



# SITE CLASSIFICATION REPORT

Zuccoli Aspire Stage 5A & 5B

PROVIDED FOR INFORMATION PURPOSES ONLY  
AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION  
- BUILDER ARE TO INFORM THEMSELVES

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964 WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARAUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

## Document Information

Client	Ostojic Group Pty Ltd
Project	Zuccoli Aspire Stage 5A & 5B – Site Classifications
Job/Report Number	D835 8854
Revision Number	1
Date	9/11/2016

PROVIDED FOR INFORMATION PURPOSES ONLY  
AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION  
- BUILDER ARE TO INFORM THEMSELVES

[HIQA.COM.AU](http://HIQA.COM.AU)

### DARWIN

PHONE: (08) 8947 4802  
EMAIL: [DARWIN@HIQA.COM.AU](mailto:DARWIN@HIQA.COM.AU)  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: [KATHERINE@HIQA.COM.AU](mailto:KATHERINE@HIQA.COM.AU)  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: [ALICE@HIQA.COM.AU](mailto:ALICE@HIQA.COM.AU)  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

## Table of Contents

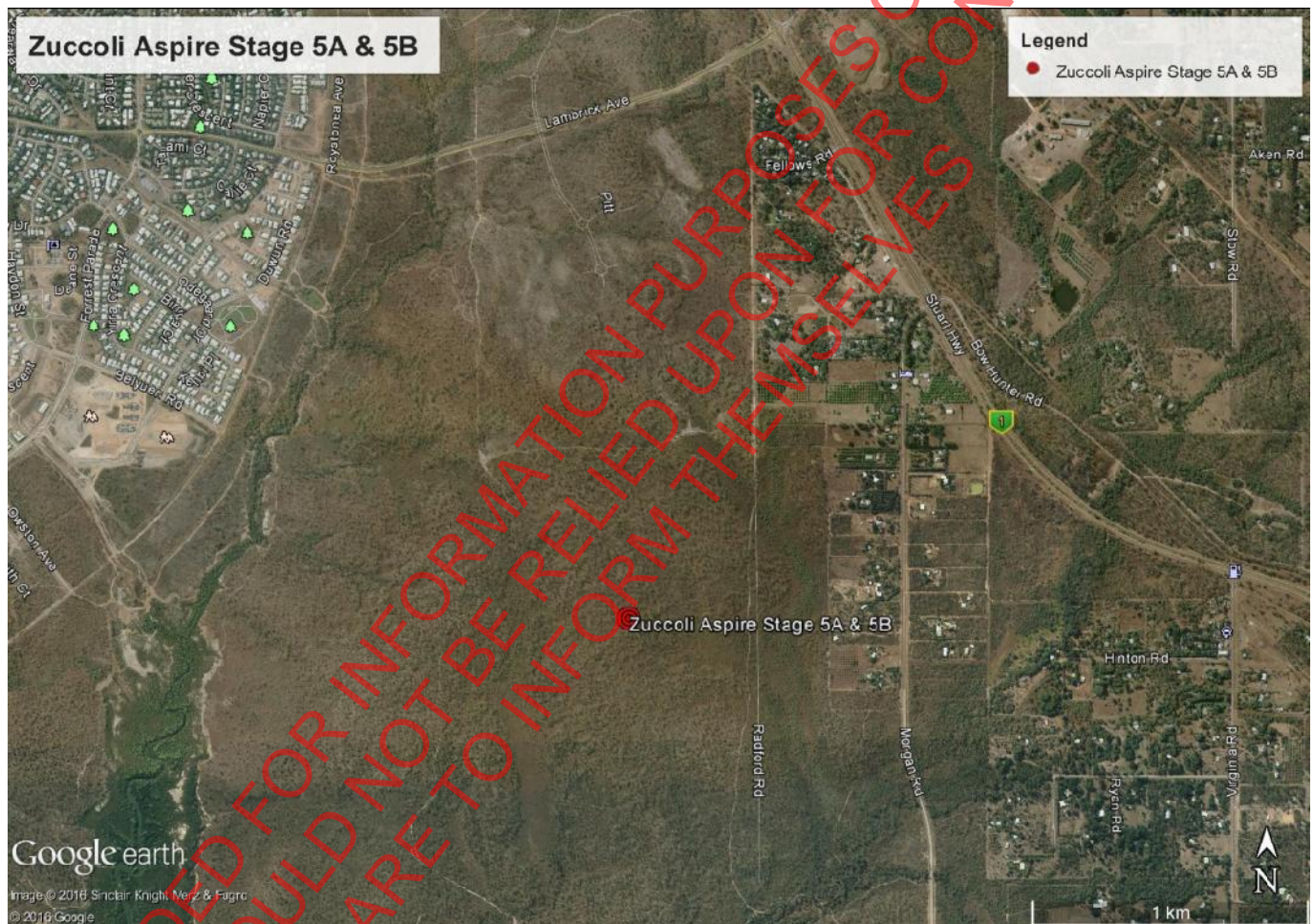
<b>1</b>	<b>Introduction</b>	<b>4</b>
1.1	Background	4
1.2	Scope of Works	4
<b>2</b>	<b>Site Conditions</b>	<b>5</b>
2.1	Regional Geological Description	5
2.2	Site Description	5
2.3	Subsurface Conditions	5
<b>3</b>	<b>Site Classification</b>	<b>5</b>
3.1	Allowable Bearing Capacity	6
3.2	Site Classification	6
3.3	Moisture Control	7
<b>4</b>	<b>Comments</b>	<b>7</b>
<b>5</b>	<b>Important Information about your Site Investigation &amp; Classification Report</b>	<b>8</b>
<b>6</b>	<b>General Notes &amp; Limitations of Geotechnical Site Investigation</b>	<b>10</b>
<b>Appendices</b>		
Appendix A	Site Plan	
Appendix B	Visual & Tactile Classification - Test Pits	
Appendix C	Laboratory Test Reports	
Appendix D	CSIRO Information Sheet BTF 18	
<b>Tables</b>		
Table 3.1	Classification Based off Site Reactivity	6
Table 3.2	Summary of Site Classifications	6

## 1. Introduction

HiQA Geotechnical (HiQA) have been commissioned by the Ostojic Group Pty Ltd (OST GRP) to undertake the site classification report for Zuccoli Aspire Stage 5A and 5B. An investigation was undertaken on Stage 5A and 5B to ascertain the site classifications for each of the lots.

### 1.1 Background

Zuccoli Aspire Stage 5A and 5B is located in Palmerston, a satellite city of Darwin located approximately 21km south east of Darwin. (refer **Figure 1**) Stage 5A and 5B is centred approximately at; Zone 52 L, Easting 718 326m & Northing 8615 443m.



**Figure 1 – Approximate Location of Stage 5A and 5B**

### 1.2 Scope of Works

The primary objective of the investigation was to assess the lots for their classification according to AS2870-2011. This is to aid the purchasers when building a home. OST GRP completed all filling operations on the site as per the requirements of the project specification.. The bore holes undertaken are presented in **Appendix A**.

HIQA.COM.AU



The scope of works were as follows;

- Undertake test pitting as per the requirements of AS2870-2011
- Log each test pit to AS1726
- DCP testing was undertaken adjacent to each test pit
- Summarise all of the findings into a final report outlining the classifications

The site investigation, laboratory testing & reporting requirements were conducted with reference to the following publications;

- AS 1726 – Geotechnical Site Investigations
- AS 2870-2011 – Residential Slabs & Footings
- Northern Territory Geological Survey, Geological Map Series

## 2. Site Conditions

### 2.1 Regional Geological Description

The project site area is best described by the published maps & information provided by the Northern Territory Geological Survey. The particular map referenced is the 1:250,000 Geological Map Series (Sheet SD 52-4, Second Edition).

The map indicates that the site is underlain by Quaternary age deposits comprising unconsolidated sands and pisolitic and mottled laterite. The unconsolidated sands consist of ferruginous and clayey, sandy and gravelly soils commonly containing limonite pisolites, while the lateritic soils consist of both in-situ and re-worked remnants of standard lateritic profiles. The Quaternary deposits are indicated to be underlain by the Early Proterozoic Age Finnis River Group and the Mount Partridge Group.

### 2.2 Site Description

When the investigation took place the earthworks had been completed for Stage 5A and 5B. The area has a general slope from the northwest to the southeast. The blocks are flat and well graded with no vegetation on the site.

No groundwater or seepage was observed during the site works.

### 2.3 Subsurface Conditions

The subsurface material was assessed by undertaking test pits (BH 1 – BH 137) with a trailer mounted drill rig. An image of the site is attached in **Appendix A**. Detailed descriptive visual & tactile observations are presented in **Appendix B**.

The material encountered on site can be predominately described as a Silty Sandy GRAVEL. The bore holes that were undertaken in the cut areas predominately refused on an extremely weathered Sandstone/Siltstone. This layer of extremely weathered rock is consistent throughout the test pits and follows a typical pattern.

## 3. Site Classification

Australian Standard AS2870-2011 establishes performance requirements and specific designs for common foundation conditions.

Site Classifications as defined in AS2870-2011 – 2.1 - General – Table 2.1 – Classification Based on Site Reactivity are summarised in **Table 3.1**.

