

***THE ASSOCIATION OF  
GEOTECHNICAL TESTING  
AUTHORITIES (QLD) INC.***

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***AGTA 1998-99  
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***Editorial***

Association Members – Welcome to AGTA's first newsletter for 1999. During the coming year, we the editorial staff, will endeavour to present coverage of committee actions on issues relating to our industry, as well as articles of interest on subjects relevant to the Geotechnical fraternity. It would be especially pleasing and indeed extremely helpful from the editors' point of view, if you, the Association members, may find the time to send in views of expression on any issue you find pertaining to our field of work, or articles which would be of interest to fellow members that could be published in future issues.

Within this newsletter, we have endeavoured to touch on a spread of issues ranging from clarification of standards, coverage of last years AGM, to profiling people that have contributed greatly to our industry over many years. As you may note, a list of the current AGTA committee members, their positions and phone numbers have been included in this issue. These people have been selected by the members to represent and be the 'voice' of the Association. Therefore should anyone wish to discuss any industry related matters, please contact your committee members. They are there for that purpose.

**Terry Ferguson  
EDITOR**

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The views expressed in this newsletter are those of the contributors and not necessarily shared by all members of the Association of Geotechnical Authorities (Qld) Inc.

# *Annual General Meeting*

## *AGTA – 1998*

AGTA's Annual General Meeting for 1998 was held at Arthur's Court Restaurant in Spring Hill on 2<sup>nd</sup> December. The evenings program consisted of dinner and drinks and the nomination and election of committee members to steer the Association into 1999. Although the numbers attending could have been greater, an enjoyable night was had by all, socialising with fellow members and their partners.

After the nominations and the election of committee members was complete, the new committee format was as follows:

<b>Chairman</b>	Steve Cusack
<b>Deputy Chairman</b>	Alan Bartlett
<b>Secretary</b>	Noel Thomas
<b>Treasurer</b>	Paul Thompson
<b>Deputy Secretary/ Newsletter Editor</b>	Terry Ferguson
<b>Non Executive</b>	Chris Brincat
<b>Non Executive</b>	Greg Greenhalgh
<b>Non Executive</b>	Amanda Macfarlane

The new committee consists of people from different facets of the Geotechnical Industry, and through this diversity, ensures that a broad range of our industry is represented in the executive arena.

### **Photo 1**

Current Chairman, Steve Cusack, his wife Karen, and newly elected committee member Chris Brincat enjoy the evening socialising.

Whilst congratulating the new committee members, a warm 'Thank You' should be passed on to the members of the previous committee who have relinquished their positions. So on behalf of AGTA members I would like to thank – Paul Fraser, Peter Davies, Mike Sandilands, Chris Bloxom and Richard Thompson for their time and contributions over the past two years. Their efforts in getting AGTA ' a going concern' is greatly appreciated.

**Photo 2**

Treasurer elect Paul Thompson and his partner Cathy enjoy the night after Paul's re-election as Treasurer

**Photo 3**

AGTA Membership No. 1 – Tom McCabe is the picture of concentration during the elections. Seated behind Tom is Ross Battison who in keeping with the festive occasion promised his membership form would be signed and delivered early 1999.

**Photo 4**

Past Chairman Paul Fraser and his wife Kate enjoy the social atmosphere of the night. Paul chaired the elections and his short talk on the amazing versatility of a Nuclear Meter was of great interest to those present.

Come December 1999 our 3<sup>rd</sup> AGM will be upon us, so please fellow members.....participate, nominate and ensure AGTA flourishes for years to come.

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## *Chairman's Report*

This is AGTA's third year and my second as chairman, and I would like to take this opportunity to thank the past committee for their work and commitment through a trying year.

I'd also like to welcome the new committee members. This years committee has already proven to be very pro-active, with new and innovative ideas, and the committee is more than capable of moving AGTA in a forward direction.

For the AGTA to move in the direction YOU want it to go, the committee needs the input of all members. To this end, we need topics for general meetings, suggestions, industry issues, anything that is of interest or of importance, that need to be addressed or raised. We also need feedback as to the performance of the association and it's committee.

In other words, we need your support and input.

If you have any concerns, questions or want to raise any issues, please contact myself or a committee member.

We have the opportunity to advance AGTA and therefore the industry we work in.

**Steve Cusack**  
**CHAIRMAN**

### **CAREER PATH FOR SOIL AND CONSTRUCTION MATERIAL TESTERS**

A career path is presently being developed by an Industry Working Group under the umbrella of Construction Training Queensland, the ITAB for Soil and Construction Material Testers.

