

Site Investigation Report (Prelim)



Site Class
M

Wind Rating
N3
AS4055 - 2021

Design Option #1

Raft Foundations: M

Section 1.0 - Site Analysis

Summary

Existing Fill (>400mm onsite)?	No	Weathered rock was identified at the time of the subsurface investigation. Bore Hole Rock Summary: BH#1 @ 1200
Is fill certified (level one in accordance with AS3798)?	No	
Was seepage/ ground water encountered at the time of site investigation?	No	
Low bearing capacity / soft or collapsing soils?	No	
Was rock encountered at the time of site investigation?	Yes	

Section 1.1 - Inspection Observation

Are there any existing structures or trees to be removed from the proposed building footprint?	No
Slope stability assessment recommended (> 15%)	No
Were trees identified within the zone of influence of the proposed building footprint?	Yes
The subject site is within 1000 m of the coast line.	No
Were cobbles or boulders encountered in the soil profile	No

Section 1.2 - Design Recommendations :

Additional Comments

Recommended Founding Material	NATURAL SOIL PROFILE
Are edge beam piers anticipated?	Yes
Are internal slab piers anticipated due to the proposed cut and fill operations?	No
Are internal slab piers anticipated due to prevailing site conditions (i.e. Poor Bearing Capacity / Presence of existing filling etc..)?	No

Unless otherwise stated, based on a 50/ 50 cut and fill earthworks operation.

Site Investigation Report (Preliminary)	252529	ISSUE	ISSUE DESCRIPTION	DATE
<small>DRAWING TITLE</small>	<small>STA JOB #</small>			
Coral Homes QLD Pty Ltd	Brown	A	Initial Soil Test	20-02-25
<small>CLIENT</small>	<small>YOUR CLIENT NAME</small>			
Lot 14 NEWLAND PLACE ADARE QLD 4343	43658			
<small>ADDRESS</small>	<small>CLIENT JOB #</small>			
LOCKYER VALLEY REGIONAL COUNCIL	329589			
<small>LOCAL AUTHORITY</small>	<small>RP / SP NUMBER</small>			

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SCALE
NTS

Relevant Code Used - NCC 2022

Section 2.0 Introduction

STA Consulting Engineers have been commissioned to undertake a soil test and site investigation in order to determine a site classification in accordance with AS 2870 Residential Slabs and Footings. Unless otherwise stated, the scope of this commission is limited to obtaining sufficient information to enable a site classification to be made, collect information on the natural soil profiles observed, determine the bearing strength of the soils, identify the presence and depth of fill material, determine the soils reactivity and calculate the effects of trees where required.

This commission does not extend to the testing of stockpiled materials stored on site, fill certificate, or the testing of sub-grade materials for pavement design. Whilst some comments may be made regarding foundations, the final design criteria is to be specified by the designing engineer.

2.01 Client Supplied Information

The following indicates the required information that is to be supplied and the information that has been supplied to the engineer prior to site investigation.

- YES Property description and site address
- YES Evidence to ensure site is correct
- YES The footprint of the proposed building and an indication of platform levels.

The below mentioned items were assessed at the time of the site investigation:

1. It is the sole responsibility of the builder to provide all relevant searches.
2. STA Note: Abnormal Site Conditions at time of investigation
 - a. Soft soil- such as uncontrolled fill or development fill sites including soft clay or silt or loose sand. (Soils bearing capacity is less than 100kPa)
 - b. Soils subject to erosion.
 - c. Reactive site subject to abnormal moisture conditions.
 - d. Sites that cannot be classified otherwise.
 - e. Unusual moisture conditions caused by drains, channels, ponds, dams or tanks which are to be maintained and removed from the site.
3. Trees located in close proximity of the footings (including trees on adjoining sites within the relevant distance of the mature height of the tree from the on site classification.

4. Unusual moisture conditions caused by drains, channels, ponds, dams or tanks which are to be maintained and removed from the site.
5. Trees located in close proximity of the footings (including trees on adjoining sites within the relevant distance of the mature height of the tree from the on site classification.

2.02 Site Classification Criteria

The soil test has been prepared in accordance with: Site Classification Criteria:

- AS 1289: Methods of testing soils for engineering purposes.
- AS 1726: Site Investigation Code.
- AS 2870: Classification of site in accordance with 'Residential Slab & footings'
- AS 3798: Guidelines on earthworks for commercial and residential development.

Section 3.0 Findings

3.01 Site Description

At the time of the investigation the site access was: Good. The vegetation consisted of grass and trees, the tested area had a gentle slope and the drainage was Poor.

3.02 Fieldwork & Laboratory Testing

A total of 3 bore holes were undertaken across the site using a Powered Auger to a maximum depth of 2500 mm (maximum bore hole depth). Dynamic Cone Penetrometer (D.C.P) tests and Pocket Penetrometer (P.P) tests were also undertaken at the time of the site investigation.

An authorised representative from STA Consulting Engineers set out the bore holes locations from existing site features, directed sampling and logged bore hole profiles. Engineering logs of the bore holes are presented in Section 4, together with Explanation Sheets defining the terms and symbols used in the preparation of the logs.

Representative samples of in situ soil were collected for the purpose of laboratory testing where appropriate. These tests include the following:

- Moisture Contents
- Liquid Limit (LL)
- Linear Shrinkage (LS)
- Shrink / Swell (Iss)

One or a combination of field tests were conducted on the in situ soils in order to make a determination on the 'Allowable Bearing Capacity' and / or "Un-drained Shear Strength". These tests include the following:

- Visual & Tactical Assessment
- Dynamic Cone Penetrometer (D.C.P)
- Pocket Penetrometer (P.P)
- Hand Held Shear Vane Test

Results of the Laboratory test are indicated under Section 7 Soil Profile and Laboratory Results.

3.03 Site Classification

As per AS2870-2011 Section C2.2 Methods for site classification; Laboratory test results and Y's calculations in conjunction with soil, geological & STA's own mapping system has been x-referenced to ensure consistency with nearby allotments pertaining to the soil profile and reactive soil characteristics for that of the proposed building site having been taken into consideration when determining the "Site Classification".

This site has been classified:

Class M

3.04 Comments & Recommendations

The following recommendations are based on the information provided to STA Consulting Engineers. If the house type, site positioning or site works vary from the information provided, STA Consulting Engineers must be contacted to reassess the site classification and design recommendations.

3.05 - Subsurface Conditions

3.05.1 - Rock

Weathered rock was identified at the time of the subsurface investigation.

