

### Association of Geotechnical Testing Authorities

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Australian Conference of Construction Materials Testing
23rd - 25th March BRISBANE

Association of Geotechnical Testing Authorities (QLD) Inc.

"Engaging the Future"



Email contact for the conference is: cmt2011@agta.org.au

## **Editorial**

As you will no doubt realise the newsletter has a new revamped look.

My name is Steve Cusack and I am the new editor of the AGTA newsletter.

I will try to produce the newsletter on a regular basis, i.e. each quarter.

The format of the newsletter has been changed to reflect a more dynamic letter, involving input from other organisations in the Civil Construction Testing and allied fields.

The Queensland Building Services Authority has inputted to this news letter with future input by other organisations, I hope this will become a regular feature.

Their input will reflect what role they have in our industry and our role with them.

If you have any questions, comments, issues to raise or input to anything in this newsletter please feel free to contact me.

Steve Cusack

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# CMT Conference "Engaging the Future "

The planning for the CMT conference is well under way and it and will be held from 23rd to the 25th March 2011.

The conference has "Engaging the Future" as its theme, and the aim is to engage the younger people working in the Construction Material Testing field of work.

The conference will be held at the Novotel conference centre, several major sponsors have been secured and opportunities for sponsorship are still available.

The cost per delegate is about the \$400 mark (this will be confirmed as we get closer to the conference).

Papers for the conference will be called for in due course.

## **Committee Report**

The committee has been very busy over the last few months, with particular emphasis on the up coming conference.

Other considerations have been the Queensland Building Services position on Level 1 monitoring with relation to compaction testing (see article)

# BSA's RECTIFICATION OF BUILDING WORK POLICY AND ITS EFFECT ON GEOTECHNICAL INVESTIGATIONS

The subsidence of residential footings and slabs, and consequential building damage, remains one of the most persistent residential building complaints received by the BSA. Subsidence related defects result in considerable stress, disappointment and financial hardship to hundreds of consumers in Queensland each year and costs the BSA's Home Warranty Scheme an average \$7.5m p.a. (average over the last four financial years). Of particular concern is the continual high incidence of subsidence related complaints, and findings by BSA consultant engineers, of inadequate foundations/slab design that often result from incorrect site classifications.

The BSA undertook extensive consultation with stakeholders (which included building associations, contractors and engineering bodies) to seek a possible solution to subsidence issues. This process led to the development of the revised July 2010 Rectification of Building Work Policy. The policy significantly impacts on a principal building contractor's obligations not only in the construction stage but also in respect to the input and administration of the testing and design phase of the footing/slab system.

Whilst the policy provides very specific requirements in respect to recording, site testing and design compliance, a significant change to the policy places emphasis on sites where the building will be positioned on fill material. BSA investigating engineers have found possible fill settlement on level 1 certified sites as a contributing factor of building failures. More alarmingly, level 1 certificates appear to have been issued where unsuitable fill material has been discovered during post construction testing.

The onus is placed on the contractor to ensure that all of the requirements of the new Rectification of Building Work Policy are observed. The policy requires that if the building is supported on fill, irrespective of whether a level 1 compaction certificate has been issued, the building contractor must ensure that if the design engineer determines that piers are not required that he/she provides written reasons on why they are not required. In practice this requirement acts as a control measure to ensure that all of the desirable engineering principles are considered and applied to the development of an engineering solution for a particular building's foundation/slab design on sites where buildings are constructed on fill.

It is important to note that the BSA rectification policy changed significantly in July 2010, from its initial issue in March 2010, in respect to level 1 compaction certificates:

#### March 2010 Rectification of Defects Policy

(i) regardless of whether a level 1 compaction certificate has been obtained for the development, if the engineer intends to omit piers, further compaction tests have been carried out within the building footprint to confirm suitability of the founding material;

### July 2010 Rectification of Defects Policy

(v) if the proposed footing is supported on filling and the engineer's design does not include piers through the filling, irrespective of whether or not the filling is part of the building contract or Level 1 compaction certificates are available, the engineer has documented requirements for further testing of or improvements to the filling such that piers are not required, or the engineer has provided written advice of the reason why the engineer has determined that piers are not required.

