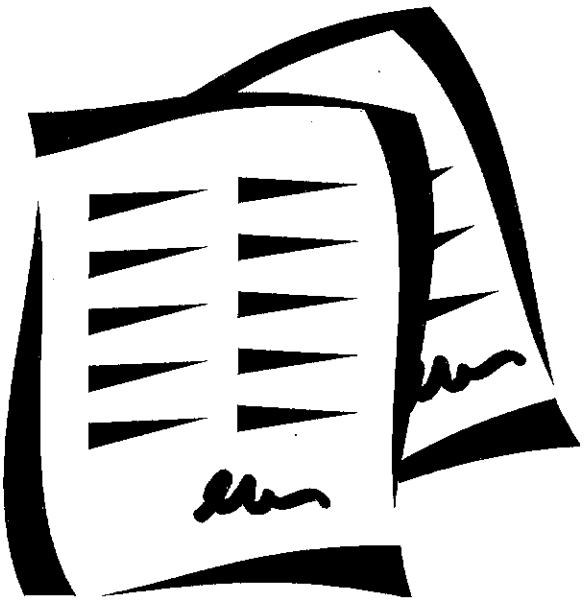
SHIRE OF DUNDAS

Ordinary Council Meeting

20 September 2016



Papers Relating

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SHIRE OF DUNDAS

10.1.1

Development Application – Multiple Dwellings Eucla

STATS

LOT 196 (#12) GURNEY WAY, EUCLA

Geotechnical Site Classification

Prepared for

H&H Architects, co Duncan Jack Consulting

Perth T: +61 (0) 8 9455 3654
Unit 1/24 Baile Road, Canning Vale, WA 6155
www.statswa.com.au

ABN: 90 016 537 577
Karratha T: +61 (0) 8 9144 4637
1938 Pyramid Rd Karratha WA 6714
www.statswa.com.au

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IMPORTANT NOTE

Please refer to STATS "Notes about Your Report"

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EXECUTIVE SUMMARY

Specialist Testing and Technical Services (STATS) was engaged by Mr. Duncan Jack (STATS Client) of Duncan Jack Consulting Engineers Pty Ltd, on behalf of H & H Architects, to conduct a Geotechnical Site Classification and laboratory tests for a site at Lot 196 (#12) Gurney Way, Eucla. The site sampling and logging of test pits were carried out by Duncan Jack Consulting Engineers, and the samples delivered to STATS Perth Laboratory for further tests and reporting.

The purpose of the investigation was to provide a Geotechnical Site Classification for the site based on the laboratory results, in accordance with the requirements of AS2870-2011.

A total of three (x3) test pits (TP 1 to TP 3) were conducted to a depth of 2m with the use of an excavator, for the purpose of logging the soils and sampling work. An additional two (x2) test pits (TP4 and TP5) were carried out mainly to determine the presence of any rock outcrop. All test locations are presented in Figure 1.

Findings

The reported soil profiles in all the three test pits (TP 1 to TP 3) are similar, consisting of a 100mm layer of **TOPSOILS**; grass cover, organics, roots, overlaying **clayey SANDS/sandy CLAYS**; medium grained, grey, dry to moist, loose to medium dense to a target depth of 2.0m. Silty SANDS was encountered in TP 3 only, from a depth of 0.1m to 0.5m.

At test pits TP 4 and TP 5, no rock outcrop was encountered from surface until the target depth of 2.0m. None of the five (x5) test pits intercepted any perch/shallow ground water table level at the time of investigation.

The site is currently assigned a **Site Classification of *"M"*** in accordance with the definitions provided in the Australian Standard AS2870 -2011. For this soil profile the characteristic surface movement (Y_s Value) indicates the site could experience between $20 < Y_s \leq 40$mm of surface movement due to seasonal moisture changes and differential settlement. The depth of design suction change is recommended as 2.3m for this locality.

To reclassify the site to an "**S**" will require either the removal of existing clayey SANDS materials or import of a 200mm layer of SANDS above.

It is recommended that the site is prepared in accordance with the recommendations given in Australian Standard AS 3798-2007, "Guidelines on Earthworks for Commercial and Residential Developments".

The laboratory falling head permeability tests completed for the clayey SANDS materials revealed an average of 0.0026m/d. Based on AS/NZS 1547:2012, this material is described as having a drainage soil category of "6", out of six (6) categories, which relates to a typical "medium to heavy clays" soil texture material. On this basis, the site is not suitable for onsite stormwater disposal and shall be disposed offsite.

The average phosphorous index obtained is 101.5mL/g, which falls under a category of 1 (out of 5). Based on Department of Environment and Conservation guideline Dec 2012, the land application is considered as been suitable under the Category of 1.

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1.0 INTRODUCTION

1.1 The following is a Geotechnical Site Classification report for Lot 196 (#12) Gurney Way, Eucla.

1.2 The investigation was commissioned by Mr. Duncan Jack (STATS Client) of Duncan Jack Consulting Engineers Pty Ltd, on behalf of H & H Architects.

1.3 The objective was to obtain information on the subsurface conditions so as to provide a Geotechnical Site Classification and Geotechnical Investigation for the site, in accordance with the requirements of AS2870-2011 and AS1726-1993.

1.4 The site investigation was carried out on 21 June 2016.

1.5 It is our understanding that the site is for residential development is for the construction of three new modular/transportable accommodation units.

2.0 SCOPE OF INVESTIGATION

2.1 The scope of investigation is as follows:

- Compile field log sheets and prepare test pit logs which were completed by Duncan Jack Engineer.
- Carry out laboratory tests consisting of:
  - Particle Size Distribution,
  - Atterberg Limits and Linear Shrinkage,
  - Falling Head Permeability Tests,
  - Phosphorus Retention Index.
- Report on Field and laboratory test results, including providing a Geotech Site Classification for the proposed site.

3.0 SITE DESCRIPTION

3.1 The site is situated at Lot 196 (#12) Gurney Way, Eucla.

3.2 The drainage of the site surface is classed as "Fair" with no water ponding noted.

3.3 There was observed presence of weeds, organics, roots at the time of investigation.

4.0 FIELD PROGRAM

4.1 Test Pit Logs

4.1.1 The reported soil profiles in all the three test pits (TP 1 to TP 3) are similar, consisting of a 100mm layer of **TOPSOILS**; grass cover, organics, roots, overlaying **clayey SANDS/sandy CLAYS**; medium grained, grey, dry to moist, loose to medium dense to a target depth of 2.0m. Silty SANDS was encountered in TP 3 only, from a depth of 0.1m to 0.5m.

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4.1.2 At test pits TP 4 and TP 5, no rock outcrop was encountered from surface until the target depth of 2.0m.

4.1.3 None of the five (x5) test pits intercepted any perch/shallow ground water table level at the time of investigation.

4.1.4 The test pit logs are presented in Appendix 2.

4.1.5 The test pit locations are presented in Figure 1.

4.2 Laboratory Work

4.2.1 Laboratory tests based on Australian Standards 1289 were conducted on the bulk samples organized by Duncan Jack Consulting Engineers, at STATSWA Laboratory, Perth.

4.2.2 Bulk samples were taken to determine the physical properties of the foundation material at the site.

4.2.3 The laboratory test program consists of the following:

- Atterberg Limits,
- Particle Size Distribution,
- Falling Head Permeability Tests,
- Phosphorus Retention Index.

4.2.4 The laboratory test results are presented in Appendix 3. A summary of the laboratory test findings are presented in Table 1.

Table 1: Summary of Laboratory Tests

Test Pit ID	TP 1	TP 2	TP 3
Depth (m)	0.5 – 1.0	0.5 – 1.0	0.5 – 1.0
USC	SC	SC	CL
Liquid Limit (%)	40	39	43
Plastic Limit (%)	22	20	21
Plasticity Index (%)	18	19	33
Linear Shrinkage (%)	7.5	6.0	8.5
Passing 2.36mm (%)	87	81	78
Passing 75µm (%)	43	40	40
Temp Corrected Permeability (m/s)	-	$9.91E^{-9}$	$4.97E^{-8}$
Phosphorus Retention Index (mL/g)	-	110	93

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4.3 Falling Head Permeability Tests

4.3.1 The laboratory falling head permeability tests completed for the clayey SANDS materials revealed an average of 0.0026m/d. Based on AS/NZS 1547:2012, this material is described as having a drainage soil category of "6", out of six (6) categories, which relates to a typical "medium to heavy clays" soil texture material.

4.3.2 On this basis the site is deemed unsuitable for onsite stormwater disposal using traditional soak well design and shall be disposed offsite or channelled offsite into council detention basins.

4.4 Phosphorus Retention Index Tests

4.4.1 The phosphorous index obtained 101.5mL/g, which falls under a category of 1 (out of 5). Based on Department of Environment and Conservation guideline Dec 2012, the land application is considered as been suitable under the Category of 1.

5.0 SITE CLASSIFICATION

5.1 The site is currently assigned a **Site Classification of *"M"*** in accordance with the definitions provided in the Australian Standard AS2870 -2011.

5.2 For this soil profile the characteristic surface movement (Y_s Value) indicates the site could experience between $20 < Y_s \leq 40$mm of surface movement due to seasonal moisture changes and differential settlement.

5.3 The explanation of the site classification is outlined in Table 2 below (source: tables 2.1 & 2.3 AS2870 2011).

Table 2: Classification by Characteristic Surface Movement *Ys*

Site Class	Soil Description Based on Reactivity	Characteristic Surface movement *Ys (mm)*
A	Most Sand & Rock Sites with little or no ground movement from moisture changes	0
S	Slightly reactive clay sites which may experience slight ground movements from moisture changes	$0 < Ys \leq 20$
M	Moderately reactive clay or silt sites which may experience moderate ground movements from moisture changes	$20 < Ys \leq 40$
H1	Highly reactive clay sites which may experience high ground movements from moisture changes	$40 < Ys \leq 60$
H2	Highly reactive clay sites which may experience very high ground movements from moisture changes	$60 < Ys \leq 75$
E	Extremely reactive sites which may experience extreme ground movements from moisture changes	$Ys > 75$
P	Sites with inadequate bearing capacity or is affected by factors other than Reactivity of the soil eg.soft soils, landslip, mine subsidence, uncontrolled fill, coastal erosion and the site cannot be classified based on soil reactivity	-

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5.4 To reclassify the site to an "S" will require either the removal of existing clayey SANDS materials or import of a 200mm layer of SANDS above).

6.0 GENERAL EARTHWORKS

6.1 Any loose or areas of weakness should be removed and backfilled with approved granular fill. If boulders, rocks, or building rubble (>300mm) is encountered, they should be removed from the works.

6.2 Where there is the presence of minor organics and tree roots the material should be raked and removed using a rake with a 50mm grid spacing. In general, this is the topsoil layer which contains organics and roots.

6.3 The base of any excavation shall be compacted using a vibrating plate prior to importing of fill or replacing screened site sands material.

6.4 The requirements for the suitability of any fill are outlined below.

6.5 Backfill Materials

6.5.1 Any imported structural fill material to support footings should be clean sand with maximum 10% passing 0.075mm sieve.

6.5.2 All structural fill is to be compacted in maximum layers of 350mm (loose) and compacted to achieve the specified minimum density ratio by an approved method.

6.5.3 The plasticity index shall be < 5%.

6.6 Site Compaction

6.6.1 Compaction required to achieve the density requirements is set out in the following Table 3 and Table 4, and shall be conducted in accordance with AS 1289.5.1.1.

Table 3: Compaction Criteria for Fill AS3798

Item	Application	Compaction Criteria	
		Min Density Ratio (Cohesive Soils)	Min Density Index (Cohesionless Soils)
1	Residential: Lots and House Sites	95%	70%
2	Commercial: To support minor loadings, including floor loadings up to 120kPa and isolated pad or strip footings to 100kPa	98%	75%

6.6.2 Alternatively, the compaction certification may be verified with the use of a Perth Sands Penetrometer (PSP) or Dynamic Cone Penetrometer (DCP) based on AS 1289.6.3.3 or AS 1289.6.3.2 respectively.

6.6.3 Typical target values to achieve, pending which test approach are as follows. If required, further correlations could be made by carrying out test pads and the number of passes, and determining the corresponding Compaction Density Ratios and the DCP or PSP values.

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Table 4: Compaction Requirements for Fill (DCP & PSP)

Depth intervals	DCP Blows (cumulative)	PSP Blows (cumulative)
0 - 150	Seat	Seat
150 – 450	9	8
450 – 750	14	11
750 – 1050	19	15

6.6 Drainage

6.7.1 If construction works were to take place during the rainy seasons, the perimeter around the site and areas of proposed earthworks should be constructed with a shallow gradient to allow drainage to a sump and to allow water to be discharged from the site. It is important that the conditions under the footings remain relatively dry. Where required, drains should be constructed to divert water from the site and to ensure no erosion or premature saturation occurs around the footings.

7.0 EFFECTS OF SITE WORKS ON CLASSIFICATION

7.1 Any earthworks required in preparing the building platform should be carried out in a controlled manner in accordance with the recommendations given in Australian Standard AS 3798-2007, "Guidelines on earthworks for commercial and residential developments".

7.2 The type of fill material used and the depth of fill may also affect the site classification.

7.3 In the event that the site conditions encountered have a different soil profile/materials from that provided in this report, this office should be contacted immediately. This also applies in the event the site has a fill layer greater than 0.5m in height, to raise the site finished level.

7.4 Any proposal to have a cut or fill on site > 0.5m must be retained by a retaining wall designed by an appropriately qualified Engineer.

8.0 SITE MAINTENANCE

8.1 We refer the owner to their responsibilities with respect to Site Maintenance. They should refer to the CSIRO publication "Guide to Home Owners on Foundation Maintenance and Footing Performance" in Building Technology File Number 18, which is available on line.

8.2 This document outlines important information on the implications of the site classification on foundation design, plumbing, property maintenance, drainage and performance expectations.

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9.0 REFERENCES

- As 1289 -2000, "Methods of Testing Soils for Engineering Purposes".
- AS 1726 - 1993, "Geotechnical Site Investigations".
- AS 2870 - 2011, "Residential Slabs and Footings".
- AS 3798 - 2007, "Guidelines on earthworks for commercial and residential developments".
- AS 1170.4 - 2007 "Structural design actions Part 4 Earthquake actions in Australia"
- HB1670 2006 "Soils Testing" published by Standards Australia.

STATS PTY LTD

Aidan Seck
BEng (Civil), PE(S), CPEng (Aust), CEng(UK)
Principal Engineer

Figures

Figure 1: Proposed Test locations

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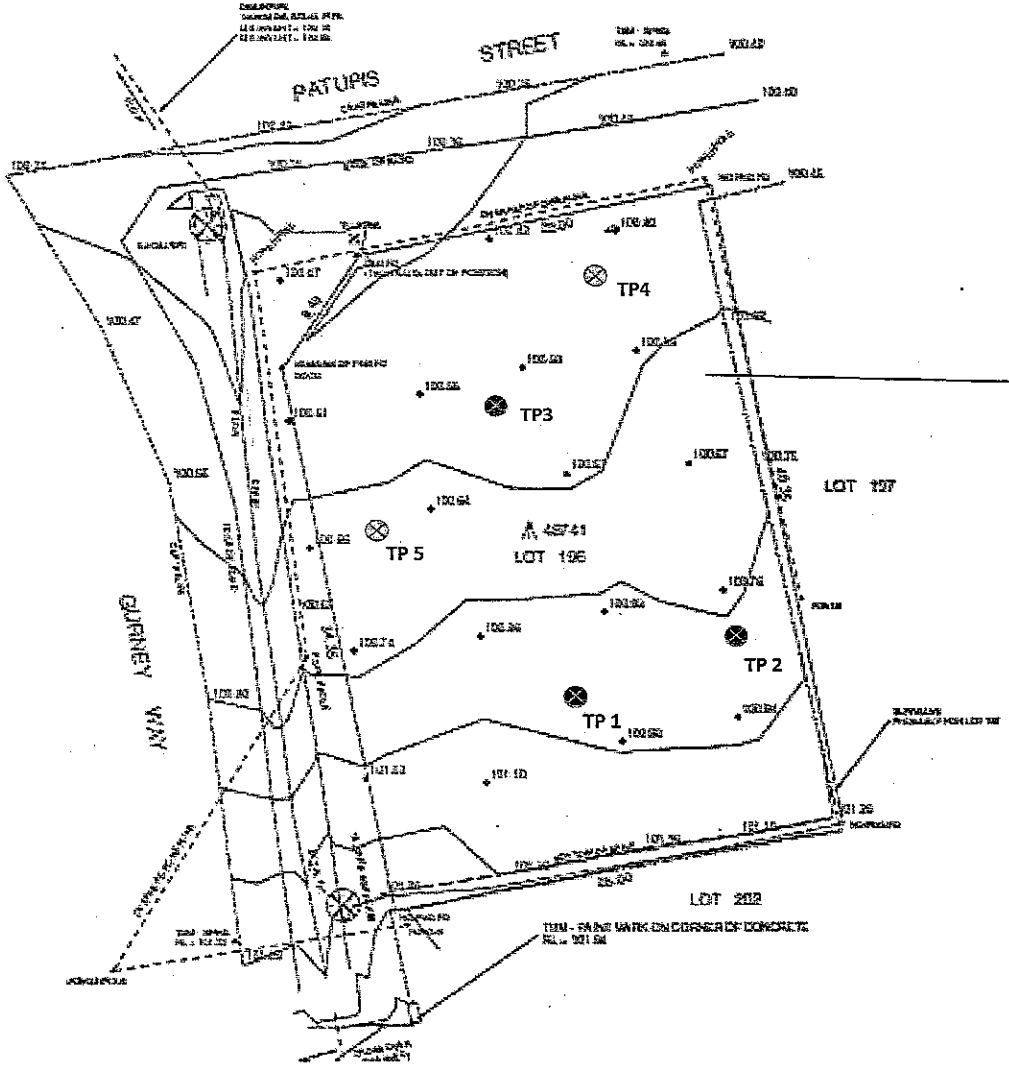

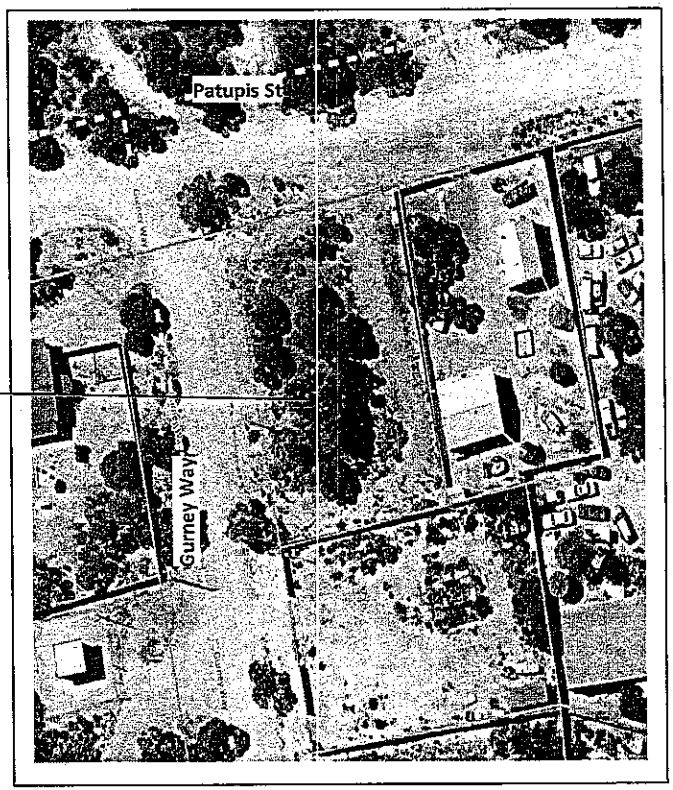

Legend

- ⊗ Test Pit Locations, TP1-TP3 (x3) to depth of 2m
- ⊗ Test Pit Locations TP4-5 (x2) to depth of 2m to determine any rock outcrop

Project Title: Lot 196 (#12) Gurney Way, Euclas - Site Classification	Title: Proposed Test Locations		STATS PTY LTD Unit 1/24 Baile Road, CANNING VALE WA 6155 Tel: 08 9455 3654 Fax: 08 9455 3709 www.statswa.com.au
	Figure: 1	Scale: NTS	
	Date: 07 Jul 2016	Drawn: AS	
	Checked: AS	Approved: AS	
	Drawing No: 100988	Rev: 0	

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Appendices

Appendix 1: Notes Relating to this Report and Soil and Rock Description Sheet

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STATS
ABN: 90 016 537 577
Unit 1/24 Baile Road, Canning Vale, WA 6155
www.statswa.com.au

NOTES ABOUT YOUR REPORT

STATS prepared this report based on our understanding of you (the Client) and your project requirements. This report is developed based on a unique set of project conditions and requirements, such as the objectives of the project, the locality and size, as well as the feasibility of the development. These notes are meant to allow you to understand where our responsibilities as the engineers begin and end, and to assist you to manage and plan your construction, and mitigate any perceived risk. If there are areas in our report that you do not understand and would like to seek clarification, please contact STATS and we will assist you.

Our findings are based on limited subsurface investigation, sampling and testing works due to site constraints, underground service information and location, as well as project costs. Some variations to our findings may occur. It is therefore recommended, that we are engaged for the construction supervision and ongoing support based on either a site visit to confirm the accuracy/expectation of the conditions originally encountered, or that of full time supervision.

Below are examples of conditions which will influence how this report is interpreted and therefore will affect the limitations of the report.

a) Subsurface conditions can be affected by events such as the removal of soil or placement of fill and by events such as seasonal fluctuations in ground water table, flood, earthquake and unstable landforms all of which can change with time. It is therefore necessary when the above situations occur to undertake additional sampling, testing and/or analysis.
b) Any changes in the proposed development, layout, orientation, elevation, loading and configuration will affect the findings and recommendations in our report.
c) If information provided in the report is to be used by others, the report shall be produced in full and not in part.
d) This report is prepared for a specific purpose and is for the client or specific party involved in the initial project request. This report must be regarded as confidential to the Client and the Client's professional team. To prevent misunderstanding or misuse of information, it is recommended that you inform and discuss with STATS first before passing your report to a third party. STATS do not accept any responsibility for any damage caused by the decisions or actions made by third party.
e) This report has been prepared with no inclusions for environmental considerations, unless specified in our scope. If there are any known concerns or documents which relate to environmental risks at site, it is your responsibility to inform STATS and we shall advise where further information and/or contacts are required.
f) Our report has been prepared with no inclusions for environmental considerations, unless specified in our scope. If there are specific concerns or document in relation to environmental risks at site, it is your responsibility to inform STATS and we shall advice on further information and contacts.

STATS has prepared this report based on information provided by the Client and others. STATS disclaim responsibility relating to any unverified information provided, including errors in, or omissions from such information. The opinions, conclusions and recommendations in this report are based on, but not limited to, assumptions made in the project proposal and accepted scope of work.

Further attention is drawn to the information "Guidelines for the Provision of Geotechnical Information in Tender Documents", published by the Institution of Engineers, Australia. Whereby information or data obtained from the report is provided for tendering purposes, it is important that all information, including the written report, email correspondence and any discussions be made available. In the event that sections of the report are not relevant to the contractual document, it may be appropriate to prepare an edited executive summary document. Contact STATS if you need assistance in this regard.

