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DIGITALLY VERIFIED RECORD

# GEOTECHNICAL INVESTIGATION REPORT

# FOR

# PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING

**JOB NO:** YPI/SIR/2025-26/103

**SITE NAME:** PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING

**SITE ADDRESS:** PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING AT S.F.NO: 296/2B3A, OF KALAPATTY WEST VILLAGE, COIMBATORE NORTH TALUK, COIMBATORE CORPARATION, COIMBATORE DISTRICT.

**LAT-LONG:** 11.057949, 77.030339

**SITE INVESTIGATION DATE:** 17.08.2025

**REPORT SUBMISSION DATE:** 20.08.2025

## CLIENT

**M/S. RAVIMURUGAA CONSTRUCTIONS PVT LTD,**
**8/1, GANESH KIRUBA, TIRUMAGAL NAGAR,**
**PEELAMEDU PUDUR, COIMBATORE 641004.**

YUBE
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Job No: YPI/SIR/2025-26/103
Date: 20.08.2025

**To**

**M/S. RAVIMURUGAA CONSTRUCTIONS PVT LTD,**
**8/1, GANESH KIRUBA, TIRUMAGAL NAGAR,**
**PEELAMEDU PUDUR, COIMBATORE 641004.**

**Name of Work :** GEOTECHNICAL INVESTIGATION WORK FOR PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING AT S.F.NO: 296/2B3A, OF KALAPATTY WEST VILLAGE, COIMBATORE NORTH TALUK, COIMBATORE CORPARATION, COIMBATORE DISTRICT.

**Sub :** Submission of Soil Investigation Report – Reg

Dear Sir,

We are pleased to hereby transmit Two (02) original Hard Copies and Soft Copies sent to your concern address, our final Geotechnical Investigation Report for the above mentioned project. If you have any questions, please contact this office.

It has been a pleasure being of service to you on this project. Assuring you of our continued co-operation, we remain.

For Yube Prime Infra.,

(Authorized Signatory)

# INDEX


| SR NO. | PARTICULARS | PAGE NO |
|---|---|---|
| 01. | INTRODUCTION | 04 |
| 02. | PROCEDURE OF INVESTIGATION | 04 |
| 03. | RELEVANT IS CODES | 08 |
| 04. | FOUNDATION ANALYSIS | 09 |
| 05. | FIELD INVESTIGATION REPORT | 12 |
| 06. | LABORATORY INVESTIGATION REPORT | 14 |
| 07. | SIEVE ANALYSIS | 15 |
| 08. | RECOMMENDATIONS | 16 |
| 09. | CERTIFICATION | 17 |
| 10. | PHOTOGRAPHS | 18 |
| 11. | SITE PLAN | 19 |
| 12. | SBC CALCULATION | 20 |

# 1 INTRODUCTION

Sub surface investigation and laboratory tests for "**PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING AT S.F.NO: 296/2B3A, OF KALAPATTY WEST VILLAGE, COIMBATORE NORTH TALUK, COIMBATORE CORPARATION, COIMBATORE DISTRICT.**"

The objective of the exploration work was to determine the probable sub surface conditions such as stratification, denseness or hardness of the strata, position of ground water table etc. and to evaluate probable range of safe bearing capacity for the structure. To fulfill the objective, the work carried out is comprises of:

- Drilling two boreholes depth up to 6.00m below existing ground level in order to know the sub surface stratification, conducting necessary field tests and to collect disturbed and undisturbed soil samples for laboratory testing.

- Testing soil samples in the laboratory to determine its physical and engineering properties of the soil samples, and

- Analyzing all field and laboratory data to evaluate safe bearing capacity of the soil for given foundation sizes and necessary recommendations for foundation design and construction.

# 2 PROCEDURE OF INVESTIGATION

The actual site investigation work was started on 17.08.2025 and was completed on 17.08.2025.

## 2.1 Calyx Drilling

Drilling two boreholes of 150mm diameter is drill up to the depth of 6.00m from the ground level. The work was in general accordance with IS: 1892 – 1979. The Client's representatives choose and selected the location of borehole to test with Engineers in charge.

**2.1.1 Disturbed Samples:** Disturbed representative samples were collected, logged, labelled and placed in polythene bags.

**2.1.2 Undisturbed Samples:** Undisturbed soil samples are collected in 100 mm diameter thin walled sampler (Shelby tube) from the borehole. The sampler used for the sampling had smooth surface and appropriate area ratio and cutting edge angle thereby minimizing disturbance of soil during sampling. Samples are logged and labelled properly and transfer to the laboratory for further testing.

**2.1.3 Water Table:** Water table was not met during the sub soil exploration work carried out in the month of **AUGUST - 2025**.

