

**THE ROLE OF PEER REVIEW**

**David Cook, Indemnity & General Insurance  
G. Alan Pickens, Tonkin & Taylor Ltd  
Grant MacDonald, Phillips Fox**

*An Auckland branch meeting of the NZ Geomechanics Society was held on 23 August 1995 to discuss issues relating to peer review. The above panel members gave presentations from different perspectives. The following notes are repeated here for the benefit of readers. However, these notes were prepared for oral presentation and comments made are sometimes candid. Opinions expressed here should not be construed as legal or professional advice.*

**PEER REVIEW - AN INSURER'S PERSPECTIVE**

**David Cook - Claims Assistant  
Indemnity & General Insurance Company**

I'm on this panel tonight as a member of the claims committee of the Indemnity Insurance Company which provides professional indemnity insurances to consulting engineers. The review of one engineer's work by another plays a significant part in our work.

I bring you the rather sobering information that in our group of insured firms, over the past year, of 100 claims notifications, 46 were related to unsatisfactory performance of soils or foundations. Shaken down to potential losses, the percentage reduces to 43%, still a significant proportion that will be of concern to this audience tonight. From the point of view of an insurance company, the more effective pre-construction reviews of any type can be, the better.

Broadly speaking, "reviews" will fall into 4 main categories:

1. General in-house reviews or over-views by a colleague or superior.
2. Client required review - usually carried out by an independent person engaged either by your firm or directly by your client.
3. Review as part of statutory process for consent.
4. Disaster or failure review.

**Category 1: General In-house Reviews** - I don't have a lot to say about category 1 reviews except that the more of it, the better! A most important area to address in these reviews is communications - make sure that all the necessary information is obtained and made available to all those people who need to take account of it.

Also make sure that opinions expressed are carefully qualified as to their application. I must say geotechnical engineers are usually very good at this- I've seen a couple of foundations investigation reports that have been so severely qualified as to provide virtually no usable information.

**Category 2: Client Required reviews** - I believe this area will be addressed in detail by Alan Pickens. The only case I can recall was where a review panel of wise men had been appointed in a major civil engineering project where problems developed due to an inadequacy in detailed design. In that case, the review panel were not able to detect and prevent the problem, nor was the clients' liability reduced by their involvement.

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**Category 3: Statutory Reviews or Checking for Consent** - Many local authorities engage independent consultants to review designs submitted to them for consent or approval. The Association of Consulting Engineers NZ (ACENZ) has a practice note, dating back to 1987 advising its members on how to handle this role. As a reviewer:

1. You should accept such engagements on the understanding that you will be permitted full rights of discussion with the designer.
2. You should notify the designer of your engagement.
3. You should exercise discretion, tact and restraint in your reviewing role and carry out the review in an atmosphere of mutual confidence and understanding.
4. In this type of review, it is not your role to comment on the choice of design, only on the designs' validity and compliance with the bylaws and codes that it is required to meet.
5. You should always consider the consequences of your decisions as that may affect the risks and costs to the owner and the public, the reputation and livelihood of the designer and equal importantly the good standing of the profession itself. If you feel the designer's work is seriously at fault, you should make every effort to resolve the matter with the designer and obtain another independent opinion if you think it necessary.

It is most important from a liability point of view (for the reviewer) to resist the temptation to become involved in modifications to the design. The reviewer's job is to point out areas of the design you believe need to be addressed and invite the designer to resolve those areas to your satisfaction.

**Category 4: Disaster or Failure Review** - The last group of review is that occasioned by failure and the need to discover why? and whose fault? ACENZ again has a set of recommendations for members to follow in this role and the principles apply to all experts engaged in this way. As a reviewer:

1. You should accept engagement on the basis that you reserve the right to discuss the design and its philosophy with the designer, should she or he wish to do so.
2. You should again notify the designer of your appointment and make every effort to obtain a full knowledge of the facts before expressing an opinion.
3. Avoid as far as possible the intrusion of your own concepts and assess the adequacy of the design to meet normally accepted standards - don't, with the benefit of hindsight, overstate these standards.

You should not treat your engagement as an opportunity to carry out a marketing exercise for your own or your firm's skills. Remember that the designer will have had cost budgets to work within and that while bullet-proof designs may seem to have been the best option after a failure, their adoption from the outset could well have put the economics of the project in jeopardy. Hopefully, the designer will have given the owner or developer the option of electing for a more conservative but expensive design and they have elected to take the risk. Discussion with the designer may reveal that such options have slipped the owner's or developer's mind.