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

**Table 3.1 – Classification Based on Site Reactivity**

Class	Foundation
A	Most sand and rock sites with little or no ground movement from moisture change
S	Slightly reactive clay sites, which may experience only slight ground movement from moisture changes
M	Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture change
H1	Highly reactive clay sites, which may experience high ground movement from moisture change
H2	Highly reactive clay sites, which may experience very high ground movement from moisture change
E	Extremely reactive sites, which may experience extreme ground movement from moisture change

### 3.1 Allowable Bearing Capacity

Allowable bearing capacity assessments were undertaken via the use of DCP testing adjacent to select test pit. These results are presented in **Appendix C**.

The results of the fieldwork indicate the near surface foundation strata of the site **should** provide an allowable bearing capacity of at least 100 kpa.

### 3.2 Site Classifications

In accordance with *AS2870-2011 Residential Slabs & Footings* the sites have been classified in **Table 3.2 – Summary of Site Classifications**.

**Table 3.2 – Summary of Site Classifications**

Lot Numbers	Site Classification
003, 004, 005, 006	<b>Class A – Non-reactive</b>
001, 002, 007, 010, 012, 025, 026, 028, 029, 033, 045, 046, 061, 062, 063, 064, 065, 066, 067, 069, 070, 072, 073, 076, 077, 078, 080, 081, 082, 083, 084, 085, 088, 089, 090	<b>Class S – Slightly Reactive</b>
020, 021, 024, 038, 039, 040, 075	<b>Class P = S</b> - Reclassified due to <b>Controlled Fill</b> on the site. Slightly Reactive
008, 009, 011, 013, 027, 031, 032, 034, 035, 043, 044, 047, 048, 049, 050, 051, 052, 053, 054, 055, 056, 057, 059, 060, 068, 071, 079, 086, 087	<b>Class M – Moderately Reactive</b>
014, 015, 016, 017, 018, 019, 022, 023, 030, 036, 037, 041, 042, 058, 074,	<b>Class P = M</b> - Reclassified due to <b>Controlled Fill</b> on the site. Moderately Reactive

Detailed visual & tactile test pit logs are presented in **Appendix B**.

HIQA.COM.AU

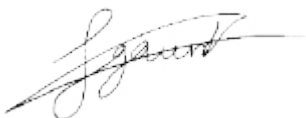
### 3.3 Moisture Control

In order to minimize the potential for unnatural or extreme moisture variation and subsequent soil volume changes within the foundation strata, the recommendations given in the CSIRO "Guide to home owners on foundation maintenance and footing performance" should be adopted.

## 4. Comments

Should you have any queries in relation to this report, please do not hesitate to contact HiQA.

Approved By;



Daniel Gaunt

HiQA Geotechnical  
Darwin Laboratory Branch Manager  
P: (08) 8947 4802  
M: 0458 726 111  
E: d.gaunt@hiqa.com.au

PROVIDED FOR INFORMATION PURPOSES ONLY  
AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION  
- BUILDER ARE TO INFORM THEMSELVES

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARLUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

## 5. Important Information about your Site Investigation & Classification Report

More construction problems are caused by site subsurface conditions than any other factor. As troublesome as subsurface problems can be, their frequency and extent have been lessened considerably in recent years, due in large measure to programs and publications of ASFE / The Association of Engineering Firms Practicing in Geosciences.

The following suggestions and observations are offered to help you reduce the geotechnical - related delays, costs – overruns and other costly headaches that can occur during a construction project.

### SITE INVESTIGATION & CLASSIFICATION REPORT IS BASED ON A UNIQUE SET OF PROJECT – SPECIFIC FACTORS

A Site Investigation & Classification Report is based on a surface exploration plan designed to incorporate a unique set of project-specific factors. These typically include: the general nature of the structure involved; its size and configuration; location of the structure on the site and its orientation; physical contaminants such as access roads, parking lots and underground utilities, and the level of additional risk which the client assumed by the virtue of limitations imposed upon the exploratory program. To help avoid costly problems, consult the geotechnical engineer to determine how any factors which change subsequent to the date of the report may affect its recommendations.

Unless your consulting geotechnical engineer indicates otherwise, your Geotechnical Engineering Report should not be used:

- When the nature of the proposed structure is changed, for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an un-refrigerated one;
- When the size or configuration of the proposed structure is altered;
- When the location or orientation of the proposed structure is modified;
- When there is a change of ownership;
- For an application to an adjacent site

*Geotechnical professionals cannot accept responsibility for problems which may develop if they are not consulted after the factors considered in the report have changed.*

### MOST GEOTECHNICAL “FINDINGS” ARE PROFESSIONAL ESTIMATES

Site exploration identifies actual subsurface conditions only at those points where samples are taken, when they are taken, data derived through sampling and subsequent laboratory testing are extrapolated by geotechnical engineers who then render an opinion about overall subsurface conditions, their likely reaction to proposed construction activity, and appropriate foundation design. Even under optimal circumstances actual conditions may differ from those inferred to exist, because no geotechnical engineer, no matter how qualified, and no subsurface exploration program, no matter how comprehensive can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than a report indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to prevent the unanticipated, but steps can be taken to help minimize their impact. For this reason, most experienced owners retain their geotechnical consultants through the construction stage, to identify variances, conduct additional tests which may be needed, and to recommend solutions to problems encountered onsite.

### SUBSURFACE CONDITIONS CAN CHANGE

Subsurface conditions may be modified by constantly changing natural forces. Because a geotechnical report is based on conditions which existed at the time of subsurface exploration, construction decisions should not be based on a geotechnical engineering report whose adequacy may have been affected by time. Speak with the geotechnical consultant to learn if additional tests are advisable before construction starts.

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARLUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Construction operations at or adjacent to the site and natural events such as floods, earthquakes or ground water fluctuations may also effect subsurface conditions and, thus continuing adequacy of a geotechnical report. The geotechnical engineer should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary. GEOTECHNICAL SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND PERSONS

Geotechnical engineer's reports are prepared to meet the specific needs of specific individuals. A report prepared for a consulting civil engineer may not be adequate for a construction contractor, or even some other consulting civil engineer. Unless indicated otherwise, this report was prepared expressly for the client involved and expressly for purposes indicated by the client. Use by any other persons for any purpose, may result in problems. No individual other than the client should apply this report for its intended purpose without first conferring with the geotechnical engineer. No person should apply this report for any purpose other than that originally contemplated without first conferring with the geotechnical engineer.

#### A GEOTECHNICAL ENGINEERING REPORT IS SUBJECT TO MISINTERPRETATION

Costly problems can occur when other design professionals develop their plans based on misinterpretations of a geotechnical report. To help avoid these problems, the geotechnical engineer should be retained to work with other appropriate design professionals to explain relevant geotechnical findings and review adequacy of the plans and specifications relevant to geotechnical issues.

#### BORING LOGS SHOULD NOT BE SEPARATED FROM THE ENGINEERING REPORT

Further boring logs are developed based upon interpretation of field logs assembled by site personnel and laboratory evaluation of field samples. Only final boring logs customarily are included in Site Investigation & Classification Reports. These logs should not under any circumstance be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process. Although photographic reproduction eliminates this problem, it does nothing to minimize the possibility of contractors, misinterpreting the logs during bid preparation. When this occurs delays, disputes and unanticipated results are the all too frequent result.

To minimize the likelihood of boring log misinterpretation, give contractors ready access to the complete geotechnical engineering report prepared or authorized for their use. Those who do not provide such access may proceed under the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and adversarial attitudes which aggravate them to disproportionate scale.

#### READ RESPONSIBILITY CLAUSES CLOSELY

Because geotechnical engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines.

This situation has resulted in wholly unwarranted claims being lodged against geotechnical consultants. To help prevent this problem, geotechnical engineers have developed model clauses for use in written transmittals. These are not exculpatory clauses designed to foist geotechnical engineer's responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely.

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARLUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

## 6. General Notes & Limitations of Geotechnical Site Investigation

### GENERAL

This report comprises the results of an investigation carried out for a specific purpose and client as defined in the introduction section(s) of the document. The report should not be used by other parties or for other purposes as it may not contain adequate or appropriate information.

### TEST PIT / BOREHOLE LOGGING

The information on the Logs (Borehole, Backhoe Pits, and Exposures etc.) has been based on a visual and tactile assessment except at the discrete locations where test information is available (field and/or laboratory results).

Reference should be made to our standard sheets for the definition of our logging procedures (Soils and Rock Description).

### GROUNDWATER

Unless otherwise indicated the water levels given on the test hole logs are the levels of free water or seepage in the test hole recorded at the given time of measuring. The actual groundwater level may differ from this recorded level depending on material permeability. Further variations of this level could occur with time due to such effects as seasonal and tidal fluctuations or construction activities. Final confirmation of levels can only be made by appropriate instrumentation and techniques and programs.

### INTERPRETATION OF RESULTS

The discussions and recommendations contained in this report are normally based on site evaluation from discrete test hole data. Generalized or idealized subsurface conditions (including any cross-sections contained in the report) have been assumed or prepared by interpolation/extrapolation of these data. As such these conditions are interpretation and must be considered as a guide only.

### CHANGE IN CONDITIONS

Local variations or anomalies in the generalized ground conditions used for this report can occur, particularly between discrete test hole locations. Furthermore, certain design or construction procedures may have been assumed in assessing the soil-structure interaction behaviour of the site.

### FOUNDATION DEPTH

Where referred to in this report, the recommended depth of any foundation (piles, caissons, footings, etc.) is an engineering estimate of the depth to which they should be constructed. The estimate is influenced and perhaps limited by the fieldwork method and testing carried out in connection with the site investigation, and other pertinent information as has been made available. The depth remains, however, an estimate and therefore liable to variation. Foundation drawings, designs and specifications based on this report should provide for variations in the final depth depending upon the ground conditions at each point of support.