STATS
Unit 1/24 Baile Road, Canning Vale, WA 6970
www.statswa.com.au

SOILS AND ROCKS EXPLANATION SHEET

Soils Definitions:

The term "soil" refers to every type of uncemented or partially cemented inorganic or organic material found in the ground. In practice, if the material can be remoulded or broken up by hand in the field or in water it is described as a soil. Other materials are described using rock description terms.

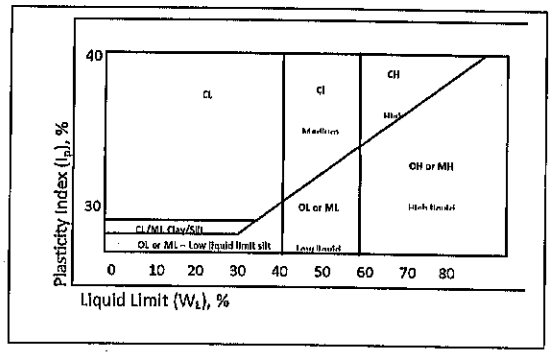
Soil Name and Classification:

The terms for Soil and Rock is described and classified in the reports (Test Pits/Borelogs) are based on the system given in AS1726-1993, Appendix A. The material properties are described using visual/tactile methods, combining field test data (if applicable).

Particle Size Description:

Name	Subdivision	Size (mm)
	Boulders	> 200 mm
	Cobbles	63 mm to 200 mm
Gravel	Coarse	20 mm to 63 mm
	Medium	6 mm to 20 mm
	Fine	2.36 mm to 6 mm
Sand	Coarse	0.6 mm to 2.36 mm
	Medium	0.2 mm to 0.6 mm
	Fine	0.075 mm to 0.2 mm
Fines	Silt	0.002 to 0.075
	Clay	< 0.002

Plasticity Properties:



Moisture Condition:

Symbol	Term	Description
D	Dry	Looks and feels dry. Cohesive and cemented soils are hard, brittle, friable or powdery. Un-cemented granular soils run freely through hands.
M	Moist	Soil feels cool and darker in colour. Cohesive soils can be moulded. Granular soils tend to cohere.
W	Wet	As for moist but with free water forming on hands when handled.

Soil Structure:

Zoning		Cementing	
Layers	Continuous across exposure or sample	Weakly cemented	Easily broken up by hand in air or water
Lenses	Discontinuous layers of lenticular shape	Moderately cemented	Effort is required to break up the soil by hand in air or water
Pockets	Irregular inclusions of different material		

Consistency and Density of Cohesive Soils (AS 1726 – 1993 and HB160-2006):

Symbol	Term	Undrained Shear Strength, s_u (kPa)	Field Guide	SPT "N"	DCP Blows per 100mm
VS	Very Soft	0 to 12	A finger can be pushed well into the soil with little effort	0 to 2	< 1
S	Soft	12 to 25	A finger can be pushed into the soil to about 25 mm depth.	2 to 4	< 1
F	Firm	25 to 50	The soil can be indented about 5 mm with the thumb, but not penetrated.	4 to 8	1 to 2
St	Stiff	50 to 100	The surface of the soil can be indented with the thumb, but not penetrated.	8 to 15	3 to 4
VSt	Very Stiff	100 to 200	The surface of the soil can be marked, but not indented with thumb pressure.	15 to 30	5 to 10
H	Hard	> 200	The surface of the soil can be marked only with the thumbnail.	> 30	> 10

Observed ease of excavation with the use of excavator / hand auger:

Symbol	Term	Remarks
E	Easy	Can be done with little effort
M	Medium	Can be carried out, but with harder effort to get through
H	Hard	Takes a lot of effort to get through the digging/excavation/auger works

Consistency and Density of Granular Soils (AS 1726 – 1993 and HB160-2006):

Symbol	Term	Density Index (%)	SPT "N"	DCP Blows per 100mm
VL	Very Loose	< 15	0 to 4	< 1
L	Loose	15 to 35	4 to 10	1 to 2
MD	Medium Dense	35 to 65	10 to 30	2 to 3
D	Dense	65 to 85	30 to 50	4 to 8
VD	Very Dense	> 85	> 50	> 8

Minor Components:

Term	Assessment Guide	Proportion Of Minor Component In:
Trace of	Presence just detectable by feel or eye, but soil properties little or no different to general properties of primary component.	Coarse grained soils: < 5% Fine grained soils: < 15%
With some	Presence easily detected by feel or eye, soil properties little different to general properties of primary component.	Coarse grained soils: 5% - 12% Fine grained soils: 15% - 30%

Geological Origin:

Weathered in Place Soils	
Extremely weathered material	Structure and fabric of parent rock visible.
Residual soil	Structure and fabric of parent rock not visible.
Transported Soils	
Aeolian soil	Deposited by wind.
Alluvial soils	Deposited by streams and rivers.
Colluvial soils	Deposited on slopes (transported down slope by gravity).
Fill	Man-made deposit. Fill may be significantly more variable between tested locations than naturally occurring soils.
Lacustrine soil	Deposited by lakes.
Marine soil	Deposited in ocean basins, bays, beaches and estuaries.

Symbols in relation to Sampling and Testing:

B	Bulk Disturbed Sample	P	Piston Sample
BS	Block Sample	PBT	Plate Bearing Test
C	Core Sample	U	Undisturbed Sample, U50: 50mm diameter
CBR	CBR Mould Sample	D	Small Disturbed Sample
ES	Environmental Soil Sample	EW	Environmental Water Sample
DCP	Dynamic Cone Penetrometer	PSP	Perth Sand Penetrometer
SPT	Standard Penetration Test E.g. 3, 4, 5 refers to blows per 150mm N = 4+5 = 9: Blows per 300mm after first 150mm seating interval	CPT	Cone Penetration Truck
VS	Vane Shear ; P = Peak R = Remoulded (kPa)	HA	Hand Auger
EX	Excavator Machinery	BH	Backhoe Machinery
DR	Drilling Rig with Auger Rod	AT	Air Track
HQ	HQ Core Barrel of core size 63.5mm	PQ	PQ Core Barrel of core size 85mm

Rock Core Recovery:

TCR	Total Core Recovery (%) = $\frac{\text{CRL}}{\text{TCL}} \times 100\%$
SCR	Solid Core Recovery (%) = $\frac{\text{CCR}}{\text{TCL}} \times 100\%$
RQD	Rock Quality Designation (%) = $\frac{\text{ALC} > 100}{\text{TCL}}$
TCL	Length of Core Run
CRL	Recovered Length of Core
CCR	Total Length of Cylindrical Pieces of Core Recovered
ALC>100	Total Length of Axial Lengths of Core Greater than 100mm length

Soil Classification Description and Identification:

FIELD IDENTIFICATION PROCEDURES (Excluding particles larger than 60mm and basing fractions on estimated mass)				USC	Primary Name
COARSE Grained Soils (More than 50% of material less than 63mm is larger than 0.075mm) 0.075mm particle is about the smallest particle visible to the naked eye	GRAVELS More than half of coarse fraction is larger than 2.0mm	CLEAN GRAVELS (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle size.	GW	GRAVEL
			Predominantly one size or a range of sizes with more intermediate sizes missing.	GP	GRAVEL
		GRAVELS WITH FINES (Appreciable Amount of fines)	Non-plastic fines (for identification procedures see ML below).	GM	SILTY GRAVEL
			Plastic fines (for identification procedures see ML below).	GC	CLAYEY GRAVEL
	SANDS More than half of coarse fraction is smaller than 2.0mm	CLEAN SANDS (Little or no fines)	Wide range in grain sizes and substantial amounts of all intermediate sizes missing.	SW	SAND
			Predominantly one size or a range of sizes with some intermediate sizes missing.	SP	SAND
		SANDS WITH FINES (Appreciable Amount of fines)	Non-plastic fines (for identification procedures see ML below).	SM	SILTY SAND
			Plastic fines (for identification procedures see CL below).	SC	CLAYEY SAND

FIELD IDENTIFICATION PROCEDURES (Excluding particles larger than 60mm and basing fractions on estimated mass)		Identification procedures for fractions < 0.2mm			USC	Primary Name
		Dry Strength	Dilatancy	Toughness		
FINE Grained Soils (More than 50% of material less than 63mm is larger than 0.075mm)	SILTS & CLAYS Liquid Limit < 50	None to Low	Quick to Slow	None	ML	SILT
		Medium to High	None	Medium	CL	CLAY
		Low to Medium	Slow to very slow	Low	OL	Organic SILT
	SILTS & CLAYS Liquid Limit > 50	Low to Medium	Slow to very slow	Low to medium	MH	SILT
		High	None	High	CH	CLAY
		Medium to High	None	Low to medium	OH	Organic Clay
Highly Organic Soils		Readily identified by colour, odour, spongy feel and frequently by fibrous texture.			PT	PEAT

Low plasticity – Liquid Limit W_L less than 35%. • Medium plasticity – W_L between 35% and 50%.

Rock Definitions:

In engineering terms, rock substance is any naturally occurring aggregate of minerals and organic material which cannot be disintegrated or remoulded by hand in air or water. Defect in rock is described as any discontinuity or break in the continuity of a substance or substances. Mass in rock is described as any material which is not effectively homogeneous. It can consist of two or more substances without defects or one or more substances with one or more defects. The descriptive terms given hereby are broadly consistent with Australian Standard AS1726-1993.

SUBSTANCE DESCRIPTIVE TERMS:		ROCK SUBSTANCE STRENGTH TERMS:			
Rock Name	Simple rock names are used rather than precise geological classification.	Term	Abbre v-iation	Point Load Index, I_s50 (MPa)	Field Guide
PARTICLE SIZE Coarse grained Medium grained Fine grained	Grain size terms for sandstone are: Mainly 0.6 mm to 2 mm Mainly 0.2 mm to 0.6 mm Mainly 0.06 mm (just visible) to 0.2 mm	Very Low	VL	Less than 0.1	Material crumbles under firm blows with sharp end of pick, can be peeled with knife, pieces up to 30 mm thick can be broken by finger pressure.
FABRIC	Terms for layering or penetrative fabric (eg. Bedding, cleavage, etc.) are:	Low	L	0.1 to 0.3	Easily scored with a knife, indentations 1 mm to 3 mm show with firm blows of a pick point, has a dull sound under hammer. Pieces of core 150 mm long by 50 mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.
Massive	No layering or penetrative fabric.				
Indistinct	Layering or fabric just visible. Little effect on properties.				
Distinct	Layering or fabric is easily visible. Rock breaks more easily parallel to layering or fabric.				

Classification of Weathering Products

Term	Symbol	Definition	Term	Symbol	Point Load Index, I_s50 (MPa)	Field Guide
Residual Soil	RS	Soil derived from the weathering of rock, the mass structure and substance fabric are no longer evident, there is a large change in volume by the soil has not been significantly transported.	Medium	M	0.3 to 1.0	Readily scored with a knife, a piece of core 150 mm long by 50 mm diameter can be broken by hand with difficulty.
Extremely Weathered Material	XW	Material is weathered to such an extent that it has soil properties, ie. it either disintegrates or can be remoulded in water. Original rock fabric still visible.	High	H	1 to 3	A piece of core 150 mm long by 50 mm cannot be broken by hand but can be broken by a pick with a single firm blow, rock rings under hammer.
Highly Weathered Rock	MW	The whole of the rock substance is discoloured, usually by iron staining or bleaching, to the extent that the colour of the fresh rock is no longer recognisable.	Very High	VH	3 to 10	Hand specimen breaks after more than one blow of a pick, rock rings under hammer.
Moderately Weathered Rock	MW	The whole of the rock substance is discoloured, usually by iron staining or bleaching, to the extent that the colour of the fresh rock is no longer recognisable.	Extremely High	EH	More than 10	Specimen requires many blows with geological pick to break, rock, rings under hammer.

Classification of Weathering Products (Continued)

Term	Symbol	Definition
Slightly Weathered Rock	SW	Rock substance affected by weathering to the extent that partial staining or partial discolouration of the rock substance (usually by limonite) has taken place. The colour and texture of the fresh rock is recognisable, strength properties are essentially those of the fresh rock substance.
Fresh Rock	FR	Rock substance unaffected by weathering.

Rock Types:

Sedimentary	Carbonates	Igneous
• Shale • Claystone /Mudstone • Siltstone • Sandstone • Conglomerate • Breccia	• Limestone • Carbonate Claystone/Calcisiltite • Carbonate Sandstone/Calcarenite • Chalk	• Coarse Grained • Medium Grained • Fine Grained • Dolerite
Metamorphic	**Evaporites**	
• Coarse Grained • Medium Grained • Fine Grained	• Gypsum or Halite	

Term	Symbol	Point Load Index, I_s50 (MPa)	Field Guide

Notes on Weathering:

1. AS1726 suggests the term "Distinctly Weathered" (DW) to cover the range of substance weathering conditions between XW and SW. For projects where it is not practical to delineate between HW and MW or it is judged that there is no advantage in making such a distinction, DW may be used with the definition given in AS1726.
2. Where physical and chemical changes were caused by hot gasses and liquids associated with igneous rocks, the term "altered" may be substituted for "weathering" to give the abbreviations XA, HA, MA, SA and DA.

Notes on Rock Substance Strength:

1. In anisotropic rocks the field guide to strength applies to the strength perpendicular to the anisotropy. High strength anisotropic rocks may break readily parallel to the planar anisotropy.
2. The term "extremely low" is not used as a rock substance strength term. While the term is used as AS1726-1993, the field guide therein makes it clear that materials in that strength range are soils in engineering terms.
3. The unconfined compressive strength of isotropic rocks (and anisotropic rocks which fail across the planar anisotropy) is typically 10 to 25 times the point load index (I_s50). The ratio may vary for different rock types. Lower strength rocks often have lower rations than higher strength rocks.

Appendices

Appendix 2: Test Pit Logs

(No of pages including this page: 04)

STATS Pty Ltd
Unit 1/24 Baile Road, Canning Vale, WA 6155

TEST PIT LOG

Test Pit: **TP 1**
Sheet 1 of 3

Project Info		Excavation/Drilling Info		Coordinates:	
Job:	100988	Contractor:	-	Latitude (S):	Refer to Figure 1
Client:	HH Architects, co Duncan Jack Consulting	Equipment:	Bobcat	Longtitude (E):	Refer to Figure 1
Project:	Lot 196 (#12) Gurney Way	Bucket/Auger:	450mm	Surface RL (m):	N/A
Location:	Euclas	Logged by:	Duncan Jack	Datum:	N/A
Date:	21/06/2016	Time:	N/A	Weather:	Fine

Depth (m)	Ease of Excavation	Classification	Sample Type	Material Description Soil Type, Particle Characteristic or plasticity, colour, secondary/minor components	Moisture Condition	Consistency/Density	GWT Level	Field Records/Comments
0.1	M			**TOPSOILS:** Grass cover / Organics / Roots.	M			
0.5	M	SC		**clayey SANDS;** medium grained, grey/brown, dry to moist, loose to medium dense.	D - M	L - MD		
1.0			B					%age passing 2.36mm = 87 %age passing 0.075mm = 43 Liquid Limit: 40% Plasticity Index: 18% Linear Shrinkage: 7.5%
1.5								
2.0								
2.5								**TP 1 terminated at target depth of 2m.**
3.0								

STATS Pty Ltd
Unit 1/24 Baile Road, Canning Vale, WA 6155

TEST PIT LOG

Test Pit: **TP 2**
Sheet 2 of 3

Project Info		Excavation/Drilling Info		Coordinates:	
Job:	100988	Contractor:	-	Latitude (S):	Refer to Figure 1
Client:	HH Architects, co Duncan Jack Consulting	Equipment:	Bobcat	Longtitude (E):	Refer to Figure 1
Project:	Lot 196 (#12) Gurney Way	Bucket/Auger:	450mm	Surface RL (m):	N/A
Location:	Euclas	Logged by:	Duncan Jack	Datum:	N/A
Date:	21/06/2016	Time:	N/A	Weather:	Fine

Depth (m)	Ease of Excavation	Classification	Sample Type	Material Description Soil Type, Particle Characteristic or plasticity, colour, secondary/minor components	Moisture Condition	Consistency/Density	GWT Level	Field Records/Comments
0.1	M			**TOPSOILS:** Grass cover / Organics / Roots.	M			
0.5	M	SC		**clayey SANDS;** medium grained, grey/brown, dry to moist, loose to medium dense.	D - M	L - MD		
1.0			B					%age passing 2.36mm = 81 %age passing 0.075mm = 40 Liquid Limit: 39% Plasticity Index: 19% Linear Shrinkage: 6.0%
1.5								
2.0								
2.5								**TP 2 terminated at target depth of 2m.**
3.0								

STATS

STATS Pty Ltd
Unit 1/24 Baile Road, Canning Vale, WA 6155

TEST PIT LOG

Test Pit: **TP 3**
Sheet 3 of 3

Project Info		Excavation/Drilling Info		Coordinates:	
Job:	100988	Contractor:	-	Latitude (S):	Refer to Figure 1
Client:	HH Architects, co Duncan Jack Consulting	Equipment:	Bobcat	Longtitude (E):	Refer to Figure 1
Project:	Lot 196 (#12) Gurney Way	Bucket/Auger:	450mm	Surface RL (m):	N/A
Location:	Euclas	Logged by:	Duncan Jack	Datum:	N/A
Date:	21/06/2016	Time:	N/A	Weather:	Fine

Depth (m)	Ease of Excavation	Classification	Sample Type	Material Description Soil Type, Particle Characteristic or plasticity, colour, secondary/minor components	Moisture Condition	Consistency/Density	GWT Level	Field Records/Comments
0.1	M			**TOPSOILS:** Grass cover / Organics / Roots.	M			
0.5	M	SC		**silty SANDS;** medium grained, grey/brown, dry to moist, loose to medium dense.	D - M	L - MD		
1.0	M	CL	B	**sandy CLAYS;** medium grained, grey/brown, dry to moist, loose to medium dense.				%age passing 2.36mm = 78 %age passing 0.075mm = 40 Liquid Limit: 43% Plasticity Index: 22% Linear Shrinkage: 8.5%
1.5								
2.0								
2.5								**TP 3 terminated at target depth of 2m.**
3.0								

Appendices

Appendix 3: Laboratory Test results

(No of pages including this page: 10)

STATS WA Pty Ltd
Unit 1/24 Baile Road
Canning Vale WA 6155
PH: +61 (08) 9455 3654
ABN: 90 016 537 577
www.statswa.com.au

Test Certificate

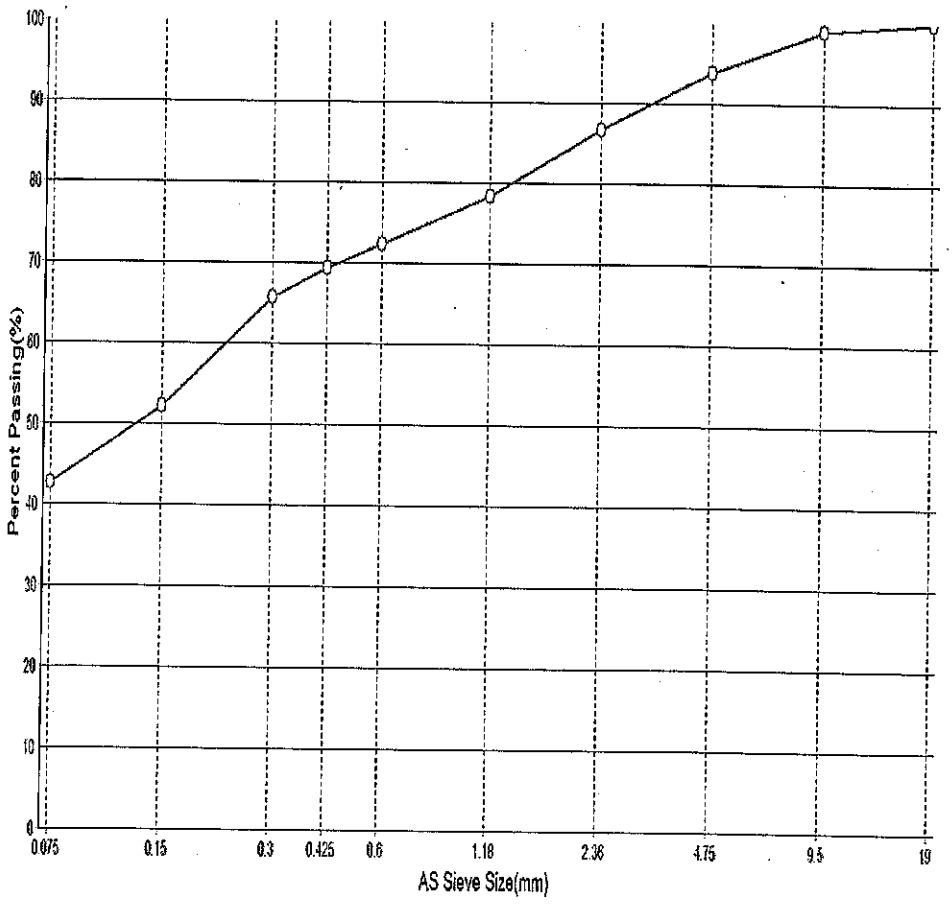
Particle Size Distribution Report

Client :	DUNCAN JACK CONSULTING	Report Number:	PE-100907 - 1/1
Address :	Suite 13, 47 Bookman Street, KALGOORLIE, WA, 6430	Report Date :	30/06/2016
Project Name :	Lot 196 Gurney Way	Order Number :	
Project Number :	PE-100907	Test Method :	AS1289.3.6.1
Location:	Eucla	Page 1 of 1	

Sample Number :	S16-431
Sampling Method :	As Received
Sampled By :	External
Date Sampled :	27/06/2016
Date Tested :	27/06/2016
Material Type :	Soil Sample
Material Source :	Test Pit
Remarks :	

SAMPLE LOCATION	
TP1 - (0.5-1.0m)	
Test Number :	1
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
19.0	100	
9.5	99	
4.75	94	
2.36	87	
1.18	78	
0.600	72	
0.425	69	
0.300	66	
0.150	52	
0.075	43	



NATA
WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

APPROVED SIGNATORY

Brendon Riordan - Laboratory Manager
NATA Accreditation Number
19186 Site Number 21714

STATS WA Pty Ltd
Unit 1/24 Baile Road
Canning Vale WA 6155
PH: +61 (08) 9455 3654
ABN: 90 016 537 577
www.statswa.com.au