**SPECIMEN LETTER ACKNOWLEDGING ENGAGEMENT**

Suem & Suem  
Barristers & Solicitors  
Prettywell Anywhere

Sirs

Re: BROKEN DOWN JOB, ROTTEN ROW

This will serve to acknowledge your instruction to make a detailed inspection of the above project and to report to your client on the engineering defects complained about.

We understand that the project was carried out by Careless Contracting Ltd to an engineering design prepared by Knowall & Partners for which a consent was issued by Notown City Council.

Your instructions seek an opinion on the cause of certain problems which will require a review of the design as well as the construction methods.

In order to reach such an opinion, it will be necessary for us to review both the design calculations and the design philosophy. While the former may be available at the council offices, it is unlikely that all the information will be contained in council records.

We propose therefore to approach Knowall & Partners and, if they agree, to review this material with them.

We are sure you will appreciate that misleading conclusions can arise out of incomplete information, as much of the source material is available only to the original designer. Experience has demonstrated that there are considerable advantages to your client in respect to both cost and time if we are able to review this material with Knowall & Partners.

Yours faithfully  
GOOD GUY & PARTNERS

I hope you will always remember the saying "there but for the grace of God go I" and that any unrealistically high standards you profess to be the norm, may one day be the precedent by which your own work is judged.

Avoid ever giving an opinion as to **negligence** even though your client or his lawyer may press you for it. This is an area for the courts to decide and such allegations made by a reviewing engineer are often difficult to retract.

I have a couple of specimen letters which illustrate the points of establishing your rights to discuss the issue with the designer and the avoidance of an opinion on negligence.

**SPECIMEN LETTER TO COMMISSIONING SOLICITOR ON  
QUESTIONS OF LIABILITY**

Suem & Suem  
Barristers & Solicitors  
HERE, THERE AND EVERYWHERE

Sirs

Re: BROKEN DOWN JOB, ROTTEN ROW

We acknowledge your letter raising further questions arising from our report on the above project.

We are pleased to answer these with the exception of question 13 in which you ask us to give our opinion on whether Knowall & Partners were negligent in this matter.

We regret that we are unable to give such an opinion, which we understand is properly a question of law. All we are prepared to comment on is the general practice of the profession in dealing with similar matters.

However, we enclose our replies to your other questions and trust that these have further clarified the position.

Yours faithfully  
GOOD GUY & PARTNERS

*Note: These notes have been prepared for the purposes of discussion at the Auckland Branch of the NZ Geomechanics Society on 23 August 1995. While opinions expressed are intended to outline aspects of peer review, they cannot be construed as professional or legal advice.*

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**PEER REVIEW - THE ROLE OF REVIEWER**

G. Alan Pickens

Geotechnical Engineer, Tonkin & Taylor Ltd

**1. INTRODUCTION**

My contribution to this discussion is about the role of the Reviewer, which involves issues such as defining the review criteria, procedures and both operational and professional relationships. David, in introducing our topic, has already canvassed most of the key issues. I may repeat some aspects he has covered but hopefully will help emphasise key aspects. David has outlined the three main types of review which we encounter and a fourth which is internal review. I will discuss the review role issues under the following main headings, which are not perfect headings by any means:

- what do we *mean* by peer review and what are the key Reviewer attributes required
- defining the *scope of reviews* and being clear about what is excluded from the review
- *managing relationships* between the parties for effective and professionally appropriate reviews
- important aspects in *getting the best out of reviews*
- who should *appoint* the Reviewer, what should the *reporting procedures* be and the importance of *defining the role contractually*

It is not easy to separate out various issues associated with this topic and you will find overlap between the headings. Grant (MacDonald) will continue the overlap into the professional liability pitfalls and hopefully make it clear to us how to avoid them. The fact that we have not found any readily accessible material on the topic which we could plagiarise, has not made it any easier for us.

