern of the proposed area falls in Domain I of the drainage map of Nilgiris which is Gross radial with Local dentritic and very low density and coarse texture. The landslide susceptibility index value for the drainage is 3.90.

LAND USE

The proposed area is at present barren. Forest area is located on the Northern side and tea plantations on the East, West and Southern sides of the area. On the West upside, there is one Highland hotel building is located; The landslide susceptibility index value for the Land use is 3.50.

LANDSLIDE SUSCEPTIBILITY

The landslide susceptibility values assigned to different contributing factors such as slope, soil thickness, drainage and land use were given below.

Slope - 15°	=	8.00
Soil thickness – 5 to 7 mtrs	=	2.50
Drainage - I	=	3.90
Landuse - Tea	=	3.50
Zone – II	=	<u>17.90.</u>

The aggregate of landslide susceptibility index value for S.F.No. 630/2A1, 2B, 2C, 2D, 2E, 2F is 17.90. Therefore the proposed site falls in Landslide Susceptibility Zone II, which is less prone for landslides.

II. PROPOSED CONSTRUCTION AREA IN S.F.NO.629 OVER AN EXTENT OF 6.88.5 HECTARES

SLOPE

The slope angle of the proposed construction area in SF.No.629 is 6° to 15° towards South east. The landslide susceptibility index value for the slope is 8.00.

SOIL COVER

The proposed area is covered with lithomargic clay soil having thickness is expected about 5 – 7 mtrs underlain by lateritic and gneissic rock. The landslide susceptibility index value for the soil thickness is 2.50.

DRAINAGE

Two low lying valley portion are seen on the north, south and south east portions of the area applied. The surface run off from the upper elevated portion passes through these valley portions to downstream area which runs in the West to East direction. The drainage pattern of the proposed area falls in Domain I of the drainage map of Nilgiris which is Gross radial with Local dentritic and very low density and coarse texture. The landslide susceptibility index value for the drainage is 3.90.

LAND USE

The proposed area is covered with tea plantation and trees on all sides. The landslide susceptibility index value for the Land use is 3.50.

LANDSLIDE SUSCEPTIBILITY

The landslide susceptibility values assigned to different contributing factors such as slope, soil thickness, drainage and land use were given below.

Slope - 6° to 15°	=	8.00
Soil thickness – 5 to 7 mtrs	=	2.50
Drainage - I	=	3.90
Landuse - Tea	=	3.50
Zone – II	=	<u>17.90.</u>

The aggregate of landslide susceptibility index value in S.F.No.629 is 17.90. Therefore the proposed site falls in Landslide Susceptibility Zone II, which is less prone for landslides.

REMARKS AND RECOMMENDATION

The proposed Construction area in S.F.No. 630/2A1, 2B, 2C, 2D, 2E, 2F and 629 (Total Plinth area - 19941.96 sq.mt) falls in Landslide Susceptibility Zone II, which is less prone for landslides. Hence the site proposed for the construction of cottages, restaurant, administration block, staff quarters, health club, child care centre, summer camp, pet care clinic buildings (Total Plinth area - 19941.96 sq.mt) in SF No. 630/2A1, 2B, 2C, 2D, 2E, 2F and 629 of

Doddabetta village Panchayat, Ooty taluk, The Nilgiris district is recommended on Geotechnical point of view with the following conditions.

1. Construction of proposed buildings should be carried out as per revised plan submitted by the applicant. Deviation of construction area should not be allowed at any cost for the location of all buildings.
2. No building construction should be done on the slope.
3. Cut faces if any made during construction, it should be protected by strong inclined RCC retaining wall with weep holes.
4. Natural streams running within the field on the south, South east and northern sides of the proposed area should not be disturbed. Necessary safety distance should be provided for the above natural stream courses.
5. The natural surface run-off should not be blocked and the provisions should be made for surface drainage in the area of construction.
6. The natural drainage should be lined and paved and maintained.
7. Sewage water should not be allowed to infiltrate into the ground and should be drained by proper drainage channels.
8. If any approach road formed, cut faces and down slope of road should be properly protected.
9. Made up soil should not be dumped within the site.
10. Afforestation measures should be carried out in the remaining non construction areas.
11. Total extent of the construction of buildings should not exceed at any cost.
12. The septic sewerage and drainage water from this area should be eliminated rapidly by providing lined channels.
13. The rain water and waste water should be properly drained through the stone surface drainage down below the site.
14. The surface flow of rain water should not be obstructed.
15. Rainwater harvesting sump should be constructed only on the surface of the ground. No water should be allowed to percolate into the ground.
16. Testing of soil characteristics like cohesion, adhesion, shear strength etc, and drilling a bore hole to ascertain the depth of the bed rock may

be undertaken, since no outcrops found in and around the proposed area, to know the strong basement.

17. Building construction should also be followed as per master plan and HACA rules.

18. Necessary Safety Distance should be provided for the stream passing through the area as per Town & Country planning conditions.

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16/6/16

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16/6/16