Test Certificate

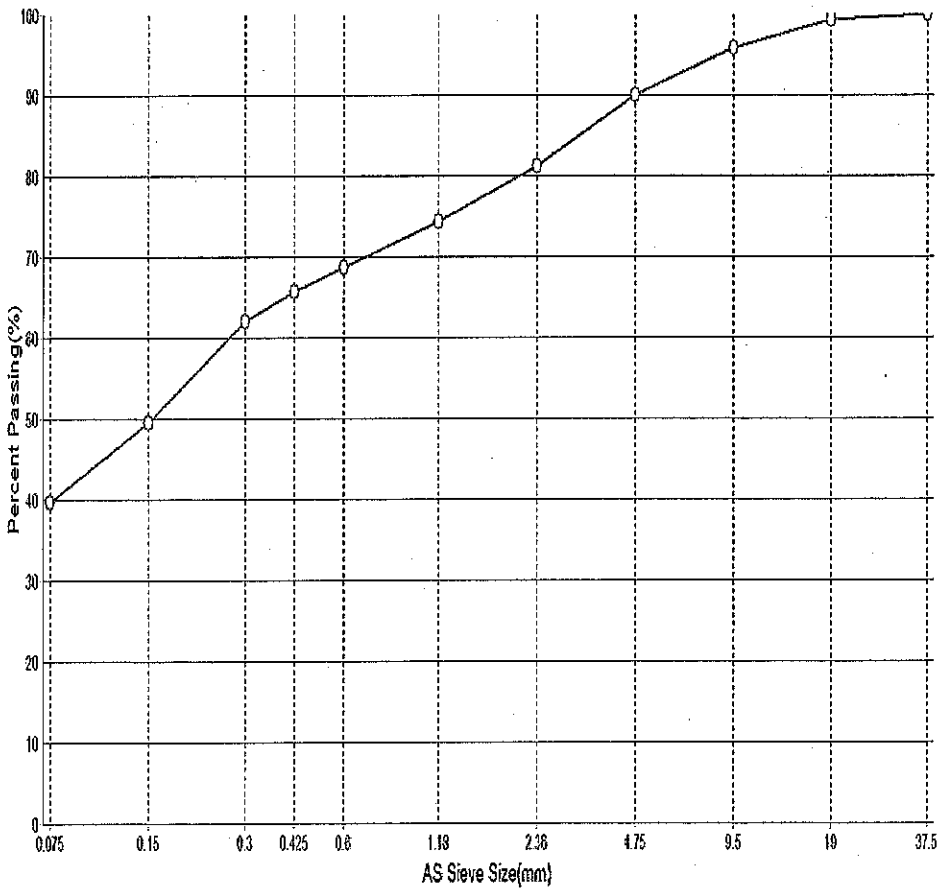
Particle Size Distribution Report

Client :	DUNCAN JACK CONSULTING	Report Number:	PE-100907 - 2/1
Address :	Suite 13, 47 Bookman Street, KALGOORLIE, WA, 6430	Report Date :	30/06/2016
Project Name :	Lot 196 Gurney Way	Order Number :	
Project Number :	PE-100907	Test Method :	AS1289.3.6.1
Location:	Eucla	Page 1 of 1	

Sample Number :	S16-432
Sampling Method :	As Received
Sampled By :	External
Date Sampled :	27/06/2016
Date Tested :	27/06/2016
Material Type :	Soil Sample
Material Source :	Test Pit
Remarks :	

SAMPLE LOCATION	
TP2 - (0.5-1.0m)	
Test Number :	2
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
37.5	100	
19.0	99	
9.5	96	
4.75	90	
2.36	81	
1.18	74	
0.600	69	
0.425	66	
0.300	62	
0.150	49	
0.075	40	



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Brendon Riordan - Laboratory Manager
NATA Accreditation Number
19186 Site Number 21714

STATS WA Pty Ltd
Unit 1/24 Baile Road
Canning Vale WA 6155
PH: +61 (08) 9455 3654
ABN: 90 016 537 577
www.statswa.com.au

Test Certificate

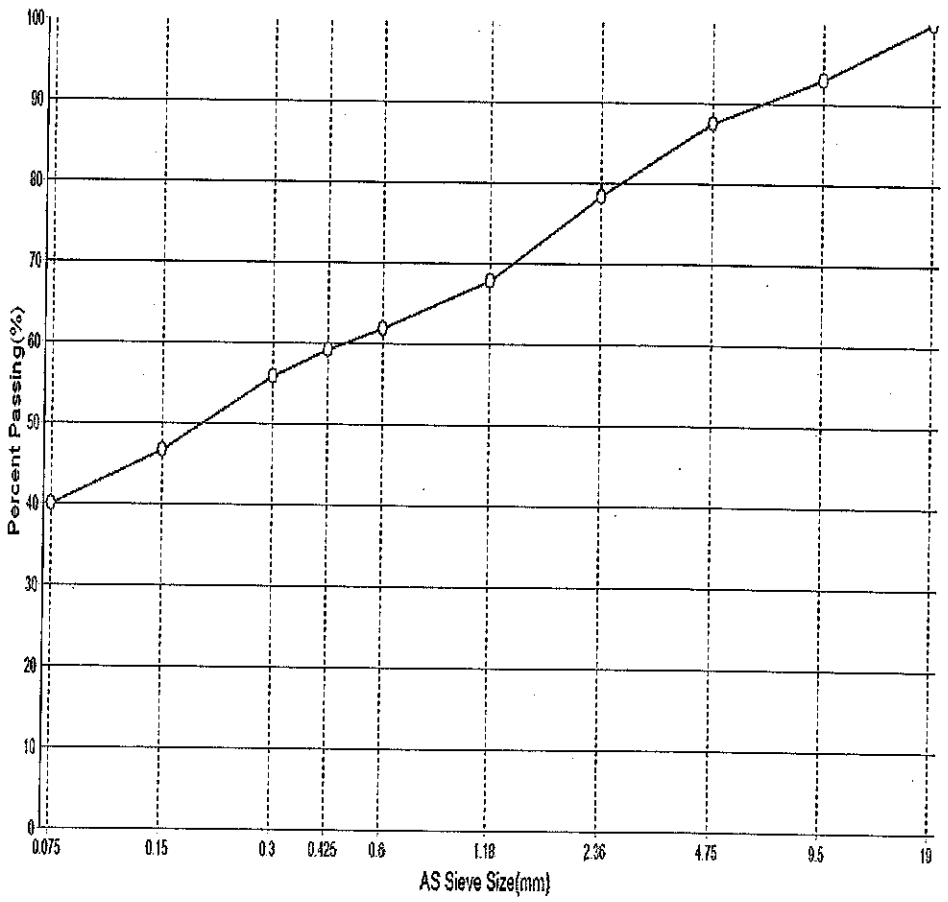
Particle Size Distribution Report

Client :	DUNCAN JACK CONSULTING	Report Number:	PE-100907 - 3/1
Address :	Suite 13, 47 Bookman Street, KALGOORLIE, WA, 6430	Report Date :	30/06/2016
Project Name :	Lot 196 Gurney Way	Order Number :	
Project Number :	PE-100907	Test Method :	AS1289.3.6.1
Location:	Eucla	Page 1 of 1	

Sample Number :	S16-433
Sampling Method :	As Received
Sampled By :	External
Date Sampled :	27/06/2016
Date Tested :	27/06/2016
Material Type :	Soil Sample
Material Source :	Test Pit
Remarks :	

SAMPLE LOCATION	
TP3 - (0.5-1.0m)	
Test Number :	3
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
19.0	100	
9.5	93	
4.75	88	
2.36	78	
1.18	68	
0.600	62	
0.425	59	
0.300	56	
0.150	47	
0.075	40	



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Brendon Riordan - Laboratory Manager
NATA Accreditation Number
19186 Site Number 21714

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Unit 1/24 Baile Road
Canning Vale WA 6155
PH: +61 (08) 9455 3654
ABN: 90 016 537 577
www.statswa.com.au

Test Certificate

Atterberg Limits Report

Client :	DUNCAN JACK CONSULTING	Report Number:	PE-100907 - 4/1
Address :	Suite 13, 47 Bookman Street, KALGOORLIE, WA, 6430	Report Date :	30/06/2016
Project Name :	Lot 196 Gurney Way	Test Method :	AS1289.3.1.2; 3.2.1; 3.3.1; 3.4.1
Project Number :	PE-100907		
Location:	Eucla	Page 1 of 1	

Sample Number :	S16-431	S16-432	S16-433	
Test Number :	1	2	3	
Date Sampled :	27/06/2016	27/06/2016	27/06/2016	
Date Tested :	29/06/2016	29/06/2016	29/06/2016	
Sampled By :	External	External	External	
Sampling Method :	As Received	As Received	As Received	
Material Source :	Test Pit	Test Pit	Test Pit	
Material Type :	Soil Sample	Soil Sample	Soil Sample	
Sample Location :	TP1 - (0.5-1.0m)	TP2 - (0.5-1.0m)	TP3 - (0.5-1.0m)	
Lot Number :				
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Sample History :	Oven Dried	Oven Dried	Oven Dried	
Sample Preparation :	Dry	Dry	Dry	
Notes :	No Cracking or Crumbling	No Cracking or Crumbling	No Cracking or Crumbling	
Mould Length (mm) :	250	250	250	
Liquid Limit (%) :	40	39	43	
Plastic Limit (%) :	22	20	21	
Plasticity Index (%) :	18	19	22	
Linear Shrinkage (%) :	7.5	6.0	8.5	
SPECIFICATION DETAILS				
Specification Number :				
Liquid Limit - Max :				
Plasticity Index - Max :				
Linear Shrinkage - Max :				
Remarks :	STATS Pty Ltd Project Number 100988			

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

APPROVED SIGNATORY

Brendon Riordan - Laboratory Manager
NATA Accreditation Number :
19186 Site Number 21714

STATS WA Pty Ltd
1/24 Baile Road
Canning Vale WA 6155
Phone: +61 9455 3654
www.statswa.com.au

TEST CERTIFICATE

Client:	Duncan Jack Consulting Engineers	Client Ref. No.:	
Project:	Lot 196 Gurney Way	Certificate No.:	PE-100907 – 5/1
		Laboratory Job No.:	PE-100907
Origin/Location:	Eucla	Lab Sample No.:	S16-432
Testing Date:	1/07/2016	Sample Description:	TP2 (0.5-1.0m)
Lab Location:	Perth		

Falling Head Permeability

AS 1289.6.7.2

Test Results

Coefficient of Permeability Kø = 8.96×10^{-9} m/s

Temperature Corrected Coefficient of Permeability $K_T = 9.91 \times 10^{-9}$ m/s

Additional Information

Laboratory Moisture Ratio: 102.5 %

Laboratory Density Ratio: 70.0%

Compactive Effort: Modified

Method of Compaction: AS1289.5.2.1

Surcharge and Pressure applied: 3KPa.

Sieve size used to obtain the test portion: 19mm

Percentage of material retained on the sieve: 1 %

Note: ----------

Approved Signatory: Brendon Riordan

Date: 7/07/2016

STATS WA Pty Ltd
1/24 Baile Road
Canning Vale WA 6155
Phone: +61 9455 3654
www.statswa.com.au

TEST CERTIFICATE

Client:	Duncan Jack Consulting Engineers	Client Ref. No.:	
Project:	Lot 196 Gurney Way	Certificate No.:	PE-100907 – 6/1
		Laboratory Job No.:	PE-100907
Origin/Location:	Eucla	Lab Sample No.:	S16-433
Testing Date:	1/07/2016	Sample Description:	TP3 (0.5-1.0m)
Lab Location:	Perth		

Falling Head Permeability

AS 1289.6.7.2

Test Results

Coefficient of Permeability Kø = 4.50×10^{-8} m/s

Temperature Corrected Coefficient of Permeability $K_T = 4.97 \times 10^{-8}$ m/s

Additional Information

Laboratory Moisture Ratio: 100.5 %

Laboratory Density Ratio: 70.0%

Compactive Effort: Modified

Method of Compaction: AS1289.5.2.1

Surcharge and Pressure applied: 3KPa.

Sieve size used to obtain the test portion: 19mm

Percentage of material retained on the sieve: 0 %

Note: ----------

Approved Signatory: Brendon Riordan

Date: 7/07/2016

ChemCentre
Inorganic Chemistry Section
Report of Examination

PO Box 1250, Bentley Delivery Centre
Bentley WA 6983
T +61 8 9422 9800
F +61 8 9422 9801
www.chemcentre.wa.gov.au
ABN 40 991 885 705

Purchase Order: None
Your Reference:
ChemCentre Reference: 15S2973 R0

STATS
1/24 Baile Rd
Canning Vale WA 6155

Attention: Terrence Gill

Final Report on 2 samples of soil received on 29/06/2016

LAB ID	Client ID and Description
15S2973 / 001	TP2 (0.5m)
15S2973 / 002	TP3 (0.5m)

Analyte		P
Method		PRI
Unit		mL/g
Lab ID	Client ID	
15S2973/001	TP2 (0.5m)	110
15S2973/002	TP3 (0.5m)	93

Analyte	Method	Description
P	PRI	Phosphorus Retention Index by method S15

The results apply only to samples as received. This report may only be reproduced in full.

Unless otherwise advised, the samples in this job will be disposed of after a holding period of 30 days from the report date shown below.

Phosphorus Retention Index (PRI) is a measure of the ability of soil to retain or leach applied phosphate.

PRI is defined as the ratio P ads : P eq where P ads is the amount of phosphorus adsorbed by soil (µg P/g soil) .

The phosphorus fixation properties of soil may be described by the following PRI values:

PRI

negative	desorbing (P leaching)
0 - 2	weakly adsorbing
2 - 20	moderately adsorbing
20 - 100	strongly adsorbing
>100	very strongly adsorbing

B. Price

Barry Price
Team Leader
Scientific Services Division
8-Jul-2016

HEALTH ACT 1911
HEALTH (TREATMENT OF SEWAGE AND DISPOSAL OF EFFLUENT AND LIQUID WASTE) REGULATIONS 1974

APPLICATION TO CONSTRUCT OR INSTALL AN APPARATUS FOR THE TREATMENT OF SEWAGE

1. Application Details

Read the application instructions in Appendix 1 before filling in this form.
Referring to Figure 1 in the Appendix 1, this is an application to the:

☐ Local Government ➔ **Proceed to Section 2**

☐ Executive Director of Public Health ➔ **Receipt number required** for the payment of $51.00 **BEFORE** this application is forwarded to the Department of Health WA. Refer to Appendix 2 for payment instructions.

Receipt Number for the payment of $51.00: _____
Note: Applications without a receipt number will be returned to applicant.

Complete Section 2 AND Section 3

2. Location of System

Lot Number	Lot 196	House Number	12
Street Name	Gurney Way		
Town or Suburb	Eucla		
Nearest crossroad	Patapis Street		
Local Government (City/Town/Shire)	Shire of Dundas		
Minesite (Include Minesite name, GPS coordinates and sub-locations)	(If applicable)		

3. Owner / Applicant Details

Owner's Name	Department Agriculture and Food		
Applicant's Name	George Nunn Director of Projects & Contracts Department of Agriculture and Food, Western Australia		
Applicant's Postal Address	3 Baron-Hay Court,		
Suburb	South Perth WA	Postcode	6151
Applicant's Phone Number	Ph: 9368 ~~3825~~ 3268		
Applicant's Email Address	george.nunn@agric.wa.gov.au		

Proceed to Section 4

4. Premises Details

☒ Residential Premises ➔ **Proceed to Section 4.1**

☐ Non-Residential Premises ➔ **Proceed to Section 4.2**

4.1 Residential Premises

- Number of bedrooms 6
- Number of persons on premises 3- 6
- Number of other dwellings on the lot 2
- Is this an ancillary accommodation? ☐ No ☒ Yes ➔ LG Planning approval required
- Spa(s) on premises? ☒ No ☐ Yes: Volume _____ Litres
- Note: Proposed single accommodation for boarder security staff

Proceed to Section 5

4.2 Non-Residential Premises

- Please give details of the premises and the nature of use.
- Public buildings - please detail the licensed maximum occupancy rate:_____ persons
- Number of persons on premises and **AND** any other volumes of liquid waste generated onsite:

Please refer to DOH factsheet: "*Supplement to Regulation 29 – Wastewater system loading rates*" for requirements and details on calculating daily wastewater volumes.

- Expected Daily Wastewater Volume: 1692 Litres / Day
- Note: _____

Proceed to Section 5

5. Treatment System Details

☐ Standard Septic Tank to Leach Drains or Evaporation Ponds ➔ **Proceed to Section 5.1**
☒ Aerobic Treatment Unit (Listed on DOH website's approved list) ➔ **Proceed to Section 5.2**
☐ Wastewater Treatment Plants (includes Commercial ATUs) ➔ **Proceed to Section 5.3**
☐ Greywater Reuse System ➔ **Proceed to Section 5.4**

☐ Alternative Wastewater Treatment Systems ➔ **Proceed to Section 5.5**

5.1 Standard Septic Tanks to Leach Drains or Evaporation Ponds

- Septic Tank Sizes _____

  _____

- Septic Tank Manufacturer _____

- Leach Drain Lengths __Evapotranspiration bed details and calculations provided

  _____

  _____

- Leach Drain Manufacturer _____

- Is it an alternating system? ☐ Yes ☒ No

- Evaporation ponds require an engineer's certification, certifying the evaporation ponds are capable of disposing the total wastewater volumes that is being fed into the ponds. Please provide details and specifications of ponds with application.

Proceed to Section 6

5.2 Aerobic Treatment Unit

- Name and Model of Aerobic Treatment Unit Graf Klaro 2.4 KL-AU-com
- Disposal Area 175 m^2
- Disposal Method:

  ☐ Surface Irrigation ☒ Subsurface Irrigation ☐ Substrata Irrigation

- Copy of maintenance agreement attached? ☐ Yes ☒ No ➔ Required.
- If leach drains are used for disposal, please complete dot point 3-5 in Section 5.1.

Proceed to Section 6

5.3 Wastewater Treatment Plants

- Please attach technical details and plant specifications with application. The following must be covered:
  - Capacity
  - Volume of treatment tanks
  - Buffer tank(s) volume(s)
  - Treatment train details
  - Water quality objectives
  - Maintenance
  - Alarms
  - Technical drawings of system

- Disposal Method:

  ☐ Surface Irrigation ☐ Subsurface Irrigation ☐ Substrata Irrigation

  Disposal Area Size: 175 m^2 Evapotranspiration bed details & calculations provided

  ☐ Evaporation ponds: require an engineer's certification, certifying the evaporation ponds are capable of disposing the total wastewater volumes that is being fed into the ponds. Please provide details and specifications of ponds with application.

- Note: System has been designed based on evapotranspiration with a non-conventional bed system. Bed size has been modelled using Trench3 software with analysis done using two separate different permeability factors.

Proceed to Section 6

5.4 Greywater Reuse System

- Name and Model of Greywater Reuse System _____

- Disposal Method:

  ☐ Surface Irrigation ☐ Subsurface Irrigation ☐ Substrata Irrigation

  Disposal Area Size: _____ m^2

- If leach drains are used for disposal, please complete dot point 3-5 in Section 5.1.

- Note: _____

  _____

Proceed to Section 6

5.5 Alternative Wastewater Treatment Systems

Attach system's technical specifications from the manufacturer with application.

Proceed to Section 6

6. Information for Government Sewerage Policy Compliance Assessment

- Lot Size 1112 m2
- Are there any existing on-site effluent disposal systems on the lot:

  ☒ No ☐ Yes ➔ Please provide the following information:

  - Local Government or Department of Health approval number(s) for all existing system(s).

    _____

  - Please provide current details on the following:
    - The use(s) of all other premise(s); and
    - Total number of persons that will occupy all other premises on the lot;
    - Estimate total wastewater volumes that is being disposed on-site.

_____

_____

_____

_____

7. System and Site Layout Plans

Unless the following are provided according to the requirements specified, the application will be returned to applicant for resubmission:

- A copy of plan and specifications of the proposed apparatus showing the top and longitudinal section to a scale of not less than 1:50.
- **3 copies** of a site plan of the premises to a scale not less than 1:100, showing:
  - the position of all buildings erected or proposed and the position of the proposed and any existing apparatus including setback distances.
  - the position, type and proposed use of all fixtures intended to discharge into the apparatus;
  - the position and setback distances of all drains, pipes, inspection openings, vents, traps and junctions in relation to buildings and boundaries;
  - the size of pipes and fittings and the fall of the drains;
  - details of the proposed and any existing effluent disposal system and its setback distances to buildings, boundaries and trafficable areas; and
  - the source of water supply to be used in connection with the apparatus if premises is not supplied by a non-reticulated mains supply.
- **Applications to the Executive Director of Public Health: For plans that are larger than A3, an electronic copy will need to be provided in a data disc with application OR via email to WWApps@health.wa.gov.au together with the receipt / receipt number for**

the $51.00 issued by the Department of Health WA. The premises address is to be identified in the email "Subject" field.

8. Declaration and Signature of Applicant

I hereby apply as the owner, or the person authorised to act on behalf of the owner, for approval to construct or install the apparatus as referred to above. I have completed Section 1-6 of this application form and provided plans that meet the requirements detailed in Section 7.

Also attached (if required) is a local government report for an application to the Executive Director Public Health.

Applicants Signature: _____ Date: 18/08/16

Please print name: G.C. NUNN DIRECTOR PROJECTS & CONTRACTS

(If this application is to be approved by the EDPH, please ensure the $51.00 application fee is paid prior to submission – Refer to Appendix 1 & 2 for further details)

LOCAL GOVERNMENT REPORT

(TO BE PROVIDED WHERE AN APPLICATION TO CONSTRUCT OR INSTALL AN APPARATUS IS MADE TO THE EXECUTIVE DIRECTOR, PUBLIC HEALTH)
(Local Government Use Only)

1. APPLICANT / LOCATION DETAILS

Owner's Name _____ Applicant's Name _____

Street _____ Town or Suburb _____

Lot or Pt. Lot No. _____ House No. _____ Local Government. _____

2. SITE CONDITIONS

Nature of Soil: ☐ Sand ☐ Gravel ☐ Loam ☐ Clay

☐ Other, specify: _____

Depth from natural ground level to highest known permanent/seasonal or tidal water table (mm) _____

Distance from natural water bodies _____ metres

Will the apparatus be installed in any of the following locations:

- Within 30 m of a well, bore, watercourse, dam intended to be used for human consumption ☐ **Yes** ☐ **No**
- In an area likely to be subject to flooding or inundation in a 1:10 year return event. ☐ **Yes** ☐ **No**

If yes to any of the above, course of action taken _____

_____

- Is the information on Section 6 of the application form correct? ☐ **Yes** ☐ **No**
- Does the proposed development complies with the Government Sewerage Policy? ☐ **Yes** ☐ **No**

3. RECOMMENDATIONS OF LOCAL GOVERNMENT

☐ Approval recommended (subject to the conditions listed below)
☐ Approval not recommended (reasons for refusal attached)

4. CONDITIONS OF APPROVAL

Type of Disposal System and Dimensions (if different from application form): _____

_____

Other Conditions: _____

_____

_____

_____

_____

_____

(Any further conditions should be attached)

Delegate of Local Government: _____

Local Government Approval No.: _____ Date: _____

EDPH approved form as per Section 4 and 4A of the
Health (Treatment of Sewage and Disposal of
Effluent and Liquid Waste) Regulations 1974

Appendix 1

Instructions for completing application form:

- Complete Sections 1-8 in full.
- Ensure plans and drawings are according to the specifications detailed in Section 7 of the application form.
- Ensure relevant application fees detailed in Appendix 2 are paid.
- Should you need assistance, contact your local government's Environmental Health Officer.