Where the drill rig was unable to penetrate the rock, it is anticipated that the bearing capacity of the rock is in excess of 400 kPa

BH No.	Depth
1	1200

Section 4.0 Bore Logs

This line represents the anticipated base level of the recommended founding material nominated on page 1 of this report. This level is to be used as a gauge only.

Bore Hole # 1						Bore Hole # 2						Bore Hole # 3							
Depth (m)	Groundwater	Graphic Log	Extent of Fill	SOIL DESCRIPTION	PP Value	Depth (m)	Groundwater	Graphic Log	Extent of Fill	SOIL DESCRIPTION	PP Value	Depth (m)	Groundwater	Graphic Log	Extent of Fill	SOIL DESCRIPTION	PP Value	D.C.P. blows/100 mm	N'q (kPa)
0				SILTY SAND (Grey-Brown) Dry & Dense		0				SILTY SAND (Light Yellow -Brown) Dry & Medium Dense		0				SILTY SAND (Light Yellow -Brown) Dry & Medium Dense		7	
0.5				CLAY SILTY SAND (Brown) Dry to Moist & Dense		0.5				SANDY SILTY CLAY (Orange-Brown-Mottled Grey) Moist & Very Stiff		0.5				SANDY SILTY CLAY (Orange-Brown-Mottled Grey) Moist & Very Stiff		7	232
1.0				EXTREMELY WEATHERED ROCK (SANDSTONE) (Light Yellow-Brown) Dry & Moderately Strong		1.0				TOTALLY WEATHERED ROCK (Yellow-Brown-Mottled Grey) Dry & Moderately Strong		1.0				TOTALLY WEATHERED ROCK (Yellow-Brown-Mottled Grey) Dry & Moderately Strong		8	
1.5				UTP (Rock)		1.5						1.5						8	223
2.0						2.0						2.0						9	
2.5						2.5						2.5						9	
3.0						3.0						3.0						13	
3.5						3.5						3.5						15	
4.0						4.0						4.0						Gravels	
4.5						4.5						4.5							
5.0						5.0						5.0							
5.5						5.5						5.5							
Bore Hole Terminated - 1200 mm Drill Method: Powered Auger						Bore Hole Terminated - 2500 mm Drill Method: Powered Auger						Bore Hole Terminated - 2500 mm Drill Method: Powered Auger							

Prelim Soil Test, Wind Report

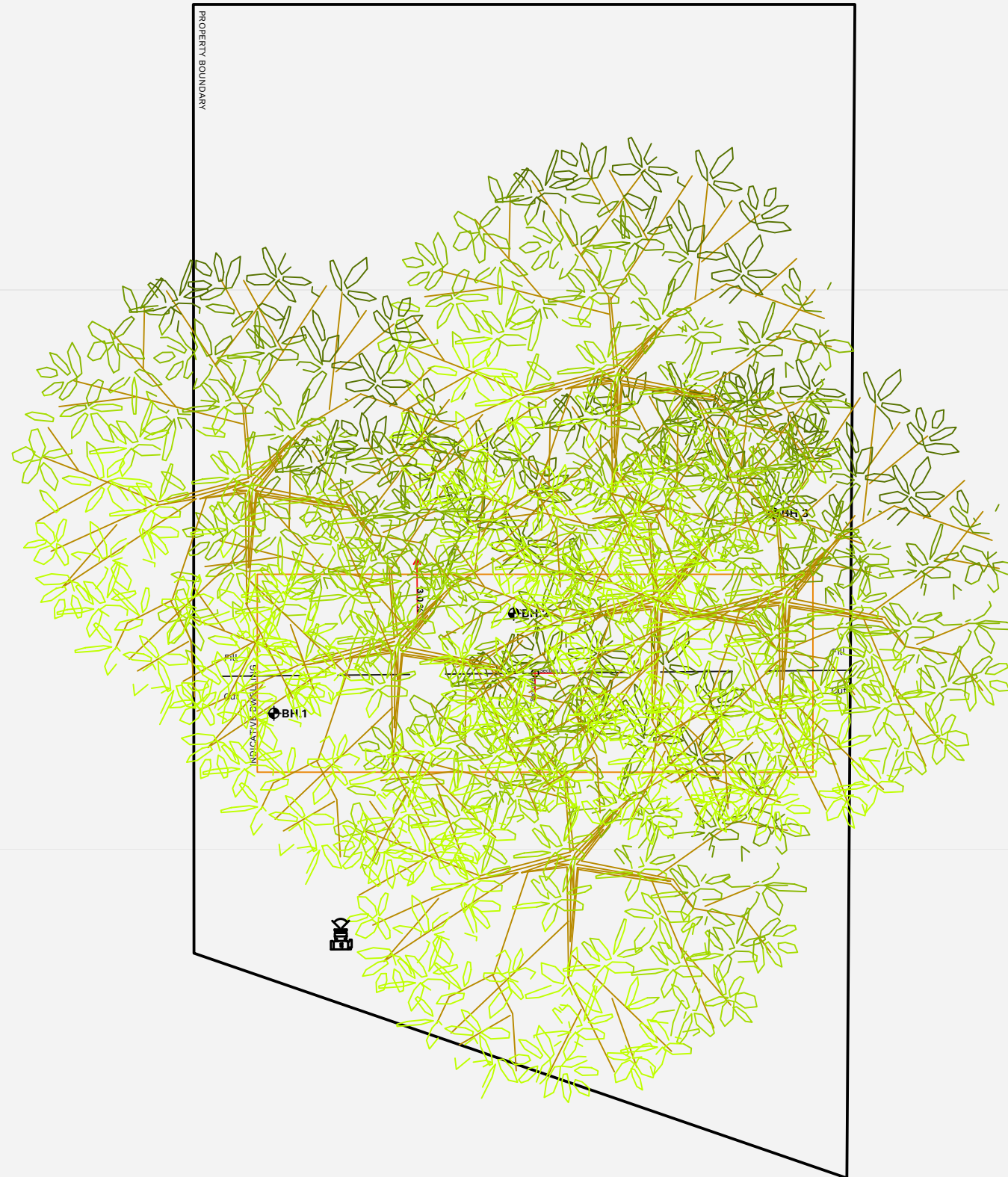
REPORT NAME	Coral Homes QLD Pty Ltd		252529
CLIENT	Brown	43658	STA JOB #
YOUR CLIENT NAME		329589	CLIENT JOB #
ADDRESS	Lot 14 NEWLAND PLACE ADARE QLD 4343		
LOCAL AUTHORITY	LOCKYER VALLEY REGIONAL COUNCIL		
ISSUE	ISSUE DESCRIPTION	DATE	
A	Initial Soil Test	20-02-25	

