

APPENDIX I

Geotechnical Letter 20.11.15

G09/1966-B VDS:vds

20 November 2015

D.Y. Surveyors
PO Box 178
KIAMA NSW 2533

By Email: dyapl@bigpond.com

Attention: David Yates

Dear Sir

**Re: Proposed Residential Subdivision, Lot 100 & 101 DP 1157883 Downes Place,
Jamberoo: Preliminary Geotechnical assessment and Stage 1 Contamination
Assessment**

1.0 Introduction

As requested Network Geotechnics Pty Ltd(NG) carried out a review of NG Report W07/1966-Ar dated 17 January 2013 on Preliminary Geotechnical and Contamination Assessment and a site walk over assessment in order to update the above report for submission to Kiama Council for the proposed residential subdivision.

It is understood that the proposed subdivision lay out is different from that was assumed for the investigation reported in January 2013. Based on the subdivision plan provided (Attached Drawing without a number and a scale dated 27 April 2015 by DY Surveyors) the proposed subdivision includes 16 lots and the area proposed is slightly larger than the area initially considered.

2.0 Site Description and Geology

The site is located at the southern corner Downes Place, Jamberoo with a gentle western north western facing slope, as observed from the centre of the site. The site is mostly covered with grass with a several medium size trees and tall grassland and weeds throughout.

A dam and a water hole is located over the western portion of the site. The proposed new area for the subdivision now covers a part of the area between the original area and the dam. The area is mostly covered with grass. Our walk over assessment carried out on 20 November 2015 by NG Principal Geotechnician did not reveal any impediments for the proposed subdivision.

3.0 Discussion and Recommendations

Based on the walk over assessment and the review of previous report NG assess that the recommendations made in Report W07/1966-Ar dated January 2013 to be current for the proposed new layout. Further investigations are assessed to be not required.

4.0 References

1. Network Geotechnics Pty Ltd. Preliminary Geotechnical and Stage 1 Contamination Assessment, 26 Downes Place Jamberoo January 2013.

7.0 Limitations

This report has been prepared for DY Surveyors in accordance with NG's proposal dated 4th June 2015 under NG's Terms of Engagement.

The report is provided for the exclusive use of DY Surveyors for the specific development and purpose as described in the report. The report may not contain sufficient information for developments or purposes other than that described in the report or for parties other than DY Surveyors .

The information in this report is considered accurate at the date of issue with regard to the current conditions of the site. The conclusions drawn in the report are based on interpolation between boreholes or test pits. Conditions can vary between test locations that cannot be explicitly defined or inferred by investigation.

The report, or sections of the report, should not be used as part of a specification for a project, without review and agreement by NG, as the report has been written as advice and opinion rather than instructions for construction.

The report must be read in conjunction with the attached Information Sheets and any other explanatory notes and should be kept in its entirety without separation of individual pages or sections. NG cannot be held responsible for interpretations or conclusions from review by others of this report or test data, which are not otherwise supported by an expressed statement, interpretation, outcome or conclusion stated in this report. In preparing the report NG has necessarily relied upon information provided by the client and/or their agents.

We trust these comments are sufficient to meet your present requirements. Please do not hesitate to contact the undersigned should you have any queries.

For and on behalf of

Network Geotechnics Pty Ltd

Report prepared by



Vipul De Silva
Principal Geotechnical Engineer

Encl Information Sheets (1 Sheet)
 Drawing No W07/1966-1 Site Plan and Test Locations (1 sheet)
 Revised Site Layout DY Surveyors Drawing dated 27th April 2015.

General Notes About This Report



INTRODUCTION

These notes have been prepared by Network Geotechnics Pty Ltd (NG) to help our Clients interpret and understand the limitations of this report. Not all sections below are necessarily relevant to all reports.

SCOPE OF SERVICES

This report has been prepared in accordance with the scope of services set out in NG's proposal under NG's Terms of Engagement, or as otherwise agreed with the Client. The scope of work may have been limited by a range of factors including time, budget, access and/or site constraints.

RELIANCE ON INFORMATION PROVIDED

In preparing the report NG has necessarily relied upon information provided by the Client and/or their Agents. Such data may include surveys, analyses, designs, maps and plans. NG has not verified the accuracy or completeness of the data except as stated in this report.

GEOTECHNICAL AND ENVIRONMENTAL REPORTING

Geotechnical and environmental reporting relies on the interpretation of factual information based on judgment and opinion and is far less exact than other engineering or design disciplines.

Geotechnical and environmental reports are for a specific purpose, development and site as described in the report and may not contain sufficient information for other purposes, developments or sites (including adjacent sites) other than that described in the report.

SUBSURFACE CONDITIONS

Subsurface conditions can change with time and can vary between test locations. For example, the actual interface between the materials may be far more gradual or abrupt than indicated and contaminant presence may be affected by spatial and temporal patterns.