For applications to the Executive Director, Public Health ONLY:

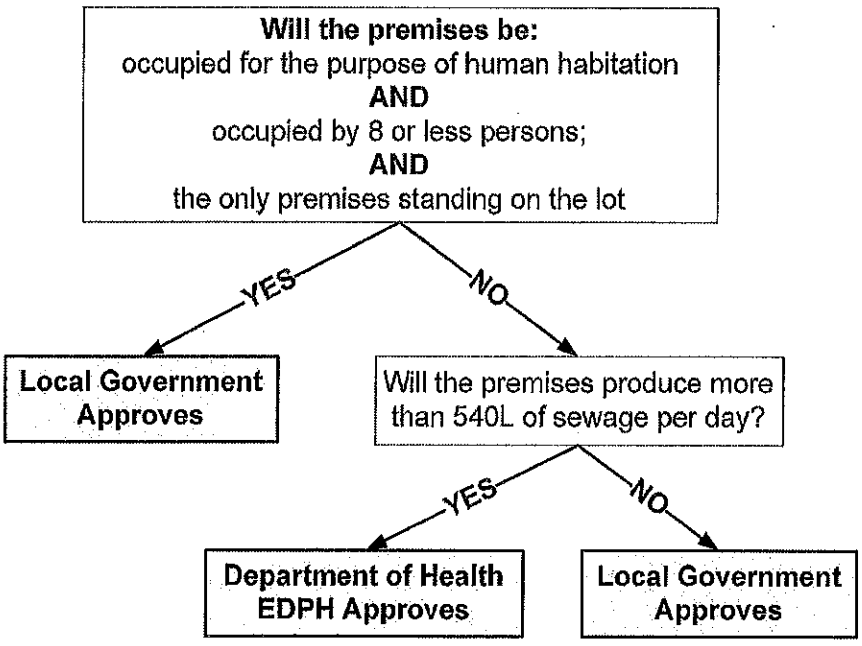
- Ensure you have recorded your receipt number for the payment of $51.00 in Section 1 of the application form.
- To submit your application you can either email to WWApps@health.wa.gov.au. OR
- Send by post to:

Water Unit
Environmental Health Directorate
Grace Vaughan House
PO Box 8172
PERTH BUSINESS CENTRE WA 6849

Compliance with regulations:

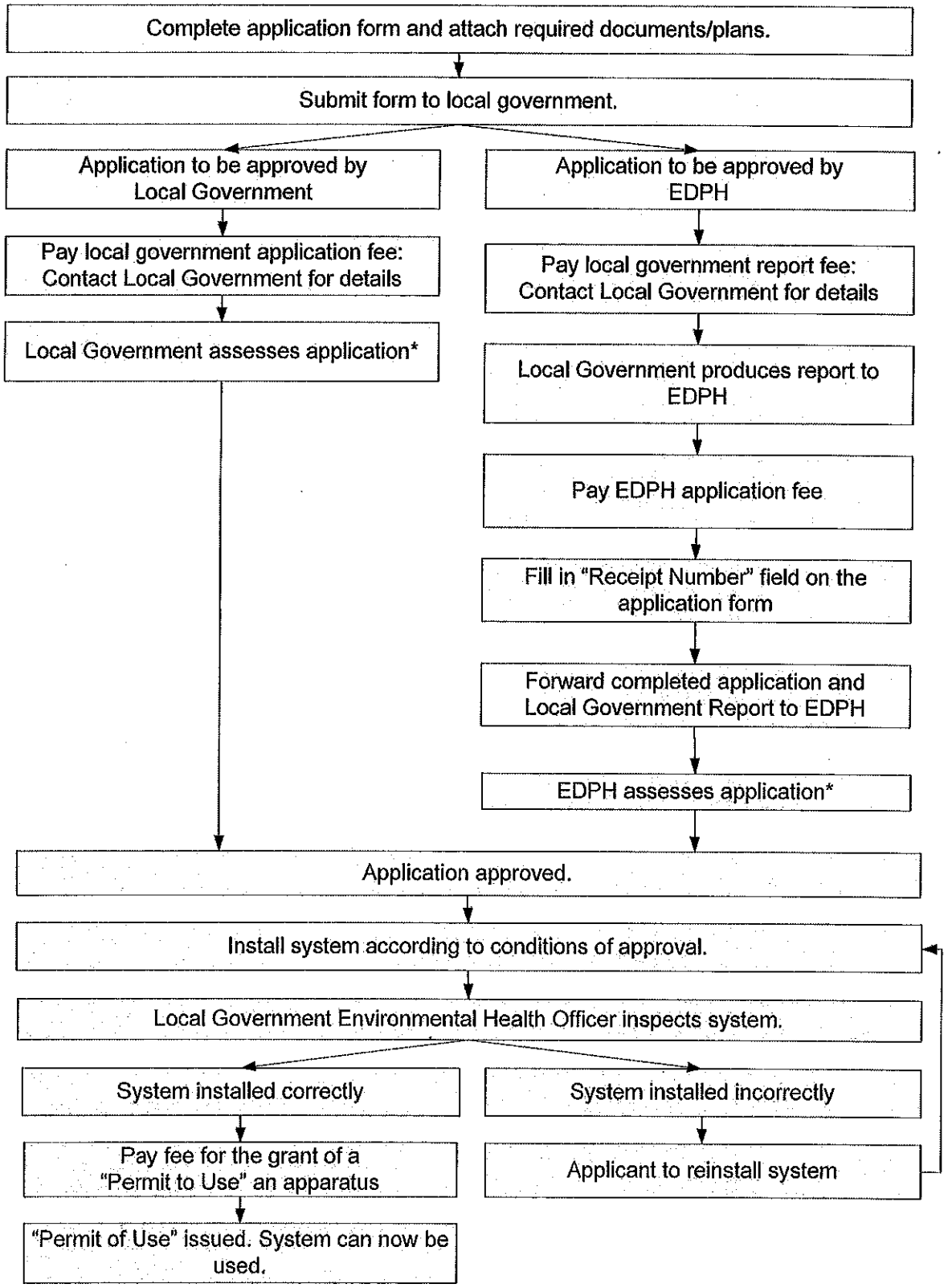
- Construction of the apparatus shall be in accordance with the requirements of the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974.
- Approval will not be given for the installation of an apparatus where sewer connection is available as provided for by either section 72 or section 81 of the Health Act 1911.

Who approves your application?
(Figure 1)



EDPH: Executive Director, Public Health

The Application Process
(Figure 2)



*Unapproved applications will be returned to applicant with reasons for refusal included.
EDPH: Executive Director, Public Health

Appendix 2

The following fees will apply:

Local government application fee (paid to local government)	**$ 118.00**

AND
(when EDPH approval is required)

Health Department of WA application fee:	
(a) with a local government report	**$ 51.00**
(b) without a local government report*	**$ 110.00**
Local government report fee ***recommended fee***	**$ 118.00**
(This fee is set by the local government and paid to the local government)	

When the application is approved:

Fee for the grant of a permit to use an apparatus (including all inspections)	**$ 118.00**

*only permitted when local government fails to provide a local government report within 28 days of request.

For applications to the Executive Director, Public Health, the **$51.00** application fee can be made through the following options:

Option 1: By Telephone
Ring **(08) 9388 4999** and request to be put through to the "Accounts Officer".

Option 2: By Email
Complete "Payment Form" overleaf and email the **PAYMENT FORM ONLY** to **BUadminsupport.ehd@health.wa.gov.au**

Option 3: By Cheque
Send cheque with the completed "Payment Form" overleaf to:

Accounts Officer
Business Unit (Grace Vaughan House)
Environmental Health Directorate
PO Box 8172
PERTH BUSINESS CENTRE WA 6849

Note: Processing times for cheques may take up to 10 business days before a receipt number can be issued. You will not be able to submit your application form without a receipt number.

For use when lodging an application to the Executive Director, Public Health ONLY

PAYMENT FORM
FOR THE APPLICATION TO INSTALL OR CONSTRUCT AN APPARATUS FOR THE TREATMENT OF SEWAGE

Application Fee $51.00

Applicant's Name / organisation

_____

Address and location of wastewater system

_____

_____

Return postal address for receipt to be sent:

Cardholders name: _____

Address: _____

Suburb: _____ Post Code: _____

Your return e-mail: _____

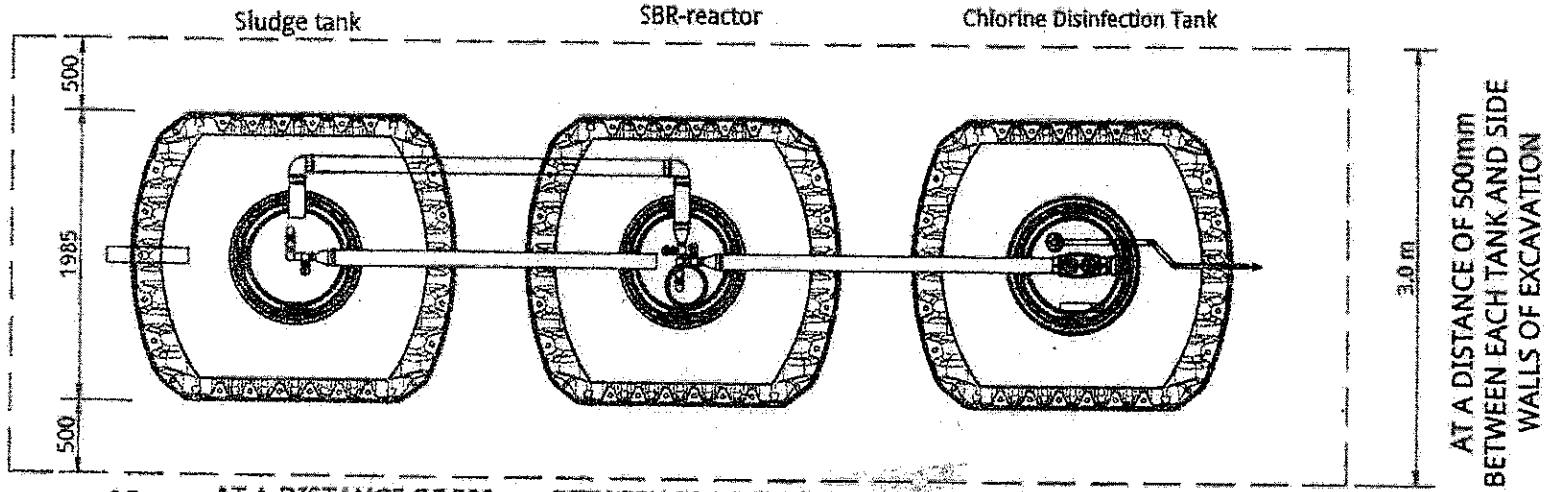
Payments by credit card: Fill in credit card details below

Card Type:
☐ Mastercard ☐ Visa

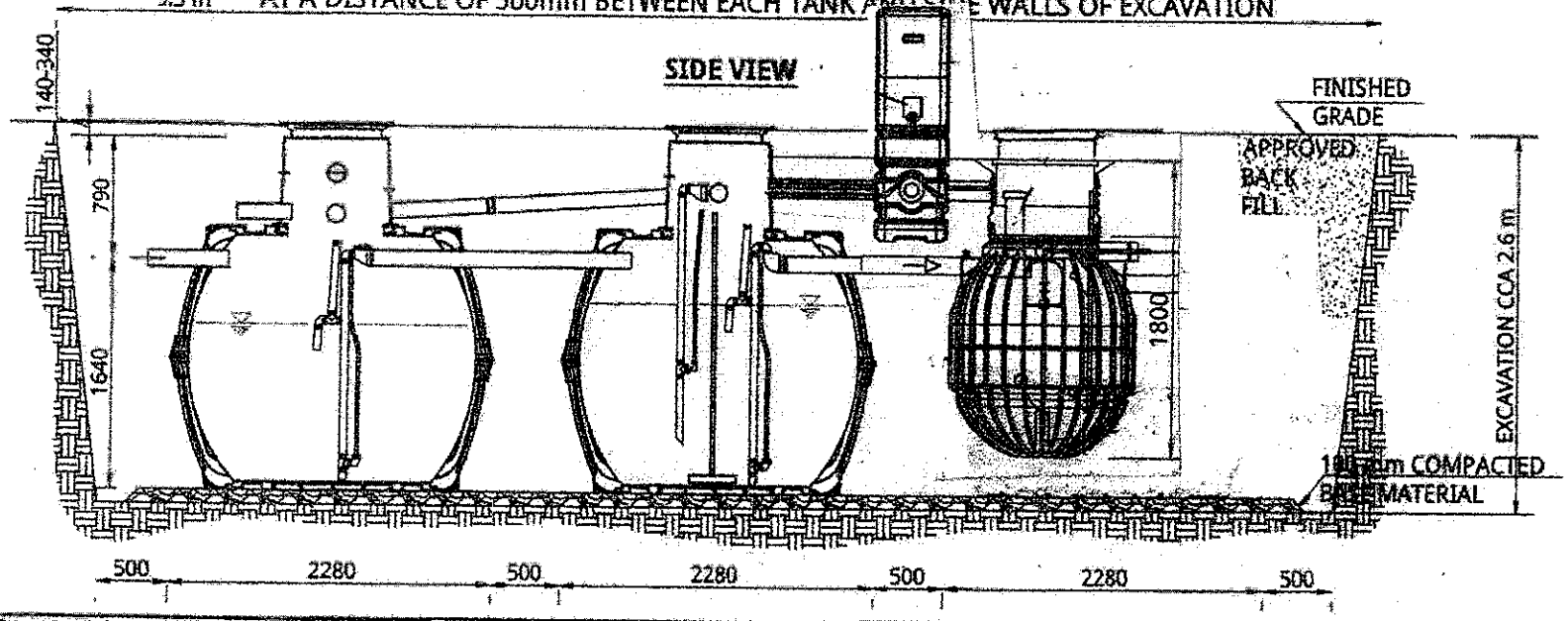
Credit Card Number ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ Expiry Date ☐☐☐☐

EDPH approved form as per Section 4 and 4A of the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974

TOP VIEW



SIDE VIEW



Company Information	Drawing Title	Drawing Information	
KLARO Graf Australia 1,2/8 Piper Street Caboolture Queensland 4510 Phone: 1300 466 469 info@klaro.com.au www.klaro.com.au GRAF ENGINEERED IN GERMANY	KLARO 24 PER DAY (1x 3750 1 x 3750 / 1 x 1150 COMMERCIAL WASTEWATER TREATMENT SYSTEM GENERAL ARRANGEMENT / SECTIONS	article no.	KL-AU-COM-2.4KL
		drawn	DGK
		date	2015/03
		note	all dimension in mm

Klaro 2.4 kL/d SBR Unit Specifications

The basic technical information for the Klaro 2.4kL SBR ATU.

Type of plant: Klaro 2.4 kL/d

Size: 2 x 3,750 L Carat Tanks treatment tanks 1 x 1.1 m diam disinfection/pump out tank

Effluent Quality:

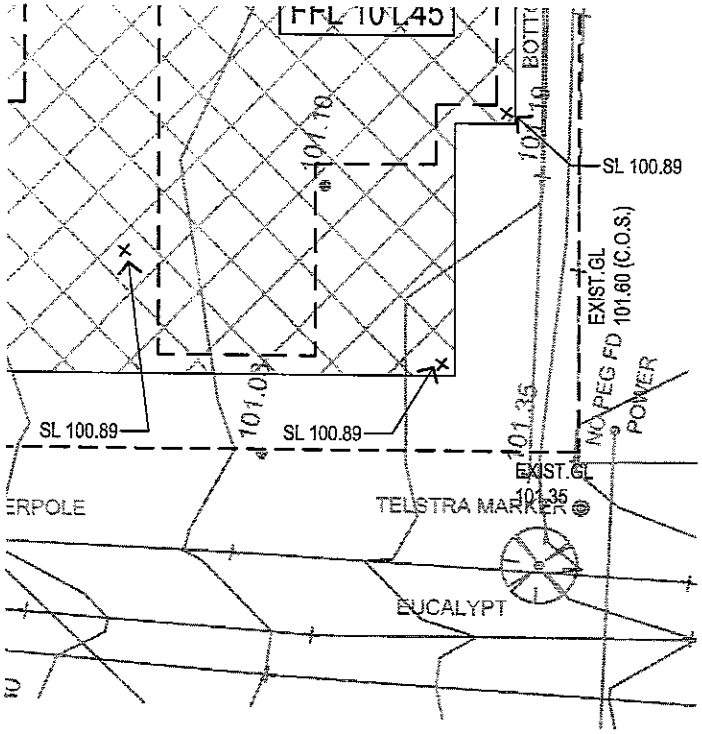
Influent
BOD_5 approx. ave 350 mg/L
SS approx. ave 400 mg/L
Free residual chlorine – nil
Faecal coliforms
pH approx. 6.5 -7.8
Grease/oil approx. 2%

Effluent
BOD_5 < 20 mg/L
SS < 30 mg/L
Free residual chlorine – N/A discharge into sub soil drip line
Faecal coliforms - N/A discharge into sub soil drip line
pH approx. 6.5 - 7.8
Grease/oil approx.. 2%

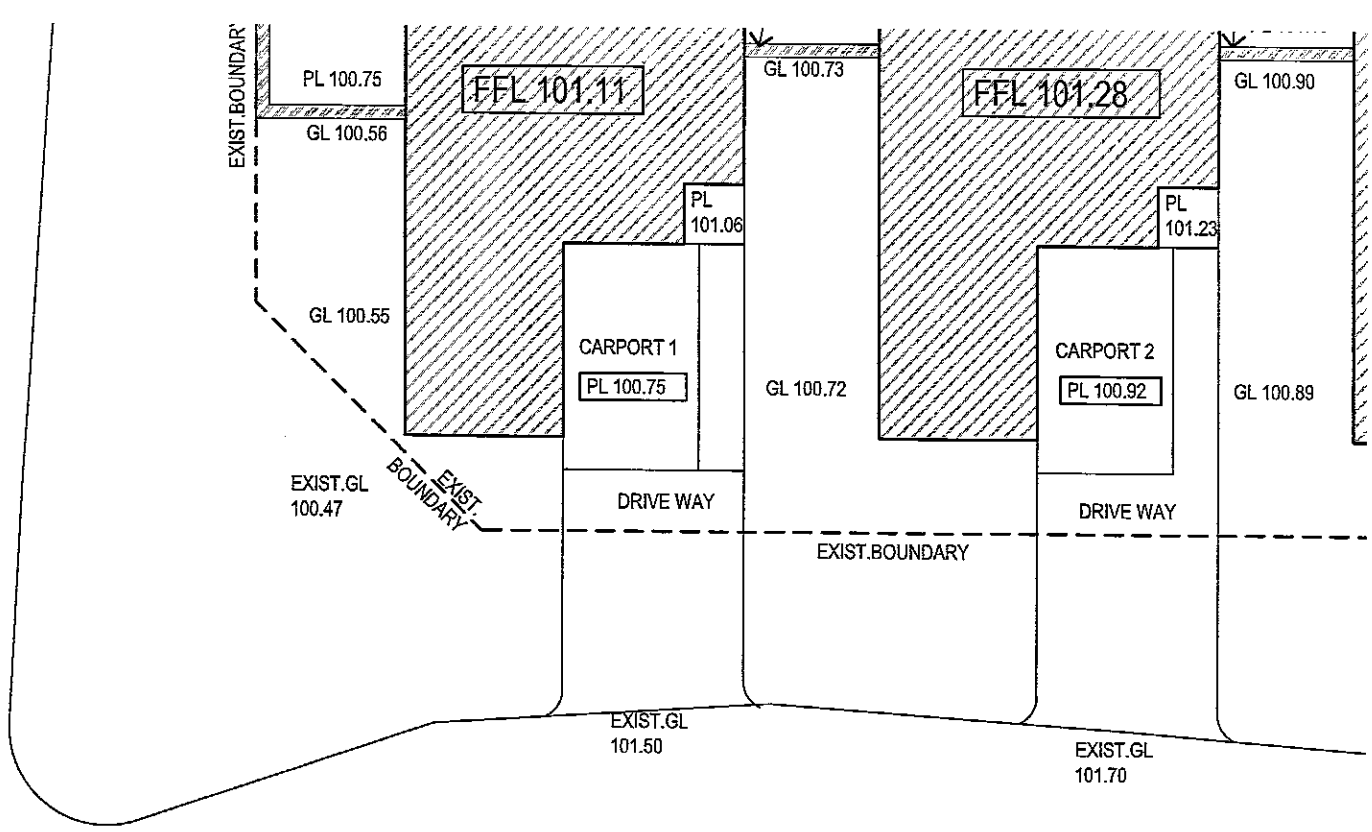
Design Criteria

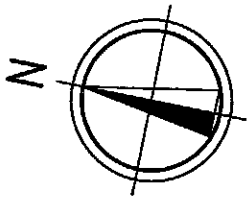
Max daily flow rate:	2.4 kL/d
Max BOD loading/d:	0.96 kg/d
Cycles per day:	4
Sludge Storage and buffer volume:	3,750 L
Batch reactor capacity:	3,750 L
Discharge Tank volume	600 L
Air Compressor Flow rate:	150 L/min
Nominal running time per day:	11.5 hrs

bioSystems 2000 PTY LTD
P O Box 1005 Bentley DC WA 6983
Ph: 9450 2570 Fax: 9450 1635 Mobile 0409 680142 e-mail: biosystems2000@yahoo.com.au
ABN 27 091 665 173



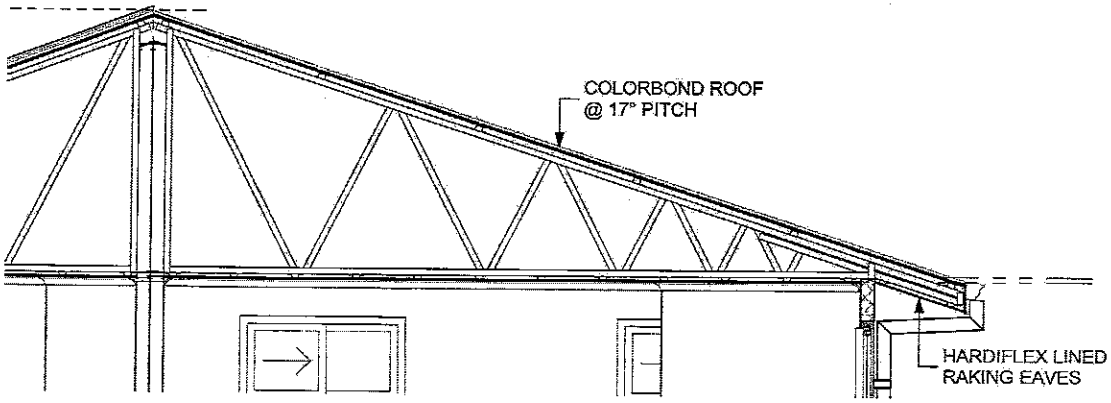
) PAD PLAN





05 / - PROPOSED PAVING LEVEL PLAN

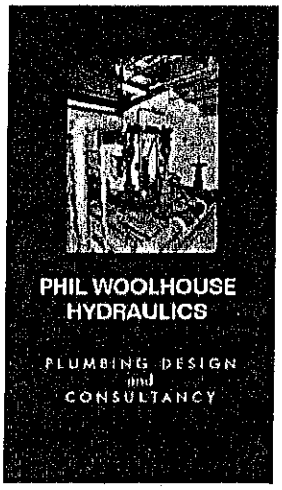
1:200 @ A2



SITE PREPARATION NOTES

ALLOW FOR SITE PREPARATION INCLUDING REMOVAL OF ALL ORGANIC MATERIAL UNCONTROLLED FILLED AND TREE ROOTS.

EXCAVATE NATURAL GROUND LEVELS TO THE SPECIFIED DEPTH SHOWN ON DRAWING FOR THE INSTALLATION OF THE 200mm THICK SAND PAD TO ACHIEVE NOMINATED LEVELS. INSTALL SAND PAD TO ENGINEERS



PHIL WOOLHOUSE HYDRAULICS
PO Box 7085
Lower King WA 6330
ABN 18 560 628 165
Mobile: 0407 426 429
Email: phil@cavrim.com.au
PL: 6359
GF: 009583

Executive Director of Public Health
189 Royal Street
East Perth WA 6004

16th August 2016

Re : Sewer disposal application lot 196 Gurney Way Eucla

Phil Woolhouse Hydraulics provides the following calculations to support the proposed waste water disposal area for Lot 196 Gurney Way Eucla.