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Section 5.0 Site Identification



Legend			
Slope Direction	↓ Approx. Slope %	Bore Hole Location	⊙ BH. 1
Camera/Photo Location		Site Plan Cross Section	⊙ Section A ⊙ Section B
Edge of Foundations	— EDGE OF FOUNDATIONS	Estimated Cut / Fill Line	— Cut / Fill - - - Cut / Fill
Tree Zone of Influence			

Prelim Soil Test, Wind Report

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Brown YOUR CLIENT NAME	43658 CLIENT JOB #
	329589 RP / SP NUMBER

Lot 14 NEWLAND PLACE
ADARE QLD 4343
ADDRESS

LOCKYER VALLEY REGIONAL COUNCIL
LOCAL AUTHORITY

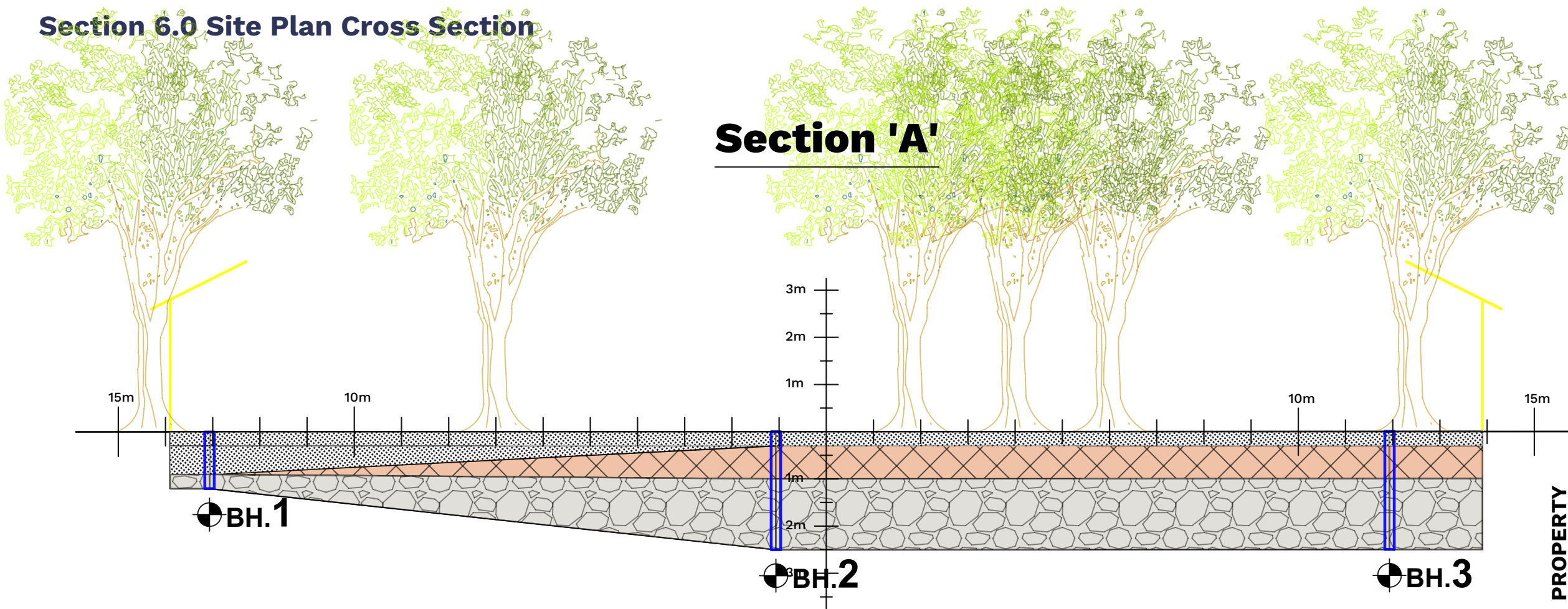
ISSUE	ISSUE DESCRIPTION	DATE
A	Initial Soil Test	20-02-25

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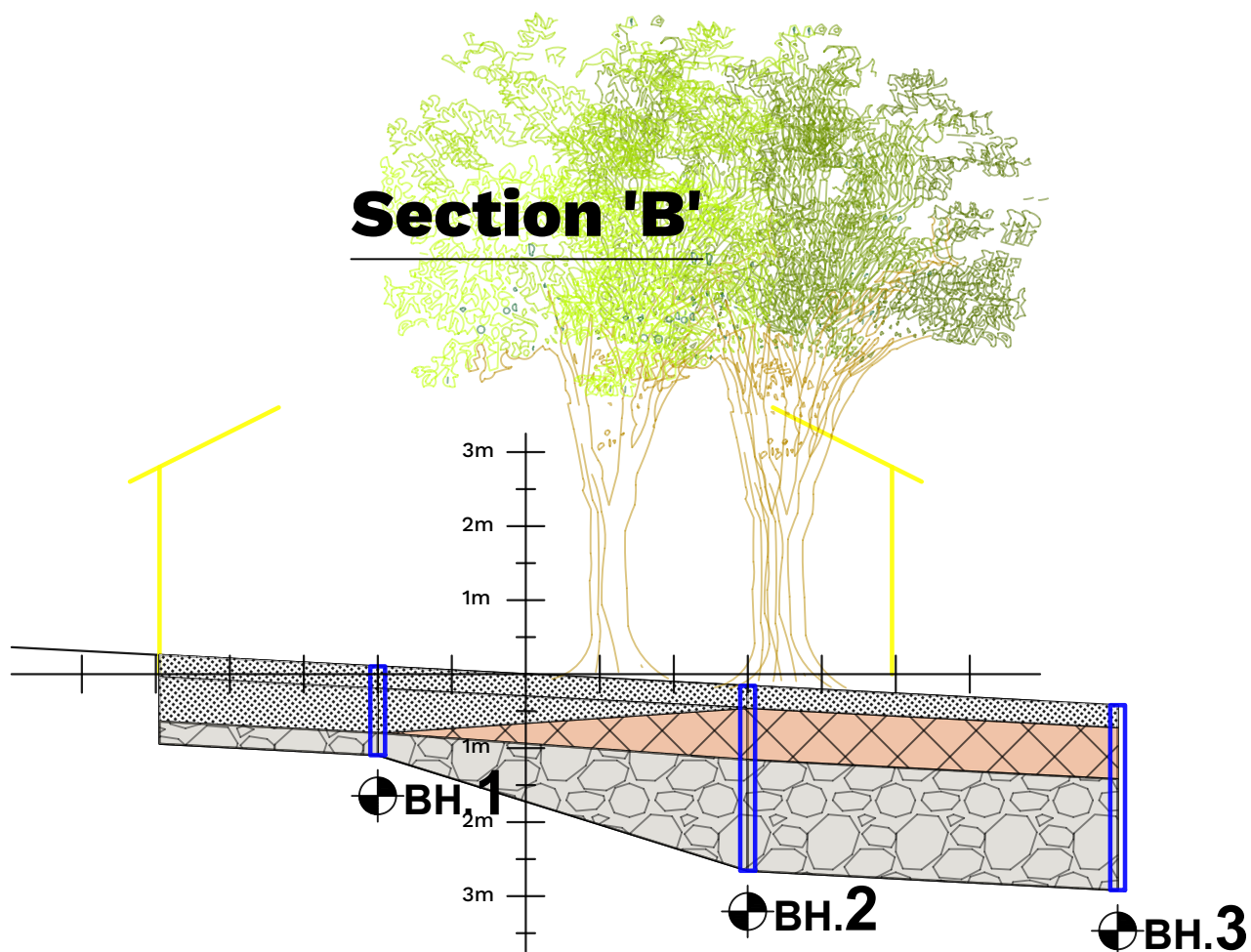
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Section 6.0 Site Plan Cross Section