**2. MEANING OF PEER REVIEW AND ATTRIBUTES**

Setting aside royal connotations, "peer" essentially means of equal rank or standing, and in the technical context, usually implies equal experience as well as equal technical ability. However, in practice the term seems to be used a bit loosely. For example:

- in a building consent peer review, the Reviewer is probably acceptable if she or he is technically qualified to carry out principle and numerical checks or reviews and the issue of years of experience compared with the Designer is not considered particularly relevant - if this is the case, is "peer review" an appropriate term or should "design check" be used?

- in a larger civil project design involving geological and hydraulic issues or a geotechnical review situation and where decisions often require judgement and application of engineering art, the experience of the Reviewer becomes much more relevant and an appropriate level of seniority and relevant prior experience is or should be sought - if the project involves high hazard or financial consequences (e.g. Clyde Power Project) then the review requirements may move to a higher plane with the skill and/or experience sought of the Reviewer, being above that of the design team
- in post-problem/failure reviews, again it is usual to involve a very high level of skill and experience both to analyse the situation and ensure corrective measures are sound

I have used "Reviewer" in the singular but as we are all aware, for more complex situations involving different facets of engineering, a team of Reviewers is common. I have not yet found a good definition for peer review and because of the varying situations which occur, maybe it is too difficult to develop a suitable definition. Grant (MacDonald) may like to comment on whether case law has a clear interpretation of peer review. Perhaps that is the reason why the Client on a dam job I am involved with has preferred the term "Design Reviewer" for the review team members, instead of "Peer Reviewer". Please note throughout that we are discussing review by persons external to the Designer. The Designer may well also have a level of internal peer review.

What does the audience think about the terminology and the need for clarity?

Clearly technical skills and experience are fundamental attributes for a Reviewer. As will become clearer in following discussion, often it is also very important that the Reviewer has good communication skills, and can operate with sensitivity to the Designer's feelings and situation. Even in a litigious situation after a problem has developed, someone acting as a post-facto Reviewer may do harm to the cause of justice, and his or her client, by not communicating thoroughly and failing to uncover or appreciate all of the environment with which the Designer was working.

### **3. SCOPE OF REVIEWS**

We have recognised three broad types of review. Within each type of review and each individual project, it is critical to define the scope of the review and in particular, in my opinion, which is excluded from the review. This is fundamental to defining relationships and the brief or service contract, with all its liability implications.

As I do not get involved in designs for building structures, I am not familiar with the detail of peer reviews accepted by Councils, for example Auckland City Council. However, my limited enquiries indicate that Auckland City again by way of example generally does its own reviews but will accept external review drawn from a list of approved reviewers.

Where something has gone wrong, the Client may terminate the original Designer's service and the review, except from the perspective of finding out what went wrong for litigation purposes, is no longer a review but becomes a new design brief. However, irrespective of whether litigation may eventuate, the Reviewer frequently undertakes assessments and provides opinions, but design of corrective action is left with the original Designer. It is vitally important to define the extent of the review service, how opinions as to corrective action are to be translated into resolutions accepted by all parties involved, and where responsibilities for various decisions and actions lie.

There are administrative advantages in the Designer organising and administering review and this kind of arrangement is more likely to avoid conflict. However, the Client has to be satisfied about the whole procedure and the Designer and Reviewer have to exercise the highest professional standards. Situations arise where other parties may insist on the review team being appointed by the Client : e.g., project financiers. In my opinion, appointment by the Designer to a brief agreed and accepted by Client is preferable, but the Designer should have a hand in the brief in any case.

While close interaction is necessary between the Designer and Reviewer, and the Client may or may not wish to be involved in review meetings, there must be a final report (or reports on stages) by the Reviewer to the Client, which as a minimum summarises the review process and confirms that the review brief has been completed.

As far as the Reviewer contract is concerned, whether it be effectively as subconsultant to the Designer or directly with the Client, we have traversed the fundamentals of the contract in earlier discussion. Grant (MacDonald) will have a lot more to say on this issue. We must remember that in most cases, the Reviewer is expected to fulfil the review role as a subsidiary activity compared with the main design role and with considerably less input than that of the Designer. The practicality and equity of this situation needs to be recognised and a fundamental point in my opinion is that the Reviewer should not be expected to carry liability disproportionate to the level of input. I suggest that the contract for reviewer services should address the following fundamentals:

- what the review does cover
- what the review excludes or inherent limitations
- how the review is to be conducted
- how the Reviewer's liability is limited fairly, relative to the above

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**PEER REVIEW - LEGAL CONSIDERATIONS**