Failure to comply with the policy may result in BSA issuing the contractor with a Direction to Rectify for any defective work. Strategically, however, it is hoped that the policy will result in establishing closer liaison between contractors and associated geotechnical professionals (during testing, foundation/slab design and construction stage of residential and commercial buildings) and result in lower incidences of subsidence related building failures.

# **Technical Question**

The question is with regard to the shrink/swell indices and their relevance to Queensland regional area

In regional Queensland and to some extent the south east, the ability to retrieve a sample that is suitable for testing and determining shrink/swell indices is very difficult.

In some regions it is almost impossible to push a tube for a sample, and if you actually can get a sample how do you retrieve it?

There have been numerous methods used to help determine the classification of sites, some of these include soil classification tests including atterberg limits, linear shrinkage and gradings.

What methods do you use and is there a common thread amongst practitioners?

To pass comment or information please contact the editor.

BSA's Rectification of Building Work can be found on the BSA's website at: http://www.bsa.qld.gov.au/SiteCollectionDocuments/Builders Contractors/Fact Sheets/Rectification Of Building Work Policy.pdf

## Forum/Feedback.

AGTA encourages feedback and comment so that the committee can better serve its members. Forward any comments, articles or items of interest to the editor at <a href="mailto:stevecusack@iinet.net.au">stevecusack@iinet.net.au</a>

## Scientists stumble upon rare volcano

(source: 9 News Online)

Scientists have discovered an extinct volcano in deep sea off the far west coast of Australia.

The cone-shaped volcano, which measures 800m across and 200m high, was found 2km beneath the ocean's surface and 100 nautical miles offshore in a protected area of the Great Australian Bight. The researchers said it was a lucky find, Adelaide Now reports.



Above - Example of under-water volcanic eruption

Scientists on board the Southern Surveyor came across the volcano – now named "Anna's Pimple" - while mapping a seabed in the Benthic Protection Zone. The volcano was named after a university student on board the ship.

South Australian Research and Development Institute chief scientist Dr David Currie said the find was exciting because the area was always thought to have a flat sea floor. "To find something like an extinct volcano in the middle, poking out of a sea of soft sediments, is pretty remarkable," he said. "And the fact it's pretty deep and probably never been fished, or never been touched since it was created (48 million years ago) is pretty amazing. "It might support some interesting beasts." The volcano's location within the protected zone means that animals are protected from trawling and other destructive human activities.

It also means that the volcano is probably home to some unique creatures with areas nearby already returning samples of strange animals, such as the "brittle star"- a starfish-like creature. Dr Currie is hopeful about what the scientists will discover. "There's just some weird and wonderful biodiversity," he said.

# Concrete Testing Executive Sentenced to Up to 21 Years

(source DNAbeta info Manhattan local news)

A judge sentenced the former president of a prominent concrete testing company in New York City to 7 to 21 years in prison on Wednesday, saying he had betrayed the public and his profession with years of lying and fakery.

V. Reddy Kancharla, was president of Testwell Laboratories, which for years was the leading concrete testing company in the city.

Testwell was often hired to measure and analyze the strength of concrete poured at major private and public development projects, including Yankee Stadium in the Bronx and the Second Avenue subway in Manhattan.

In October 2008, prosecutors accused Mr. Kancharla and others at the company of faking concrete mix and strength tests, filing false invoices and creating bogus steel inspection reports, among other offenses.

In February, a State Supreme Court jury in Manhattan convicted Mr. Kancharla of 15 counts of falsifying business records and related charges.

Justice Edward J. McLaughlin, said Mr. Kancharla, a licensed professional engineer, had traded on his good name to deceive others.

He said he hoped Mr. Kancharla's sentence would be a deterrent to the "variety of schemes and conniving" that he said characterized the building business.

"The construction industry in New York City over the decades has been rife with corruption," Justice McLaughlin said. "The people of New York City are the ultimate victims of the pilfering."