Section 'A'



Section 'B'

Legend

Slope Direction	Approx. Slope %	Bore Hole Location	BH. 1
Camera/ Photo Location		Site Plan Cross Section	Section A Section B
Edge of Foundations	EDGE OF FOUNDATIONS	Estimated Cut / Fill Line	Cut / Fill
Tree Zone of Influence			

PROPERTY BOUNDARY

Prelim Soil Test, Wind Report

REPORT NAME

Coral Homes QLD Pty Ltd 252529

CLIENT STA JOB # 43658

Brown CLIENT JOB # 329589

YOUR CLIENT NAME RP / SP NUMBER

Lot 14 NEWLAND PLACE
ADARE QLD 4343

LOCKYER VALLEY REGIONAL COUNCIL
LOCAL AUTHORITY

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Section 7.0 Laboratory Test Results

Zone of Influence		Influence of Trees	
Climate Zone	Zone 3 Temperate	Single Tree	Tree Group
Description	Zone 3 Temperate	Max Design Drying Depth (Ht) 3.00	Max Design Drying Depth (Ht) 3.60
Hs (m)	2.3	Max Extra Suction Change (Du Base) 0.35	Max Extra Suction Change (Du Base) 0.43
Suction Change Du	2.3	As per AS2870-2011 Section 2.3.3, Determination of suction change (HS) estimated from "Thornthwaite Moisture Index".	

Laboratory Test Results			
Building ID	A	A	A
Sample Location	BH # 1	BH # 2	BH # 2
Depth Sample (mm)	600 mm	1500 mm	400 mm
Liquid Limit %	43.0 %	50.0 %	53.0 %
Linear Shrinkage %	12.0 %	14.0 %	15.0 %
I _{ss}	2.0	3.0	3.0

Summary of Bore Holes across the Site			
Bore Hole	1	2	3
Characteristic Surface Movement Y's (mm)	0	18	18
Tree Effect Yt's (mm)	0	3	3
Fill Depths (m)	0.0	0.0	0.2

Site Classification

M

Predictive Site Tilt

1:751

Level 1 Fill Settlement

N/A

Design Class Options			
The 'Design Class' are based on the use of a 'Raft Foundation' using the worst bore hole calculated on site.			
Raft Foundation	M	Foundations rafted on top of natural soil or controlled fill. Piers may be required where differential settlement of fill or soft clays are encountered.	Y _m = 16

Prelim Soil Test, Wind Report

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Section 8.0 Wind Evaluation & Rating

Wind Loading Assessment as per AS4055:2021

Wind Rating	N3	
Wind Region	B	
Terrain Category	2.5	
Topographic Class	T1	
Shielding Class	PS	Infill development likely within next 5 years development.

