



SITE CLASSIFICATION

Client: Dunlop & Pitson Earthmoving
24 Jewell Court
Bendigo, VIC 3550

Project: Lot 23 Gummin Court, Marong

1 INTRODUCTION

Dunlop & Pitson Earthmoving commissioned Geotechnical Testing Services to conduct a geotechnical investigation for a proposed residential development located at Lot 23 Gummin Court, Marong.

The investigation has been conducted for the purpose of assessing general subsurface conditions at the site and consequently assigning a Site Classification in accordance with AS2870 – 2011 “Residential Slabs and Footings”.

2 INVESTIGATION

The investigation was carried out by a technician on the 7th September, 2011 using a vehicle mounted drill-rig and drilling 2 boreholes to depths of 1.8 to 3.0 metres within the designated area. Dynamic Cone Penetrometer (DCP) tests were also undertaken. The subsequent soil profiles and DCP results are presented in page 4 and the location of the boreholes are presented on page 5.

At the time of this investigation, the type of development proposed was unknown to GTS.

3 SITE CONDITIONS

The site is relatively flat and is currently vacant. The surface of the site was dry with no ground covering. There are no trees located on the site. There was no visual evidence of surface cracking. No groundwater seepage was encountered over the investigated depths.

Full details of soil conditions are presented in the borehole logs.

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4 SITE CLASSIFICATION

After allowing due consideration to the site geology, soil conditions, drainage and known details of the proposed structure, the site has been classified as **Class M-D** (AS2870 – 2011).

Foundations designed in accordance with this classification are to be subject to the overriding conditions of Section 5 below.

5 DISCUSSION

Particular attention should be paid to the design of footings as required by AS2870 – 2011.

In addition to the normal founding requirements arising from the above classification, particular conditions at the site dictate that the founding medium and minimum depth below existing surface levels for all footings should be as follows:

- Sandy CLAY, medium plasticity, moist, pale brown mottled grey, stiff
At depths below 0.5 metres in the vicinity of BH1 or
- Sandy Silty CLAY, medium plasticity, moist, brown, stiff
At depths below 0.4 metres in the vicinity of BH2

An allowable bearing pressure of 100kPa is available for edge beams, strips and stump footings founded as above.

If necessary, blinding concrete (minimum 15MPa) may be used to bring the excavation up to design level.

It should be noted that the proposed dwelling should be located a minimum distance of 1 x the mature height of any existing trees. If this distance is impeded then the size and distance from the dwelling of the tree(s) needs to be taken into account when designing the foundation.

6 IMPORTANT NOTES ABOUT THIS REPORT

- The site classification presented in Section 4 assumes that the current natural drainage and infiltration conditions at the site will not be markedly affected by the proposed site development work. Care should therefore be taken to ensure that surface water is not permitted to collect adjacent to the structure and that significant changes to seasonal soil moisture equilibria do not develop as a result of service trench construction or tree root action.



- Attention is drawn to Appendix B of AS 2870 and CSIRO document, BTF 18 – "Foundation Maintenance and Footing Performance: A Homeowner's Guide" as a guide to maintenance requirement for the proposed structure.
- This is not a comprehensive investigation nor is it economic or practical to determine every subsurface feature on the site. Although this investigation indicates that soil conditions are relatively uniform across the site, it is recommended that the base of all footing excavations be inspected to ensure that the founding medium meets that requirements referenced herein with respect to type and strength of founding materials. If further variations in descriptions in soil types, colour or depths are discovered during construction, this office should be notified immediately so that potential influence on the footings may be assessed.
- The soil colours provided in the borelogs attached may vary with soil moisture content and individual interpretation, therefore colour alone should not be used to identify these soils.
- Strength characteristics of soils often exhibit a large variation between wet and dry conditions. Soil characteristics of a soil profile are given on the soil conditions at the time of the investigation.
- In the event of significant earthworks being undertaken on the site after this investigation, this report may require an amendment if appropriate.
- If FILL is found during this investigation, it is an indication of what was found during the investigation and it may vary over the site. It may be in the best interest of the buyer / seller to undertake a more detailed investigation, in this instance.

Should you have any further queries concerning these results, please do not hesitate in contacting this office on 5441 4881

Yours faithfully

Daniel Curtain BE
Geotechnical Engineer

Enclosed
Borelogs (Page 4)
Brief Site Map (Page 5)



GEOTECHNICAL

TESTING SERVICES PTY LTD

Test Report

Borehole Logs

| | | | |
|----------|-------------------------------|-------------------|-------------|
| Client: | Dunlop & Pitson Earthmoving | Borehole Log No.: | 1 – 2 |
| | | Report Number: | 11C 924(23) |
| | | Date Drilled: | 07/09/11 |
| Project: | Lot 23 Gummin Court Marong | Logged By: | MB |
| | | Drilling Method | AS |
| | | Sheet 4 of 5 | |

| Profile (mm): | * Structure: (see key) | Material Description: | Moisture Description: | Cohesion Density: | Plasticity: | Testing / Sampling: |
|--|------------------------|--|-----------------------|-------------------|-------------|---------------------|
| 0 to 500 to 1000 to 1500 to 3000 | Soil Profile | BL-1 Silty Sand/ Sandy Silt Pale Brown | D | MD | - | No |
| | | Sandy Clay Pale Brown | M | ST | M | No |
| | | Sand Brown | M | MD | - | No |
| | | Sandy Clay Brown | M | ST | M | No |
| 0 to 150 to 400 to 1800 | Fill | BL-2 Silty Sand/ Sandy Silt Pale Brown | D | MD | - | DCP:3,3, |
| | Soil Profile | Silty Sand/ Sandy Silt Pale Brown | D | MD | - | 4,4, |
| | | Sandy Silty Clay Brown | M | ST | M | 4,5,5 |