Supporting documentation included.

- Evapotranspiration calculations using Trench3 software in accordance with AS1547
- Test results of on site permeability tests in accordance with Section 8 WA Health (treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974

Additional information attached.

- Geotechnical report Duncan Jack Consulting
- Nonconventional Beds September 2013 W. Cromer.
- Hydraulic drawings H01.a H.02.a
- Architectural drawing A13

Summary.

The Department of Agriculture and food have proposed three two bedroom dwellings to be located on number 12 Gurney Way Eucla. The proposed development is housing for their boarder security staff which will be primarily be a maximum of 2 people per dwelling at any one time. The expected discharge rate (150 litres per person per day) of 900 litres per day has **not** been adopted but rather the more conservative amount of 1692 litres per day based on 564 litres per two bedroom dwelling as recommended in Schedule 9 of the Regulations.

The initial geotechnical report at undertaken at number 12 Gurney Way Eucla by Duncan Jack Consulting described a permeability factor of 0.0025 and a soil factor of 6 based on the results of a laboratory based falling head permeability test in accordance with AS1289.6.7.2. The results of this test were surprising as the measured permeability factor was not consistent with the described site soil conditions. The aforementioned test is not an equivalent to the requirements of AS1547 and subsequent permeability tests on site were undertaken. Based on these results a standard subsurface irrigation system could not be used due to insufficient available discharge area.

The Eucla Township has a very low annual rainfall rate, has no issues with ground water table and is exposed to constant winds from the southern ocean, which all promote the use of evapotranspiration as the major method of waste disposal. The size and design of the drainage bed has been adopted on methods used in other areas or poor permeability such as Tasmania. The system was modelled with varying permeability factors well below the measured value and the largest bed area able to fit on the site was adopted. The likelihood is the current bed design will not hold more than 100mm of water at the base in a 12 month period.

Evapotranspiration Modelling.

PWH has modelled the Eucla waste water discharge of three dwellings using Trench®3 Wastewater Software, based on a drainage bed of 32m long x 5.3m wide and 800mm deep using a combination both evapotranspiration and infiltration disposal methods. A conservative permeability factor of 10 litres per m^2 per day has be adopted. The system was also modelled with a reduced permeability factor of 8 litres per m^2 per day and was found still to be adequate.

The above modelling parameters were adopted after an internal review by Geotechnical Engineer Bill Cromer.

Phil Woolhouse Hydraulics

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Assessment Report

Site Assessment for absorption trenches

Assessment for	Department of Agriculture and food	Assess. Date	30-Jul-16
		Ref. No.	160520
Assessed site(s)	House 12 Gurney Way Eucla	Site(s) Inspected	
Local authority	Shire Of Dundas	Assessed by	Phil Woolhouse

This report summarises wastewater volumes, climatic inputs for the site, soil characteristics and system sizing and design issues. Site Capability and Environmental sensitivity issues are reported separately, where 'Alert' columns flag factors with high (A) or very high (AA) limitations which probably require special consideration for system design(s). Blank spaces on this page indicate data have not been entered into TRENCH.

Wastewater Characteristics

Wastewater volume (L/day) used for this assessment = 1,692 (using the 'No. of bedrooms in a dwelling' method)

Septic tank wastewater volume (L/day) = 560

Sullage volume (L/day) = 1,130

Total nitrogen (kg/year) generated by wastewater = 4.1

Total phosphorus (kg/year) generated by wastewater = 2.0

Climatic assumptions for site (Evapotranspiration calculated using the crop factor method)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean rainfall (mm)	15	19	23	27	31	30	25	26	22	23	24	25
Adopted rainfall (R, mm)	20	25	30	30	35	33	30	30	30	30	30	30
Retained rain (Rr, mm)	18	23	27	27	32	30	27	27	27	27	27	27
Max. daily temp. (deg. C)	26	26	25	21	19	18	18	19	21	23	24	25
Evapotrans (ET, mm)	88	86	72	52	43	35	38	45	63	83	86	102
Evapotr. less rain (mm)	70	63	45	25	12	5	11	18	36	56	59	75

Annual evapotranspiration loss retained rain (mm) = 473

Soil characteristics

Texture = Sandy clays Category = 6 Thick. (m) = 2

Adopted permeability (m/day) = 0.05 Adopted LTAR (L/sq m/day) = 10 Min depth (m) to water = 40

Proposed disposal and treatment methods

Proportion of wastewater to be retained on site:	
The preferred method of on-site primary treatment:	In a package treatment plant
The preferred method of on-site secondary treatment:	In-ground
The preferred type of in-ground secondary treatment:	Trench(es)
The preferred type of above-ground secondary treatment:	None
Site modifications or specific designs:	Are needed

Suggested dimensions for on-site secondary treatment system

Total length (m) =	29
Width (m) =	5.3
Depth (m) =	0.8
Total disposal area (sq m) required =	160
comprising a Primary Area (sq m) of:	175
and a Secondary (backup) Area (sq m) of:	

Sufficient area is available on site

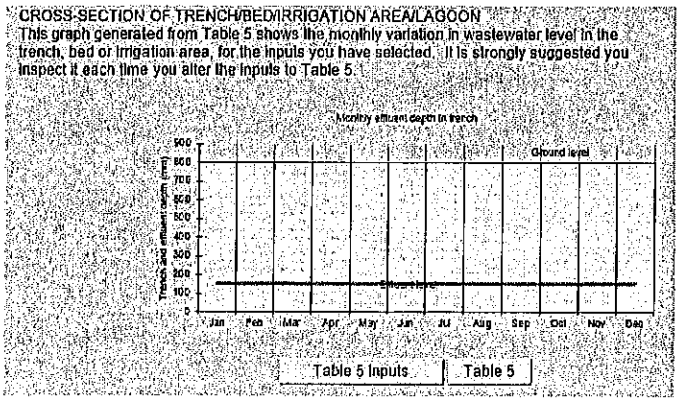


Figure 1 Trench3 modelling using reduced a conservative LTAR of 10 litres per m² per day, note the minimum level of the drainage bed has not changed.

Phil Woolhouse Hydraulics

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Assessment Report

Site Assessment for absorption trenches

Assessment for	Department of Agriculture and food	Assess. Date	30-Jul-16
		Ref. No.	160520
Assessed site(s)	House 12 Gurney Way Eucla	Site(s) Inspected	
Local authority	Shire Of Dundas	Assessed by	Phil Woolhouse

This report summarises wastewater volumes, climatic inputs for the site, soil characteristics and system sizing and design issues. Site Capability and Environmental sensitivity issues are reported separately, where 'Alert' columns flag factors with high (A) or very high (AA) limitations which probably require special consideration for system design(s). Blank spaces on this page indicate data have not been entered into TRENCH.

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Total nitrogen (kg/year) generated by wastewater = 4.1

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Climatic assumptions for site (Evapotranspiration calculated using the crop factor method)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean rainfall (mm)	15	19	23	27	31	30	25	26	22	23	24	25
Adopted rainfall (R, mm)	29	25	30	30	36	33	30	30	30	30	30	30
Retained rain (Rr, mm)	18	23	27	27	32	30	27	27	27	27	27	27
Max. daily temp. (deg. C)	26	26	25	21	19	18	18	19	21	23	24	25
Evapotrans (ET, mm)	88	86	72	52	43	35	38	45	63	83	86	102
Evapotr. less rain (mm)	70	63	45	25	12	5	11	18	36	56	59	75

Annual evapotranspiration less retained rain (mm) = 473

Soil characteristics

Texture = Sandy clays Category = 6 Thick. (m) = 2

Adopted permeability (m/day) = 0.03 Adopted LTAR (L/sq m/day) = 8 Min depth (m) to water = 40

Proposed disposal and treatment methods

Proportion of wastewater to be retained on site:	
The preferred method of on-site primary treatment:	In a package treatment plant
The preferred method of on-site secondary treatment:	In-ground
The preferred type of in-ground secondary treatment:	Trench(es)
The preferred type of above-ground secondary treatment:	None
Site modifications or specific designs:	Are needed

Suggested dimensions for on-site secondary treatment system

Total length (m) =	29
Width (m) =	5.3
Depth (m) =	0.8
Total disposal area (sq m) required =	180
comprising a Primary Area (sq m) of:	175
and a Secondary (backup) Area (sq m) of:	

Sufficient area is available on site

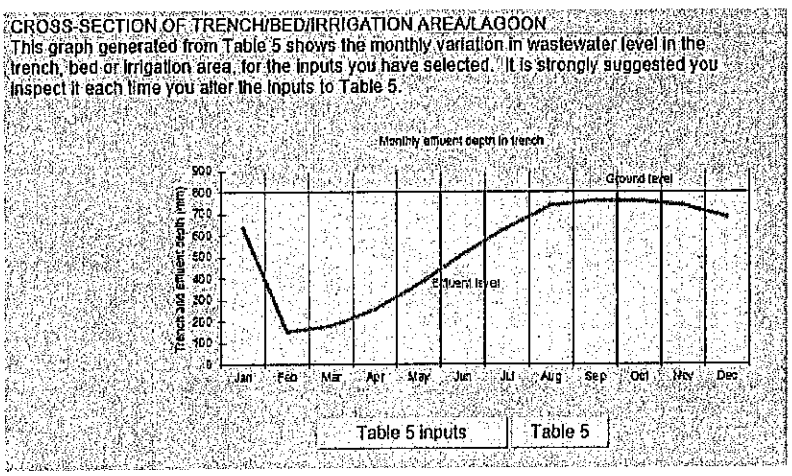


Figure 2 Trench3 modelling using reduced LTAR of 8 litres per m² per day, system at maximum capacity.

Permeability testing.

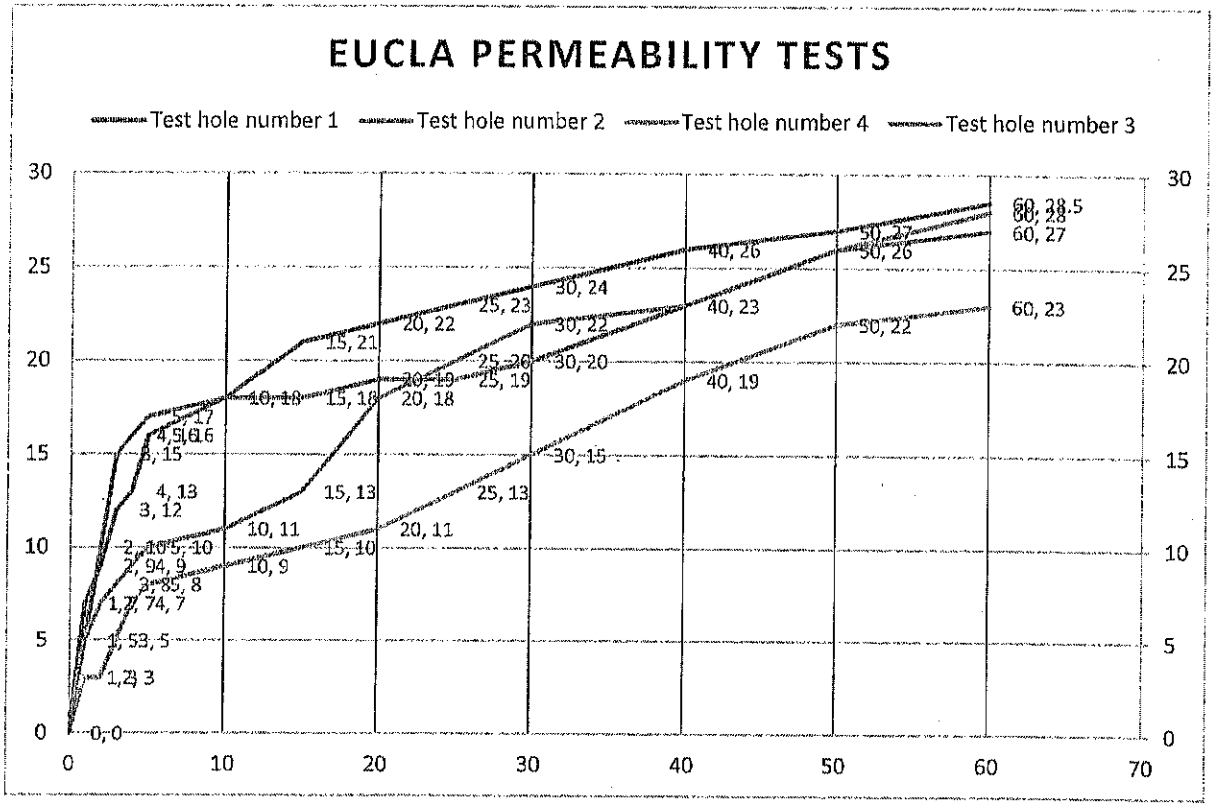


Figure 3 Falling head permeability test results.

Three of the four falling head permeability tests undertaken at 12 Gurney meet the requirements of the Health Regulations 1974 as over 25mm of water dropped within the 60-minute period. This equates to a discharge factor of 20 litres per square metre per day according to the table in section 8 of the regulations.

The test holes were excavated by hand to the original proposed base of the drainage bed. The test holes were then all filled with water and allowed to drain overnight, the tests were conducted the next day. Each test showed very similar characteristics with the majority of the 25mm of water infiltrating within the first 10 minutes. PWH adopted a conservative approach and looked at the average drop of the water recorded from the 20 to 50-minute mark in Figure 3. This has been estimated at 0.075m/day or 11 litres per square metre per day when adopting a Long Term Acceptance Rate (LTAR). This is a similar approach used within a constant head test but it must be noted that there is no recognised mathematical equation to substantiate an LTAR from a falling head test as conducted on site. This factor was introduced by PHW to assist with modelling the waste water infiltration as noticeable reduction of infiltration occurred after the first 10minute period of the falling head test.

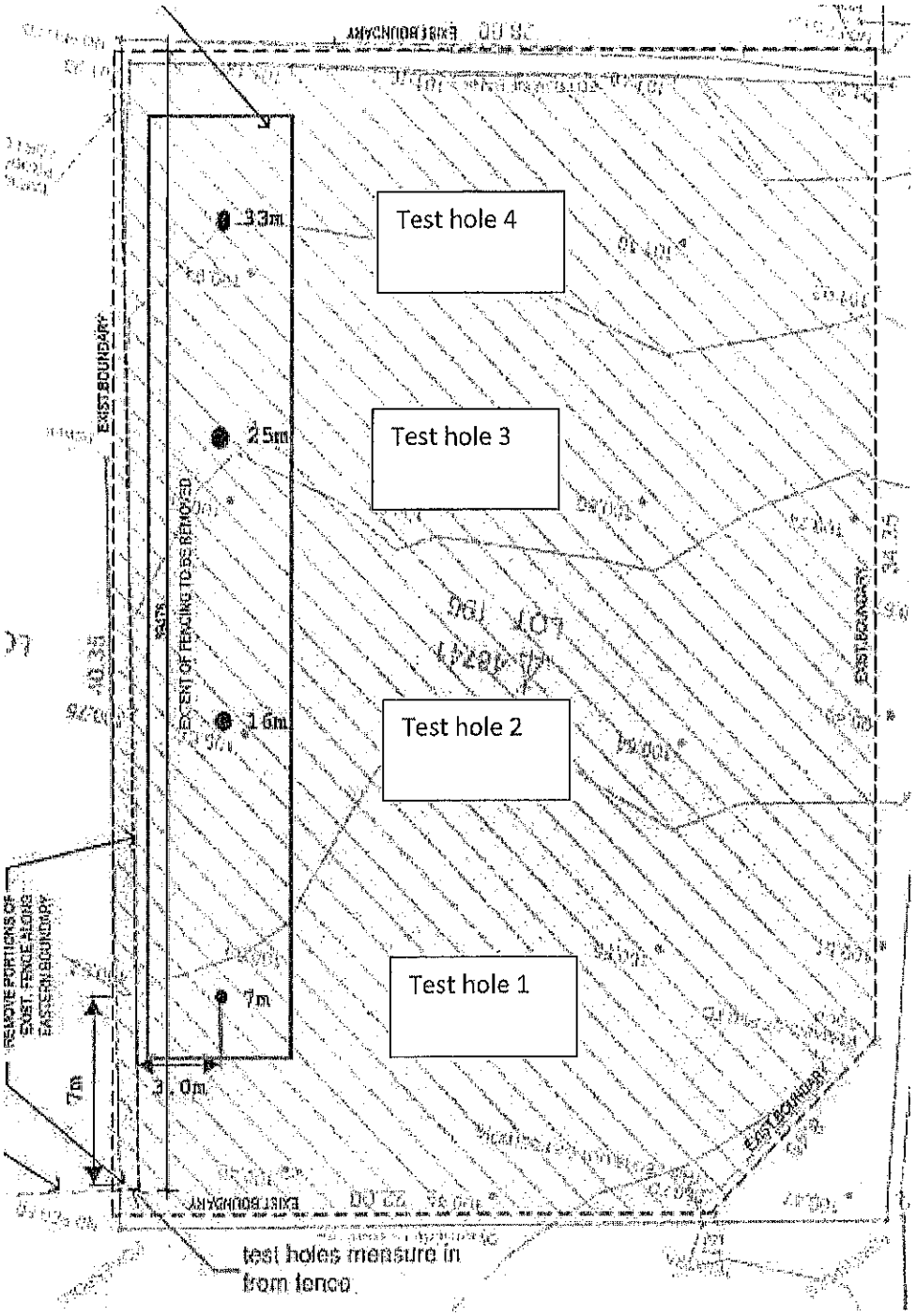
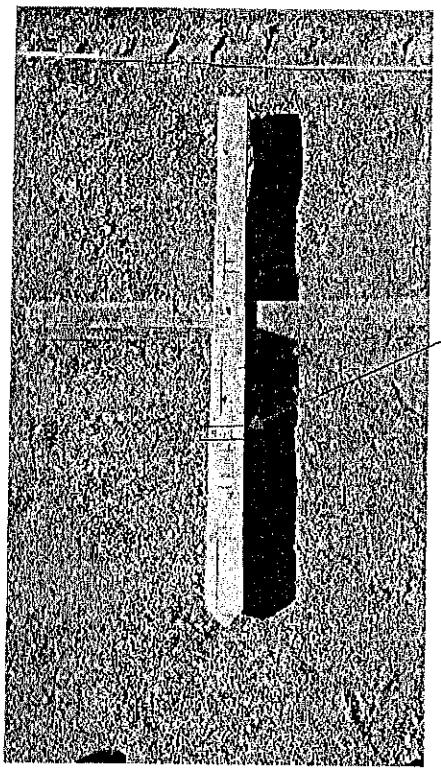
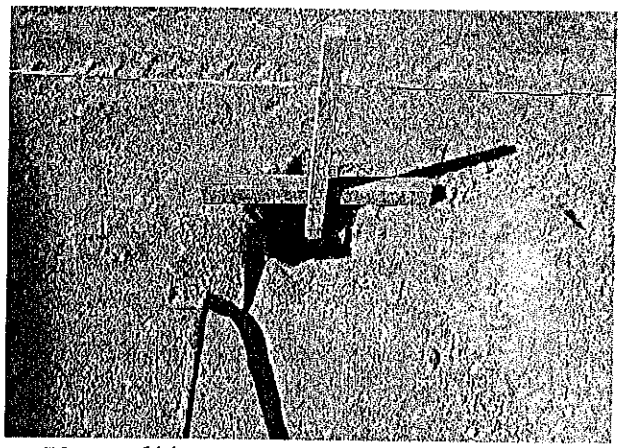
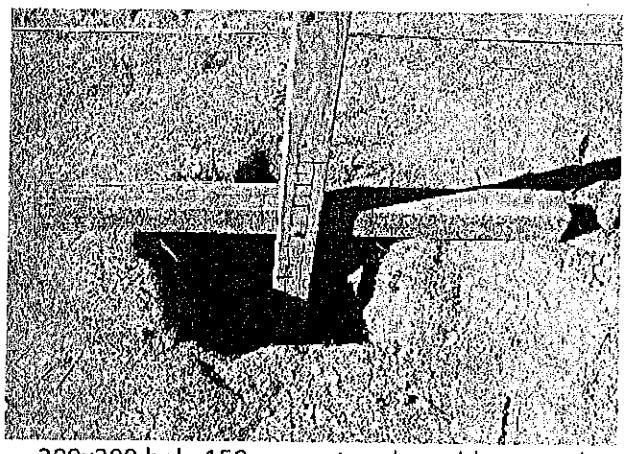


Figure 4 site locations of test holes





50mm of blue metal installed to base of hole



300x300 hole 150mm water above blue metal

Figure 5 example of test holes and equipment

Falling Head Permeability Test

Test Hole Number 3

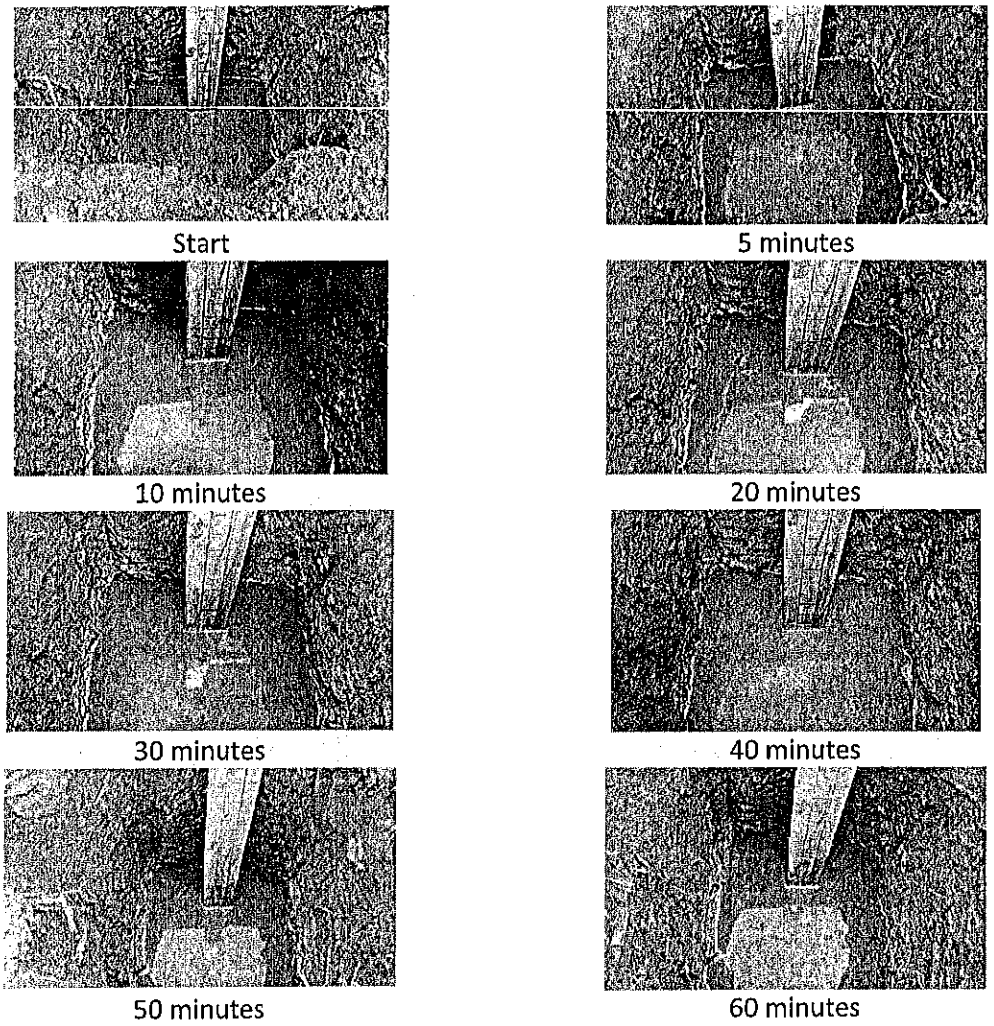
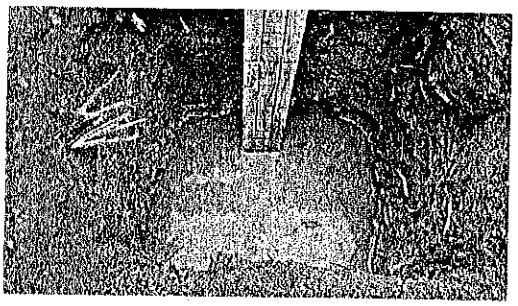
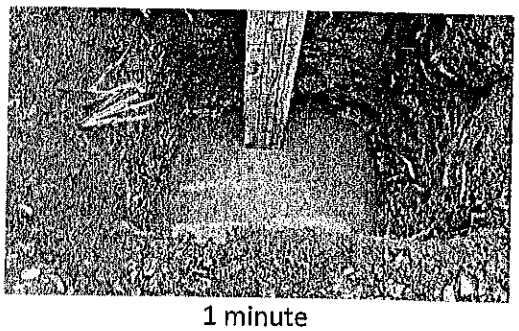