**2.1.4 Seismic Zone:** The proposed project is situated at **COIMBATORE DISTRICT.** It falls under the Seismic Zone-III, according to the Indian Standard Seismic Zoning Map. Zone - III This is said to **Moderate Seismic Zone.**

**2.1.5 Method of Sampling:** Sampler is coupled together with a sampler head to form a sampling assembly. The sampler head provide a non-flexible connection between the sampling tube and the drill rods. Vent holes are provided in the sampler head to allow escape of water from the top of sampler tube during penetration. The sampling tubes are made free from dust and rust. Coating of oil is applied on both sides to obtain the undisturbed samples in best possible manner.

The sampler is then lowered inside the bore hole on a string of rods and driven to a predetermined level. On completion of driving the sampler is first rotated within the borehole to shear the soil sample at bottom and then pulled out. Upon removal of the sampling tubes, the length of sample in the tube is recorded. The disturbed material in the upper end of the tube, if any, is completely removed before sealing.

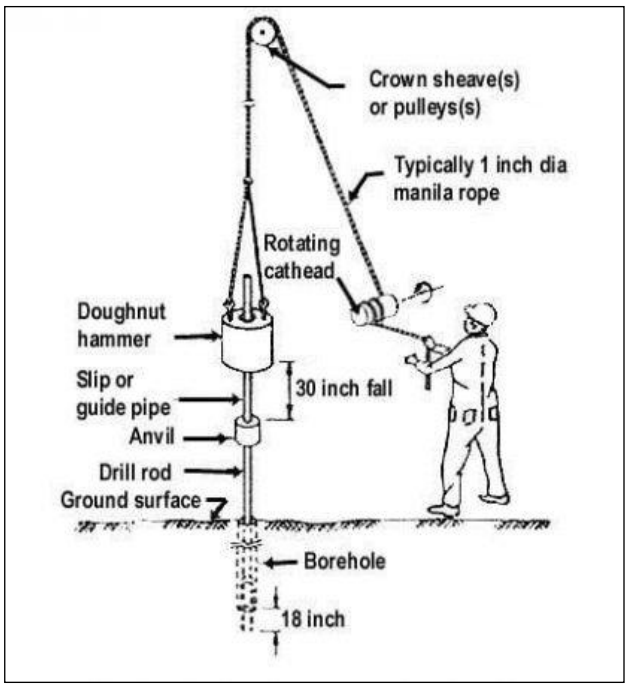
The soil at the lower end of the tube is trimmed to a distance of about 10 to 20 mm. After cleaning and inserting an impervious disc at each end, both ends are sealed. The empty space in the sampler, if any, is filled with the moist soil, and the ends covered with tight wrapper. The identification mark is then made on each sample.

## 2.2 Standard Penetration Test (SPT)

A standard penetration test was conducted at 1.0/1.5 m intervals or at change of stratum as per Indian standard IS 2131-1981 and split spoon sampler used confirmed to the Indian standard, IS 9640-1980.

The standard penetration test is conducted in a borehole using a Standard split spoon sampler. When the borehole has been drilled to the desired depth, the drilling tools are removed and the sampler is lowered to the bottom of the hole. The sampler is driven into the soil by a drop hammer of 63.5 kg mass falling through a height of 75 cm at the rate of 330 blows per minute as per IS 2131-1963. The number of hammer blows required to drive 15 cm of the sample is counted. The sample is further driven by 15 cm and the number of blows recorded. Likewise, the sample is once again further driven by 15 cm and the number of blows recorded. The number of blows recorded for the first 15 cm is disregarded. The number of blows recorded for the last two 15 cm intervals are added to give the standard penetration number (N). If the number of blows for 330 cm drive exceeds 50, it is taken as refusal and the test is discontinued.

Sufficient disturbed soil samples were collected from the split spoon sampler while performing the standard penetration tests in each hole.



## 2.3 Laboratory Tests

The operations to be performed in the laboratory depend upon the type of the nature of data required for the problem at hand. In case of cohesionless material, like sand, the laboratory tests are usually minimum and the design parameters are worked out from field test data such as form SPT- N value, Core resistance and plate load test data.

In the case of cohesive soils, the programme of laboratory testing can vary from carrying out simple tests such as unconfined tests to comprehensive study of soil behaviour using triaxial shear tests and consolidation tests. Following laboratory tests are conducted.

| COHESIVE SOIL | COHESIVE LESS SOIL |
|---|---|
| Specific gravity | Specific gravity |
| Natural moisture content | Natural moisture content |
| Sieve Analysis | Sieve analysis |
| Unconfined compression test | Direct shear test |
| Wet / Dry Density | Wet / Dry Density |
| Atterberg's limits | |
| Consolidation test | |
| Triaxial test | |

## 3 RELEVANT IS – CODES

All the test are carried out as per IS codes. Some of the prominent test and there relevant IS Codes are given in the table.

