Client Job No.:	200110/140	CWSP Job No:	GJG0 36
		Calare Civil Job No:	2013-059

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Site Investigation Report

Date: 23rd January 2013

Client: GJ Gardner Orange

Site Location: Lot 2 Dairy Hill Place

Orange

SITE INVESTIGATION RESULTS

Site Classification in accordance with AS2870-1997

Report Prepared by: Justin Porter

1.1	Charasteristic Soil Surface Movement Equivalent to	See Attached Calare Civil Letter for Classification of site	☐ Problem Site
1.2	Wind Classification in accordance with AS4055-2006	N2 (W33)	
1.3	Site Cost Code (office use only)	4	
1.4	Effluent Dispersal Test	No	

1.5	Vehicle access to site	Good	1.9	Rock Encountered which may affect excavation	No
1.6	Cut/Fill Required	Yes	1.10	Fill Slope Stability Assessment will be	N/A
1.7	Existing fill onsite	No	1.11	Visable Cracking in Existing Masonry buildings	No
1.8	Presence of rock, rock rock visable on site or ajoining	Yes	1.12	Picture of site Recorded	Yes

2.0 INSPECTION OF SITE

2.1 Identification of the LOT
The site has been identified as the Lot marked by the Client on a copy of the registered subdivision plan or it has been verified that the site is the correct Lot. — Checked

2.2 Site Status - Platform and Slope is:

Natural Site	○ Slope =	°	**Fall direction**	E to W
Developers Platform	◉ Slope =	9 °	**Fall direction**	E to W
Builders / Home Owners Platform	○ Slope =	°	**Fall direction**	

The builder is responsible to provide certification to Local Authority Fill should be Level 1 certified, compacted and tested in accordance with AS3798-1996. Controlled fill to be certified in accordance with AS2870-1996.