Wind Loading Assessment Limitations

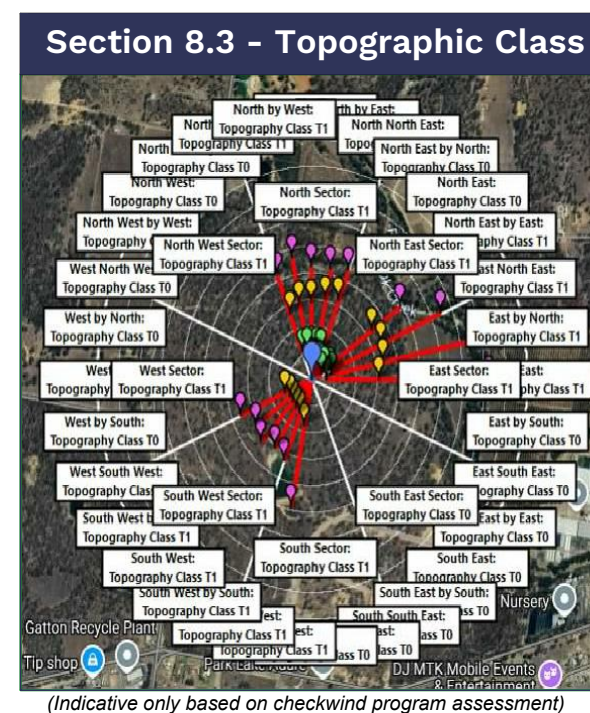
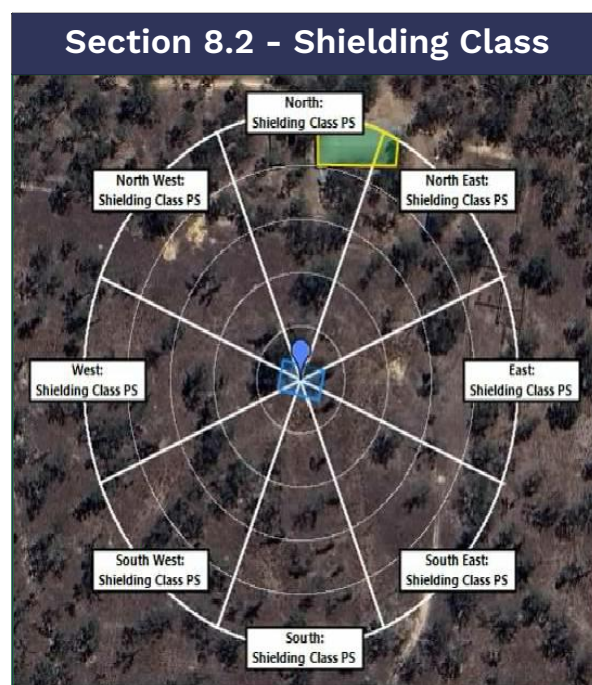
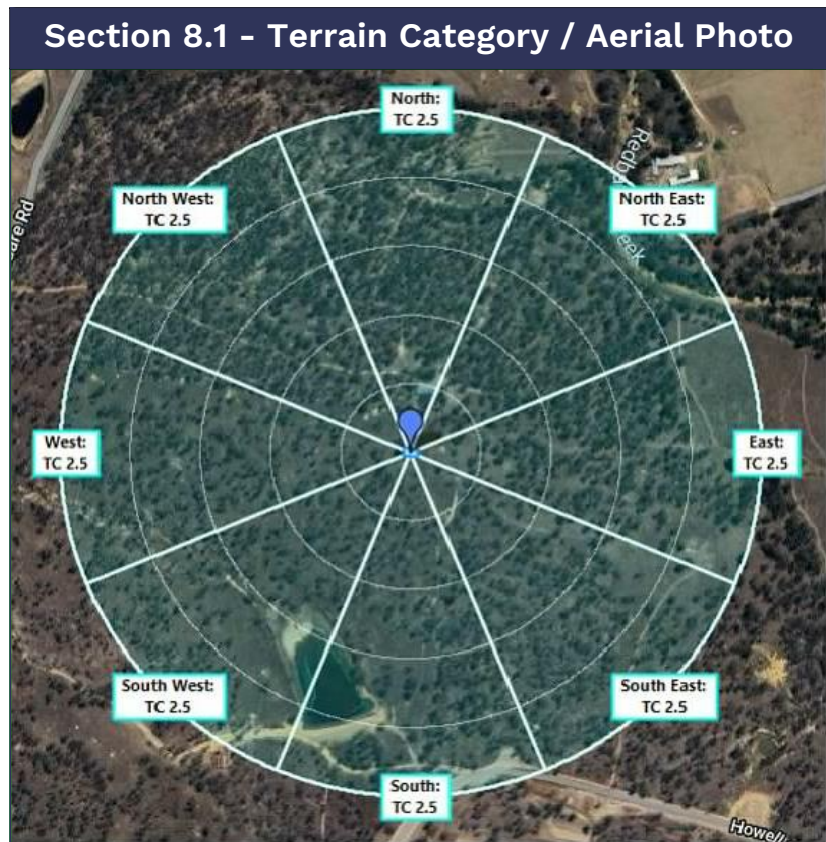
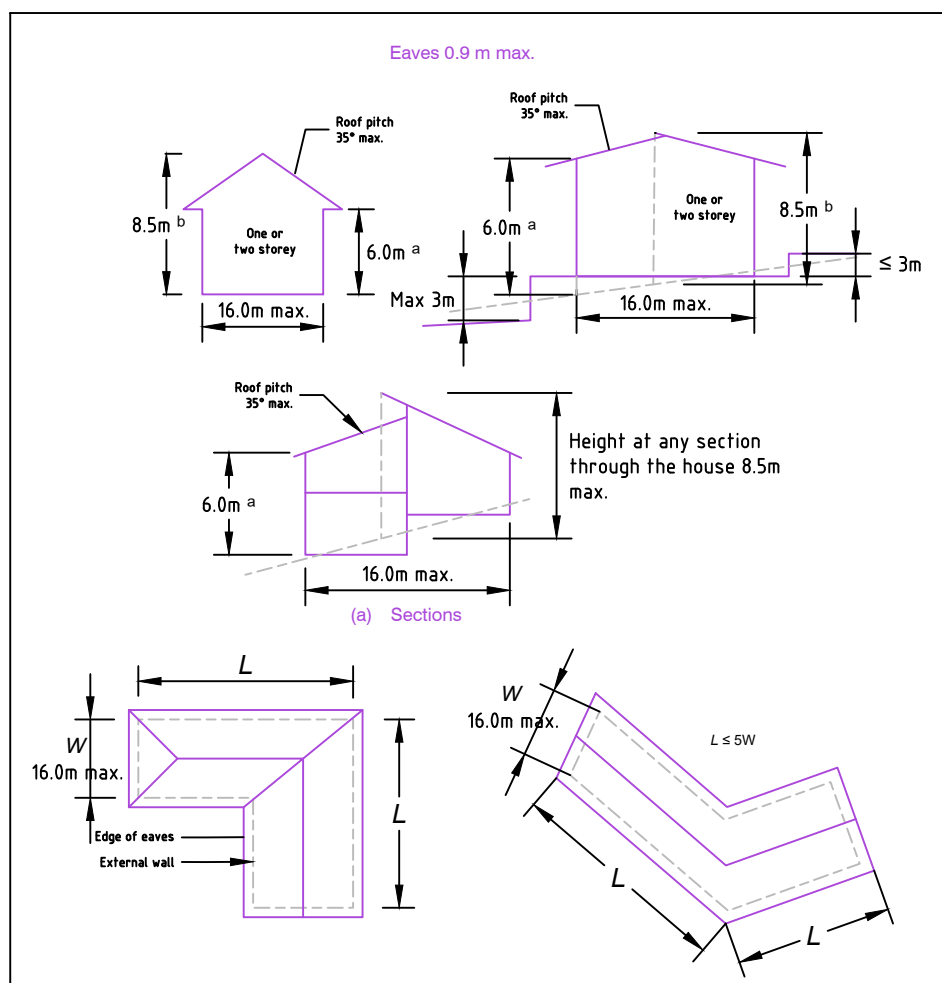
The following wind rating is applicable for dwellings which comply with AS4055 Section 1.2. If the proposed dwelling does not comply with these limitations the wind rating will need to be reassessed as per AS NZS 1170.2:2021.