| S No. | Type of Testing | As per IS Code |
|---|---|---|
| **01** | Excavation of bore holes (Field Test) | IS 1892 - 1979 (Reaffirmed 2002) |
| **02** | Standard Penetration Test (Field Test) | IS 2131 - 1981 (Reaffirmed 2002) |
| **03** | Atterberg' s Limit (Laboratory Test) | IS 2720 Part 5 - 1970 (Reaffirmed 2006) |
| **04** | Grain Size Analysis (Laboratory Test) | IS 2720 Part 4 - 1975 (Reaffirmed 2006) |
| **05** | Specific Gravity Test (Laboratory Test) | IS 2720 Part 3 – 1981 (Reaffirmed 2002) |
| **06** | Density Test (Laboratory Test) | IS 2720 Part 8 -1983 (Reaffirmed 2006) |
| **07** | Direct Shear Test (Laboratory Test) | IS 2720 Part 13-1986 (Reaffirmed 2002) |
| **08** | Tri-axial Compression Test (Laboratory Test) | IS 2720 Part 10-1973 (Reaffirmed 2002)<br>IS 2720 Part 11-1971 (Reaffirmed 2002)<br>IS 2720 Part 12-1981 (Reaffirmed 2002) |
| **09** | Soil Classification (Laboratory Test) | IS 1498-1970 (Reaffirmed 2019) |
| **10** | Soil Bearing Capacity as per settlement criteria | IS 8009 -1976 (Reaffirmed 2006) |
| **11** | Soil Bearing Capacity as per shear criteria | IS 6403 – 1981 (Reaffirmed 2004) |

# 4 FOUNDATION ANALYSIS

## 4.1 Soil Profile

The profile of the area as observed in the borehole is given in the chart. Borehole soil profiles are given in below,

Borehole: 01

| Depth of Soil (m) | Soil Description | IS Classification |
|---|---|---|
| **0.00 – 0.60** | Clay with gravel | GC – Clay with Gravel |
| **0.60 – 1.70** | Silty Sand | SM –Silty Sand |
| **1.70 – 6.00** | Soft Disintegrated Rock | SDR – Soft Disintegrated Rock |

Borehole: 02

| Depth of Soil (m) | Soil Description | IS Classification |
|---|---|---|
| **0.00 – 0.50** | Clay with Gravel | GC – Clay with Gravel |
| **0.50 – 1.80** | Silty Sand | SM – Silty Sand |
| **1.80 – 6.00** | Soft Disintegrated Rock | SDR – Soft Disintegrated Rock |

### 4.2 Safe Bearing Capacity

Maximum intensity of loading that the foundation will safely carry without the risk of shear failure of soil irrespective of any settlement that may occur.

Safe Bearing Capacity (SBC) = $q = 0.314\ N^2\ B.Rw2 + 0.943\ (100 + N^2)\ Df.\ Rw1$

Where,

| | | |
|---|---|---|
| N | : | Standard Penetration Value |
| B | : | Width of Footing (or least lateral dimensions) |
| Df | : | Depth of Foundation |
| Rw1 & Rw2 | : | Water Reduction Factor |

### 4.3 Allowable Bearing Pressure

The net intensity of loading which the foundation will carry without undergoing settlement in excess of the permissible value for the structure under consideration but not exceeding net safe bearing capacity. The safe bearing pressure, qs corresponding to a settlement of 25mm is given by,

$$q = 1.36\ (N - 3)\ ((B+0.3)/2B)^2\ Rw2\ .\ Rd$$

Where,

| | | |
|---|---|---|
| B | : | Maximum Size of the Footing |
| R | : | Water table correction factor (For the worst case, Taken as 0.5) |

## 4.4 Safe Bearing Capacity as per IS 6403:20020

The net ultimate bearing capacity for cohesive and cohesionless soils, as per Indian Standard 6403:2002(Reaffirmed) is given below:

For cohesionless soils, the net ultimate bearing capacity of soil based on standard penetration resistance value is given by:

$$Net\ ultimate\ bearing\ capacity, q_{nu} = \sigma'(N_q - 1)s_q d_q i_q + \frac{1}{2}\Upsilon B N_\Upsilon s_\Upsilon d_\Upsilon i_\Upsilon W'$$

where,

| | | |
|---|---|---|
| σ' | : | Effective surcharge at the base level of foundation, kN/m$^2$ |
| $N_q$ & $N_\Upsilon$ | : | Bearing capacity factors |
| $s_q$ & $s_\Upsilon$ | : | Shape factors |
| $d_q$ & $d_\Upsilon$ | : | Depth factors |
| $i_q$ & $i_\Upsilon$ | : | Inclination factors |
| W' | : | Water table correction factor |
| $\Upsilon$ | : | Unit weight of the soil, kN/m$^3$ |