In this career path is envisaged that a person can leave school, start working at a soils or materials laboratory and follow a stepped path trainee soil tester, technician and professional (Certificate diploma and finally a degree).

This path will have a number of entry and exit points.

At present a number of universities are being approached with the view of endorsing a training package with Material Testing as the major focus.

## Technical Talk

In "Technical Talk" this edition, we look at correspondence between Mr NJ Thomas of Queensland Geotechnical Services and Standards Australia in regard to clarification of Section 2.4 of AS 2870 – 1996 Residential Slabs and Footings – Construction.

## Clarification Request

4 January 1999

Standards Australia  
Head Office  
PO Box 2140  
NSW 2135

Dear Sir/Madam

RE: AUSTRALIAN STANDARD 2870 1996  
RESIDENTIAL SLABS AND FOOTINGS

I refer to Section 2.4 – Additional Considerations for Site Classification and would be grateful if you could kindly provide me with some clarification.

I note that Clause 2.4.1 states "Filled sites shall be classified as Class P except where the conditions of clauses 2.4.6 (c) and 6.4.2. allow another classification.

Clause 2.4.6 (c) is summarised above and refers to the requirement for engineering principles. If you refer to 6.4.2 (a) there is a qualification on the depth of controlled fill: e.g.

- "sand fill up to 0.8m – shall be deemed to comply with this requirement".
- "non-sand fill up to 0.4m – shall be deemed to comply with this requirement".

Clause 2.4.6 (a) defines the "effect of fill on classification". In particular, sub clause (ii) states "The classification of a site with controlled fill of material other than sand and deeper than 0.4m shall be Class P (refer Item (c) regarding reclassification).

In other words, so far as I can see, read in conjunction with 2.4.6 (b) (i) and (ii), failing undertaking whatever is necessary to reclassify the site, no difference in classification exists between controlled and uncontrolled non sand fill over 0.4 metre deep.

As I read it, the Standard give no indication of how a site may be re-classified other than "if assessed in accordance with engineering principles" which is given as a qualification, with some following guidance on movement of fills/soils and equilibrium conditions.

Some companies are interpreting the issue that the placement of, say, some two to three metres of fill (over 0.4 metre) on a site under, say, Level 2 conditions as defined by Australian Standard 3798 – 1996 as a "stand along" situation – that is, no supplementary testing to determine other than reactive parameters – is sufficient to reclassify a site from P to a lesser classification.

As a good client of ours is obtaining conflicting advice on the re-classification issue, I should be grateful if you would kindly provide me with some indication, when the section on re-classification was drafted, of what in the opinion of the Association is the minimum necessary undertaking to re-classify a fill. Or, regardless of fill thickness, is merely the placement of a technician on site during earthworks placement on a permanent (Level 1) or intermittent (Level 2) basis adequate to effect the re-classification?

Yours Sincerely

Noel J Thomas

**QUEENSLAND GEOTECHNICAL SERVICES**

## Response

TO: Mr Noel Thomas

FROM: Denis Dawkins  
Advisory Education & Related Services  
STANDARDS AUSTRALIA

DATE: 14 January 1999

Subject: TECHNICAL ASSISTANCE

Dear Mr Thomas

I refer to your fax of 4 January 1999.

Class "P" sites are those for which it would not be accurate or otherwise appropriate to assign one of the classes based on soil reactivity alone, i.e. A, S, M etc. In the most recent revision of AS 2870 the definition of class P sites was extended by the addition of "sites which cannot be classified otherwise" in order to make this point more explicit.

In the case of the present query it follows that reclassification of a site away from class "P" should occur only when the Classifier has determined that the presence of fill will have no bearing on the specification of house footings for a "standard" house on the site. Note that the site classification should not be influenced by the requirements of a particular house planned for a site. Frequently house plans change and a completely different type of house may be built from the one expected when the site was classified.

Clearly moisture content and compaction of filling are critical aspects in ensuring the integrity of a fill platform. Other related aspects include subgrade preparation, and fill cleanliness and uniformity. All of these points are addressed in AS 3798 and it is these points that are addressed in such "Level 2" certificates. That is, the certificate will assist in determining whether or not the fill platform comprises "controlled" fill. However (as you point out) these sites are still class "P" under the Standard, as notwithstanding how well the fill is compacted the presence of fill will often affect the footing design.