The Testwell case began in 2008 when monitors uncovered irregularities at the new Yankee Stadium and the Freedom Tower, now called 1 World Trade Center. Investigators said Testwell had cut corners and conducted evaluations improperly, causing the city to plan additional tests at more than 100 projects.

"This defendant, Reddy Kancharla, created a lucrative and thriving business model based on the routine, almost automated, creation of fraudulent test reports," the court was told

A moment later, Mr. Kancharla rose to address the court. He wore a brace on his neck, a remnant of one of two recent suicide attempts.

## **AGTA AGM 2010**

The AGM will be held on the 6th of December at 7 pm at the same venue as last year, the Stones Corner Hotel.

The format is an informal gathering, this is followed by dinner and then the AGM which includes the elections.

Last years event was very well attended and everyone had a great time catching up with friends and colleagues.

All positions on the committee will be declared vacant and elections will be held for the committee positions for the following year.

2011 is a very important and hopefully significant year, particularly with the CMT conference to kick start the year

If you wish to nominate for a committee position you are encouraged to do so.

If you can not make the AGM you may wish to nominate a proxy.

This can be done by contacting the secretary.

The AGM is a very important event for the Association, it is an opportunity for you to have an input into the direction that the organisation takes.



# AGTA Code of Conduct, a big question?

Do we self regulate or do we get regulated?

Earlier this year the QBSA put in place specific regulations with regard to fill on a building site.

This required that "additional" compaction testing be conducted on the fill, almost dismissing Level 1 monitoring as engineering component of foundation design.

This then asked the question, if we need additional compaction testing, why not just pier through the fill, and if this is the case why do we need level 1 monitoring any way?

Prior to the regulation an AGTA committee member (the editor) suggested a code of practice should be looked at, some work has been carried out to this effect. The code of practice would detail the work to be carried out on a project, i.e. following the standards, regulations or industry best practice.

AGTA members would under take to follow these codes of practice thereby showing their clients and potential clients their commitment to quality work.

The suggested initial areas of the codes are

- Site Investigation
- Level 1 Monitoring

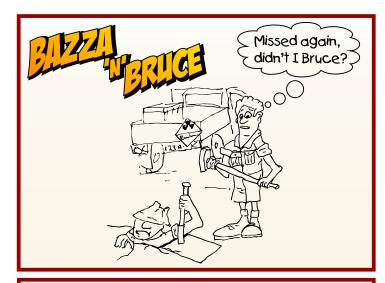
#### The questions are

- Do we need or want a code of practice?
  - What are the legal implications?
- If we want a code of practice we will need a process address

those who do not follow it?

Does there need to be a forum on these codes of practice, and if so what form?

Any comments or suggestions please contact the editor.



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- ALKALI
- ASPHALT ATTERBERGS
- BASALT BRASS
- BRISBANE CALCIUM
- CHALK CHEMICALS
- CITIGATE COMPACTION
- DIAMONDS DIORITE
- DRILLRIG
- FISHING
- HARDHAT KINDORPL
- METAMORPHIC MINERALS
- MOHR NUCLEAR
- RUTILE
- SEBEL TECHNICAL TRAINING
- **VOLCANOE**

# **AGTA...** The Journey

The foundation for AGTA started some years before it was eventually formed.

#### 1980s

In the late 1980s there was an industry focus group (including Gerry Fitzgerald, Amanda McFarlane, Peter Davis, Paul Fraser, and others).

They would meet at NATA headquarters on a regular basis; many in this group would form the nucleus of the initial AGTA committee.

Almost at about the same time there was an attempt to form an industry association.

It had an initial meeting at the Institution of Engineers Building, it formed a steering committee, which then reported back, the conclusion presented was that there was no need for an industry association (how wrong they were), this embryonic attempt was to

#### 1990s

The industry focus group decided that an industry association focusing on Construction Material Testing was desirable. To set up an association not only takes an incredible amount of dedication by the forming committee, but also work in the shape of constitutions and other legal matters.

The association, Association of Geotechnical Testing Authorities (AGTA) was formed in approximately 1997.



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