For cohesive soils ($\phi = 0$), the net ultimate bearing capacity is given by:

$$Net\ ultimate\ bearing\ capacity, q_{nu} = c\ N_c\ s_c d_c i_c$$

where,

| | | |
|---|---|---|
| C | : | Cohesion obtained from unconfined compressive strength, kN/m$^2$ |
| $N_c$ | : | Bearing capacity factor |
| $s_c$,$d_c$ & $i_c$ | : | Shape factor, depth factor and inclination factor |

# 5 FIELD INVESTIGATION REPORT

## BORE LOG DETAILS

## BOREHOLE NO: 01

**Job No:** YPI/SIR/2025-26/103

**Name Of Work:** GEOTECHNICAL INVESTIGATION WORK FOR PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING AT S.F.NO: 296/2B3A, OF KALAPATTY WEST VILLAGE, COIMBATORE NORTH TALUK, COIMBATORE CORPARATION, COIMBATORE DISTRICT.

| **Soil Investigation done by:** | Yube Prime Infra, Salem – 05 | **Method:** Rotary drilling | Ground Water Table | Not met |
|---|---|---|---|---|
| | | | Commencement Date | 17.08.2025 |
| | | | Completion Date | 17.08.2025 |

| Depth below G.L.(R.L) | Soil Profile | IS Classification of Soil | Thickness of layer (m) | Depth at which test is conducted | Standard Penetration Test Data | | | | Relative density / Consistency | Graphical representation of penetration resistance | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **N1** | **N2** | **N3** | **N = N2+N3** | | **20** | **40** | **60** | **80** | **100** |
| 0.60 | | Clay with Gravel | 0.60 | 1.00 | 10 | 50/5 | - | >50 | Hard | | | | | |
| 1.70 | | Silty Sand | 1.10 | 2.00 | 50/9 | - | - | >50 | V Dense | | | | | |
| | | | | 3.00 | R | | | | | | | | | |
| | | Soft Disintegrated Rock | 4.30 | 4.50 | R | | | | | | | | | |
| 6.00 | | | | 6.00 | R | | | | | | | | | |

***R – Refusal,**

## BOREHOLE NO: 02

**Job No:** YPI/SIR/2025-26/103

**Name Of Work:** GEOTECHNICAL INVESTIGATION WORK FOR PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING AT S.F.NO: 296/2B3A, OF KALAPATTY WEST VILLAGE, COIMBATORE NORTH TALUK, COIMBATORE CORPARATION, COIMBATORE DISTRICT.

| **Soil Investigation done by:** | Yube Prime Infra, Salem – 05 | **Method:** Rotary drilling | Ground Water Table | Not met |
|---|---|---|---|---|
| | | | Commencement Date | 17.08.2025 |
| | | | Completion Date | 17.08.2025 |

| Depth below G.L.(R.L) | Soil Profile | IS Classification of Soil | Thickness of layer (m) | Depth at which test is conducted | Standard Penetration Test Data | | | | Relative density / Consistency | Graphical representation of penetration resistance | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **N1** | **N2** | **N3** | **N = N2+ N3** | | **20** | **40** | **60** | **80** | **100** |
| 0.50 | | Clay with Gravel | 0.50 | 1.00 | 15 | 50/8 | - | >50 | Hard | | | | | |
| 1.80 | | Silty Sand | 1.30 | 2.00 | 12 | 30 | - | >50 | V Dense | | | | | |
| | | | | 3.00 | R | | | | | | | | | |
| | | Soft Disintegrated Rock | 4.20 | 4.50 | R | | | | | | | | | |
| 6.00 | | | | 6.00 | R | | | | | | | | | |

