

SITE SPECIFIC FEATURES

Site Features:	Vacant Site with grass
Site Drainage:	Poor to Fair (At time of testing)
Ground Slope	Moderate
Proposed Earthworks:	Assume 50/50 Cut Fill
Iss Value:	lps < 2%
Y _s :	21-30mm
H _s :	1700mm or Rock
Water Table/Seepage:	Not present
Fill:	Yes (Uncontrolled)
Rock:	Yes
Slope Instability Assessment:	Not commissioned

ALLOWABLE BEARING PRESSURE

See Borelogs

DESIGN GUIDE FOR BUILDER ESTIMATION PURPOSES ONLY*

<u>Design Slab Class</u> *:	Class H1
<u>Piering Required</u> :	Yes
	Reason: Fill
<u>Piers (Min depth)</u> **:	Construction Piers : Socket into Rock
	Tree Piers if required
	Service Piers as required
<u>Plumbing Requirements</u> :	Articulated / Flexible Joints: No

Please note that should additional information become available that was not supplied or known at the time of our testing, we reserve the right to revise this report without penalty.

*For the purposes of this report, this is an estimation only and is subject to change on review of a qualified structural engineer based on the information contained within this report.

** ± Predicted cut/fill depths

SITE SPECIFIC NOTES

We have classified the site as Class P in accordance with AS2870-2011.

Street Trees

We have noted trees, but it is unclear if they are within the zone of influence of the proposed building footprint due to the following being unknown to us:

- a. The final building footprint of the dwelling (as the final contract for the dwelling has not been signed, and the information made available to us may change).
- b. How high the tree(s) will grow. We are not arborists, so prediction of tree growth is beyond our expertise and therefore we do not know the mature height of these trees.

If after all the above is confirmed, and it is determined that the trees are within the zone of potential influence, then the site classification will automatically be Class P and the design engineer must refer to Appendix H and CH of AS2870-2011 for guidance.

Uncontrolled Fill

This site has received a P classification because we have encountered filled ground deeper than the deemed to comply depths outlined in Section 2 of AS 2870-2011 and have not been able to source documentation certifying this fill as "controlled". This is not to say that the fill is bad or inadequate (and it was most likely placed under geotechnical supervision) it is a statement about the lack of documentation.

If the fill is well compacted and controlled, it will perform in accordance with the quoted γ_s , however in some rare instances, problems occur during earthworks and compaction may not have been achieved, in which case some settlement can be expected. Without this compaction report, there is a dilemma for the design engineer whether to design for reactivity or settlement. If the compaction certification can be sourced and forwarded to our office for review, we may be able to review our original result. If an amended report is requested so as to reflect this new information, an additional fee may be incurred.

Slope Stability

There are some areas nearby which the local authority may believe to be subject to landslip. Although our commission has specifically excluded consideration of landslip, this does not exclude the possibility that the local authority may request a Slope Stability Assessment for this project, nor does it exclude the possibility that during estate development modifications to the site may have masked any indicators of previous instability.

We do not see any reason why construction should not proceed in accordance with the above classification, but if during the various stages of development the possibility of slope instability is flagged by the certifying authority, then a more detailed investigation may be required. In this circumstance, we reserve the right to revise or withdraw this report without penalty. In some cases a slope stability assessment report already exists, but its importance may not have been recognised and not forwarded onto us. If required, we can provide a quotation for a slope stability report or appraise any existing report.

Water Table

Although no water table was encountered during our testing, a perched water table or water seepage can occur during or after wet periods, generally where a porous layer overlies less porous strata. This generally results in some water seepage into excavations down to this level, but a competent contractor can usually resolve this issue.

Shallow Rock

During our on-site testing we encountered weathered rock, which was very dense and may prove difficult to excavate. Due to this, allowances need to be made for possible problems associated with the excavation of service trenches and cut/fill earthworks.

Other Considerations

Prior to construction, our classification assumes all topsoil/estate dressing and any debris including organic vegetation is stripped clear from the building platform. Providing the exposed surface after site clearing is proof rolled and any new fill is compacted and certified in accordance with AS3798-2007 as "controlled" fill, then we do not see the need for additional fill piers on this site, other already mentioned above. Service piers maybe required for structural footings which maybe within the zone of influence of retaining walls, underground services, pools, inground tanks etc.

Warning: Our classification has not allowed for any future tree(s), which may be planted as part of the future landscaping. The owner, future owners and any stakeholder/consultant who is involved in the landscaping, has a duty of care to ensure that any future planting does not adversely affect the proposed dwelling and both Appendix H and CH AS2870-2011 and the referenced CSIRO documents give guidance on "Acceptable Long Term Site Management". Therefore, it would be prudent for any such proposal to be presented to the design engineer as soon as it is available, to ensure that the design engineer is satisfied that the landscaping proposed will not adversely affect the footing system.

Note: Cutting and filling the site by depths equal to or greater than 400mm will result in a 'P' classification, which may increase the design 'ys'. Therefore, when the proposed cut and fill earthworks is known, we shall be forwarded the earthworks plan to determine the potential impact on the above recorded calculations.

Unless specifically mentioned elsewhere within this report, we make no representation about the trafficability of the site during construction, however the thicker the topsoil/estate dressing, the greater the problem with moving construction equipment during or after rain periods.

AW Geotechnics



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BORELOGS as per AS1726-2017

Depth (mm)	TEST SITE 1				TEST SITE 2				
	Description Soil Type-Colour-Consistency	FILL	PP	Qa kPa	Depth (mm)	Description Soil Type-Colour-Consistency	FILL	PP	Qa kPa
100	SILTY SANDY CLAY (CL) w gravel (brn) Moist			520	100	SILTY SANDY CLAY (CL) w gravel			250
200					200	XW ROCK			
300					300	Low Strength			
400					400				
500					500				
600	XW ROCK Low Strength			480	600				
700					700				
800					800				
900					900				
1000					1000	250			
1100					1100				
1200					1200				
1300					1300				
1400					1400				
1500					1500				
1600	END P/A				1600				
1700					1700				
1800					1800				
1900					1900				
2000					2000				
2100					2100				
2200					2200				
2300					2300				
2400					2400				
2500					2500				
2600					2600				
2700					2700				
2800					2800				
2900					2900				
3000					3000				

NOMENCLATURE:

UTP = Unable to Penetrate XW ROCK = Extremely Weathered Rock P/A = Power Auger H/A = Hand Auger
 Refer Tables 7.3.2 & 7.3.3. AS1726-2017 gy=grey or=orange yel=yellow rd=red wh=white brn=brown bk=black bl=blue gr=green
 Refer AS1726-2017 Clause A2.4 for classifying soils.

Notes:

1. Hand Auger (H/A) is a portable auger and where utilised is used because of lack of access or trafficability, it is essential that the results of a hand auger are confirmed once access is provided, further testing using a 4WD mounted drill rig is carried out, or stakeholders shall accept the associated risk of results which may not represent the subject site conditions.
2. 9kg Dynamic Cone Penetrometer (DCP) can be unreliable in certain soils which may include (but not limited too), cohesive soils, soils which may contain gravels with a grain size in excess of 10mm, and strata with allowable bearing pressures in excess of 400kPa.
3. Pocket Penetrometer (PP) readings are an unfactored field strength test and should not be assumed equates to an allowable bearing pressure.

SITE SKETCH (Not to Scale)