**Grant MacDonald  
Barrister, Phillips Fox**

**PRELIMINARY COMMENTS**

Traditionally the law requires you to act with skill and care when carrying out your services. The standard of care required is the standard of a competent geotechnical engineer. In theory you do not guarantee your advice - only that you will give it carefully. While traditionally the obligation is only to act with reasonable skill and care, in practice the Courts often apply the standard in such a way that the obligation amounts to something like a guarantee that your work is correct. This being the case we can say that the standard of skill and care required of geotechnical engineers (and other professionals) is very high. The rationale for the courts' approach for applying the standard in a way that is akin to a guarantee while paying lip service to the traditional standard, is insurance. Most geotechnical engineers are insured. Clients are not normally insured against the loss and therefore are less financially able to bear the loss. So the Court finds the insured professional fully liable for the damage. The rationale for doing so has been as described by the Courts as "the loss adjustment mechanism".

As there is a discrepancy between the traditional standard and the application of that standard the Courts are open to the criticism of intellectual dishonesty and susceptible to reversal by the Privy Council - if a case goes that far.

Traditionally engineers could limit their liability to their clients by agreement (disclaimer/ limitation clauses), However, the application of recent legislation prevents that in certain situations. An analysis of the application of those Acts (the Fair Trading Act, The Consumers Guarantee Act) is beyond the scope of this paper but their effects on contracting out of liability needs to be borne in mind (refer notes in Appendix A).

**PEER REVIEW**

If you are considering undertaking a peer review the most important legal matters you need to address are your contract with the client, and your report.

**THE CONTRACT**

There should be a written contract between yourself and the client. The contract should address the matters discussed below:

**Who is Engaging You and Who can Rely on the Review**

The person who is engaging you will normally be paying your fee. This person will be entitled to rely on your review. But other persons involved in the project may also rely on your review. As it is foreseeable they may do so, you owe them a duty of care in tort to carry out your review with reasonable skill and care. In order to minimise your risk in this regard you should state in the contract who can rely on the review.

**The Scope of your Review**

The purpose and scope of the review should be written out in full. The explanation should state exactly what you will be doing, and also what you will not be doing.

### **What is Your Liability**

The contract should record the agreement you have reached with the client concerning:

- Whether you are disclaiming all liability in contract and tort
- Whether you are limiting your liability in contract and tort to a certain sum of money
- Whether you are contracting out of the Consumers Guarantees Act 1993

The clauses recording this agreement should be written by your lawyer.

### **THE REPORT**

The report, like the contract, should:

- State who is entitled to rely on the report
- State what is the scope of the report
- State what is the purpose of the report
- Limit or disclaim your liability in contract and tort, and contract out of liability under the Consumer Guarantees Act 1993

In addition, the report should include appropriate qualifying statements. A qualifying statement is a statement which sets out and explains the limitations which attach to the report. Qualifying statements should be used in the following circumstances:

- When you have not done something you said in the contract you would do, or you have not done something you ought to have done
- When matters require further investigation or information
- When you are relying on information provided by another person
- When you are making assumptions

### **COUNCIL ENGAGEMENT**

The legal considerations which are relevant to carrying out a peer review are also relevant when you are engaged by a Council to review the work of another engineer. That is, you should have a written contract with the Council and that contract should address the matters discussed in the section under Peer Review. Likewise, your report to Council should also address the matters discussed under the section on Peer Review.

As mentioned before, if you are only engaged to check whether another engineer's design or calculations are correct you should not go beyond this and suggest or recommend remedies or solutions. If you do so, and your suggestions or recommendations are wrong, then you increase your potential exposure.

### **EXPERT IN COURT PROCEEDINGS**

When you are engaged to act as an expert witness in a Court proceeding, your involvement commonly includes advising and providing a report to your client's lawyers on whether the engineer has acted in accordance with the usual standards. Your advice and report will form an important part in the lawyers' and client's decision whether to settle the claim, and if so at what amount, or whether to proceed to trial. If a trial does eventuate then you will provide evidence in Court. That usually involves the lawyers first writing down your evidence (called a Brief of Evidence). You will read the brief in Court. Then you will be cross-examined by the other party's lawyers on what you have said, and re-examined by your client's lawyer.