### REPRODUCTION OF REPORTS

Where it is desired to reproduce the information contained in this report for the inclusion in the contract documents or engineering specifications of the subject development, such reproduction should include at least the entire relevant trial hole and test data, together with the appropriate standard description sheets and remarks in the written report of a factual or descriptive nature.

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARLUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

## SCOPE OF SERVICES

This geotechnical site assessment report ("The Report") has been prepared in accordance with the scope of services set out in the contract, or as otherwise agreed between the Client and HiQA ("Scope of Services"). In some circumstances the Scope of Services may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints.

## RELIANCE ON DATA

In preparing the report, HiQA has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("The Data"). Except as otherwise stated in the report, HiQA has not verified the accuracy or completeness of The Data to the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("Conclusions") are based in whole or part on The Data, those conclusions are contingent upon the accuracy and completeness of The Data. HiQA will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to HiQA.

## GEOTECHNICAL INVESTIGATION

Geotechnical engineering is based extensively on judgment and opinion. It is far less exact than other engineering disciplines. Geotechnical engineering reports are prepared to meet the specific needs of individuals. A report prepared for a consulting civil engineer may not be adequate for a construction contractor or even some other consulting civil engineer. This report was prepared expressly for the Client and expressly for purposes indicated by the Client or his/her representative. Use by any other persons for any purpose or by the Client for a different purpose, might result in problems. The Client should not use this report for other than its intended purpose without seeking additional geotechnical advice.

## THIS GEOTECHNICAL REPORT IS BASED ON PROJECT-SPECIFIC FACTORS

This report is based on a subsurface investigation which was designed for project-specification factors, including the nature of any development, its size and configuration, the location of any development on the site and its orientation, and the location of access roads and parking areas. Unless further geotechnical advice is obtained this report cannot be used when the nature of any proposed development is changed, or when the size, configuration location or orientation of any proposed development is modified.

This report cannot be applied to an adjacent site. The Limitations of Site Investigation in making an assessment of a site from a limited number of boreholes or test pits there is the possibility that variations may occur between test locations. Site exploration identifies specific subsurface conditions only at those points from which samples have been taken. The risk that variations will not be detected can be reduced by increasing the frequency of test locations; however this often does not result in any overall cost savings for the project. The investigation programme undertaken is a professional estimate of the scope of investigation required to provide a general profile of the subsurface conditions. The data derived from the site investigation programme and subsequent laboratory testing are extrapolated across the site to form an inferred geological model and an engineering opinion is rendered about overall subsurface conditions and their likely behaviour with regard to the proposed development. Despite investigations the actual conditions at the site might differ from those inferred to exist, since no subsurface exploration programme, no matter how comprehensive, can reveal all subsurface details and anomalies. The borehole logs are the subjective interpretation of subsurface conditions at a particular location, made by trained personnel the interpretation may be limited by the method of investigation, and cannot always be definitive. For example, inspection of an excavation or test pit allows a greater area of the subsurface profile to be inspected than borehole investigation; however, such methods are limited by depth and site disturbance restrictions. In borehole investigation the actual interface between materials may be more gradual or abrupt than a report indicates.

## SUBSURFACE CONDITIONS ARE TIME DEPENDENT

Subsurface conditions may be modified by changing natural forces or man-made influences. This report is based on conditions which existed at the time of subsurface exploration. Construction operations at, or adjacent to the site and natural

HIQA.COM.AU

### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARLUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

events such as floods, or groundwater fluctuations, may also affect subsurface conditions and thus the continuing adequacy of a report. The geotechnical engineer should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

#### AVOID MISINTERPRETATION

A geotechnical engineer should be retained to work with other appropriate design professionals explaining relevant geotechnical findings and in reviewing the adequacy of their plans and specifications relative to geotechnical issues.

#### BORE PROFILE LOGS SHOULD NOT BE SEPARATED FROM THE ENGINEERING REPORT

Bore/profile logs are developed by geotechnical engineers based upon their interpretation of field logs and laboratory evaluation of field samples. Customarily, only the final bore/profile logs are included in geotechnical engineering reports. These logs should not under any circumstances be redrawn for inclusion in architectural or other design drawings. To minimise the likelihood of bore/profile log misinterpretation, contractors should be given access to the complete geotechnical engineering report prepared or authorised for their use. Providing the best available information to contractors helps prevent costly construction problems. For further information on this matter reference should be made to Guidelines for the Provision of Geotechnical Information in Construction Contracts published by the Institution of Engineers Australia, National Headquarters. Canberra 1987.

#### GEOTECHNICAL INVOLVEMENT DURING CONSTRUCTION

During construction, excavation is frequently undertaken which exposes the actual subsurface conditions. For this reason geotechnical consultants should be retained through the construction stage, to identify variations if they are exposed and to conduct additional tests which may be required and to deal quickly with geotechnical problems if they arise

#### REPORT FOR BENEFIT OF CLIENT

The report has been prepared for the benefit of the Client and no other party. HiQA assumes no responsibility and will not be liable to any other person or organisation for, or in relation to, any matter dealt with or conclusions expressed in the report or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report (including, without limitation, matters arising from any negligent act or omission of HiQA or to any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in the report). Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own enquiries and obtain independent advice in relation to such matters.

#### OTHER LIMITATIONS

HiQA will not be liable to update or revise the report to take into account any events or emergent circumstances or facts occurring or becoming apparent after the date of the report.

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARLUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

PROVIDED FOR INFORMATION PURPOSES ONLY  
AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION  
- BUILDER ARE TO INFORM THEMSELVES

## APPENDIX A

### Site Plan

[HIQA.COM.AU](http://HIQA.COM.AU)

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: [DARWIN@HIQA.COM.AU](mailto:DARWIN@HIQA.COM.AU)  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: [KATHERINE@HIQA.COM.AU](mailto:KATHERINE@HIQA.COM.AU)  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: [ALICE@HIQA.COM.AU](mailto:ALICE@HIQA.COM.AU)  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



**LEGEND**

■ ■ ■ ■ ■ WORKS BOUNDARY

————— PROPOSED KERB LINE

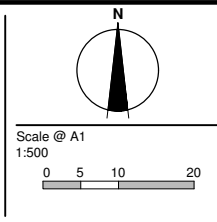
Pt	Chainage	Easting	Northing	Level	Bearing	Rad/Spiral	A.Length	D.Angle
IP1	0	4121.441	1503.495	20.574	243°07'00.00"			
TC	108.436	4024.724	1454.463	21.522	243°07'00.00"			
IP2	119.816	4012.042	1448.034	21.43		-15	22.759	86°56'00.00"
CT	131.196	4017.784	1435.027	21.266	156°11'00.00"			
TC	241.578	4062.357	1334.044	19.341	156°11'00.00"			

ZUCCOLI PARADE SETOUT TABLE					
PI	Chainage	Easting	Northing	Level	Bearing
IP1	0	4105.978	1534.897	21.12	153°47'00.00"
IP2	259.472	4220.604	1302.117	16.443	153°47'00.00"



A	Issue for Construction	18/03/16	RT/CH	BG
REVISION		DATE	DES/DFT	APP'D

Principal Costonjic Pty Ltd	PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE SIGNED ..... DATE ..... DIRECTOR OF TECHNICAL SERVICES CITY OF PALMERSTON This permission to use is given on the basis that the Developer and/or Consultant is not absolved from full responsibility for the correctness and accuracy of the design and/or associated documents. This permission is valid for a period of two years from the date of signed approval	Project Leader S. Fraser Designed R.Tait Drawn C. Haywood Checked G.Wilkin Authorised B. Godfrey (MIEAust) Date October 2015



© SMEC Australia Pty Ltd  
ABN 47 065 475 149

---

These designs and drawings are the copyright of SMEC Australia Pty Ltd. The drawing shall not be reproduced or copied, in whole or part, without the written permission of SMEC Australia Pty Ltd. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they are intended.