***R – Refusal,**

# 6 LABORATORY INVESTIGATION REPORT

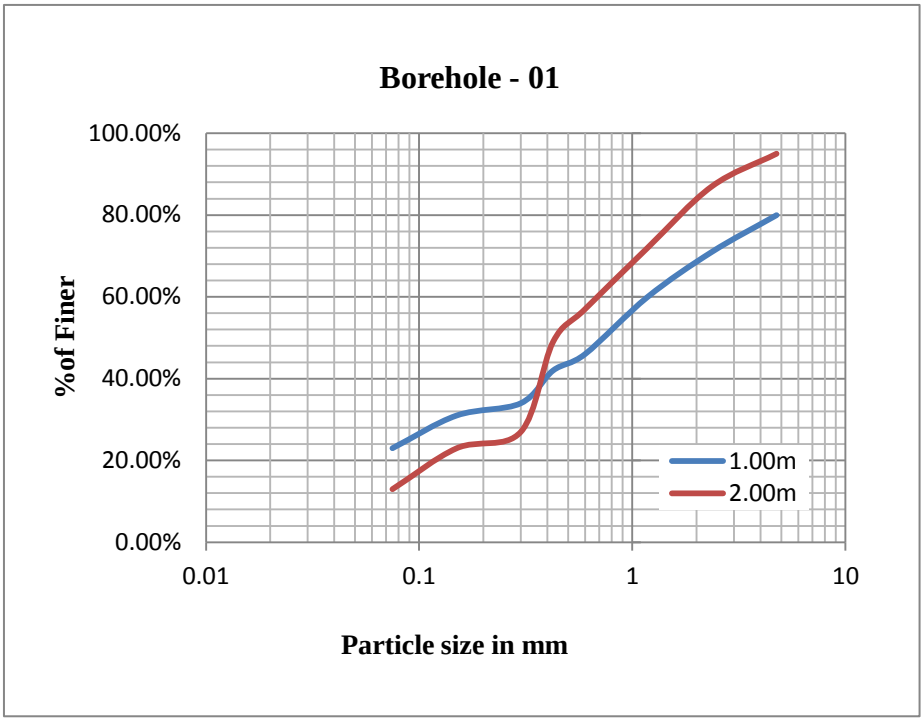
## MECHANICAL PROPERTIES OF SOIL

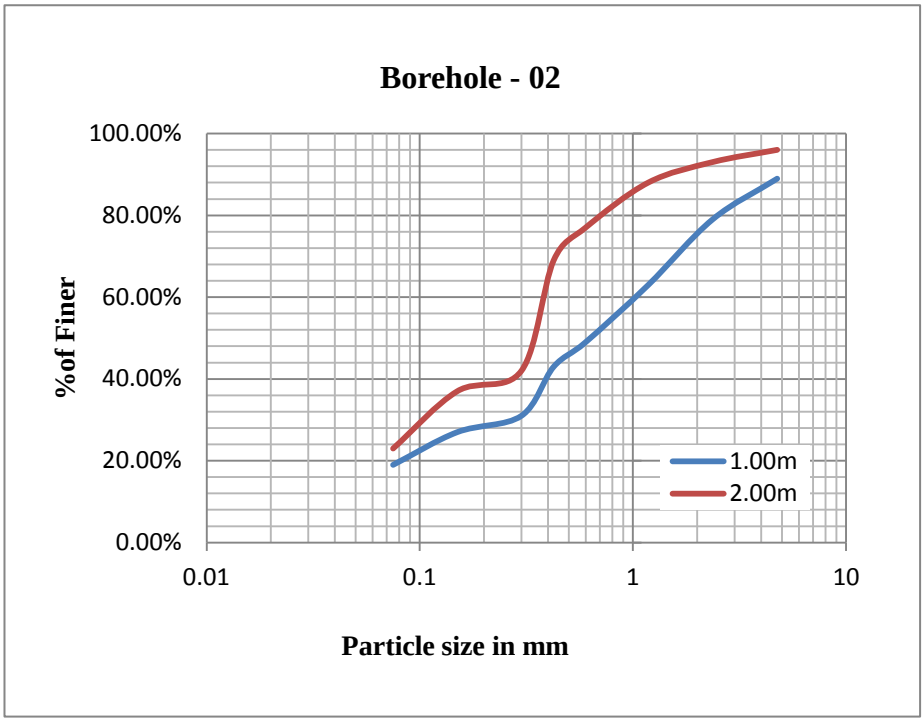
| Borehole | Depth (m) from EGL | Method of Sample | Number of sample collected | Grain Size Analysis | | | Consistency limits | | | IS Classification | Specific Gravity | Density g/cc | Observed N Value | Corrected N Value | Core Recovery % | Rock Quality Designation % | Ultimate Crushing Strength (mpa) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Gravel % | Sand % | Silt + Clay | Liquid Limit % | Plastic Limit % | Plasticity Index % | | | | | | | | |
| 01 | 1.00 | SPT | 1 | 20 | 57 | 23 | NP | NP | NP | GC | 2.62 | 1.72 | >50 | 50.00 | - | - | - |
| | 2.00 | SPT | 1 | 5 | 82 | 13 | NP | NP | NP | SM | 2.64 | 1.74 | >50 | 50.00 | - | - | - |
| | 3.00 | DS | 1 | - | - | - | - | - | - | SDR | - | - | >50 | 50.00 | - | - | - |
| | 4.50 | DS | 1 | - | - | - | - | - | - | SDR | - | - | >50 | 50.00 | - | - | - |
| | 6.00 | DS | 1 | - | - | - | - | - | - | SDR | - | - | >50 | 50.00 | - | - | - |
| 02 | 1.00 | SPT | 1 | 11 | 70 | 19 | NP | NP | NP | GC | 2.63 | 1.73 | >50 | 50.00 | - | - | - |
| | 2.00 | SPT | 1 | 4 | 73 | 23 | NP | NP | NP | SM | 2.65 | 1.75 | >50 | 50.00 | - | - | - |
| | 3.00 | DS | 1 | - | - | - | - | - | - | SDR | - | - | >50 | 50.00 | - | - | - |
| | 4.50 | DS | 1 | - | - | - | - | - | - | SDR | - | - | >50 | 50.00 | - | - | - |
| | 6.00 | DS | 1 | - | - | - | - | - | - | SDR | - | - | >50 | 50.00 | - | - | - |