2.3 Fill Compaction Certificate Sighted — No

2.4 Are there any Retaining Walls supporting this site? (if YES, show locations at 6.0). — No

2.5 Are there any trees (or removed trees) affecting this site? (if YES, show locations at 6.0). — Large Trees on Site

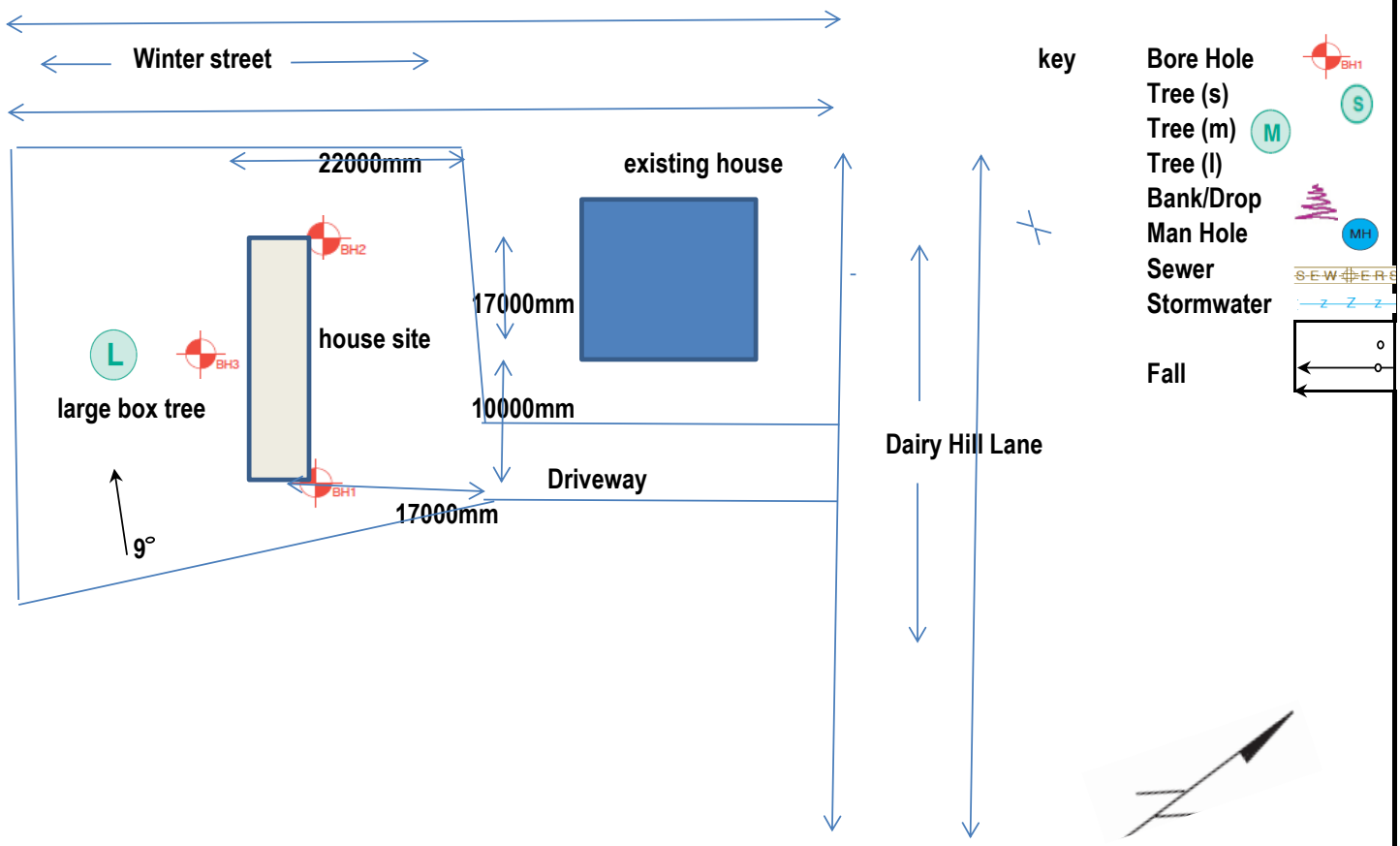
3.0 SITE ANALYSIS

Is there current evidence of the following that would likely effect this site?

3.1	Reactive soil	Yes		
3.2	Fill Containing Wood, Metal, Plastic or other deleterious materials	No		
3.3	Deep Fill (>400mm to fill)	No		
3.4	Floating boulders	No		
3.5	Rock (difficult excavation)	No		
3.6	Soft or Colapsing soils	No		
3.7	Erosion	No		
3.8	Residential allotment (<1000m2) with over 1.6m fill	No		
3.9	Rural allotment (>1000m2) with over 2.4m fill	No		
3.10	Underground flowing water and/or seepage evidence	No		
3.11	Marine Environment or other risk of corrosion	No		
3.12	Mature trees	Yes	Large	Onsite

4.0 LOCATION OF BOREHOLES

The location of boreholes are marked & numbered as set out on the following site sketch. (Not to Scale)



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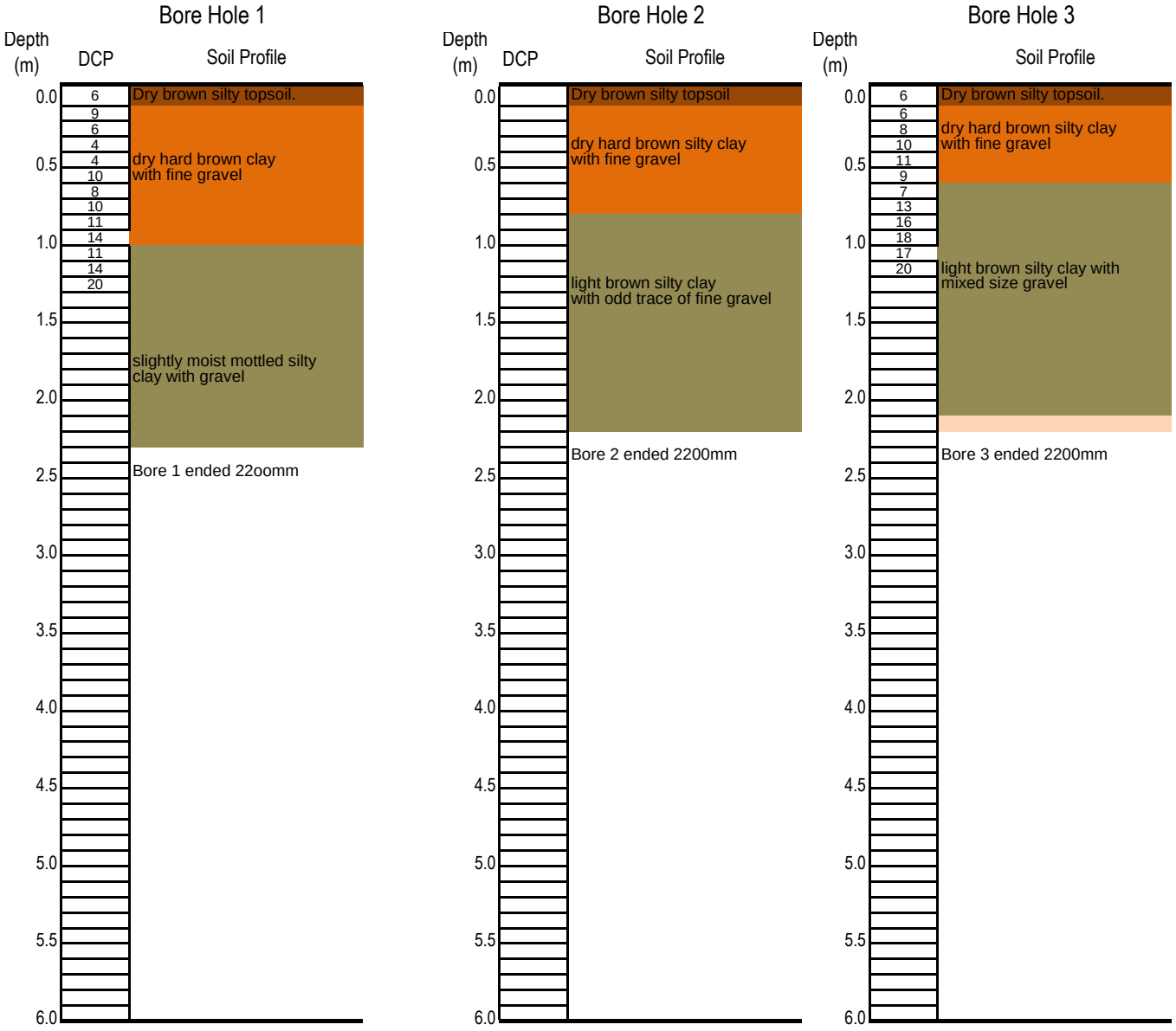
5.0 FIELD RECORD OF TEST BORING AND/OR IN SITU TESTING