Figure 6 photos of test hole 3

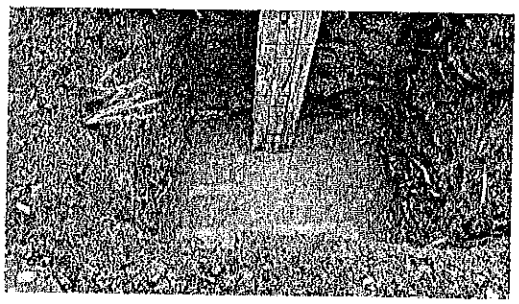
Falling Head Permeability Test
Test Hole Number 2



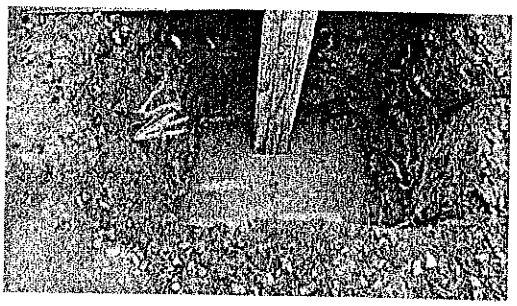
Start



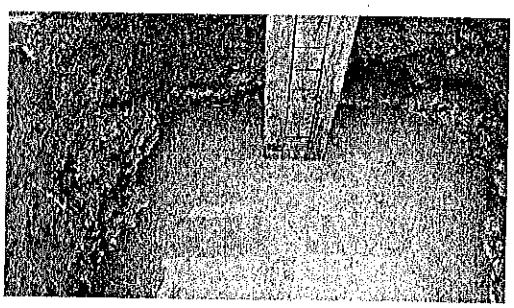
1 minute



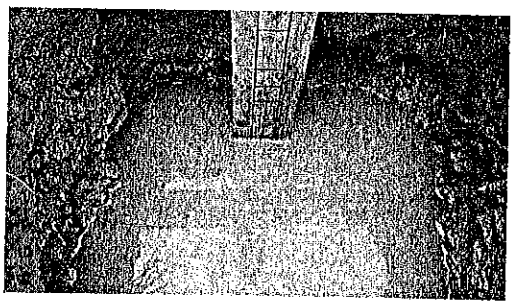
5 minutes



10 minutes



50 minutes



60 minutes

Figure 7 phots of test hole 2

Permeability Test Sheet

Address	Lot 196 Gurney Road Eucla		
Date	26/7/16		
Test done By	David Ellard		
Test hole number	Hole # 1 (400x300x300)		

Time Taken for water to drop 25mm		50mm measure 150 water	
Time	Total drop measured	Time	Total drop measured
1 min	9.15 am 7mm	25 min	9.50 am 23 mm ?
2 min	9.16 am 9mm	30 min	9.55 am 24 mm
3 min	9.18 am 12 mm	40 min	10.05 am 26 mm
4 min	9.20 am 12 - 13 mm	50 min	10.17 am 27 mm
5 min	9.23 am 16 mm	60 min	10.30 28 mm.
10 min	9.33 am 18 mm		
15 min	9.40 am 21 mm		
20 min	9.47 am 22-23 m		

Figure 8 test sheet from hole 1

Permeability Test Sheet			
Address	Lot 196 Gurney Road Eucla		
Date	27/7/16		
Test done By	DAVID SHAW		
Test hole number	HOLE # 2 (500x300x300)		
Time Taken for water to drop 25mm			
Time	Total drop measured	Time	Total drop measured
1 min	8:05 AM 5 mm	25 min	8:23 AM 19 mm
2 min	8:07 AM 10 mm	30 min	8:28 AM 20 mm
3 min	8:09 AM 15 mm	40 min	8:48 AM 23 mm
4 min	8:11 AM 16 mm	50 min	8:58 AM 26 mm
5 min	8:13 AM 17 mm	60 min	
10 min	8:18 AM 18 mm		
15 min	8:23 AM 18 mm		
20 min	8:28 19 mm		

No bare stone found to depth of 300mm!

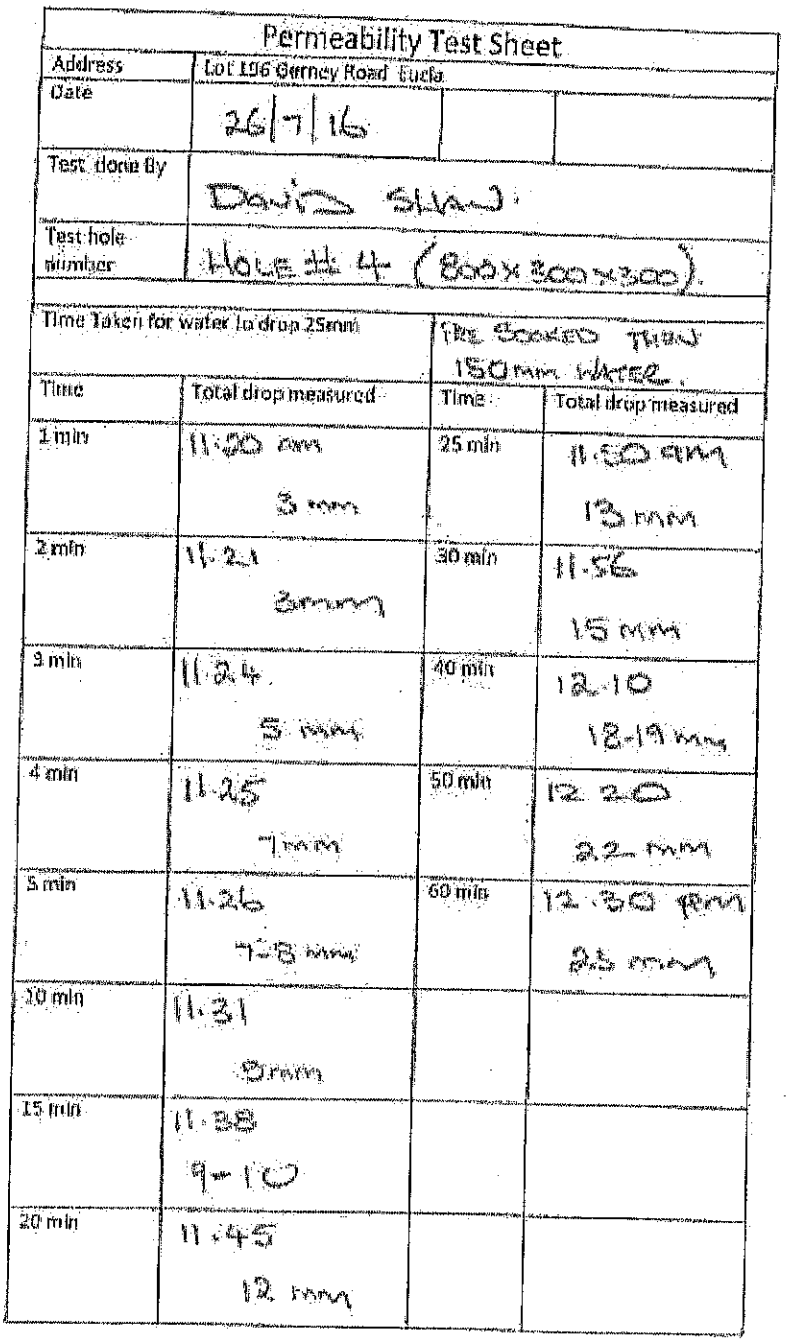
Figure 9 test sheet from hole 2

150mm WATER AFTER TOTAL FILL AND DRAIN AWAY OF HOLE.

Permeability Test Sheet			
Address	Lot 196 Gurney Road Epcla		
Date	26/7/16		
Test done By	David Shaw		
Test hole number	Hole # 3 (600x200x300)		
Time Taken for water to drop 25mm			
Time	Total drop measured	Time	Total drop measured
1 min	2.20 pm 5mm	25 min	2.50 pm 20 mm
2 min	2.21 pm 7mm	30 min	2.55 pm 22 mm
3 min	2.24 pm 7-8mm	40 min	3.05 pm 23 mm
4 min	2.25 pm 9 mm	50 min	3.15 pm 26mm
5 min		60 min	3.25 pm 28mm
10 min	2.35 pm 11 mm		
15 min	2.40 pm 13 mm		
20 min	2.45 pm 18 mm		

Hole # 3 - 25 mm drop in 3 hours

Figure 10 test sheet from hole 3



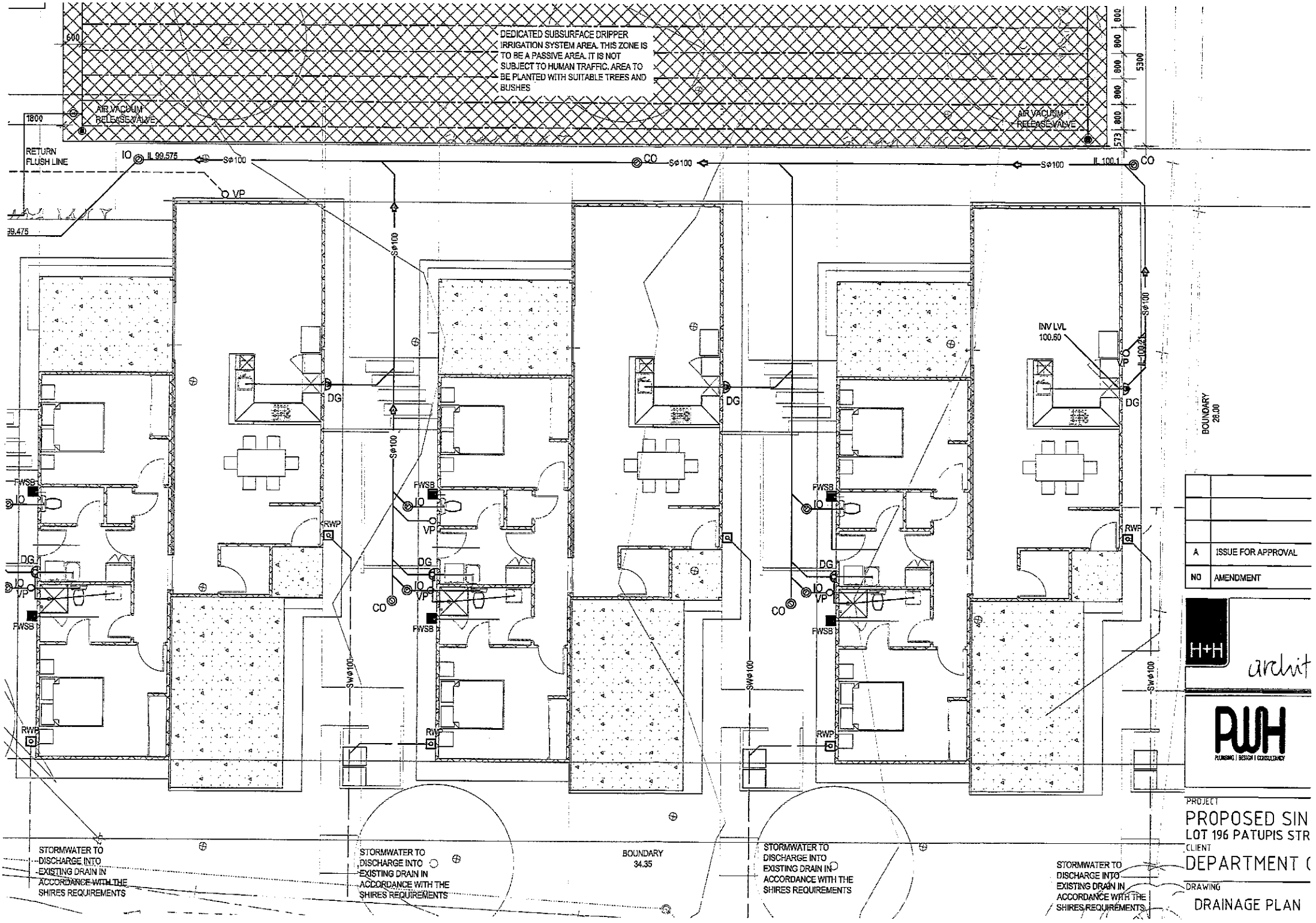
Permeability Test Sheet

Address	Lot 196 Gurney Road Eucla		
Date	26/7/16		
Test done By	Davis Shand		
Test hole number	Hole # 4 (800 x 300 x 300).		
Time Taken for water to drop 25mm		the soaked Third 150mm Water.	
Time	Total drop measured	Time	Total drop measured
1 min	11:20 am 3 mm	25 min	11:50 am 13 mm
2 min	11:21 3mm	30 min	11:56 15 mm
3 min	11:24 5 mm	40 min	12:10 12-19 mm
4 min	11:25 7 mm	50 min	12:20 22 mm
5 min	11:26 7-8 mm	60 min	12:30 pm 25 mm
10 min	11:31 8mm		
15 min	11:38 9-10		
20 min	11:45 12 mm		

Figure 11 test sheet from hole 4

Regards

Phil Woolhouse



NO	AMENDMENT
A	ISSUE FOR APPROVAL

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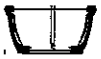
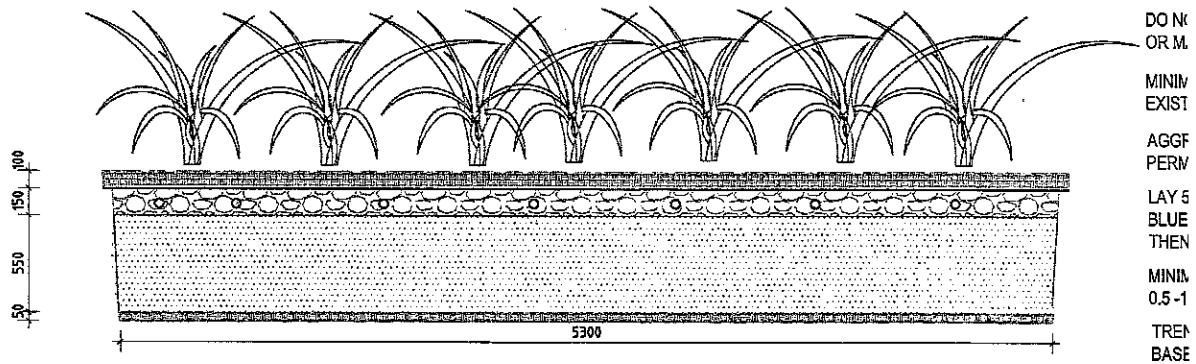


SECTION OF DRAINAGE BED

SCALE 1:100



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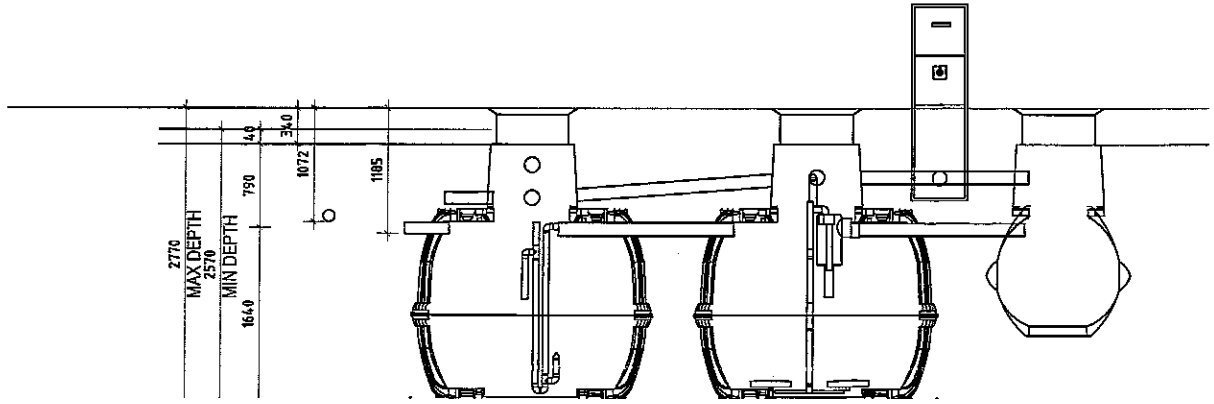
0.5 -1

TREN
BASE

EVAPOTRANSPIRATION BED DETAIL

SCALE 1:30



A	ISSUE FOR APPROVAL
NO	AMENDMENT

H+H archit

PWH
PLUMBING | DESIGN | CONSULTANCY

PROJECT
PROPOSED SIN
LOT 196 PATUPIS STR
CLIENT
DEPARTMENT (

DRAWING
DRAINAGE DETAIL

SHIRE OF DUNDAS

10.1.2

Application for Freehold Lease

Government of **Western Australia**
Department of **Lands**

Metropolitan and Regional Services

Our ref: File 01409-1952-02RO Job 142093
Enquiries: Chris James Ph: (08) 6552 4542
Fax: (08) 6552 4417
Email: Christopher.James@lands.wa.gov.au

01 August 2016

Chief Executive Officer
Shire of Dundas
PO Box 163
NORSEMAN WA 6443

Dear Sir/Madam

PROPOSED FREEHOLD PURCHASE OF CROWN LEASE 355/1952 (N105079) OVER LOT 1146 ON DEPOSITED PLAN 205296, DOWNING STREET, NORSEMAN – SHIRE OF DUNDAS

I refer to correspondence from the Shire of Dundas regarding the above dated 22 October 2008, a copy of which is attached for your information.

The Department of Lands is again investigating a request from the Lessee of Lease N105079 to purchase Lot 1146 in freehold. Lot 1146 is the subject Lease N105079 which commenced on 1 April 1952 for the purpose of 'residential site' with a term of 99 years.

I ask if could please provide to the Department of Lands at your earliest convenience, any comments/ objections you may have to the proposed licence proceeding.

A copy of the Smartplan map of the area is attached for your information.

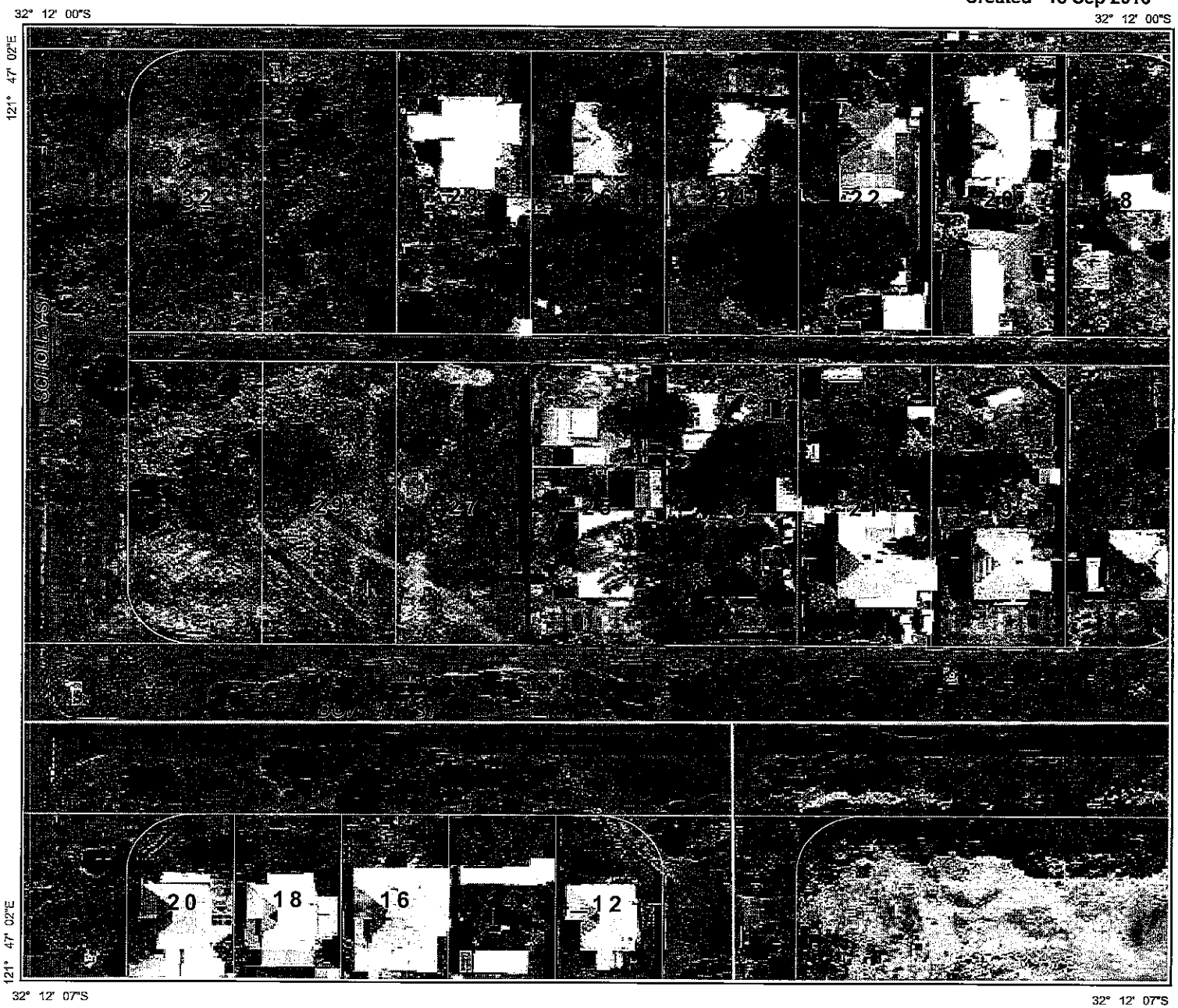
Please contact this office quoting the above reference and job number should you require further information or if you wish to discuss this matter.