 **SMC**

**SMC AUSTRALIA PTY LTD**  
(C) ABN 47 065 475 149

**SMC AUSTRALIA**  
Level 1, 48-50 Smith St, Darwin, NT 0800, Australia  
p +61 8 8981 4806 | f +61 8 8941 0848 | [www.smc.com](http://www.smc.com)

Brisbane	+61 7 38331 8988	Gold Coast	+61 7 5578 0200
Campbelltown	+61 2 4640 8222	Melbourne	+61 3 9669 8800
Canberra	+61 2 6126 1900	Perth	+61 8 9322 5900
Geelong	+61 3 5228 3100	Torquay	+61 5 5123 0100

**Zuccoli 5**  
Detailed Design - Precinct A  
City of Palmerston  
Roadworks  
Roadworks Centreline Setout Plan  
**Drawing No.** 30030087E-A-201  
**Rev A**  
**Dev. App. No.** DP15/0587  
Sheet No. 1 of 1

---

Issue for Construction



PROVIDED FOR INFORMATION PURPOSES ONLY  
AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION  
- BUILDER ARE TO INFORM THEMSELVES

## APPENDIX B

### Visual & Tactile Classification - Test Pits

[HIQA.COM.AU](http://HIQA.COM.AU)

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: [DARWIN@HIQA.COM.AU](mailto:DARWIN@HIQA.COM.AU)  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: [KATHERINE@HIQA.COM.AU](mailto:KATHERINE@HIQA.COM.AU)  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: [ALICE@HIQA.COM.AU](mailto:ALICE@HIQA.COM.AU)  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 1	0.00 – 0.25	Moist	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	TOPSOIL	Natural
BH 1	0.25 – 0.45	Dry	ML	Very Pale Brown – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 45 50	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 0.45m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 33  
E 718244  
N 8615384

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 2	0.00 – 0.25	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	TOPSOIL	Natural
BH 2	0.25 – 0.55	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	25 20 15	Fine to Course	Fine to Course	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 0.55m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 33/32  
E 718241  
N 8615391

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 3	0.00 – 0.20	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 3	0.20 – 0.45	Moist	SM	Pale Grey – Silty SAND trace Gravel	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 35 40	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Roots present
BH 3	0.45 – 1.00	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	25 20 15	Fine to Course	Fine to Course	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 1.0m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 32  
E 718240  
N 8615397

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 30/8/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 4	0.00 – 0.30	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 4	0.30 – 0.50	Moist	SM	Pale Grey – Silty SAND trace Gravel	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 35 40	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural
BH 4	0.50 – 0.90	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	25 20 20	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERED ROCK	Refusal @ 0.90m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 31  
E 718232  
N 8615408

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 5	0.00 – 0.40	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	30 25 20	Fine to Course	Fine to Course	Sub Angular-Sub Rounded	FILL	
BH 5	0.40 – 0.50	Moist	SM	Pale Grey – Silty SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	1 35 40	Fine to Course	-	-	-	Natural
BH 5	0.50 – 0.55	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	25 20 15	Fine to Course	Fine to Course	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 0.55m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 31/30  
E 718235  
N 8615414

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 6	0.00 – 0.50	Moist	GM	Pale Red – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	25 25 20	Fine to Course	Fine to Course	Sub Angular-Sub Rounded	FILL	
BH 6	0.50 – 0.65	Moist	SM	Pale Grey – Gravelly SAND with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 10 5	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
Lot 30 E 718230 N 8615420												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 7	0.00 - 0.35	Moist	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 7	0.35 – 0.55	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 15 15	Fine to Course	Fine to Medium	Angular-Sub Angular	-	Natural, Refusal @ 0.55m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 29  
E 718222  
N 8615429

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 8	0.00 – 0.30	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 8	0.30 – 0.50	Dry	GM	Pale Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	30 10 5	Fine to Course	Fine to Course	Sub Angular-Sub Rounded	-	Natural
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 29/28  
E 718222  
N 8615434

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 9	0.00 – 0.25	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 9	0.25 – 0.75	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural
BH 9	0.75 – 1.10	Dry	GM	Dark Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	25 10 5	Fine to Course	Fine to Course	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 1.10m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 28 E 718219 N 8615442												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 10	0.00 – 0.25	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 10	0.25 – 1.25	Dry	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 45 40	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural
BH 10	1.25 – 1.50	Dry	GM	Very Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 50 50	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 27  
E 718215  
N 8615454

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 30/8/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 11	0.00 - 0.25	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 11	0.25 – 0.80	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 30 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 26  
E 718209  
N 8615463

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 30/8/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 12	0.00 – 0.25	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 20 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 12	0.25 – 0.50	Moist	SM	Pale Yellow/Brown – Silty SAND trace Gravel	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 15 10	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Sandstone, Refusal @ 0.50m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 27/26  
E 718212  
N 8615459

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date : 30/8/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 13	0.00 – 0.25	Moist	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 13	0.25 – 0.90	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 25	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.90m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 13  
E 718202  
N 8615475

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 14	0.00 – 0.25	Moist	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 14	0.25 – 0.75	Dry	GM	Dark Red – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 25 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural
BH 14	0.75 – 0.85	Dry	GM	Very Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 30	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 0.95m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 13/12 E 718200 N 8615482												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 15	0.00 – 0.25	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	25 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 15	0.25 – 0.70	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.70m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
Lot 12 E 718197 N 8615487												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 16	0.00 – 0.25	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 16	0.25 – 1.00	Dry	GM	Dark Red/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 35 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural
BH 16	1.00 – 1.30	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Refusal @ 1.30m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 11  
E 718191  
N 8615498

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 17	0.00 – 0.35	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 17	0.35 – 0.75	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERED ROCK	Natural, Refusal @ 0.75m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 11/10  
E 718189  
N 8615504

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	30/8/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 18	0.00 – 0.30	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 18	0.30 – 1.10	Dry	GM	Pale Red/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 1.10m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 10 E 718180 N 8615519												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 19	0.00 – 0.30	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 19	0.30 – 0.80	Dry	SM	Pale Orange/Brown – Gravelly Silty SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 20	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 20	0.25 – 1.25	Dry	GM	Dark Red/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 35 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural
BH 20	1.25 – 1.50	Dry	GM	Very Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 30	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 9/8 E 718205 N 8615539												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :		30/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 21	0.00 – 0.20	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 21	0.20 – 0.50	Dry	SM	Dark Orange/Brown – Silty Gravelly SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.50m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 8  
E 718214  
N 8615546

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 30/8/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 22	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 22	0.25 – 0.45	Dry	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Quartz, Refusal @ 0.45m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	30/8/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 23	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 35 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	TOPSOIL	Natural, Refusal @ 0.25m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 7/6 E 718231 N 8615554												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 24	0.00 – 0.25	Moist	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 24	0.25 – 0.40	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Refusal @ 0.40m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 6 E 718236 N 8615557												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	30/8/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 25	0.00 – 0.30	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Refusal @ 0.30m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 5 E 718247 N 8615563												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	31/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 26	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 15	Fine to Course	Fine to Medium	Angular-Sub Angular	FILL	Refusal @ 0.25m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 5/4 E 718250 N 8615567												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	31/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 27	0.00 – 0.30	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 15	Fine to Course	Fine to Medium	Angular-Sub Angular	FILL	
BH 27	0.30 – 0.35	Dry	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 25 15	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.35m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 4 E 718259 N 8615569												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date : 31/8/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 28	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 15	Fine to Course	Fine to Medium	Angular-Sub Angular	FILL	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
						Lot 3 E 718268 N 8615575						

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	31/8/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 29	0.00 – 0.20	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 29	0.20 – 0.35	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 30 25	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERED ROCK	Natural, Refusal @ 0.35m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 3/2  
E 718275  
N 8615578

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	31/8/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 30	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 30	0.25 – 0.30	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 30 25	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERED ROCK	Natural, Refusal @ 0.30m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 2 E 718280 N 8615580												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :			Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 31	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 31	0.25 – 0.50	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	25 20 15	Fine to Course	Fine to Course	Sub Angular-Sub Rounded	-	Natural
BH31	0.50 – 0.85	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 30 20	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 2/1 E 718287 N 8615582												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 32	0.00 – 0.20	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 32	0.20 – 0.35	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural
BH 32	0.35 – 0.65	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 30 20	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 1  
E 718293  
N 8615586

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 1/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 33	0.00 – 0.60	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 33	0.60 – 0.80	Moist	SM	Pale Grey – Silty Gravelly SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	TOPSOIL	Natural
BH 33	0.80 – 1.10	Dry	GM	Very Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 15 15	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERED ROCK	Refusal @ 1.10m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 76  
E 718380  
N 8615529

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date : 1/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 34	0.00 – 0.60	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 34	0.60 – 0.80	Moist	SM	Pale Grey – Silty SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	2 25 25	Fine to Course	-	-	-	Natural
BH 34	0.80 – 0.95	Moist	SM	Very Pale Brown – Silty SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	2 25 25	Fine to Course	-	-	-	
BH 34	0.95 – 1.10	Dry	GM	Pale Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 10 5	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 1.10m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 76/77  
E 718379  
N 8615519

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 35	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 35	0.25 – 0.45	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	25 20 15	Fine to Course	Fine to Course	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.45m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 77  
E 718382  
N 8615509

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 36	0.00 – 0.20	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 36	0.20 – 0.55	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 15	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.55m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
Lot 78 E 718388 N 8615501												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 37	0.00 – 0.20	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 37	0.20 – 0.65	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 78/79  
E 718390  
N 8615494

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 38	0.00 – 0.20	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 38	0.20 – 0.45	Moist	SM	Dark Brown – Gravelly Silty SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 38	0.45 – 1.15	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 20 15	Fine to Course	Fine to Course	Angular-Sub Angular	EXTREMELY WEATHERED ROCK	Refusal @ 1.15m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 79  
E 718392  
N 8615488

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 39	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 39	0.25 – 0.50	Moist	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 39	0.50 – 1.35	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Refusal @ 1.35m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 80  
E 718395  
N 8615479

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	1/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 40	0.00 – 0.15	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 40	0.15 – 0.50	Moist	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 40	0.50 – 1.05	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERED ROCK	Refusal @ 1.05m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 80/81  
E 718405  
N 8615475

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 41	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 41	0.25 – 0.50	Moist	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 41	0.50 – 0.70	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 15 15	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 0.70m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 81  
E 718414  
N 8615474

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 42	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 42	0.25 – 0.50	Moist	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural
BH 42	0.50 – 1.20	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 15 15	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 1.20m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 82  
E 718418  
N 8615464

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 43	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 43	0.25 – 0.45	Moist	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 43	0.45 – 0.70	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 15 15	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERED ROCK	Refusal @ 0.70m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 82/83  
E 718421  
N 8615457