Fill | Natural Soil | Founding



Note: DCP = Dynamic Cone Penetrometer blow counts (blows/100mm). UTP = Unable to penetrate.

TABLE 5.1 For SAND correlation between Density Index &

DENSITY Term	Density Index (%)	Approx DCP Blow Count (blows/100mm)
Very Loose	< 15	< 1
Loose	15 - 35	1 - 3
Medium Dense	35 - 65	3 - 9
Dense	65 - 85	9 - 15
Very Dense	> 85	> 15

TABLE 5.2 For SILTS & CLAY correlation between Cu & Penetrometer results

CONSISTENCY Term	Undrained Shear Strength (kPa)	Approx DCP Blow Count (blows/100mm)
Very Soft	0 - 12	< 1
Soft	12 - 25	1 - 2
Firm	25 - 50	2 - 3
Stiff	50 - 100	3 - 5
Very Stiff	100 - 200	5 - 8

NOTES.

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6.0 WIND CLASSIFICATION CALCULATION (IN ACCORDANCE WITH AS4055-2066)(NON CYCLONIC)

TERRAIN CATEGORY

Area used to determine category - 500m radius

Houses / Trees > 3m tall

TC 3.0	>10 per hectare
TC 2.5	2.5 to 10 per hectare
TC2	<2.5 per hectare
TC1.0	Flat treeless land >10kms wide

NOTE: A hectare = 100x100m (2 football fields side by side)
500m = 2 grids in UBD

SHIELDING CLASSIFICATION

Area used to determine category - 100m radius

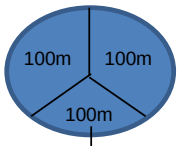
Houses / Trees > 3m tall

FS	>10 per hectare
PS	2.5 to 10 per hectare
NS	<2.5 per hectare
NS	Estate early stage of development

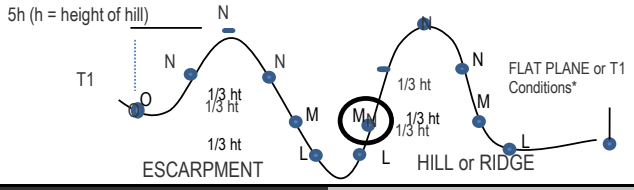
☐ NOTE: Select this box if the only form of shielding is TREES

TOPOGRAPHIC CLASSIFICATION

NOTE: The least shielded of these three areas will determine the shielding classification.



Approx 1 Hectare



TOPOGRAPHIC CLASSIFICATIONS — T1 CLASSIFICATIONS

Average Slope of Hill/Ridge or Escarpment	L Near bottom 1/3 of hill	**M Near middle 1/3 of hill**	N Near top 1/3 of hill	O Over top escarpment only	Max height of Hill/Ridge or Escarpment	Maximum Average Slope
<10% (<5.7°)	T1	T1	T1	T1	Any Height	<10% (<5.7°)
10%<14% (5.7°<7.6°)	T1	T1	T2	T1	<25m	10%<14% (5.7°<7.6°)
14%<20% (7.6°<11.3°)	T1	**T1**	T3	T1	<20m	14%<20% (7.6°<11.3°)
20%<33% (11.3°<18.4°)	T1	T2	T4	T2	<15m	20%<33% (11.3°<18.4°)
>33% (>18.4°)	T1	T3	T5	T3	———	>33% (>18.4°)

HIGHLIGHT RELEVENT CLASSIFICATION

NOTE: (1) Cleared areas up to 150m wide do not derate the Terrain Category. Cleared areas (eg. Roads) up to 50m wide do not derate the Shielding Classification.