**SPT – Standard Penetration Test, DS – Disturbed Sample**

| Bore No | Depth (m) from EGL | Moisture Content % | Cohesion value C $kN/m^2$ | Angle of shearing resistance (Ø ) | Remarks |
|---|---|---|---|---|---|
| 01 | 2.00 | 9.25 | - | 36 | - |

## 7 SIEVE ANALYSIS



# 8 RECOMMENDATIONS

## Type of Foundation

After critical review of the results, OPEN FOUNDATION in the form of ISOLATED FOOTING may be designed for this project.

## Depth of foundation & Safe Bearing Capacity

The depth of foundation and Safe Bearing Capacity shall be given in the table.

| Borehole | Depth | Design strength parameters | | Safe bearing capacity $q_{ns}$ (IS 6403:1981 Based on Shear Criteria ) | Controlled Settlement SBC for (25mm) |
|---|---|---|---|---|---|
| | | C | ϕ | | |
| | (m) | ($t/m^2$) | $^o$ | ($t/m^2$) | ($t/m^2$) |
| 01 | 2.00 | - | 36 | 38.5 | 49.9 |

## Safety Measures

The top layer soil should be used for back filling and well rammed.

***Note:** The width of the foundation shall be decided by Structural Engineer.

## 9 CERTIFICATION

FOR M/S. RAVIMURUGAA CONSTRUCTIONS PVT LTD, 8/1, GANESH KIRUBA, TIRUMAGAL NAGAR, PEELAMEDU PUDUR, COIMBATORE 641004 WE (YUBE PRIME INFRA) HAVE A PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING AT S.F.NO: 296/2B3A, OF KALAPATTY WEST VILLAGE, COIMBATORE NORTH TALUK, COIMBATORE CORPARATION, COIMBATORE DISTRICT. GEOTECHNICAL INVESTIGATION WORK WAS CONDUCTED AT THE SITE ON 17-AUGUST-2025. AFTER ANALYSIS OF THE TEST REPORTS, IT IS RECOMMENDED THAT ISOLATED FOUNDATION TO BE ADOPTED FOR DESIGN PURPOSE WITH SAFE BEARING CAPACITY AND DEPTH OF FOUNDATION ARE GIVEN IN THE TABLE.

**SAFE BEARING CAPACITY**

| **Borehole** | Depth | Design strength parameters | | Safe bearing capacity $q_{ns}$ (IS 6403:1981 Based on Shear Criteria ) | Controlled Settlement SBC for (25mm) | Allowable SBC |
|---|---|---|---|---|---|---|
| | | C | ϕ | | | |
| | (m) | ($t/m^2$) | $^o$ | ($t/m^2$) | ($t/m^2$) | (t/m2) |
| 01 | 2.00 | - | 36 | 38.5 | 49.9 | 48.0 |

FOR YUBE PRIME INFRA

Er. M.YUVARAJ, ME (GEOTECH), MIGS
(GEOTECHNICAL & STRUCTURAL CONSULTANT)