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 44	0.00 – 0.20	Moist	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	TOPSOIL	Natural
BH 44	0.20 – 0.80	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 83  
E 718415  
N 8615445

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 45	0.00 – 0.20	Moist	SM	Dark Grey – Silty Gravelly SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 10 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	TOPSOIL	Natural
BH 45	0.20 – 0.65	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 84 E 718421 N 8615436												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	1/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 46	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 20 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 46	0.25 – 0.90	Moist	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.90m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
						Lot 84/85 E 718423 N 8615428						

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 1/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 47	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 47	0.25 – 0.85	Moist	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 85 E 718428 N 8615418												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 1/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 48	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 48	0.25 – 0.35	Moist	GM	Dark Grey – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural
BH 48	0.35 – 1.25	Moist	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERED ROCK	Refusal @ 1.25m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 86  
E 718434  
N 8615391

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 49	0.00 – 0.30	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 49	0.30 – 0.60	Moist	GM	Dark Grey – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural
BH 49	0.60 – 1.50	Moist	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 86/87  
E 718439  
N 8615393

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 1/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 50	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 50	0.25 – 0.50	Moist	GM	Dark Grey – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Quartz and Cobbles in fill, Refusal @ 0.50m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 87 E 718446 N 8615394												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 51	0.00 – 0.25	Dry	SM	Pale Brown – Silty Gravelly SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 51	0.25 – 0.45	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Cobbles in fill, Refusal @ 0.45m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 88 E 718455 N 8615398												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	1/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 52	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 52	0.25 – 0.50	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Cobbles in fill, Refusal @ 0.50m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
						Lot 88/89 E 718460 N 8615399						

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 1/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 53	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 53	0.25 – 0.45	Dry	SM	Pale Brown – Silty SAND trace Gravel	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Cobbles if fill, Refusal @ 0.45m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 89  
E 718467  
N 8615403

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	1/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 54	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 54	0.25 – 0.40	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Cobbles in fill, Refusal @ 0.40m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
						Lot 89/90 E 718474 N 8615406						

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 1/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 55	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 55	0.25 – 0.45	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Large Cobbles in fill, Refusal @ 0.45m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 90 E 718476 N 8615410												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 56	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 56	0.25 – 0.50	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Laterite, Natural
BH 56	0.50 – 1.50	Dry	ML	Pale Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 45 40	Fine to Course	Fine to Medium	Angular-Sub Angular	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 25 E 718257 N 8615485												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 57	0.00 – 0.40	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 20 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 57	0.40 – 0.80	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, roots present Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 25/14  
E 718252  
N 8615489

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date : 2/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 58	0.00 – 0.65	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Quartz
BH 58	0.65 – 0.75	Moist	GM	Dark Grey – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 15 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 58	0.75 – 1.15	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Laterite, Refusal @ 1.15m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 14  
E 718249  
N 8615495

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 2/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 59	0.00 – 0.60	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Quartz
BH 59	0.60 – 0.65	Moist	GM	Dark Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 10 5	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present, Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 15 E 718245 N 8615502												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 60	0.00 – 0.55	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Quartz
BH 60	0.55 – 0.75	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Laterite
BH 60	0.75 – 0.95	-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 15/16  
E 718239  
N 8615508

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :			Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 61	0.00 – 0.50	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Quartz
BH 61	0.50 – 0.75	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMLEY WEATHERD ROCK	Laterite
BH 61	0.75 – 0.85	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 30 25	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMLEY WEATHERD ROCK	Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 16 E 718242 N 8615514												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 62	0.00 – 0.50	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 62	0.50 – 0.65	Moist	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Natural, Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 17 E 718266 N 8615522												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 2/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 63	0.00 – 0.50	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 63	0.50 – 0.70	Moist	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Fill, Refusal @ 0.70m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 17/18  
E 718275  
N 8615525

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date : 2/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 64	0.00 – 0.75	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 64	0.75 – 0.80	Moist	SM	Dark Grey – Silty Gravelly SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 18  
E 718285  
N 8615530

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 65	0.00 – 0.45	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 65	0.45 – 0.65	Dry	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Laterite
BH 65	0.65 – 1.50	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 35 30	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	No Refusal
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 19  
E 718305  
N 8615545

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 2/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 66	0.00 – 0.45	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 66	0.45 – 0.65	Moist	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural
BH 66	0.65 – 0.95	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 35 30	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 0.95
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 19/20  
E 718305  
N 8615539

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 2/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 67	0.00 – 0.40	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 67	0.40 – 0.70	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERED ROCK	Natural, Organics present, Refusal @ 0.70m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 20 E 718308 N 8615532												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 68	0.00 – 0.40	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 68	0.40 – 0.65	Dry	GM	Dark Orange/Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 10 10	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 21 E 718312 N 8615523												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 69	0.00 – 0.45	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Cobbles, Refusal @ 0.45m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 21/22 E 718316 N 8615516												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	2/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 70	0.00 – 0.45	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 70	0.45 – 0.60	Moist	SM	Dark Grey – Silty Gravelly SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 10 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural
BH 70	0.60 – 0.75	Moist	SM	Very Pale Orange/Brown – Silty Gravelly SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 10 15	Fine to Course	Fine to Course	Sub Angular-Sub Rounded	-	
BH 70	0.75 – 1.00	Dry	GM	Pale Orange/Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 10 5	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 1.0m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 22  
E 718316  
N 8615509

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 71	0.00 – 0.45	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Cobbles, Refusal @ 0.45m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 23 E 718297 N 8615503												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 2/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 72	0.00 – 0.45	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Cobbles, Refusal @ 0.45m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Loy 23/24 E 718288 N 8615502												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 73	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 73	0.25 – 0.50	Moist	GM	Dark Grey – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 73	0.50 – 1.00	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Refusal @ 1.0m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 24 E 718283 N 8615491												

Lot 24  
E 718283  
N 8615491

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 74	0.00 – 0.30	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 74	0.30 – 0.75	Moist	GM	Pale Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 10 10	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Roots present
BH 74	0.75 – 1.25	Dry	GM	Pale Orange – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 5 75	Fine to Course	Fine to Course	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 1.25m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 72  
E718283  
N 8615416

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 75	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 75	0.25 – 0.50	Moist	GM	Pale Grey/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 75	0.50 – 0.95	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 30 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERED ROCK	Refusal @ 0.95m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 72/73  
E 718280  
N 8615419

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	2/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 76	0.00 – 0.40	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 76	0.40 – 0.50	Moist	GM	Pale Grey/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 76	0.50 – 0.90	Moist	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 30 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERED ROCK	Refusal @ 0.90m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 73  
E 718279  
N 8615424

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 77	0.00 – 0.50	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 77	0.50 – 0.70	Moist	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Refusal @ 0.70m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 74 E 718274 N 8615434												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 2/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 78	0.00 – 0.40	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Cobbles, Refusal @ 0.40m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 74/75												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 79	0.00 – 0.20	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 79	0.20 – 0.50	Moist	GM	Pale Grey/Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 10 5	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 79	0.50 – 0.65	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERED ROCK	Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 75  
E 718268  
N 8615445

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	2/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 80	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 80	0.25 – 0.40	Moist	GM	Very Dark Black – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 15 10	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 80	0.40 – 0.85	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERED ROCK	Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 62  
E 718291  
N 8615449

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 81	0.00 – 0.50	Dry	ML	Pale Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 50 45	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 81	0.50 – 0.80	Moist	GM	Very Pale White – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 50 30	Fine to Course	Fine to Course	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 37  
E 718262  
N 8615336

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 82	0.00 – 0.60	Dry	ML	Pale Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 50 45	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 82	0.60 – 0.70	Dry	GM	Very Pale White – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 35 25	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.70m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 37/36  
E 718259  
N 8615344

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 83	0.00 – 0.65	Dry	ML	Dark Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 50 45	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 83	0.65 – 0.75	Dry	GM	Very Pale White – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 35 30	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.75m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
Lot 36 E 718257 N 8615348												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 84	0.00 – 0.55	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 84	0.55 – 0.65	Dry	GM	Very Pale White – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 35 E 718256 N 8615359												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 85	0.00 – 0.35	Dry	ML	Pale Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 50 45	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 85	0.35 – 1.10	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 40 30	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 1.10m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 35/34  
E 718254  
N 8615368

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 86	0.00 – 0.25	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 86	0.25 – 0.45	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural
BH 86	0.45 – 0.55	Dry	GM	Very Pale – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Refusal @ 0.55m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 34  
E 718251  
N 8615376

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 87	0.00 – 0.65	Moist	ML	Dark Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 50 40	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 87	0.65 – 0.80	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 35 25	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 58  
E 718312  
N 8615349

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	3/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 88	0.00 – 0.40	Moist	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 88	0.40 – 0.95	Dry	ML	Pale Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 50 45	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.95m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 58/59  
E 718303  
N 8615353

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 89	0.00 – 0.20	Moist	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 89	0.20 – 0.75	Dry	ML	Very Pale Brown – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 50 45	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.75m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 59 E 718300 N 8615361												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 90	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 90	0.25 – 0.60	Dry	ML	Very Pale Brown – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 50 45	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.60m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 60  
E 718294  
N 8615369

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 91	0.00 – 0.20	Dry	GM	Very Pale White – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Refusal @ 0.20m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 60/61 E 718293 N 8615375												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 92	0.00 – 0.40	Moist	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 92	0.40 – 0.60	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 30 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.60m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 61  
E 718301  
N 8615387