Therefore, actual conditions in areas not sampled may differ from those predicted since no subsurface investigation, no matter how comprehensive, can reveal all subsurface details and anomalies.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes or groundwater fluctuations can also affect subsurface conditions and thus the continuing adequacy of a geotechnical report. NG should be kept informed of any such events and should be retained to identify variances, conduct additional tests if required, and recommend solutions to

problems encountered on site.

GROUNDWATER

Groundwater levels indicated on borehole and test pit logs are recorded at specific times. Depending on ground permeability, measured levels may or may not reflect actual levels if measured over a longer time period. Also, groundwater levels and seepage inflows may fluctuate with seasonal and environmental variations and construction activities.

INTERPRETATION OF DATA

Data obtained from nominated discrete locations, subsequent laboratory testing and empirical or external sources are interpreted by trained professionals in order to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions in accordance with any relevant industry standards, guidelines or procedures.

SOIL AND ROCK DESCRIPTIONS

Soil and rock descriptions are based on AS 1726 – 1993, using visual and tactile assessment except at discrete locations where field and / or laboratory tests have been carried out. Refer to the accompanying soil and rock terms sheet for further information.

COPYRIGHT AND REPRODUCTION

The contents of this document are and remain the intellectual property of NG. This document should only be used for the purpose for which it was commissioned and should not be used for other projects or by a third party.

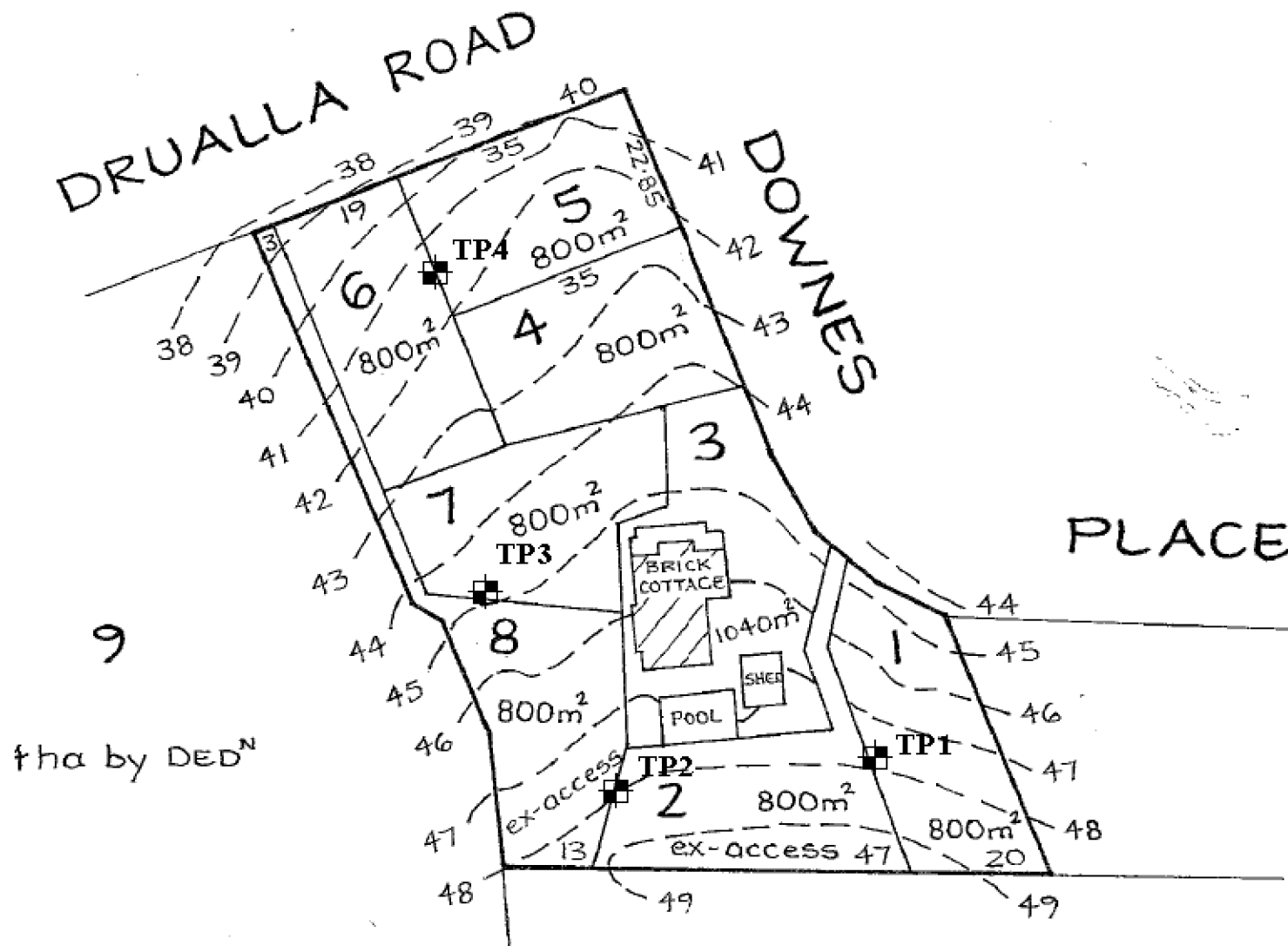
This report shall not be reproduced either totally or in part without the permission of NG. Where information from this report is to be included in contract documents or engineering specification for the project, the entire report should be included in order to minimise the likelihood of misinterpretation.