Key:

| Drilling Method: | Moisture Condition | Cohesion: | Density: | Testing/Sampling: |
|---------------------|--------------------|------------------|-------------------|--|
| AS - Auger Screwing | D - Dry | VS - Very Soft | VL - Very Loose | PP – Pocket Penetrometer |
| HA - Hand Auger | M - Moist | S - Soft | L - Loose | V – Hand Vane Shear |
| | W - Wet | F - Firm | MD - Medium Dense | DCP – Dynamic Cone Penetrometer |
| | | ST - Stiff | D - Dense | SPT – Standard Penetration Test |
| | | VST - Very Stiff | VD - Very Dense | US – Undisturbed Sampling |
| | | H - Hard | | DS – Disturbed Sampling |
| | | VH – Very hard | | * See notes on borelog location page (last). |

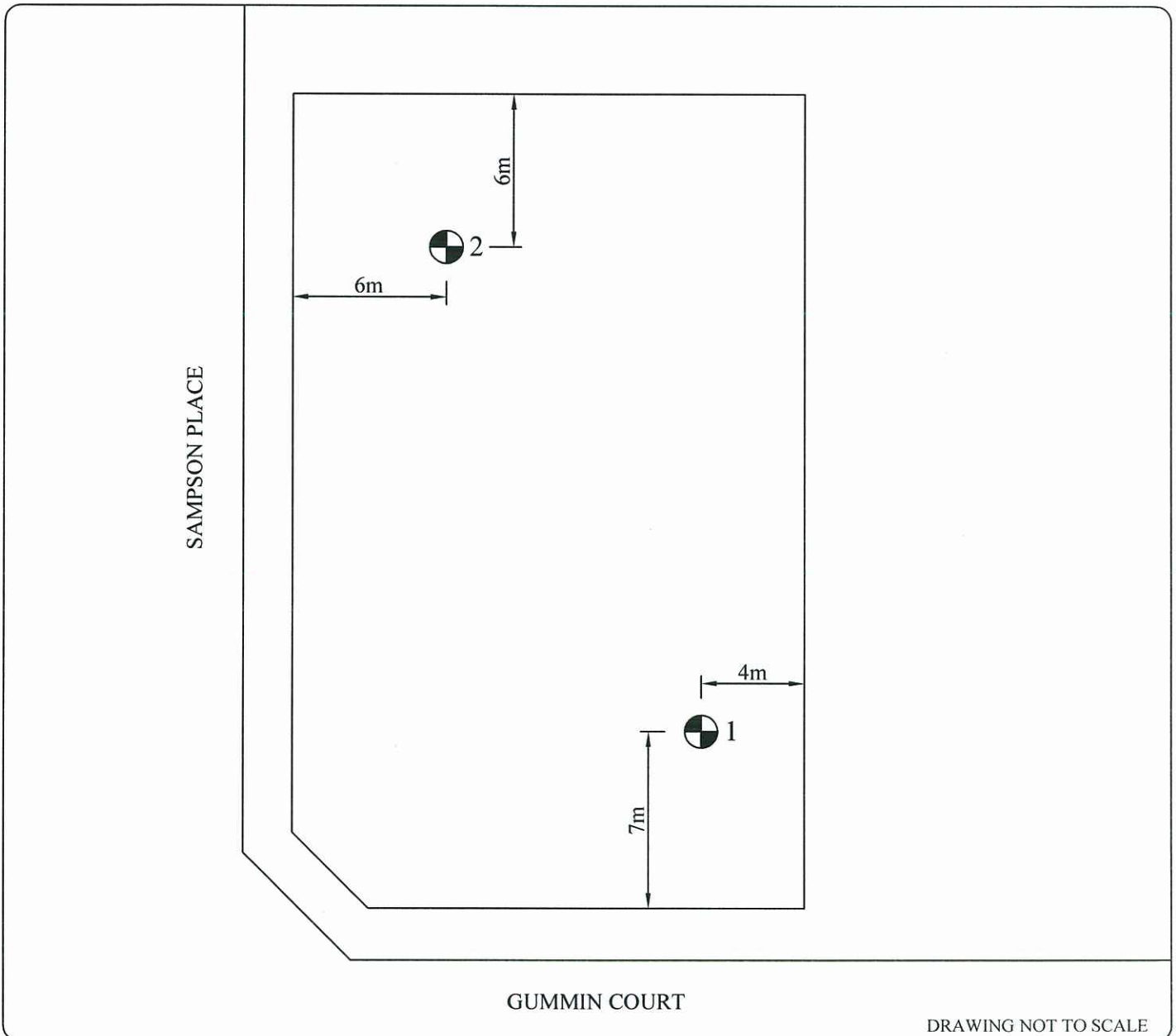


Borehole Locations

GEOTECHNICAL TESTING SERVICES PTY LTD

| | |
|----------|-------------------------------|
| Client : | DUNLOP & PITSON EARTHMOVING |
| Project: | LOT 23 GUMMIN COURT MARONG |

| | |
|------------------|-------------|
| Borehole No. : | 1 & 2 |
| Report No. : | 11C 924(23) |
| Date Drilled : | 07/09/11 |
| Operator: | MB |
| Drilling Method: | A.S |
| Page No.: | 5 of 5 |



(T) = TREES