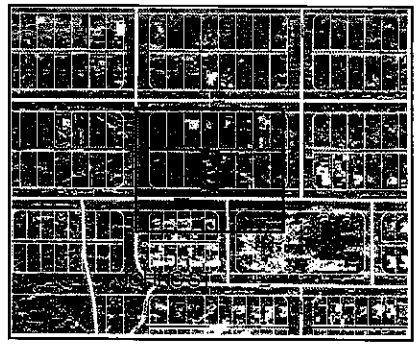
Yours faithfully,

Chris James
A/State Land Officer
Case Management – Goldfields, Esperance, Wheatbelt

Map Viewer

Created 13 Sep 2016





Scale: 1:850

Description

LOT 1146 DOWNING STREET

Map Projection: GDA 94 (Lat/Long)

Datum: Geocentric Datum of Australia 1994

1 Midland Square
Midland WA 6056
(08) 9273 7341
customerservice@landgate.wa.gov.au
www.landgate.wa.gov.au

Landgate

SHIRE OF DUNDAS

10.1.3

Application for Mining Lease 63/662

Mining Title Consultants
Tenement
Western Tenement Services

P. +61 8 9325 7111
F. +61 8 9325 7311
PO Box 3285
East Perth WA 6892
admin@wts.net.au
77 Bennett Street
East Perth WA 6004

9 September 2016

REGISTERED MAIL
942536361012

Shire of Dundas
Chief Executive Officer
PO Box 163
NORSEMAN WA 6443

Dear Sir/Madam,

RE: APPLICATION FOR MINING LEASE 63/662

Please find enclosed herewith a copy of the Form 21 & Plan which was recently lodged at the Department of Mines & Petroleum.

This notice is provided pursuant to Regulation 64A of the Mining Regulations 1981.

The area of the application falls within your shire boundary – LGA3080.

If you have any further queries in regards to this matter, please don't hesitate to contact the undersigned at this office.

Kind Regards

M. Behrendt

Michael Behrendt
Mining Title Consultant
WESTERN TENEMENT SERVICES

Encl.

Form 21

WESTERN AUSTRALIA
Mining Act 1978
(Secs. 41, 58, 70C, 74, 86, 91, Reg. 64)

APPLICATION FOR MINING TENEMENT

(a) Type of tenement	(a) Mining Lease	No. M 63/662
(b) Time & Date marked out (where applicable)	(b) 18/08/2016 10:30:00	(c) DUNDAS
(c) Mineral Field		

For each applicant: (d) Full Name and ACN/ABN (e) Address	(d) and (e) POLAR METALS PTY LTD (ACN: 149 543 448) C/- WESTERN TENEMENT SERVICES, PO BOX 3285, EAST PERTH, WA, 6892	(f) Shares 100
(f) No. of shares (g) Total No. of shares		(g) Total 100

DESCRIPTION OF GROUND APPLIED FOR:
(For Exploration Licences see Note 1. For other Licences see Note 2. For all Licences see Note 3.)

(h) Locality
(i) Datum Peg
(j) Boundaries

(h) Halls Knoll-Yogi
(i) LOCATED AT THE SW CORNER OF LATE MC 63/613 HAVING MGA94 ZONE 51 COORDINATES E 388913.16 - N 6465598.84, Thence
(j) E 388971.78 - N 6466252.68, thence
E 388160.50 - N 6466244.42, thence
E 388243.26 - N 6467740.10, thence
E 389054.37 - N 6467748.26, thence
E 389105.68 - N 6468677.86, thence
E 389873.46 - N 6468685.81, thence
E 389857.96 - N 6470190.39, thence
E 390663.49 - N 6470198.79, thence
E 391481.30 - N 6470207.48, thence
E 391481.70 - N 6470172.50, thence
E 391496.19 - N 6468702.68, thence
E 391497.62 - N 6468559.34, thence
E 391510.70 - N 6467216.48, thence
E 390694.83 - N 6467208.03, thence
E 390522.85 - N 6467206.30, thence
E 390498.64 - N 6466402.17, thence
E 390474.92 - N 6465615.11, thence
E 390372.90 - N 6465614.00, thence
Back to datum
The application is a Conversion of P 63/1587, P 63/1588, P 63/1589, P 63/1590, P 63/1591, P 63/1592, P 63/1593 and P 63/1594 (+E63/1142 PART CONVERSION)
Minerals: Gold
Nickel

(k) Area (ha or km²): (k) 970.86000 HA

(l) Signature of applicant or agent(if agent state full name and address)

(l) *Michael Behrendt*
PO BOX 3285, EAST PERTH, WA, 6892

Date: 26/08/2016

OFFICIAL USE

A NOTICE OF OBJECTION may be lodged at any mining registrar's office on or before the 30th day of September 2016 (See Note 4).

Where an objection to this application is lodged the hearing will take place on a date to be set.

Received at 13:45:35 on 26 August 2016 with fees of

Application	$467.90
Rent	$16,555.55
TOTAL	$17,023.45
Receipt No:	66432476681

Mining Registrar

NOTES

Note 1: EXPLORATION LICENCE

(i) Attachments 1 and 2 form part of every application for an exploration licence and must be lodged with this form in lieu of (h), (i), (j) and (k) above.

(ii) An application for an Exploration Licence shall be accompanied by a statement specifying method of exploration, details of the proposed work programme, estimated cost of exploration and technical and financial ability of the applicant(s).

Note 2: PROSPECTING/MISCELLANEOUS LICENCE AND MINING/GENERAL PURPOSE LEASE

(i) This application form shall be accompanied by a map on which are clearly delineated the boundaries of the area applied for.

Note 3: GROUND AVAILABILITY

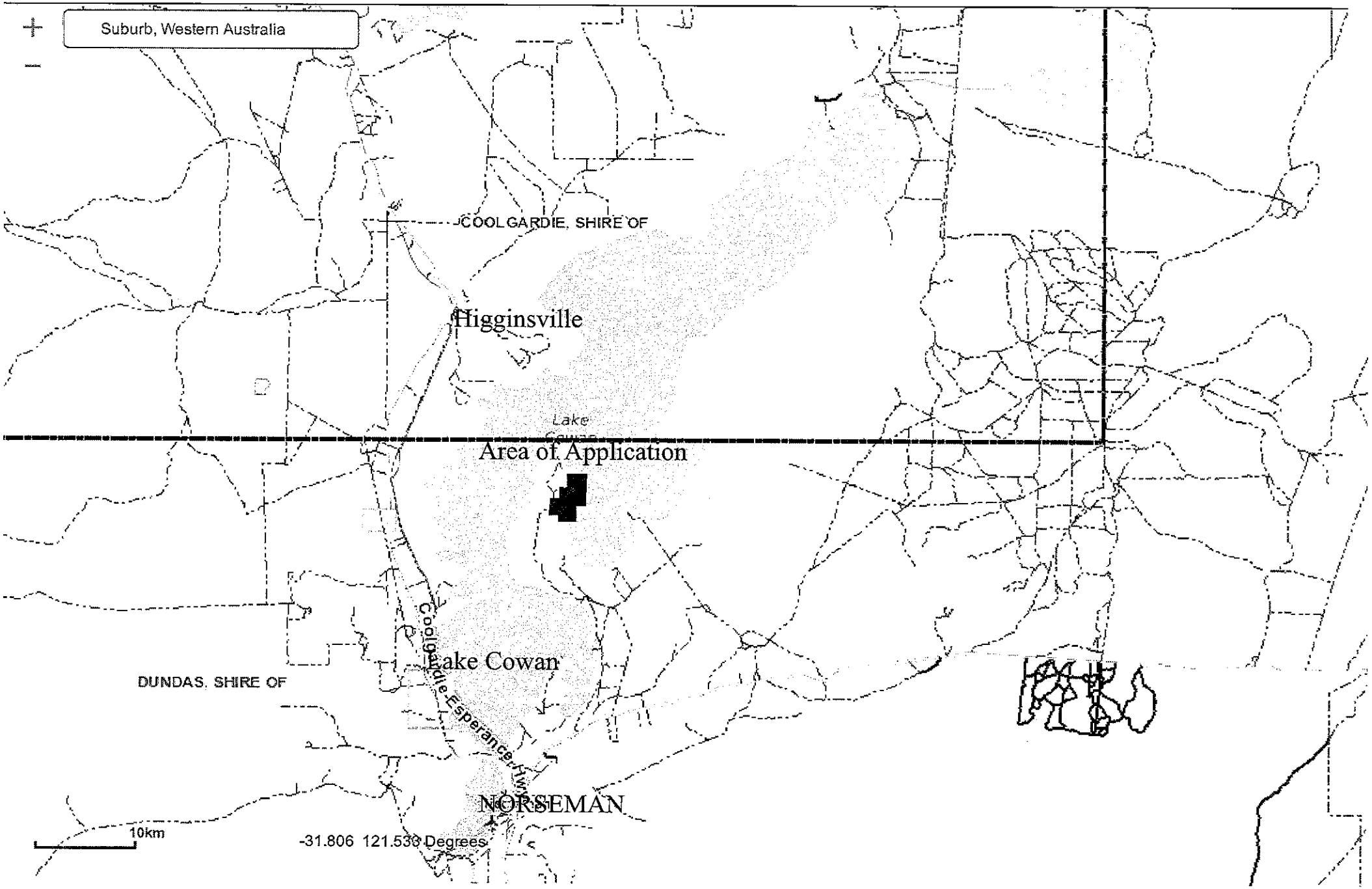
(i) The onus is on the applicant to ensure that ground is available to be marked out and/or applied for.

(ii) The following action should be taken to ascertain ground availability:
(a) public plan search; (b) register search; (c) ground inspection.

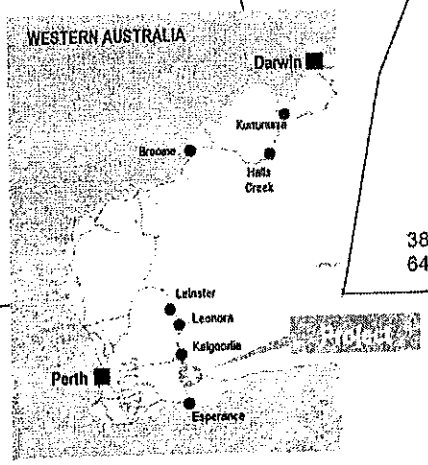
Note 4: ALL APPLICATIONS OVER PRIVATE LAND

The period for lodgement of an objection is within 21 days of service of this notice, or the date noted above for lodging objections, whichever is the longer period.

SLIP LGA Package 1.1 powered by SLIP SLIP Terms & Conditions FAQs



"ATTACHMENT 1"



388,000 mE | 390,000 mE | 392,000 mE

6,470,000 mN | 6,468,000 mN | 6,466,000 mN

389857.96mE
6470190.39mN

390663.49mE
6470198.79mN

391481.3mE
6470207.48mN

MLA

391481.7mE
6470172.5mN

P 63/1587

P 63/1588

389105.68mE
6468677.86mN

389873.46mE
6468685.81mN

391496.19mE
6468702.68mN

391497.62mE
6468559.34mN

M 63/66

P 63/1589

P 63/1590

P 63/1591

388243.26mE
6467740.1mN

389054.37mE
6467748.26mN

390522.85mE
6467206.3mN

390694.83mE
6467208.03mN

391510.7mE
6467216.48mN

P 63/1592

P 63/1593

390498.64mE
6466402.17mN

388160.5mE
6466244.42mN

388971.78mE
6466252.68mN

P 63/1594

DATUM

388913.16mE
6465598.84mN

390372.9mE
6465614mN

390474.92mE
6465615.11mN

Tenure

Mining Lease Application

NORTH

0 0.5 1km

Scale: 1:25,000

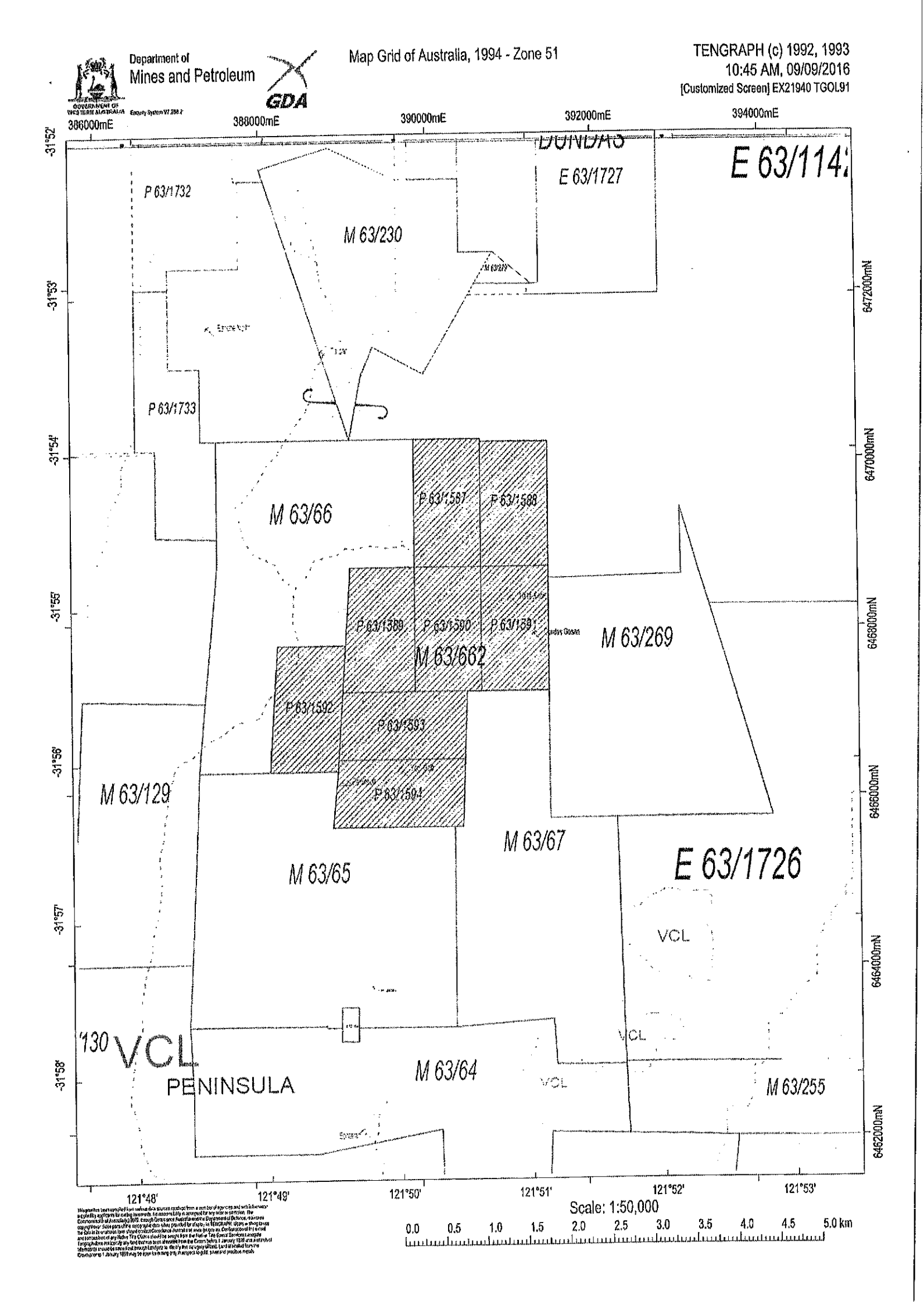
388,000 mE | 390,000 mE | 392,000 mE

Author : John Bartlett
Drawn : Shane Taylor
Projection: MGA Zone 51 (GDA 94)

Date : 18/08/2016
Scale: 1:25,000
File Name : PB_16027

POLAR BEAR PROJECT

Yogi Mining Lease Application


Department of
Mines and Petroleum
GOVERNMENT OF WESTERN AUSTRALIA
Enquiry System V7.25B.2
GDA
Map Grid of Australia, 1994 - Zone 51
TENGRAPH (c) 1992, 1993
10:45 AM, 09/09/2016
[Customized Screen] EX21940 TGOL91
386000mE
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392000mE
394000mE
-31°52'
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-31°54'
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6464000mN
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M 63/230
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P 63/1587
P 63/1588
P 63/1589
P 63/1590
P 63/1591
M 63/662
M 63/269
P 63/1592
P 63/1593
P 63/1594
M 63/129
M 63/67
E 63/1726
M 63/65
VCL
130 VCL
PENINSULA
M 63/64
M 63/255
121°48'
121°49'
121°50'
121°51'
121°52'
121°53'
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SHIRE OF DUNDAS

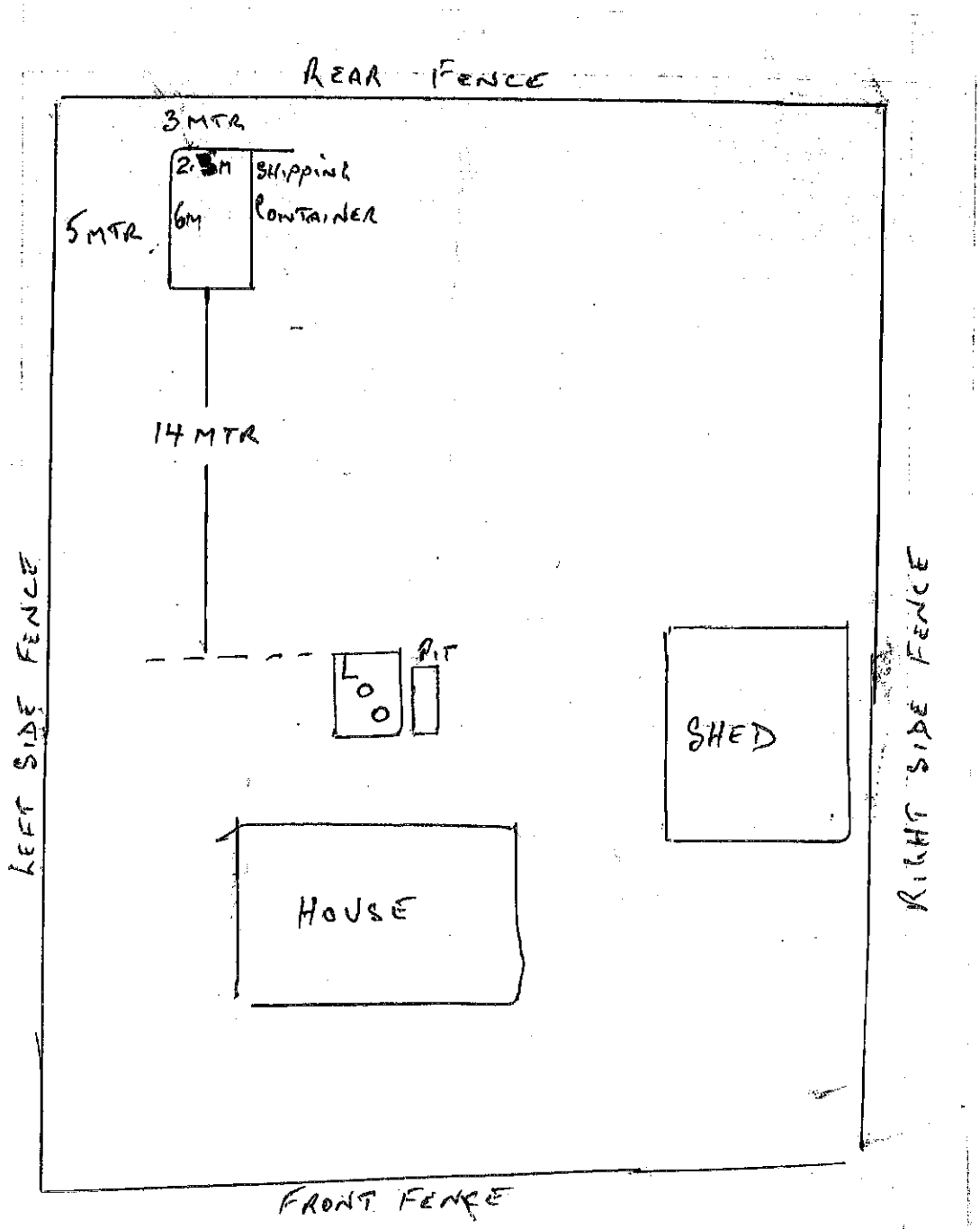
10.2.1

Building Application Outbuilding

2 m

Safely securing one quality 6m L x 2.4m W x 2.6m H to be used as storage for house hold goods and work shop tools.
constructing 6 x 600mm deep x 300mm wide concrete offset footings incorporating galvanised steel pipes as anchor points to attach high tensile steel chain/ chain dogs or load straps/ ratchets
Approximate spacings from rear fence 2metres and left side fence 1 to 2 metres

1m+



116 ROBERTS ST
NORSEMAN

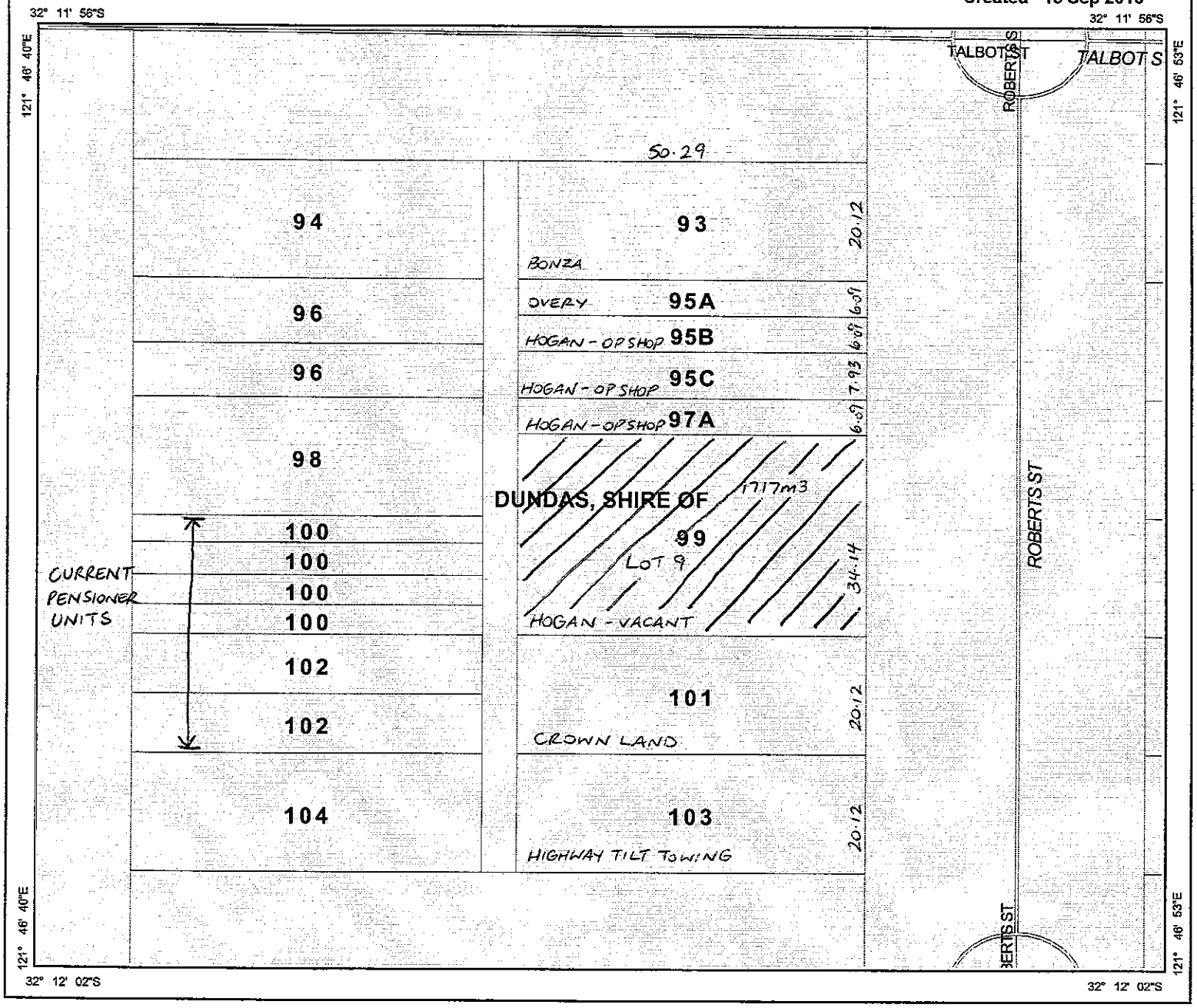
SHIRE OF DUNDAS

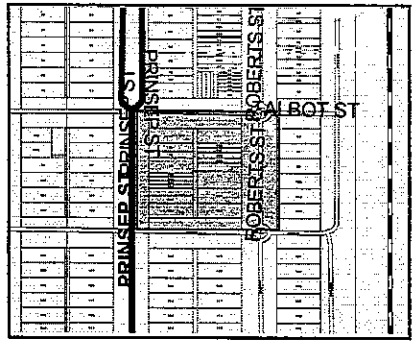
10.3.2

Donation of Land to Shire

Map Viewer

Created 15 Sep 2016





Scale: 1:800

Description

Map Projection: GDA 94 (Lat/Long)

Datum: Geocentric Datum of Australia 1994

1 Midland Square
Midland WA 6056
(08) 9273 7341
customerservice@landgate.wa.gov.au
www.landgate.wa.gov.au

Landgate

SHIRE OF DUNDAS

10.4.4

Officers Reports

SHIRE OF DUNDAS

COUNCIL MEETING 20TH SEPTEMBER 2016

REPORT BY CEO

13th September 2016.