## 10 PHOTOGRAPHS





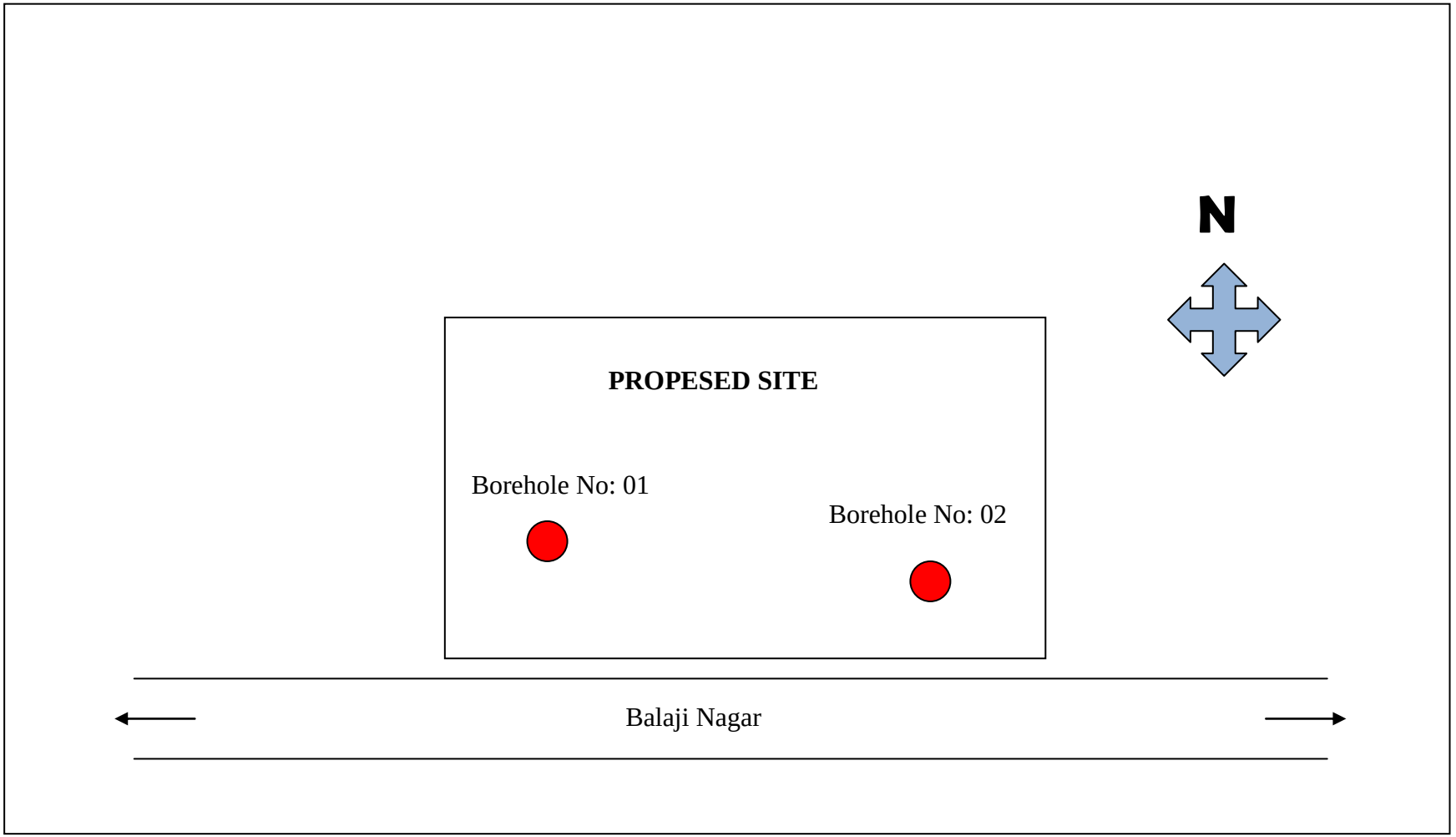







## 11 SITE PLAN

**Name of Work:** GEOTECHNICAL INVESTIGATION WORK FOR PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING AT S.F.NO: 296/2B3A, OF KALAPATTY WEST VILLAGE, COIMBATORE NORTH TALUK, COIMBATORE CORPARATION, COIMBATORE DISTRICT.



## 12 SBC CALCULATION

| | | | | | Ref: |
|---|---|---|---|---|---|
| **Corrections for N** | | | | | |
| SPT N value from field, N | **N** | = | **50** | Weightage N value | @ foundation depth |
| Depth of Foundation | **d** | = | 2 | m | |
| Bulk Density at d | **$\gamma_b$** | = | 17.4 | kN/m$^3$ | |
| **Correction for overburden** | | | | | |
| Over Burden pressure | | = | 0.17 | kg/cm$^2$ | |
| Correction Factor | **C'** | = | 1.30 | | Clause 3.6.1, Fig 1, IS:2131 |
| | **N'** | = | 65 | | |
| **Correction for dilatancy** | | | | | |
| Corrected N | **N''** | = | 40 | | Clause 3.6.2, IS:2131 |
| | **$\phi$** | = | 36 | ° | Fig 1, IS:6403:2002 |
| | $C_u$ | = | | kN/m$^2$ | |
| **Safe Bearing Capacity-In situ parameters** | | | | | |
| Undrained cohesion | $C_u$ | = | 0 | kPa | |
| Angle of internal friction | **$\phi$** | = | 36 | ° | Design value |
| Bulk density | **$\gamma_b$** | = | 17.4 | kN/m$^3$ | |
| Depth of GWT below EGL | | = | 6 | m | Worst case |
| Submerged density | $\gamma'$ | = | 7.6 | kN/m$^3$ | |
| **Foundation Details** | | | | | |
| Depth of foundation | $D_f$ | = | 2 | m | |
| Shape of foundation | | = | Square | | |
| Width | B | = | 2 | m | |
| Shear Failure Condition | | = | General Shear | | |
| | N$\phi$ | = | 3.85 | | Clause 3, IS:6403:2002 |
| **Terzaghi Bearing Capacity Factors** | | | | | |
| Nc Nq Nγ | | | | | IS:6403:2002- Table 1 |
| 51.96 39.48 60.31 | | | | | |
| **Shape Factors** | | | | | |
| $s_c$ $s_q$ $s_\gamma$ | | | | | IS:6403:2002-Clause 5.1.2.1, Table 2 |
| 1.3 1.2 0.6 | | | | | |
| Depth Factors | | | | | |
| $d_c$ $d_q$ $d_\gamma$ | | | | | Clause 5.1.2.2, IS:6403:2002 |
| 1.4 1.2 1.00 | | | | | |
| | W' | = | 0.5 | | IS:6403:2002-Clause:5.1.2.4 |
| General Shear Failure | | | | | |
| Net Ultimate Bearing Capacity (NUBC) | | | | | |
| $q_d =$ $cN_cs_cd_ci_c + q(N_q-1)s_qd_qi_q + 0.5B\gamma N_\gamma s_\gamma d_\gamma i_\gamma W'$ | | | | | |
| | NUBC | = | 1154 | kPa | Clause 5.1.2, IS |