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 93	0.00 – 0.30	Moist	GM	Pale Orange –Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 93	0.30 – 0.80	Dry	ML	Pale Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 47  
E 718315  
N 8615392

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 94	0.00 – 0.25	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 94	0.25 – 0.65	Dry	ML	Pale Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 47/48  
E 718324  
N 8615395

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 95	0.00 – 0.30	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 95	0.30 – 1.00	Dry	ML	Pale Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 1.0m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 48 E 718332 N 8615399												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 96	0.00 – 0.70	Dry	ML	Dark Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 35 40	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.70m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 49 E 718344 N 8615404												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 97	0.00 – 0.95	Dry	ML	Pale Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.95m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 49/50 E 718353 N 8615408												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 98	0.00 – 0.35	Moist	GM	Dark Orange/Red – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 30 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMLEY WEATHERD ROCK	Natural, Laterite
BH 98	0.35 – 0.55	Dry	ML	Pale Orange/Brown – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMLEY WEATHERD ROCK	Refusal @ 0.55m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 50  
E 718366  
N 8615414

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	3/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 99	0.00 – 0.25	Dry	GM	Very Pale White – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 30 20	Fine to Course	Fine to Medium	Angular-Sub Angular	FILL	
BH 99	0.25 – 0.80	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 40 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
Lot 51 E 718376 N 8615404												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 100	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 100	0.25 – 0.80	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
						Lot 51/52 E 718378 N 8615397						

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 101	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 101	0.25 – 0.95	Dry	ML	Dark Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.95m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 52 E 718384 N 8615388												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 102	0.00 – 0.25	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 102	0.25 – 0.85	Dry	GM	Pale Yellow/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 40 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 53  
E 718384  
N 8615375

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 103	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 103	0.25 – 0.90	Dry	ML	Dark Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.90m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
						Lot 53/54 E 718367 N 8615368						

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 104	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 104	0.25 – 1.00	Dry	ML	Pale Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERED ROCK	Natural, Refusal @ 1.0m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 54 E 718366 N 8615367												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 105	0.00 – 0.20	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 105	0.20 – 0.35	Dry	ML	Pale Yellow/Brown – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.35m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 55  
E 718357  
N 8615362

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 106	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	20 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 106	0.25 – 0.75	Dry	ML	Pale Orange/Brown – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.75m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 55/56  
E 718351  
N 8615359

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 107	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 107	0.25 – 0.85	Dry	ML	Pale Orange/Brown – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 56 E 718343 N 8615355												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 108	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 108	0.25 – 0.80	Dry	ML	Pale Orange/Brown – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 56/57  
E 718342  
N 8615354

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 3/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 109	0.00 – 0.30	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 109	0.30 – 0.85	Dry	ML	Pale Brown – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 57  
E 718336  
N 8615353

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 4/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 110	0.00 – 0.55	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 110	0.55 – 0.65	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 15	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERED ROCK	Natural, Organics present Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 38 E 718269 N 8615295												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARLUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 111	0.00 – 0.50	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 111	0.50 – 0.65	Moist	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.65m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
						Lot 38/39 E 718276 N 8615297						

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date : 4/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 112	0.00 – 0.40	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 112	0.40 – 0.55	Moist	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 30 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Organics present, Refusal @ 0.55m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 39 E 718285 N 8615301												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 113	0.00 – 0.50	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 113	0.50 – 0.75	Dry	GM	Dark Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 10 5	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMLEY WEATHERD ROCK	Natural, Organics present
BH 113	0.75 – 0.85	Dry	GM	Pale Yellow/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 15 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMLEY WEATHERD ROCK	Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 40 E 718295 N 8615305												

Lot 40  
E 718295  
N 8615305

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 114	0.00 – 0.45	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	Cobbles, Refusal @ 0.45m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 40/41  
E 718303  
N 8615306

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 115	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 115	0.25 – 0.85	Dry	GM	Very Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 40 30	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERED ROCK	Natural, Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 41  
E 718310  
N 8615309

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 116	0.00 – 0.50	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 45 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 116	0.50 – 0.85	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 42  
E 718322  
N 8615315

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 117	0.00 – 0.20	Dry	ML	Dark Orange/Brown – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 45 40	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 117	0.20 – 0.95	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.95m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	

Lot 42/43  
E 718327  
N 8615318

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	4/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 118	0.00 – 0.20	Dry	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 118	0.20 – 0.75	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 25 20	Fine to Course	Fine to Medium	Angular-Sub Angular	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.75m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 43  
E 718334  
N 8615321

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 119	0.00 – 0.25	Dry	GM	Dark Red – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMLEY WEATHERD ROCK	Natural, Laterite
BH 119	0.25 – 0.90	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMLEY WEATHERD ROCK	Refusal @ 0.90m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 44  
E 718346  
N 8615330

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 120	0.00 – 0.25	Dry	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMLEY WEATHERD ROCK	Natural, Laterite
BH 120	0.25 – 0.75	Dry	SM	Pale Orange – Silty Gravelly SAND	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 10 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMLEY WEATHERD ROCK	
BH 120	0.75 – 1.10	Dry	GM	Pale Orange/Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 5 5	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMLEY WEATHERD ROCK	Refusal @ 1.10m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 44/45  
E 718358  
N 8615324

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 121	0.00 – 0.20	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 121	0.20 – 0.35	Moist	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 15 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Organics present, Refusal @ 0.35m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 45 E 718362 N 8615319												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 122	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 122	0.25 – 0.85	Dry	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Organics present, Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 45/46  
E 718362  
N 8615316

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 123	0.00 – 0.15	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	15 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 123	0.15 – 0.25	Dry	GM	Dark Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 15 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 123	0.25 – 0.80	Dry	GM	Dark Orange/Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 10 10	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMLEY WEATHERD ROCK	Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 46 E 718365 N 8615309												

Lot 46  
E 718365  
N 8615309

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	4/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 124	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 124	0.25 – 0.30	Moist	GM	Dark Grey/Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 10 5	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 124	0.30 – 0.40	Dry	GM	Dark Orange/Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 15 10	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Refusal @ 0.40m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 62/63  
E 718300  
N 8615456

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 125	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 125	0.25 – 0.35	Moist	GM	Dark Grey/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 25 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 125	0.35 – 0.70	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 15 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERED ROCK	Refusal @ 0.70m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 63  
E 718307  
N 8615460

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 126	0.00 – 0.30	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 126	0.30 – 0.50	Moist	GM	Dark Grey/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 15 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Organics present
BH 126	0.50 – 0.85	Dry	GM	Pale Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 10 5	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERED ROCK	Refusal @ 0.85m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 64  
E 718317  
N 8615467

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 127	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 127	0.25 – 0.75	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Organics present, Refusal @ 0.75m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
						Lot 64/65 E 718323 N 8615473						

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 4/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 128	0.00 – 0.30	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 128	0.30 – 0.70	Dry	GM	Dark Orange/Brown – Sandy GRAVEL with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 15 10	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural, Refusal @ 0.70m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 65 E 718334 N 8615481												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	4/9/16		Drill Rig/Excavator :		Excavator			Surface Elevation :		Finished Surface		
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 129	0.00 – 0.15	Moist	SM	Dark Grey – Gravelly SAND with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	25 10 5	Fine to Course	Fine to Course	Sub Angular-Sub Rounded	TOPSOIL	Natural
BH 129	0.15 – 0.80	Dry	GM	Dark Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 20 15	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Laterite, Refusal @ 0.80m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 66  
E 718344  
N 8615472

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date :	4/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 130	0.00 – 0.25	Dry	SM	Pale Brown – Gravelly SAND with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 10 5	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.25m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 66/67  
E 718346  
N 8615466

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 4/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 131	0.00 – 0.25	Dry	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 25 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 131	0.25 – 1.10	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Refusal @ 1.10m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 67  
E 718350  
N 8615462

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date :	5/9/16		Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 132	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 132	0.25 – 0.50	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural
BH 132	0.50 – 1.15	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 1.15m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	- - -	-	-	-	-	

Lot 68  
E 718352  
N 8615452

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 5/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 133	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 133	0.25 – 0.55	Dry	SM	Pale Orange – Gravelly SAND with Silt	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 10 5	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.55m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
						Lot 68/69 E 718332 N 8615446						

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 5/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 134	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 134	0.25 – 0.50	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 30 20	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.50m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 69 E 718326 N 8615443												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 5/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 135	0.00 – 0.30	Dry	GM	Dark Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 135	0.30 – 1.25	Dry	GM	Pale Orange – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
Lot 70 E 718319 N 8615439												

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
 EMAIL: DARWIN@HIQA.COM.AU  
 OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
 POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
 EMAIL: KATHERINE@HIQA.COM.AU  
 OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
 POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
 EMAIL: ALICE@HIQA.COM.AU  
 OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
 POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



Date : 5/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 136	0.00 – 0.30	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 136	0.30 – 0.60	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 30 25	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural, Refusal @ 0.60m
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)	-	-	-	-	-	
						Lot 70/71 E 781311 N 8615434						