(2) The first 2 rows of houses adjacent to permanent open areas such as parks, airfields, etc. Greater than 50mx50m give an NS Classification.

REGIONS A & B - NON-CYCLONIC

Geo Reg	Ter Cat	TOPOGRAPHIC CLASSIFICATION														
		T1			T2			T3			T4			T5		
		SHIELDING CLASSIFICATION														
		FS	**PS**	NS	FS	PS	NS	FS	PS	NS	FS	PS	NS	FS	PS	NS
		WIND CLASSIFICATION														
A	TC3	W28N	W28N	W28N	W33N	W33N	W33N	W33N	W41N	W41N	W33N	W41N	W41N	W41N	W41N	W50N
		N1	N1	N1	N2	N2	N2	N2	N3	N3	N2	N3	N3	N3	N3	N4
	TC2.5	W28N	W28N	W33N	W33N	W41N	W41N	W33N	W41N	W41N	W41N	W41N	W50N	W41N	W50N	W50N
		N1	N1	N2	N2	N3	N3	N2	N3	N3	N3	N3	N4	N3	N4	N4
	TC2	W28N	W33N	W33N	W33N	W41N	W41N	W41N	W41N	W41N	W41N	W50N	W50N	W50N	W50N	W50N
		N1	N2	N2	N2	N3	N3	N3	N3	N3	N3	N4	N4	N4	N4	N4
	TC1	W33N	W41N	W41N	W41N	W41N	W50N	W41N	W50N	W50N	W50N	W50N	W50N	W50N	W50N	W50N
		N2	N3	N3	N3	N3	N4	N3	N4	N4	N4	N4	N4	N4	N5	N5

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COST CODE CALCULATION

Express Post #

Photos Taken

OFFICE USE ONLY

HOUSE DIMENSION ALONG SLOPE DIRECTION

HOUSE STYLE NAME	DIMENSIONS		
	LENGTH (a)	BREADTH (b)	DIAGONAL (c)
			0

SITE CRITERIA — MEASURED/STEPPED

NATURAL	DEVELOPER	OWNER/BUILDER	SLOPE ANGLE
	FILL O.K. - *FILL U/S - low DCP's* *- soil below DCP's*	*Note: will need to pier through this U/S uncontrolled FILL*	*NATURAL Slope ° =* *and* *PLATFORM Slope ° =*

FILL CALCULATIONS

HOUSE DIMENSION	PAD EXTENSION	PAD LENGTH (L)	FILL CALC
Select dimension: **m**			Existing Fill = New Fill @ 50/50 = 0.0 Total ALL Fill = 0.0

SCREW PIER LENGTH CALCULATION

Checked Climate Zone Map - for H & E sites.

Zone =

Min pier depth in natural stiff/Med dense

Down Slope BORE HOLE	DEPTH	0.0	SCREW LENGTH	PIER STOCK LENGTH
BH # used for calcs. Cut Side **BH1**	*Torque starts (DCP5) =* *Extra penetration =* *Depth (D) =*	0.0	*Depth (D) =* *New Fill (F) =* *Screw Length =* 0.0	*Pier Stock Length =*
BH # used for calcs. Fill Side **BH2**	*Torque starts (DCP5) =* *Extra penetration =* *Depth (D) =*	0.0	*Depth (D) =* *New Fill (F) =* 0.0 *Screw Length =* 0.0	*Pier Stock Length =*

SCREW PIER COST CODE CALCULATION

PRE -DRILL REQUIRED

Site Class was upgraded due to trees — eg. M→ high M:M→H:H →high H:H →E

Site Class changed due to trees — eg. M→H:H →E

SOIL SITE CLASS	S		M		H		E		P	
COST CODE	1	2	3	4	5	6	7	8	9	10
FILL DEPTH (m)	≤ 1.0		≤ 1.6		≤ 2.6		≤ 3.6		≤ 4.0	
STOCK SCREW LENGTH	1 1/2 - 1	1 1/2 All	2 - 1	2 All	3 - 1	3 All	4 - 1	4 All	5 All	6 All

INSTALLER NOTES:

STOCK LENGTH REQD: 0.0 : CUT SIDE 0.0 : FILL SIDE **OR** : m WHOLE SITE

PRE-DRILL REQD: 0.0 : CUT SIDE 0.0 :FILL SIDE **OR** : m WHOLE SITE

Only if unable to achieve min penetration of

OTHER COMMENTS