Other aspects that must be considered using engineering principles include:

- Variation in fill depth across the site. (If fill depth varies markedly even small percentage variation in fill volume can cause damaging differential movements.)
- Moisture content of fill. (Optimum Moisture Content for compaction will often allow considerable volume change as the moisture content moves towards the long term equilibrium moisture content).
- Overcompaction. (An overcompacted site may rebound with time. Also, while the entire platform may have satisfied the minimum compaction criterion there may be considerable variation across the site).
- Consolidation of natural ground and/or fill. (The weight of the fill platform can cause damaging differential movements as either or both the natural ground and the fill itself consolidate. This can take many years to stabilise, as evidenced by at least one recent failure at the Gold Coast).
- Changes to moisture paths. (The presence of the fill platform and the type of fill can cause substantial changes to ground moisture conditions, leading in turn to damaging movements. Clause C2.4.6 of the Commentary has some discussion on aspects of this point).
- Slip mobilisation. (In some areas the presence of a heavy fill platform can initiate ground movement that is otherwise dormant).

Each of these aspects has caused footing failure in the past, and none of them is considered when a compacted fill platform is certified as complying with AS 3798. As each site is unique it is impossible to provide a set of engineering principles that will apply in all cases and the Classifier must consider each site individually.

In summary, certification of a fill platform to Level 1 or Level 2 of AS 3798 will assist in determining whether fill is controlled. In itself it does not satisfy the requirements for engineering principles as specified in Clause 2.4.6 (c) of AS 2870.

Yours Sincerely  
 Denis Dawkins  
 Associate Director  
**STANDARDS AUSTRALIA**

***Footnote:***

Subsequently the editor of Standards Association letter was contacted verbally regarding clarification on the limits of fill depth variation: we were told the maximum depth variation should not exceed 40 to 50 percent.

***Food for Thought***

- The secret of joy in work is contained in one word – excellence. To know how to do something well is to enjoy it. *Pearl Buck*
- Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime *Chinese Proverb.*
- Always acknowledge a fault frankly. This will throw those in authority off their guard and give you opportunity to commit more. *Mark Twain*

***Current Membership Roll Call***

Membership No.	Name
001	Thomas McCabe
002	Ullman & Nolan Geotechnical
003	Civil Quality Assurance (Qld) Pty Ltd
004	Tony McDonald
005	GJ Brandon & Associates Pty Ltd
006	Amanda Macfarlane
007	South Qld Soils Pty Ltd
008	Wide Bay Geotechnical Services P/L
009	Brisbane City Council
010	Geo-Tech Temp Pty Ltd
011	Geotest Engineering Services Pty Ltd
012	Bowler Geotechnical Pty Ltd (Browns Plains)
013	Geoff Maiden Partners
014	Queensland Geotechnical Pty Ltd
015	Noel Thomas
016	Paul Thompson
017	Lloyd R Davies
018	Roadtest
019	Vimbury Pty Ltd trading as Earthtech Laboratories
020	John V Simmons
021	Soiltech Pty Ltd
022	Boral Construction Materials Country (Qld) Raw Materials Laboratory
023	Far North Qld Testing Pty Ltd
024	Golder Associates Pty Ltd
025	Soil Test Australia
026	Peter Murphy
027	H&M Testing Pty Ltd
028	Department of Natural Resources
029	Ron Richards & Partners Pty Ltd
030	Geotech (SC) Pty Ltd trading as Soil Surveys Technical Services
031	CSE (Aust) Pty Ltd
032	Gold Coast City Council
033	Strata Test Pty Ltd
034	Will V Aus
035	Kase Enterprises
036	CSR Construction Materials - Toowoomba
037	Gerald A Fitzgerald
038	Soil Engineering Services
039	Civil Tech Pty Ltd
040	Karreman Group
041	Anthony J. McKenna
042	John Wilson & Partners Pty Ltd
043	Border Tech
044	Tiaro Shire Council
045	Geo-Investigations Pty Ltd
046	Alan Bartlett
047	Chris Brincat
048	Graeme Sheppard
049	Stephen Vlatko-Rulo trading as Duke Contracting Services
050	Mark Hallett
051	Crows Nest Shire Council
052	D&G Concrete Testing

## *People in Profile*

Within the Geotechnical Industry there are many people who have made valuable contributions. One that immediately comes to mind is Martin Ferguson of Contest Manufacturing Pty Ltd based in the inner Brisbane suburb of Albion. With a staff of 6, Contest has supplied a wide range of quality testing equipment, encompassing soil, bitumen, concrete and quarry products, to our industry for 25 years. Innovative, durable and quality are words that comfortably describe the equipment that Martin continues to manufacture and supply to laboratories Australia wide. When it comes to test equipment design and manufacture, Martin's ingenuity inevitably creates a product that identifies him as one of the best in his field of expertise.