Limitations as per Section 1.2 AS4055 - Wind Loads for Housing

For the purpose of this Standard the following conditions (geometric limits) shall apply (See Figure 1.1):

- (a) The distance from ground level to underside of eaves shall not exceed 6.0m. The distance from ground level to the highest point of the roof, not including chimneys, shall not exceed 8.5m
- (b) The width (W) including roofed verandahs, excluding eaves, shall not exceed 16.0m, and the length (L) shall not exceed 16.0m
- (c) The roof pitch shall not exceed 35°.

Figure 1.2 AS4055:2021



Prelim Soil Test, Wind Report

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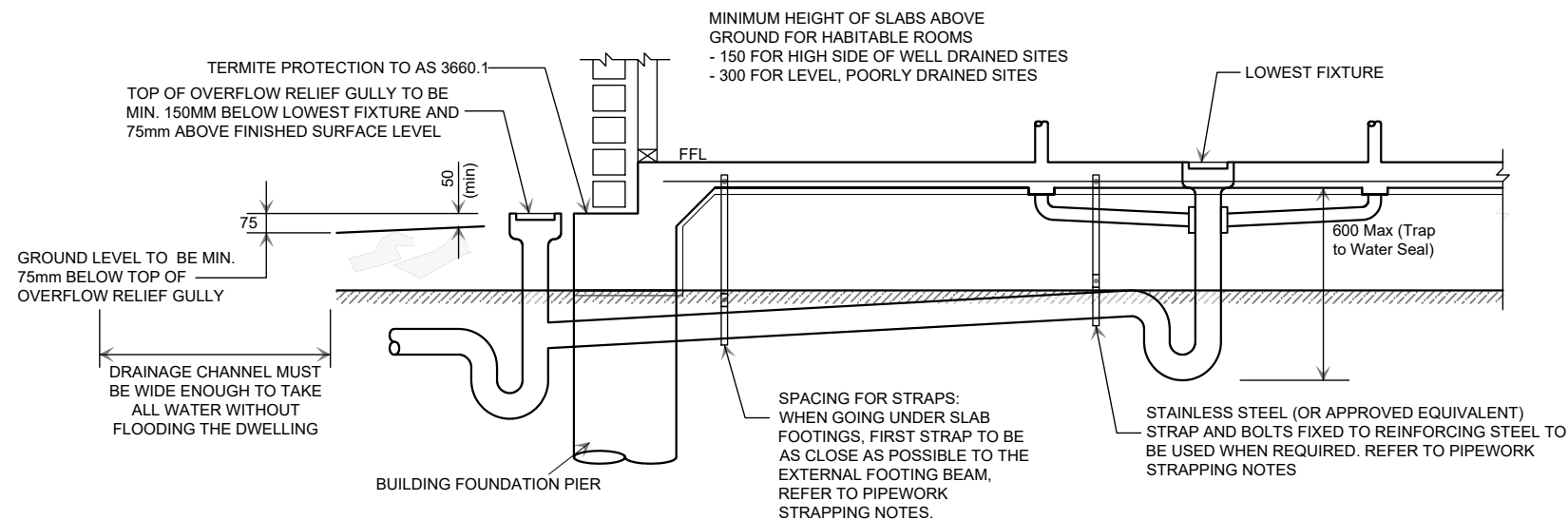
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Typical Plumbing Guidelines

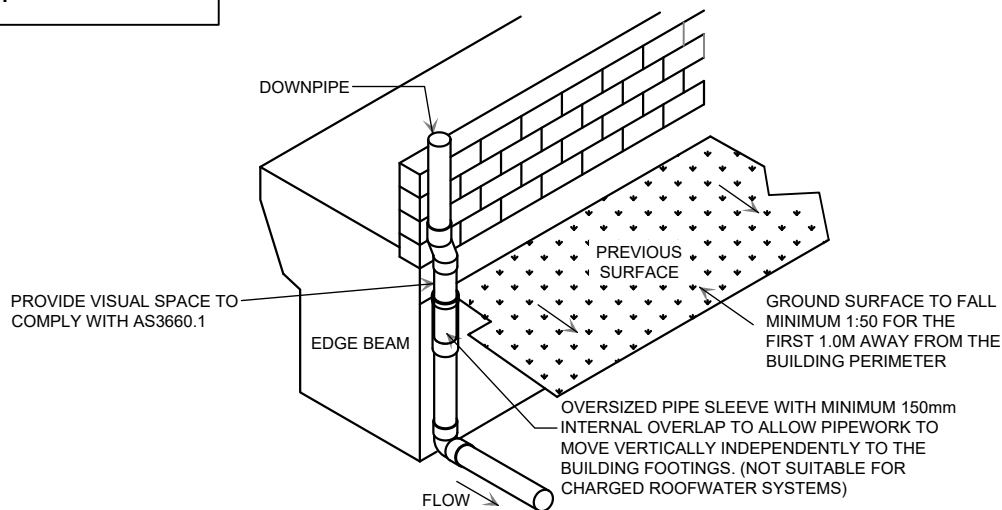
As per the Requirements of AS2870-2011 Section 5.6.4

STA CONSULTING ENGINEERS CONFIRMS THAT PLUMBING ARTICULATION JOINTS ARE NOT REQUIRED ON THIS SITE PROVIDING THE DETAILS ON THIS PAGE AND ANY LOCAL AUTHORITY REQUIREMENTS ARE ADHERED TO.



TYPICAL DETAIL - SERVICE PIPE STRAPPING UNDER SLAB FOR FIXTURE TRAPS AND CONNECTION TO OVERFLOW RELIEF GULLIES

NOT TO SCALE

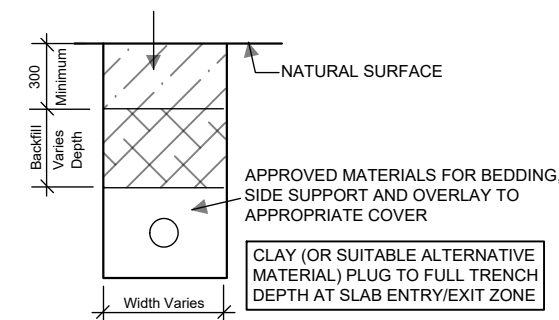


TYPICAL DETAIL - ROOFWATER DRAINAGE

NOT TO SCALE

TYPICAL DETAIL - BACKFILLING OF TRENCHES

ALL EXTERNAL TRENCHES WITHIN 1.5M OF THE BUILDING PERIMETER TO BE BACKFILLED WITH COMPACTED CLAY SOILS OR EQUIVALENT TO FORM AN IMPERMEABLE LAYER.