FURTHER ADVICE

NG would be pleased to further discuss how any of the above issues could affect a specific project. We would also be pleased to provide further advice or assistance including:

- Assessment of suitability of designs and construction techniques;
- Contract documentation and specification;
- Construction control testing (earthworks, pavement materials, concrete);
- Construction advice (foundation assessments, excavation support).





12/9-15 Gundah Rd, Mt. Kuring-Gai NSW 2529
 Tel: (02) 8438 0312
 Fax: (02) 8438 0310
 Email: masadabadi@netgeo.com.au

Scale: A4 - NOT TO SCALE

Date: 6/12/12

Drawing: MA

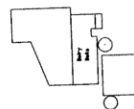
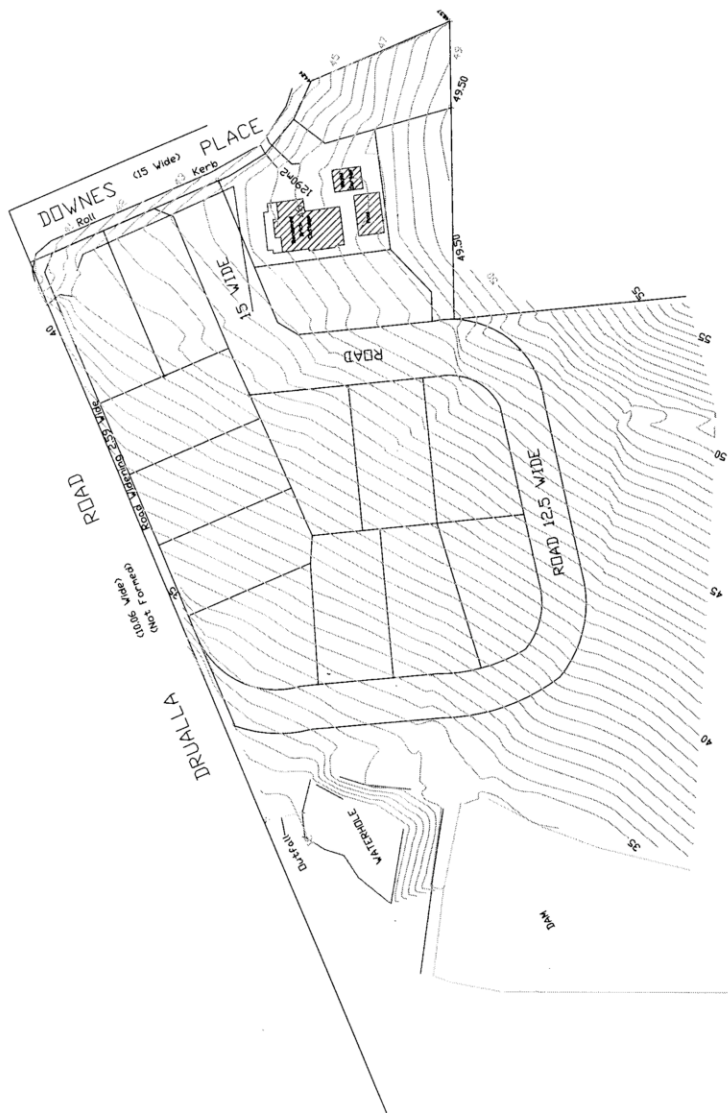
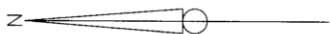
Drawing No: W07/1966-1

Client: D.Y. Surveyors

Project: Proposed Residential Subdivision

Location: LOT 100 & 101 DP 1157883, Downes Place, JAMBEROO

SITE PLAN



SCALE: 1: (AT A3 SIZE)
 CONTOUR INTERVAL: 500mm
 DATUM: AUSTRALIAN HEIGHT DATUM
 DRAWN: M.P.
 DATE: 27TH APRIL 2015

PLAN

OF PROPOSED LAYOUT OVER LOT 101 AND PART OF LOT 100
 IN D.P. 1157883 OFF DOWNES PLACE, JAMBEROO

D.Y. SURVEYORS PTY. LTD.

Mob: 0488 560 452 Fax: 4232 1019
 PO Box 178 KIAMA N.S.W. 2533
 Email: dyapl@bigpond.com