1. BANK

The ATM is due to be installed and tested this week with two Directors from Goldfields Bank visiting us the following week. GB has requested that some formal opening ceremony be held with members of the community being invited. This would be at the bank's expense. Training is expected to start shortly where certain of our staff members would spend time in the Kalgoorlie branch.
The ATM is to be installed in the Shire foyer, outside the President's Office. The unit will be bolted into the floor; in order to improve security, it is proposed that two sets of bollards be erected outside the entrance to limit anyone trying to drive a Ute through the sliding doors. The bollards would be positioned so as not to hamper our "gofer drivers".

2. NORSEMAN AIRSTRIP

We do seem to be nearing the end of this saga. The underlying problem has been the uncertainty of the data received from studies and tests done in 2007, which formed the basis of the business case produced in 2014 indicating that the cost of the project would amount to $3.2million. We have received in cash $1,500,000 with the balance available by draw down.
The CEO challenged the reliability of the estimates given that the project would be commencing in 2016/17 financial year. On investigation the revised costing indicated a blow out of close to $2 million. This was not accepted by the Shire and legal views were sought.

A third party contractor was employed (his experience included building the Busselton Airstrip in a swamp, being similar conditions to our strip) to assist in re-costing and sourcing of more appropriate material.

It was also discovered that the scope of the project was based on flight traffic of 2 flights per day for 20 years by heavier and larger aircraft than was necessary. The view pertaining in 2014 was that the mines would use our airstrip extensively for FIFO traffic. This is no longer relevant and the current view is that if the mines should need to extend the runway, then they should pay for it.

A final view was put together that a shorter runway with the same density as originally proposed would be appropriate for use by the RFDS and the occasional larger and heavier aircraft. The new proposed strip would be able to handle periodic use by the larger and heavier aircraft, just not at the frequency originally proposed in 2014.
The length of the strip would be cut back from 1700mtrs to 1200mtrs, more efficient material was identified and the combination of these two changes would bring the project back within budget.

The Shire met with the GEDC on Wednesday 14th September to explain the movement in the scope of the project and that we would **not** be looking for additional funding. GEDC stated that they could not envisage any difficulty with the change in scope as the original intention was unchanged, but could make no official comment until they had done further investigating.
The CEO is currently contacting the other financiers to get their consent to a change in scope. We are due to meet with Rick Wilson on the 21 September to update him on developments. Rick Wilson was very involved in the funding process.

3. WOODLANDS CENTRE

The Business Plan for the development of the Camel Café is due to be completed and submitted to the GEDC this week. A similar business plan has already been submitted to Lottery west. If successful in raising the needed financial support, the project will commence during the 2017/2018 financial year.

4. STAFF MEETINGS

We continue to hold staff meetings aiming to have at least 2 meetings a month. Apart from ensuring that all staff are current with developments in the shire, we also aim to ensure that staff members understand their budget responsibilities.

It is refreshing to note that the level of interest and participation and the level of debate improving at each meeting.

5. HOUSING INSPECTIONS

Our Building Inspector has inspected two dwellings in town and has written to the owners advising them of their rights and responsibilities regarding the state of their premises. If the procedural process is not complied with the two houses will be demolished.

6. HEALTH INSPECTIONS

Our Health Inspector has inspected 19 business premises in town and along the Eyre Highway and has issued them with his report indicating remedial action required. These reports will be followed up and appropriate action taken.

REPORT TO COUNCIL

COUNCIL GENERAL MEETING TUESDAY 20th September 2016

AREA: COMMUNITY DEVELOPMENT **OFFICER:** PANIA TURNER

Period of Reporting: 17 August- 14 September 2016

Community Consultation and Feedback

September has heralded the start of community consultation with Community Voice surveys distributed in the Norseman Today and a community mail out. The Shire has also commenced the community consultation sessions with targeted focus groups.

• Norseman Ladies Craft Group (Completed) • Norseman Pensioner's Group (Completed) • Norseman Play Group (Completed) • Norseman Men's Shed • Ngadju Artists • Ngadju Community •	• Norseman DHS Student Leadership Team • Norseman DHS Teaching Staff • Norseman Tourism Industry Representatives • Eucla Citizens Association • Norseman Community Health • Norseman DHS community (hosted by the P&C)

Gold Fever Festival

During September the Gold Fever Festival Committee put forward the motion to postpone the 2016 Gold Fever Festival. The event has been postponed to either late February or early March to coincide with the Norseman Races thereby strengthening both events. This motion was not taken lightly and indeed there was much discussion around how best to hold an excellent well attended community festival as well as a safe and successful Rock Drill competition. This decision was made from information around a few issues.

1. Secured funding for the event currently sits at $21,000 with a further potential $6000 coming from registrations. The 2015 festival cost sat over $50,000. Through the Norseman Arts Festival the Shire would be able to contribute creative based community activities and events to support the weekend to the value of approximately $5000-$7000.
2. A severe shortage of accommodation, this was so significant that the Golf Club has withdrawn its Golden Nugget tournament as it will be unable to house players.
3. Time frame. As of the general meeting in September there were seven weeks remaining before the event with registrations for the Rock Drill to be advertised.
4. Regional activities such as harvest and other events.
5. Norseman's own pipes to practise and to compete with.

After this there has been some finger pointing at the Shire to the postponement of the event and indeed media attention from the Kalgoorlie Miner. At no time was this a Shire decision rather it was a Norseman Gold Fever Festival Committee decision this has been stated at the meeting, to stakeholders and published on the Shire Facebook Page and Norseman Discussion Board. As always the Shire endeavours to support community committees and events and either way would have supported whatever decision the committee had made.

I encourage Councillors if they hear negative feedback to invite the person/s to attend a Gold Fever Committee meeting where they can become more informed.

Bay of Isles Community Outreach (BOICO)

BOICO is a Non-Government, Not for Profit mental health outreach service that provides support in the South East Goldfields region, including Norseman. Currently they have support workers who visit clients in Norseman once a week/fortnight. Their vision is to have social equity and inclusion for all people, with the mission of "providing recovery focused community managed mental health and wellbeing services for people affected by mental illness, their Carers and families". (www.boico.org)

I met with two of the support workers and we discussed the potential for collaborative approaches to mental health awareness in the community, creating supportive community environments, the services that Norseman has in residence and the importance of communication. It was a positive meeting and I look forward to the benefits for Norseman that come from working together to support the services offered to local residents.

Morning Tea Amongst the Markets

On Wednesday 24th August Community Development enjoyed a lovely day with the Norseman Home and Community Care clients as well as the Norseman Ladies Craft Group. It was an excellent day with all enjoying themselves, we even managed a couple of prize winners in our group. Hosted by Salmon Gums Playgroup, President Monique Guest thanked the support given by the Norseman visitors. "Salmon Gums Playgroup would like to thank the Shire of Dundas, Norseman HACCS and Norseman community for their support of Morning Tea Amongst the Markets. The event was even more successful than last year raising just shy of $1000 which will be used to purchase a new imaginative play kitchen for our playgroup. Our group was impressed and delighted by the show of support and hope that everyone attended enjoyed the event, food and stalls. So THANKYOU Norseman and we hope to see you again!"

Funding Applications

The Norseman: *The Heart of the Great Western Woodlands* a Cultural, Visitor and Community Precinct Business Case was submitted to GEDC on Thursday 15th September. The Community Development Team has been working with community groups to secure letters of support.

Graffiti at Skate Park

The Norseman Skate Park was targeted by a troubled young man in a graffiti attack during the month. The young man was quickly identified and is being dealt with via the correct processes. This left the Skate Park with a number of bright pink tags and some not so pink language. The works crew quickly painted over the swear words however Community Development is looking at supporting a school holdays art project with the youth to address the damaged artwork. It should be said that the existing mural was already quite worn and there was other forms of tagging and grafitti that needed to be addressed.

Free 24hr Camping at the Sports Grounds

During the consultation process we have been receiving feedback about the free 24 hour stop over for self-contained RVs. The community is feeling that there is quite some "abuse" of this privilege with some campers staying more than one night, damage to the sporting complex to gain entry to water or the toilets and the spread out of the campers.

It is excellent to see the increased visitor traffic to Norseman however the free camping site may need to be managed more tightly. It may be useful for Council to consider defining a designated space for campers and improved signage about time limits and move on orders for those campers who are not self-contained. Some of our seniors would rather walk elsewhere for their exercise than deal with campers at the sports oval.

REPORT TO COUNCIL

ORDINARY MEETING TUEDSAY 20th September 2016

AREA: Works Department **OFFICER:** Jon Fry

Period of Reporting: 10th August 2016-15th September 2016

Team Leader's Utility

Three quotations were sought for a replacement Utility for the team leader of the town crew. The best quotation we got was $27,040.50 from Esperance Autos for a Nissan Navarra (within budget)

Gardeners

The gardeners have been occupied with weed spraying in particular as the spring growth is causing major problems. They have also been doing the usual trimming trees and whipper snipping. One gardener has sustained an injury and this could involve some lengthy periods of time off work. With this in mind and the spring growth coming on we have employed a casual for a month, to be reviewed as necessary

Town Crew

The town crew have been helping contractors replacing and extending the footpaths in Phoenix Park, this is all part of a major upgrade of this park. Some of the Shires plant and labour has been on hire working for a contractor at the day camp at Mt Henry, digging and then backfilling trenches for plumbing services.

Construction Crew

The Construction Crew are re sheeting the Hyden Rd and it is time to make the annual trip to Eucla, at present I am trying to set a date to commence work in Eucla and it looks like the week starting the 17th October 2016 The works to be done are

- Hard rubbish clean up
- Tidy up dump area
- Grade airstrip (spray weeds)
- Grade airstrip road and dump road
- Other works as requested (private works or Shire's responsibility)

The Youth Centre has planned a few activities for these school holidays. However, some of these activities may not be able to take place until the Youth Officer has received her F-extension on her licence. This has been applied for and now we are waiting to get the paperwork back. The Youth Centre will be open throughout the holidays running local activities that do not require transportation of kids.

School Holiday Planner

Tuesday	Wednesday	Thursday	Friday	Saturday
27th Closed	28th Youth Centre OPEN	29th Esperance Excursion Mini Golf Skate Park Beach Movies	30th Youth Centre OPEN	1st October AFL Grand Final Day Watch LIVE at the Youth Centre Dress Up in favourite footy team colours Footy themed lunch
4th Centrecare's Kids Day Out Connecting to Country 10am - 3pm FREE Leave from Youth Centre	5th Youth Centre OPEN	6th Kalgoorlie Excursion Parkour @ PCYC Movies Skate Park	7th Youth Centre OPEN	8th Hyden Rd Excursion Cherry Island Disappointment Rock The Breakaways Lake Johnson BBQ Lunch

Department of
Sport and Recreation

GOVERNMENT OF WESTERN AUSTRALIA

Club Matters

The newsletter for sport and recreation clubs and local governments.

KidSport

KIDSPORT

After almost six years, KidSport has nearly 60,000 WA children taking part in sport and recreation – with close to 110,000 vouchers distributed so far.

This award-winning program is a partnership between the State Government, 132 local governments and more than 2,400 clubs across WA.

111,437 vouchers	$16,710,905.69	Sep 2011 - Aug 2016
59,822 unique kids	Funded	Date range

KidSport Statistics for Shire of Dundas

YEAR	NO of CLUBS	NO of VOUCHERS	TOTAL FUNDED	NO of FEMALE	No OF MALE
2014	4 Clubs	28	$2,924.00	14	14
2015	5 Clubs	20	$2,746.50	5	15
2016	3 Clubs	43	$4,150	18	25
TOTALS		91	$9820.50	37	54

SHIRE OF DUNDAS

10.4.5

Community Grants Program Application

File Number
GS.PR
Record Number
NFM 20169575.

SHIRE of DUNDAS

COMMUNITY GRANTS PROGRAM

Sundry Donations

SHIRE OF DUNDAS – COMMUNITY GRANTS PROGRAM
Sundry Donations (Up to $1,000) Application Package

Contents Page

SHIRE OF DUNDAS COMMUNITY GRANTS PROGRAM
Sundry Donations (Up to $1,000) Application Package

Before you begin

The Shire of Dundas's Community Grants Program is to articulate Council's commitment to developing the Shire by providing opportunities to community groups, clubs, organisations, not-for-profit organisations and to prescribe the role and function of the Community Grants Program Committee.

The funding applications are presented in line with relevant funding deadlines to the Chief Executive Officer for consideration.

The Chief Executive Officer operates within the guidelines of the Community Grant Program Policy. It is strongly recommended that all applicants read this policy to determine their viability before submitting their application.

Groups that are ineligible for funding include, local, state and federal government departments, private companies, individuals and private and public schools including employees of those bodies acting on behalf of their employer (excluding relevant community purpose representative bodies such as P & C's and F & F's).

Items that are not eligible for funding include: Bonds and employee salaries.

Please note all grant payments will not be awarded retrospectively unless exceptional circumstances are noted.

The policy can be found on the Shire of Dundas website www.dundas.wa.gov.au

Please note that, in considering your proposal for funding, the information detailed in this proposal may be shared with relevant Commonwealth, State and/or Local Government agencies, organisations and individuals, including those you identify in the proposal, to substantiate any claims or statements that you make, to verify the capacity of the proponent organisation to manage the Shire of Dundas funds and for general comment on the viability of your proposal.

If you consider that certain information in the proposal should be treated as confidential, you must clearly indicate that information and provide reasons for the request. The Shire of Dundas reserves the right to accept or refuse a request to treat information as confidential.

Information relating to individuals will be protected under the *Privacy Act 1988*. Requests for access to such information will be dealt with under the provisions of the *Freedom of Information Act 1982*.

The Shire of Dundas will inform and publish the names of successful proponents and relevant information about their projects.

Please fill out this form as fully as possible. The information requested here is necessary and will provide vital insights to enable assessment of your proposal. Missing or unclear information may make you ineligible for funding or delay the assessment of your proposal while we seek clarification.

Proposals not submitted in this format may not be considered. Proposals not consistent with the guidelines may be rejected.

Electronic copies are preferred, accompanied by one complete hard copy with a signed Legal Authorisation Form.

Completed proposals should be forwarded to:

Electronic copies: shire@dundas.wa.gov.au

Paper copies:
The Chief Executive Officer
Shire of Dundas
PO Box 163
NORSEMAN WA 6443

Part 1 - Legal Authorisation

I, JAMES SCHULTZ <full name of proponent>

as Coordinator of The Ngadju Dancers <position/title >

of 115 ROBERTS ST NORSEMAN <organisation & full address>

confirm that:

- I am a person authorised to make this declaration on behalf of my organisation/individual and all relevant persons have made a full disclosure of information.
- The information provided in this form and all attached documents is complete and correct. I understand that giving false or misleading information is a serious offence.
- The Shire of Dundas is authorised to undertake the necessary steps to assess the proposal from my organisation by checking the information provided in this proposal, or by obtaining additional information from:
  - The Shire's databases and records, including information related to my organisation's application for funding;
  - State or Territory agencies;
  - Law enforcement agencies;
  - Credit reference agencies;
  - Any other appropriate organisation or person as reasonably required as part of these checks.
- I agree that the Shire may arrange for an independent viability assessment (IVA) of my project including by an external adviser or consultant to the Shire.

Signed: _____ Date: 14/9/2016

Part 2 - Applicant Details

1. Legal name of proposing organisation or individual – If member of a consortium, indicate name of member organisation.

Ngadju Dancers

2. Registered business or trading name if other than your legal name

Ngadju Dancers

3. Registered business address details – Business address or Company's registered business address (not PO Box)

Street Address	Roberts Street
Suburb/Town/City	Norseman
State	WA
Postcode	6443

4. Postal address – Only if different from registered business address

Street Address	
Suburb/Town/City	
State	
Postcode	

5. Organisation contact numbers

Telephone Number	
Mobile	0431 625 507
Fax Number	
Email	ngadjudancer@gmail.com

6. Is your organisation registered with an Australian Company Number (ACN), an Australian Business Number (ABN), Australian Registered Business Number (ARBN).

No ☐

Yes ☐ please provide details:

ACN _____-_____-_____

ABN _____-_____-_____-_____

ARBN _____-_____-_____

7. Organisation's GST Registration
Yes ☐ Please enter total amount ($) requested excluding GST where relevant. No ☒ There will be no GST amount added to your total amount requested.
8. Organisation's Incorporation
Yes ☐ No ☒
9. Insurance Status.
Yes ☐ Please list details and provide a current copy of insurance certificate No ☒
10. Contact details for this proposal – Please provide a contact person who is available and has the authority to answer any queries that the Shire of Dundas may have about this proposal. Any correspondence will be sent to the contact listed here.

Title	Mr
First Name	James
Surname	Schultz
Position	Coordinator
Telephone Number	
Mobile Number	0431 625 507
Fax Number	
Email Address	ngadjudancer@gmail.com

11. Bank Account Details – for direct deposit of successful grant*	
Account Name	Nadju Dnacers
BSB Number	016 710
Account Number	206 773 666
Bank Name	ANZ
Bank Branch	Kalgoorlie

*Notes: ☐ If this facility is unavailable please tick the box to receive a cheque

Notes

1. **All successful applicants are required to submit an acquittal on the CGP Acquittal form within 30 days of completion of the event/project.**
2. **It is essential to supply copies of receipts with Acquittal.**

Part 3 - Project Details

1. Amount Requested ($)

$1000

2. Title of Project

Dance Rites

3. Project Description

Dance Rites is Australia's national Indigenous dance competition. Open to all Aboriginal communities and performers of all levels of experience it offers an international stage for Aboriginal groups to share the stories of culture and country.

- *Dance Rites* celebrates the continued cultural dance practices of Australia's first peoples.
- The competition is open to all Aboriginal and Torres Strait Islander communities who have or would like to develop a dance group.
- Each group will present a welcome and farewell dance, one of which must include a chant in local language.

4. Aims/Objectives of the Project

Ngadju Dancers promote the rich and beautiful cultural and environmental heritage of the Shire of Dundas by sharing the stories of Ngadju country through dance, song and performance. The Ngadju Dancers perform across the region, state and nation we have represented our culture and country dancing in the Commonwealth Games, the 2012 London Olympics and New Zealand.

We hope to further promote our beautiful home and invite tourists to come and experience all that Dundas has to offer by performing in the 2016 Dance Rites at the Sydney Opera House on Sunday the 9th October 2016.

5. How the grant will benefit your organisation and/or the community

This grant will assist in the accommodation costs which are quite significant.

The benefits to the community of Dundas and our Ngadju community are many:

- Youth will be performing in this event, this teaches them to be proud of their Ngadju heritage and to share the stories of their people to help educate and connect.
- We are growing the potential for cultural and creative tourism, which can be a pathway for local employment opportunity.
- We are sharing our culture on a national and international stage at one of Australia's most recognized icons the Sydney Opera House. This is a key marketing opportunity for Ngadju Dancers and sharing Ngadju culture.
- Flow on benefits for the community with creative and cultural opportunities.

6. Budget (for requested amount only)

Budget Item	Actual Cost ($)		Budget Item	Actual Cost ($)
EXPENDITURE (Specify)			***INCOME***	
Travel/Flights	$9000		***IGO (sponsored all travel)***	$9000
Dance Rites Registration	$150		Organisation's contribution	$1150
Accommodation	$5000		GO fundraising	
Food	$1000		***Shire of Dundas Grant***	$1000
Total Expenditure	$15150		**Total Income**	
			In Kind – Volunteer Hours	$5000

Notes:

1. **Please calculate the value of volunteer hours at $25/hour/volunteer.**
2. **If registered for GST please enter amounts excluding GST.**

7. Describe how the project or facility will be managed for a sustainable future.

Ngadju Dancers have performed for many years with the support from Ngadju Elders and Community. We continue to grow in strength as we train up the young people in dance, and song passing culture down through the generations.
We perform across the region and state at local schools, community events and private business functions.
We look forward to support the development and growth of creative industries in Norseman and cultural tourism.
Ngadjumya (Ngadju language) is taught at the local school and we see this as opportunity to see further examples of language on country.

8. Tick which of the five criteria your project supports as outlined below

- ☑ Personal Development & Wellbeing: To connect people to services, facilities and experiences that enhance their physical, social and overall health.
- ☐ Infrastructure Development: To plan, develop and manage community facilities that met the social, recreation, education, housing and transport needs of the community.
- ☑ Community Participation: To encourage and facilitate community involvement through consultation, improved access and recognition of achievements.
- ☐ Place Activation: To create vibrant and meaningful community hubs as places of social interaction, creativity and economic vitality.
- ☑ Relationship Building & Connections: To build self-reliant community organisations and develop mutually beneficial partnerships between government, business and residents.

9. Describe who is contributing to the delivery of the project – (Include staff, volunteers, partner organisations, etc.)

Ngadju Dancers
Family members supporting the practice sessions, making of costumes and travel preparations.

10. Describe the effect on the project if the Council contribution does not meet the requested amount

If accommodation costs are not met it means that the group may have to stay in different locations across Sydney which impacts the dance practice. It also means that we would have to find extra money for travel to and from the venue. As there are young people involved it is also important that they have good care and supervision whilst in such a large city.

11. In this application in relation to either a school/large group, excursion/trip/group?

Yes ☑ Please describe below

No ☐

Nagdju Dancers will be travelling with 7 youth performers and 3 adult supervisors to help with cooking, travel and supervision.