PIPEWORK STRAPPING NOTES:

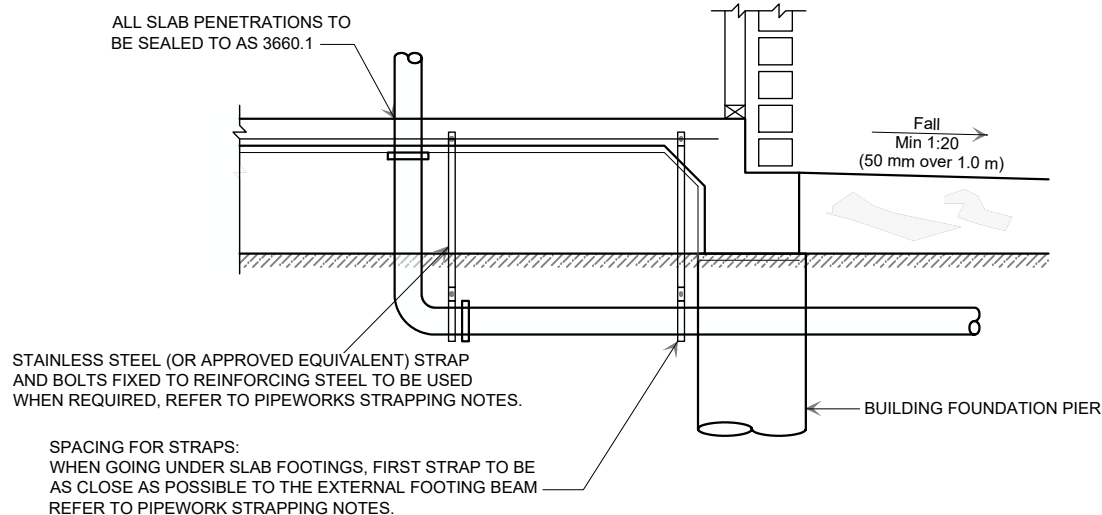
- Strapping of under slab pipework is required when:
 - Class "P" Sites where uncompacted fill has been identified or as a result of cut / filling operation in the construction of the building pad and pipework is not founded in natural material. Uncompacted fill being material that which is not natural ground of such having compaction certification as per AS3798 (Level One Supervision)
- Strapping shall be placed as follows:
 - For graded PVC-U Drains Dia 150mm > Dia 100mm: (e.g. water closets & main drains), strapping to be placed at the head and then at 1200mm Max Spacings.
 - For graded PVC-U Drains < Dia 100mm (e.g. sink floor waste), strapping to be placed at the head and then at 1000mm max spacing.
 - For pipework passing under the footing, place strapping as close as practicable to the inside edge of the footing.
 - For pipework passing through the footing, place strapping at maximum spacing suited to the pipe size above, for the inside edge of the footing.

Notes:

- All plumbing (within & beyond the footprint of the slab & footings) to be constructed in accordance with AS3500 - National Plumbing & Drainage code.
- All PVC pipe work passing horizontally through concrete must have 20 mm for 'H' or 40 mm lagging for 'E' sites. Sleeves allowing equivalent movement may be used as an alternative.
- Corrugated flexible PVC pipe should not be used for sanitary (sewer) pipes as it is not able to expand to accommodate soil movement.

Advice to Plumbers

Ensure that no piers are accidentally dislodged during trench excavation. If this happens, advise site supervisor immediately.



TYPICAL DETAIL - SERVICE PIPE STRAPPING UNDER SLAB AND NEAR EXTERNAL FOOTINGS BEAMS

NOT TO SCALE

Site Reactivity
M

John D'Amici, MIE Aust CPEng, RPEQ 12014 NER 316291

Section 10 Glossary of Terms

The following are definitions of words used in this report and attached documents.

Allowable Bearing Capacity - Maximum bearing pressure that can be sustained by the foundation from the proposed footing system under service loads which should avoid failure or excessive settlement.

Clay - Fine grained soil with plastic properties when wet. Includes sandy or silty clays.

Dynamic Cone Penetrometer (D.C.P) - Field equipment used to determine underlying soil strength by measuring the penetration of the device into the soil after each hammer blow.

Foundation - Ground which supports the building.

Footing System - General term used to refer to slabs, footings, piers and pile systems used to transfer load from the structure to the foundations.

Linear Shrinkage [LS] - Decrease in length expressed as a percentage of the original length when a sample of soil is oven dried from a moisture content of about the liquid limit as determined by the linear shrinkage test.

Liquid Limit [wl] - Moisture content at which the soil passes from plastic to the liquid state as determined by the liquid limit test.

Plastic Limit [wp] - Moisture content at which the soil becomes too dry to be in a plastic condition as determined by the plastic limit test.

Plasticity Index [Ip] - Numerical difference between the liquid limit and the plastic limit of a soil.

Pocket Penetrometer (P.P) - Instrument used to evaluate consistency and approximate unconfined compressive strength of saturated cohesive soils.

Rock - Strong material including shaley material and strongly cemented sand or gravel that does not soften in water. Material that cannot readily be excavated by a back hoe may be taken to be rock.

Sand - Granular soil that may contain a small proportion of fines including silt or clay. The amount of fines may be assessed as small by visual inspection or if the amount passing a 425 um sieve is 15% or less. Material with a higher proportion of fines shall be treated as silt or clay.

Services - Means all under ground services to the site including but not limited to power, telephone, sewerage, water & storm water.

Silt - Fine grained soil that is non-cohesive and non-plastic when wet, can include some sand and clay.

Site - Block upon which the testing was carried out.

Standard Residential Allotment - Means that if the lot/allotment is larger than 650 metres square then the client needs to identify where the proposed dwelling structure is to be erected.

Surface Movement (Ys) - Design movement at the surface of a reactive site caused by moisture changes.

Surface Movement Trees (Yt) - Potential surface movement due to the tree-induced suction change in addition to the normal design suction change.