6403:2002

Factor of Safety = 3

SBC = 385 kPa

= 38.5 t/m$^2$

**Safe Bearing Pressure of Foundation Soil (Permissible Settlement Criteria):**

Teng's correlation has been used to arrive at safe bearing pressure.

Safe bearing pressure for allowable settlement of 25mm is given by the equation:

$q_ns=34\ (N-3)\ [(B+0.3)/2B]\text{^}2\ R_w2\ R_d$ **kPa**

Teng's Correlation

$R_w = [1/2+ [\![0.5\ D]\!]_f/B]$ = 1

$R_d= [1+ (0.2\ D_f)/B]$ = 1.20

Considering GWT @ GL

$S_25$

For allowable settlement = 25 mm

i.e., $q_{ns(25)}$ = **499 kPa**

Safe bearing pressure for allowable settlement of 50 mm:

$q_{ns\ (50)} = q_{ns(25)}$ x (50/25) = **998 kPa**

Safe bearing pressure for allowable settlement of 66 mm

$q_{ns(66)} = q_{ns}(25)$ x (75/25) = **1497 kPa**

**Allowable Bearing Pressure of Foundation Soil**

Allowable Net Bearing pressure (ANSBP) is the least of safe bearing capacity for shear and safe bearing pressure for settlement.

ANSBP for 25mm = 499 kPa

= **49.9** t/m$^2$

THE LANDLENS SUITE

# Eight ways to know a piece of land before you pay for it.

This report covers one part of the picture. These cover the rest, drawn from the same government records, for any property in Tamil Nadu.

### LandLens One
Ask anything about a property and get an answer grounded in live government records, with the sources shown.
**/landlens/one**

### Verify My Land
Every record check run on one property and returned as a single report.
**/landlens/verify-my-land**

### Legal Opinion
An advocate's written opinion on the title, built on the records we pull for it.
**/landlens**

### One Map
Every layer on one map: the parcel, its boundary, zoning, water bodies and what sits around it.
**/landlens/one/map**

### PriceMap
What land actually changed hands for around this plot, taken from the registered deeds.
**/landlens/pricemap**

### Build Scope
What you are allowed to build here: floor space, height, coverage and setbacks.
**/landlens/build-scope**

### Property Tracker
Watch a property and hear about it when something new is registered against it.
**/landlens/property-tracker**

### Deal Room
Run the transaction in one place: documents, stamping, signatures and the parties.
**/landlens/deal-room**

FREE TOOLS · NO ACCOUNT NEEDED

# Twenty-four checks you can run yourself, at no cost.

## Records and verification

The registers themselves, read for you.

- Encumbrance Certificate
- Patta and Chitta
- Field Measurement Sketch
- EC Analyzer
- Bank charge check
- Court case search
- Seller background check
- Approval check by survey

## Value and duty

What it is worth and what it costs to register.

- Guideline value by street
- Guideline value by survey
- Stamp duty and registration fees
- Capital gains
- Floor space index
- Area unit converter

## Zoning and land use

What the plan says can happen on this land.

- Land use zone finder
- CMDA land use check
- Coastal regulation zone
- Master plan check
- Water bodies finder
- Airport height clearance

## Registers and directories

Who holds it, and which office keeps the record.

- Find your registering office
- Temple property check
- Waqf property check
- RERA register

**Every free tool**
/tools

**Services we run for you**
/services

**The LandLens suite**
/landlens/one

Verified RealEstate™

# Every claim in this document traces back to a government record.

- Legal opinions, due diligence and title verification
- Building plan, layout and sub-division approvals
- Completion and occupancy certificates, regularisation
- Escrow, negotiation and NRI property management
- Land survey, soil testing, architecture and construction

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Prepared from the registers named on the page each finding sits on. Where a register could not be read, this document says so in its place rather than leaving the gap to be read as a clean result.