Martin Ferguson was born in Melbourne in the Year of 1925. Before he reached his first birthday his family, upon purchasing a sheep station, moved to Longreach, Queensland. Through his youth, Martin attended Scots College at Warwick. At the completion of his secondary education in 1943 he enlisted in the Australian Air Force as a trainee pilot for the duration of the second world war. At the end of the war, Martin continued his education by enrolling in, and completing a wool classers course at Gatton Agricultural College. During 1948 Martin decided his future lay in the expanding frontier of Papua New Guinea, so for the next 6 years of his life, he ran his own company consisting of semitrailers, tippers, mechanical workshops and road maintenance contracts. Come 1954 the lure of the Queensland outback brought Martin back to Tara (South/West of Dalby) and in keeping with family tradition he purchased a sheep station and worked it for the next 4 years. By 1958 the adventurous streak in Martin found him bound for the British Isles where he resided in London for 3 years. When asked what he did during this period, his answer was "Worked in mechanical workshops and drank quite a bit of beer". Upon his return to Australia in 1961 he entered the Geotechnical Industry for the first time. For the next 5 years of his life he was employed by Coffey and Hollingsworth, working out of their Fortitude Valley office. During this period he worked on civil projects around Emerald, also spending time on the Swanbank Power Station and General Motors Acacia Ridge projects. With a change of employer in the late sixties, Martin began a five year working relationship with Pioneer, working out of their Coopers Plains Laboratory conducting compaction and concrete testing. It was during this time that he began to look into the manufacturing side of the geotechnical industry by constructing concrete and compaction moulds in his spare time. In 1974 Martin took yet another career turn and went into full-time manufacturing of geotechnical equipment under the name of Contest Manufacturing Pty Ltd. To this day Contest's doors are still open and Martin has become one of the personalities of our industry.

During the course of my interview with Martin, I asked him about retirement. His reply to this question was "At present I have no plans for retirement and I also have no plans to continue". An ambiguous answer to say the least! When asked for a comment on how he continues to produce good quality, user friendly equipment, his reply was "A mix of my previous testing experience and constant conversation with current geotechnicians using

my equipment". As my interview wound to an end (and the stubbies ran dry) I asked Martin one last question – "What improvements might make the industry a better place to work? From a manufacturers point of view came this reply – "The standards should be overhauled so that certain pieces of equipment i.e. tamping rods etc. could be multi-purpose and used in many different test procedures rather than just one".

Martin Ferguson has been an integral part of our industry's history for more than three decades now and it was a pleasure to sit and talk about his very interesting life. So next time you pick the phone up and ring Martin about a piece of equipment you will know a little more about the man behind the voice.

**Terry Ferguson**

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## *Lighten Up*

A tractor salesman from Gunnedah tells the story of approaching a wheat farmer to sell him a new tractor, only to find him resting on his verandah patting his pet dog. Only on closer examination it turned out to be a pig with a wooden leg. As much to put off the inevitable wheeling and dealing about the price of the tractor as anything, the salesman remarked that the pig had a wooden leg. "Some pig that," replied the cocky, "saved my missus". He went on to recount a story where two scoundrels had come to the house whilst he was away, with the intention of robbing it. The pig had sent them packing.

"But it's got a wooden leg," said the salesman.

"Quite a pig," said the cocky. "Saved my kids from drowning". He went on to explain that the kids had been playing in the dam and got into difficulties whereupon the pig launched himself into the water and pushed them to safety.

"But it's a wooden leg, isn't it?" said our intrepid salesman. "A bonzer pig, this is" said the cocky. "I remember once when the kerosene fridge caught alight. We would have all burnt to death in our beds if it wasn't for that pig". And he gave it a fond pat.

"But I'm still interested in how come it's got a wooden leg", said our salesman.

A sentimental smile spread over the cocky's face. "Well, if you had a pig as good as this, would you eat him all at once".

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## *Useful Industry Information*

# *Coming Events*

## *General Meeting*

- TOPICS:** Soil Testers Award  
Industry Training Advisory Board  
Industry Training Packages
- SPEAKERS:** Keith McIlwain – Chairman of The Civil Operations Stream  
Advisory Board  
Blue O’Shea – Secretary Construction Training Queensland
- VENUE:** Hotel Grand Chancellor  
Room Chancellor 3  
23 Leichhardt (Cnr Wickham Tce)  
Spring Hill
- DATE:** Tuesday 30<sup>th</sup> March
- VENUE:** 6.30 P.M.