Classification by characteristic surface movement as per AS2870-2011	Site Classification Symbols	Y's	Y'm	Generalised Description (Guide Only)
	'A'	0mm	0mm	Most sand and rock sites with little or no ground movement from moisture changes.
	'S'	0mm to 20mm	< 14mm	Slightly reactive clay sites, which may experience only slight ground movement from moisture changes.
	'M'	20mm to 40mm	< 28mm	Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes.
	'H1'	40mm to 60 mm	< 42mm	Highly reactive clay sites, which may experience high ground movement from moisture change.
	'H2'	60mm to 75mm	< 53mm	Highly reactive clay sites, which may experience high ground movement from moisture change.
	'E'	>75mm	< 63mm	Extremely reactive clay sites, which may experience extreme ground movement from moisture changes. The subcategory of E1, E2, E3 are designated for clays within the extreme range to determine the severity of potential ground movement, with E1 being just above the limits of a H2, and E3 being at the extreme end of predictive ground movement.
	'P'	N/A	N/A	Problem sites which generally have soils associated with uncontrolled fill, abnormal moisture conditions (trees), soft or collapsing soils, land slip etc..
	'-D'	N/A	N/A	For classes M, H1, H2 and E this further classification may be required, based on the depth of expected moisture change. Applied to sites with deep-seated moisture changes characteristic of dry climates and corresponding to a design depth of suction change (Hs), equal to or greater than 3 metres.

Note - Design Y'm = 0.7 Y's + Y't as per AS2870 - 2011

Section 10 - Appendix

10.01 - Soil Test/ Report Parameters

It is the clients responsibility to ensure that accurate details have been conveyed to STA Consulting Engineers prior to production of this report. STA Consulting Engineers is also not responsible for bracing and/or tie down requirements.

10.02 - Site Class and Potential Surface Movement

Methods adopted are in accordance with guidelines specified in AS 2870, appendix D. Potential surface movement and the resultant site classification are therefore in consideration of the local depth of the zone of consideration of significant soil moisture variations and the entire ground profile. This includes the influence of reactive clay based soils and/or the presence of fill, as well as the effect of stable materials such as dense sands or shallow rock. Site classification is divided into various classes, dependent on the Design Yst (potential movement).

10.03 - Soil Names

Major Divisions	Symbols	Subdivision	Particle Size	
Coarse grained soils (more than half of material is larger than 0.075mm).	G	Boulders	>200mm	
		Cobbles	60mm to 200mm	
		Gravels (more than half of coarse fraction is larger than 2mm).	Coarse 20mm to 60mm Medium 6mm to 20 mm Fine 2mm to 6mm	
	S	Sands (more than half of coarse fraction is smaller than 2mm).	Coarse 0.6mm to 2mm Medium 0.2mm to 0.6mm Fine 75mm to 0.2mm	
		Fine grained soils (more than half of material is smaller than 0.075mm).	M	High/ low plasticity <75 µm
			C	
O				

10.04 - Strength/ Consistency

TERM	Bearing Capacity (kPa)	Field Guide
Very Loose	> 50	Foot imprints easily
Loose	50 - 100	Shovels easily
Medium Dense	100 - 200	Shovelling difficult
Dense	200 - 300	Needs pick for excavation
Very Dense	300 - 400	Picking difficult

Coarse grained soils- (Non Cohesive)

The consistency of essentially non cohesive soils is described in terms of the density index %. Technically it is not possible to make an assessment of the density index without some form of test, normally a penetration test such as a D.C.P, S.P.T or C.P.T is used in conjunction with published correlation tables. The table on the left is to be used as a guide only when determining strength parameters of non-cohesive soils:-

Fine grained soils- (Cohesive)

Cohesive soils are described in terms of strength. Un-drained shear strength can be assessed using a pocket penetrometer for firm to very stiff soils, where a hand shear vane should be used up to firm soils. Refer table below:

TERM	Bearing Capacity (kPa)	Field Guide
Very Soft	> 20	Extrudes between fingers when squeezed in hand
Soft	20 - 50	Can be molded by light finger pressure
Firm	50 - 100	Can be molded by strong finger pressure
Stiff	100 - 200	Cannot be molded by fingers, but can be indented by thumb
Very Stiff	200 - 300	Can be identified by thumb nail
Hard	300 -400	Can be indented with difficulty by thumb nail

Section 11 Disclaimer

Where any footing excavations may indicate significant variations to the ground conditions specified in this report then STA Consulting Engineers must be informed immediately before further work proceeds on site.

The site classification is based upon the condition of the site at the time of the investigation and does not take into account any proposed earthworks or proposed site preparation details unless indicated. If any extensive cutting, cut/filling or total filling is proposed, a re assessment of the site classification will be required.

The Yt range is based on the mature height of the trees and vegetation present at the time of testing. If any additional trees are vegetation are to be placed STA Consulting Engineers should be contacted to re-evaluate the site classification and design recommendations (*if applicable*).

Where this report is used by a designing engineer then an original of the complete report must be provided to that engineer.

The information contained within this report is only applicable to the site address supplied by our client. Also, if the site is not a standard residential allotment, information contained in this report is only relevant to those areas investigated.

The bore hole locations, slope directions and offsets are estimations only and should not be taken as being accurate or relied on for set out.

It is the clients sole responsibility to determine:

- The set out of any proposed structure on the site;
- The location of any services.

This report does not cover termite prevention, investigation or treatment. Any queries concerning these matters should be referred to appropriately qualified person.

It is the clients obligation to advise STA Consulting Engineers in writing of any known or suspected peculiarities or irregularities concerning the site.

Where STA Consulting Engineers relies upon information and documentation provided by the client the responsibility for the accuracy of any such information or documentation so provided is the clients sole responsibility.

Where the site is situated in a new development, it is the responsibility of the client to provide certifications of fill compaction to STA Consulting Engineers at the time of our engagement to prepare this report. Where the relevant certifications of fill compaction are not provided by the client to STA Consulting Engineers then the classification of this site may change which may increase the over all costs of construction of the proposed structure on the site. Where the certifications of fill compaction are provided after the completion of this report, then the client will be liable for an additional fee for the work necessary to revise the report in view of that additional documentation.

In the instances where by significant levels of filling are observed, there will always remain the possibility of tilt within a rafted foundation as a result of differential settlement in the fill. Australian Standard (AS2870-2011) does not cater for tilting of the slab as a result of differential settlement within certified filling nor does the Australian Standard address the possible occurrence when shallow foundations are adopted.

This report should only be relied upon by the client where the report is provided in an original format and not as a copy.

This report is for the addressee only and STA Consulting Engineers specifically disclaims liability to any other party. Nothing in this report may be extracted or reprinted without the prior written consent of STA Consulting Engineers.

Note: Tree Locations are indicative only and all recorded measurements are approximate.