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

Date : 5/9/16			Drill Rig/Excavator :		Excavator				Surface Elevation :		Finished Surface	
TP/BH (No.)	Depth (m)	Estimated Moisture Condition	USC	Colour & Visual Description	Estimated Consistency	Estimated Properties	-	Estimated Sand Grain Size	Estimated Gravel Grain Size	Estimated Gravel Shape	Estimated Material Origin	Comments
BH 137	0.00 – 0.25	Dry	GM	Pale Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 35 30	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	FILL	
BH 137	0.25 – 0.75	Dry	SM	Dark Orange – Gravelly Sandy SILT	-	MPS (mm) LL (%) Pass. 0.075 (%)	5 45 40	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	-	Natural
BH 137	0.75 – 1.50	Dry	GM	Pale Orange/Brown – Silty Sandy GRAVEL	-	MPS (mm) LL (%) Pass. 0.075 (%)	10 40 35	Fine to Course	Fine to Medium	Sub Angular-Sub Rounded	EXTREMELY WEATHERD ROCK	Natural
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	
		-	-		-	MPS (mm) LL (%) Pass. 0.075 (%)		-	-	-	-	

Lot 71  
E 781302  
N 8615432

\*\*Constituent Parts are logged: Second Least MOST, MPS = Maximum Particle Size, \*\*LL = Liquid Limit, Pass. 0.075 = Passing the 0.075mm Sieve\*\*

HIQA.COM.AU

**DARWIN**

PHONE: (08) 8947 4802  
EMAIL: DARWIN@HIQA.COM.AU  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

**KATHERINE**

PHONE: (08) 8947 4802  
EMAIL: KATHERINE@HIQA.COM.AU  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

**ALICE SPRINGS**

PHONE: (08) 8947 4802  
EMAIL: ALICE@HIQA.COM.AU  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871

## APPENDIX C

### Laboratory Test Reports

PROVIDED FOR INFORMATION PURPOSES ONLY  
AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION  
- BUILDER ARE TO INFORM THEMSELVES

[HIQA.COM.AU](http://HIQA.COM.AU)

#### DARWIN

PHONE: (08) 8947 4802  
EMAIL: [DARWIN@HIQA.COM.AU](mailto:DARWIN@HIQA.COM.AU)  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

#### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: [KATHERINE@HIQA.COM.AU](mailto:KATHERINE@HIQA.COM.AU)  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

#### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: [ALICE@HIQA.COM.AU](mailto:ALICE@HIQA.COM.AU)  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 A  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 1		8731/ 2		8731/ 3		8731/ 4		8731/ 5	
Location:	Lot 33		Lot 33/32		Lot 32		Lot 31		Lot 31/30	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	10	10	14	7	21	5	9	11	19	5
100-200	17	6	17	6	18	6	12	8	15	7
200-300	8	13	17	6	10	10	24	4	20	5
300-400	19	5	25	4	8	13	23	4	25	4
400-500	25	4			9	11	14	7		
500-600					9	11	9	11		
600-700					10	10	6	17		
700-800					6	17	7	14		
800-900					5	20	9	11		
900-1000					23	4	25	4		
1000-1100					25	4				
1100-1200										
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/A  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

*(Signature)*  
A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 A  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 6		8731/ 7		8731/ 8		8731/ 9		8731/ 10	
Location:	Lot 30		Lot 29		Lot 29/28		Lot 28		Lot 27	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	17	6	13	8	13	8	15	7	16	6
100-200	22	5	16	6	12	8	15	7	12	8
200-300	12	8	13	8	11	9	19	5	14	7
300-400	6	17	21	5	19	5	9	11	25	4
400-500	10	10	25	4	25	4	6	17		
500-600	25	4					7	14		
600-700							8	13		
700-800							6	17		
800-900							6	17		
900-1000							6	17		
1000-1100							13	8		
1100-1200							25	4		
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/A  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 B  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 11		8731/ 12		8731/ 13		8731/ 14		8731/ 15	
Location:	Lot 27/26		Lot 26		Lot 13		Lot 13/12		Lot 12	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	13	8	13	8	16	6	17	6	16	6
100-200	12	8	16	6	22	5	18	6	16	6
200-300	10	10	17	6	24	4	14	7	25	4
300-400	6	17	25	4	25	4	10	10		
400-500	4	25					13	8		
500-600	4	25					25	4		
600-700	4	25								
700-800	4	25								
800-900	4	25								
900-1000	7	14								
1000-1100	25	4								
1100-1200										
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/B  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo





## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 B  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 16		8731/ 17		8731/ 18		8731/ 19		8731/ 20	
Location:		Lot 11		Lot 11/10		Lot 10		Lot 9		Lot 9/8	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		18	6	15	7	16	6	12	8	23	4
100-200		24	4	19	5	24	4	11	9	20	5
200-300		17	6	18	6	25	4	10	10	14	7
300-400		9	11	11	9			15	7	25	4
400-500		15	7	8	13			25	4		
500-600		25	4	25	4						
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:	All test stopped at refusal										



Accredited No. 13121  
Report No. D835 8731/B  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory

A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 / C  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 21		8731/ 22		8731/ 23		8731/ 24		8731/ 25	
Location:	Lot 8		Lot 7		Lot 7/6		Lot 6		Lot 5	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	20	5	25	4	24	4	23	4	25	4
100-200	25	4	25	4	25	4	22	5	25	4
200-300							25	4		
300-400										
400-500										
500-600										
600-700										
700-800										
800-900										
900-1000										
1000-1100										
1100-1200										
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/C  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo



GEOTECHNICAL

# DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : Ostojic Group Pty Ltd  
Contractor: -  
Project : Zuccoli Aspire Stage 5A & 5B Site Classifications  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 / C  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 26		8731/ 27		8731/ 28		8731/ 29		8731/ 30	
Location:	Lot 5/4		Lot 4		Lot 3		Lot 3/2		Lot 2	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	24	4	23	4	22	5	25	4	24	4
100-200	25	4	25	4	25	4	25	4	25	4
200-300										
300-400										
400-500										
500-600										
600-700										
700-800										
800-900										
900-1000										
1000-1100										
1100-1200										
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/C  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 D  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 31		8731/ 32		8731/ 33		8731/ 34		8731/ 35	
Location:		Lot 2/1		Lot 1		Lot 76		Lot 76/77		Lot 77	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		25	4	23	4	18	6	25	4	25	4
100-200		25	4	25	4	25	4	25	4	25	4
200-300											
300-400											
400-500											
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:		All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/D  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory

A.Bravo



GEOTECHNICAL

# DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : Ostojic Group Pty Ltd  
Contractor: -  
Project : Zuccoli Aspire Stage 5A & 5B Site Classifications  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 D  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 36		8731/ 37		8731/ 38		8731/ 39		8731/ 40	
Location:	Lot 78		Lot 78/79		Lot 79		Lot 80		Lot 80/81	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	20	5	24	4	25	4	25	4	23	4
100-200	25	4	25	4	25	4	25	4	25	4
200-300										
300-400										
400-500										
500-600										
600-700										
700-800										
800-900										
900-1000										
1000-1100										
1100-1200										
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/D  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 E  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 41		8731/ 42		8731/ 43		8731/ 44		8731/ 45	
Location:		Lot 81		Lot 82		Lot 82/83		Lot 83		Lot 84	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		25	4	24	4	24	4	12	8	20	5
100-200		25	4	25	4	25	4	6	17	12	8
200-300								14	7	25	4
300-400								25	4		
400-500											
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:	All test stopped at refusal										



Accredited No. 13121  
Report No. D835 8731/E  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo





## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 E  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 46		8731/ 47		8731/ 48		8731/ 49		8731/ 50	
Location:		Lot 84/85		Lot 85		Lot 86		Lot 86/87		Lot 87	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		25	4	24	4	23	4	24	4	24	4
100-200		25	4	25	4	25	4	25	4	25	4
200-300											
300-400											
400-500											
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:		All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/E  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 / F  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 51		8731/ 52		8731/ 53		8731/ 54		8731/ 55	
Location:	Lot 88		Lot 88/89		Lot 89		Lot 89/90		Lot 90	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	25	4	25	4	25	4	25	4	25	4
100-200										
200-300										
300-400										
400-500										
500-600										
600-700										
700-800										
800-900										
900-1000										
1000-1100										
1100-1200										
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/F  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 / F  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 56		8731/ 57		8731/ 58		8731/ 59		8731/ 60	
Location:		Lot 25		Lot 25/14		Lot 14		Lot 15		Lot 15/16	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		25	4	18	6	25	4	14	7	25	4
100-200		25	4	25	4			25	4		
200-300											
300-400											
400-500											
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
<b>Remarks:</b>	All test stopped at refusal										



Accredited No. 13121  
Report No. D835 8731/F  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

*(Signature)*  
A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 G  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 61		8731/ 62		8731/ 63		8731/ 64		8731/ 65	
Location:		Lot 16		Lot 17		Lot 17/18		Lot 18		Lot 19	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		25	4	25	4	25	4	25	4	25	4
100-200											
200-300											
300-400											
400-500											
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:	All test stopped at refusal										



Accredited No. 13121  
Report No. D835 8731/G  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory

*(Signature)*  
A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 / G  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 66		8731/ 67		8731/ 68		8731/ 69		8731/ 70	
Location:		Lot 19/20		Lot 20		Lot 21		Lot 21/22		Lot 22	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		25	4	25	4	24	4	25	4	25	4
100-200						25	4				
200-300											
300-400											
400-500											
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:	All test stopped at refusal										



Accredited No. 13121  
Report No. D835 8731/G  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

*(Signature)*  
A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 H  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 71		8731/ 72		8731/ 73		8731/ 74		8731/ 75	
Location:		Lot 23		Lot 23/24		Lot 24		Lot 72		Lot 72/73	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		24	4	25	4	25	4	25	4	25	4
100-200		25	4								
200-300											
300-400											
400-500											
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:		All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/H  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo





## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 H  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 76		8731/ 77		8731/ 78		8731/ 79		8731/ 80	
Location:		Lot 73		Lot 74		Lot 74/75		Lot 75		Lot 62	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		23	4	24	4	25	4	25	4	25	4
100-200		25	4	25	4			25	4		
200-300											
300-400											
400-500											
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:		All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/H  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

*(Signature)*  
A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pit  
Job No.: D835 Sample No.: 8731 / I  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 8/11/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 81		8731/ 82		8731/ 83		8731/ 84		8731/ 85	
Location:		Lot 37		Lot 37/36		Lot 36		Lot 35		Lot 35/34	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		25	4	20	5	13	8	16	6	25	4
100-200		25	4	25	4	10	10	25	4		
200-300						13	8				
300-400						14	7				
400-500						25	4				
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:		All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/I  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

*(Signature)*  
A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pit  
Job No.: D835 Sample No.: 8731 I  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 8/11/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 86		8731/ 87		8731/ 88		8731/ 89		8731/ 90	
Location:		Lot 34		Lot 58		Lot 58/59		Lot 59		Lot 60	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		25	4	12	8	18	6	11	9	13	8
100-200				12	8	17	6	15	7	15	7
200-300				5	20	11	9	25	4	25	4
300-400				3	33	20	5				
400-500				4	25	25	4				
500-600				11	9						
600-700				12	8						
700-800				11	9						
800-900				15	7						
900-1000				25	4						
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:	All test stopped at refusal										



Accredited No. 13121  
Report No. D835 8731/I  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 J  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 91		8731/ 92		8731/ 93		8731/ 94		8731/ 95	
Location:		Lot 60/61		Lot 61		Lot 47		Lot 47/48		Lot 48	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		25	4	19	5	19	5	18	6	18	6
100-200				13	8	17	6	13	8	23	4
200-300				10	10	11	9	7	14	15	7
300-400				25	4	7	14	25	4	25	4
400-500						13	8				
500-600						25	4				
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:	All test stopped at refusal										



Accredited No. 13121  
Report No. D835 8731/J  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

*(Signature)*  
A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 J  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 96		8731/ 97		8731/ 98		8731/ 99		8731/ 100	
Location:		Lot 49		Lot 49/50		Lot 50		Lot 51		Lot 51/52	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		18	6	14	7	15	7	12	8	18	6
100-200		13	8	6	17	10	10	17	6	25	4
200-300		25	4	23	4	10	10	24	4		
300-400				25	4	25	4	25	4		
400-500											
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:	All test stopped at refusal										



Accredited No. 13121  
Report No. D835 8731/J  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

*(Signature)*  
A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 K  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 101		8731/ 102		8731/ 103		8731/ 104		8731/ 105	
Location:		Lot 52		Lot 53		Lot 53/54		Lot 54		Lot 55	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		11	9	20	5	25	4	15	7	15	7
100-200		15	7	25	4			25	4	20	5
200-300		13	8							25	4
300-400		25	4								
400-500											
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:	All test stopped at refusal										



Accredited No. 13121  
Report No. D835 8731/K  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo





## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 / K  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 106		8731/ 107		8731/ 108		8731/ 109		8731/ 110	
Location:	Lot 55/56		Lot 56		Lot 56/57		Lot 57		Lot 38	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	12	8	25	4	21	5	23	4	18	6
100-200	21	5			25	4	25	4	25	4
200-300	25	4								
300-400										
400-500										
500-600										
600-700										
700-800										
800-900										
900-1000										
1000-1100										
1100-1200										
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/K  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 L  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 111		8731/ 112		8731/ 113		8731/ 114		8731/ 115	
Location:	Lot 38/39		Lot 39		Lot 40		Lot 40/41		Lot 41	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	25	4	25	4	25	4	25	4	25	4
100-200										
200-300										
300-400										
400-500										
500-600										
600-700										
700-800										
800-900										
900-1000										
1000-1100										
1100-1200										
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/L  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory

A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 L  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 116		8731/ 117		8731/ 118		8731/ 119		8731/ 120	
Location:	Lot 42		Lot 42/43		Lot 43		Lot 44		Lot 44/45	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	25	4	25	4	25	4	25	4	25	4
100-200										
200-300										
300-400										
400-500										
500-600										
600-700										
700-800										
800-900										
900-1000										
1000-1100										
1100-1200										
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/L  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 M  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 121		8731/ 122		8731/ 123		8731/ 124		8731/ 125	
Location:	Lot 45		Lot 45/46		Lot 46		Lot 62/63		Lot 63	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	25	4	25	4	25	4	25	4	25	4
100-200										
200-300										
300-400										
400-500										
500-600										
600-700										
700-800										
800-900										
900-1000										
1000-1100										
1100-1200										
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/M  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 M  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:		8731/ 126		8731/ 127		8731/ 128		8731/ 129		8731/ 130	
Location:		Lot 64		Lot 64/65		Lot 65		Lot 66		Lot 66/67	
Starting Depth (m):		0.00		0.00		0.00		0.00		0.00	
Soil Description:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:		Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:		N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)		Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100		25	4	25	4	25	4	25	4	25	4
100-200						25	4	16	6	25	4
200-300								10	10		
300-400								8	13		
400-500								25	4		
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:	All test stopped at refusal										



Accredited No. 13121  
Report No. D835 8731/M  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

*(Signature)*  
A.Bravo



## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 / N  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2	Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 131		8731/ 132		8731/ 133		8731/ 134		8731/ 135	
Location:	Lot 67		Lot 68		Lot 68/69		Lot 69		Lot 70	
Starting Depth (m):	0.00		0.00		0.00		0.00		0.00	
Soil Description:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Moisture Condition:	Refer Logs		Refer Logs		Refer Logs		Refer Logs		Refer Logs	
Ground Water Depth:	N/A		N/A		N/A		N/A		N/A	
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow
0-100	24	4	25	4	25	4	25	4	25	4
100-200	25	4								
200-300										
300-400										
400-500										
500-600										
600-700										
700-800										
800-900										
900-1000										
1000-1100										
1100-1200										
1200-1300										
1300-1400										
1400-1500										
1500-1600										
1600-1700										
1700-1800										
1800-1900										
1900-2000										
Remarks:	All test stopped at refusal									



Accredited No. 13121  
Report No. D835 8731/N  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo





## DYNAMIC CONE PENETROMETER REPORT

ACN: 130669493  
Shed 1 No. 6 Wedding Road Tivendale, NT 0822  
Postal Address : PO Box 35964 Winnellie,  
NT 0821  
Telephone : (08) 8947 4802  
Email: [darwin@hiqa.com.au](mailto:darwin@hiqa.com.au)

Client : **Ostojic Group Pty Ltd**  
Contractor: -  
Project : **Zuccoli Aspire Stage 5A & 5B Site Classifications**  
Location : Various Test Pits  
Job No.: D835 Sample No.: 8731 / N  
Test Date: 30/08/2016 By: G.Cawdrey  
Check Date: 24/10/2016 By: A.Bravo  
Client Ref.: #60901

Test Procedure : As 1289. 6.3.2		Dynamic Cone Penetrometer Test Results.									
Test Number:	8731/ 136		8731/ 137								
Location:	Lot 70/71		Lot 70								
Starting Depth (m):	0.00		0.00								
Soil Description:	Refer Logs		Refer Logs								
Moisture Condition:	Refer Logs		Refer Logs								
Ground Water Depth:	N/A		N/A								
Depth Below Start (mm)	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	Blows per 100mm	mm per Blow	
0-100	24	4	25	4							
100-200											
200-300											
300-400											
400-500											
500-600											
600-700											
700-800											
800-900											
900-1000											
1000-1100											
1100-1200											
1200-1300											
1300-1400											
1400-1500											
1500-1600											
1600-1700											
1700-1800											
1800-1900											
1900-2000											
Remarks:	All test stopped at refusal										



Accredited No. 13121  
Report No. D835 8731/N  
Date of Issue: 9/11/2016

Accredited for compliance with ISO/IEC 17025

Authorised Signatory .....

A.Bravo

## APPENDIX D

CSIRO Information Sheet BTF 18

PROVIDED FOR INFORMATION PURPOSES ONLY  
AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION  
- BUILDER ARE TO INFORM THEMSELVES

[HIQA.COM.AU](http://HIQA.COM.AU)

### DARWIN

PHONE: (08) 8947 4802  
EMAIL: [DARWIN@HIQA.COM.AU](mailto:DARWIN@HIQA.COM.AU)  
OFFICE: 1/6 WEDDING ROAD, TIVENDALE NT 0822  
POSTAL: PO BOX 35964, WINNELLIE NT 0821

### KATHERINE

PHONE: (08) 8947 4802  
EMAIL: [KATHERINE@HIQA.COM.AU](mailto:KATHERINE@HIQA.COM.AU)  
OFFICE: 5/7 CRAWFORD STREET, KATHERINE NT 0850  
POSTAL: PO BOX 712, KATHERINE NT 0851

### ALICE SPRINGS

PHONE: (08) 8947 4802  
EMAIL: [ALICE@HIQA.COM.AU](mailto:ALICE@HIQA.COM.AU)  
OFFICE: 2/70 LOVEGROVE DRIVE, ARALUEN NT 0870  
POSTAL: PO BOX 3569, ALICE SPRINGS NT 0871