#### **Approach When engaged as Expert in Court Proceedings**

When acting as an expert in Court proceedings you should:

- Act in an independent and unbiased manner. (While you are engaged by one side to act as their expert, do not act as their advocate as this discredits your testimony)
- Be circumspect about using the benefit of hindsight
- Be factual, and able to justify your conclusions and options

*Note: These notes have been prepared for the purposes of discussion at the Auckland Branch meeting of the NZ Geomechanics Society on 23 August 1995. While opinions expressed here are intended to outline aspects of Peer Review, they cannot be construed as legal or professional advice. For advice on specific issues or cases, the reader should consult a lawyer.*

### **APPENDIX A: RECENT LEGISLATION**

#### **Fair Trading Act 1986**

This Act prohibits you engaging in conduct which misleads or deceives, or may mislead or deceive. The conduct may be something you wrote, said or did, or something you omitted to write, say or do.

Both your client and third persons may bring a claim against you for a breach of the Act.

You cannot limit or disclaim liability under the Act. If you attempt to do so you may be in breach of the Act and liable for up to \$30,000 in the case of an individual, and up to \$100,000 in the case of a company.

#### **Consumer Guarantees Act 1993**

This Act only came into effect on 1 April 1994.

The Act applies when the service being supplied is ordinarily acquired for personal, domestic or household use or consumption.

Most notably, when the Act applies, the following two guarantees apply to your services as an expert:

- A guarantee that the service will be carried out with reasonable skill and care
- A guarantee that service, and any product resulting from it, will be fit for the purpose and able to achieve the particular result the client makes known to you (called "the particular purpose guarantee")

There is, however, a proviso to the particular purpose guarantee. This is, it will not apply when the circumstances show that the client does not rely on your skill or judgement or it was unreasonable for the client to rely on your skill or judgement.

You cannot limit or disclaim liability under the Act unless the service is being acquired for a business purpose. Contracting out involves agreeing with the client in writing that the Act does not apply to your services.

*These presentations were followed by a session of questions and answers. Space does not allow for full presentation of this session and we prefer that the reader send in a letter to the editors to discuss these topics further in the next issue of NZ Geomechanics News.*

*As chance would have the Australian Geomechanics Society has recently published some guidelines for their geotechnical members reviewing the work of other engineers (and engineering geologists) for the purposes of litigation. These guidelines are reproduced in the following pages - Ed.*

# *Guidelines for Members Reviewing the Work of Other Engineers for the Purposes of Litigation*

*Endorsed by the National Committee of the Australian Geomechanics Society  
25 September 1987*

## **PREAMBLE**

Engineers<sup>1</sup> are frequently asked to review the work of other engineers for the purpose of litigation in cases of suspected shortcomings in the design and construction of a geotechnical project. Clause 1 of the Code of Ethics (IEAust 1981) implies that engineers should make their services available to the community to examine the work of another engineer. Hence the concept of "closing ranks" to protect the interests of fellow engineers is unethical.

In cases of litigation the Code of Ethics has been interpreted (ACEA 1985) so that an engineer may give an opinion on the technical cause of the problem and to offer a view on whether the design and/or construction were consistent with the state of the art of the profession at the time. The work of the engineer must be strictly factual and opinions must be given in an objective manner.

The National Committee of the Australian Geomechanics Society has been made aware of instances<sup>2</sup> where it may be argued that the engineer, in carrying out the role of the expert witness, has not followed this interpretation of the Code of Ethics. In cases of litigation against engineers, this can only mean that the Geomechanics Profession as a whole will suffer. It can also lead to increasing litigation and result in further problems in obtaining professional indemnity cover for our activities.

As a result, at its meeting on 27th September 1987, the National Committee of the Australian Geomechanics Society has endorsed the following for its members.

## **ROLE OF THE EXPERT WITNESS**

When asked to be an expert witness, the engineer should confine his/her evidence to the following:

1. The use of the word engineer is to include engineering geologists.
2. The National Committee is aware of at least nine cases.

- the presentation of facts;
- giving an opinion on the technical cause of the problem;
- describing in detail the methodology that enabled the cause of the problem to be determined;
- recommending or specifying remedial measures if so requested;
- giving an opinion as to whether a departure from the state of the art of the profession at the time of the design and construction actually led to the problem;
- giving an opinion as to whether an appropriately qualified person might have acted similarly at the time, in the matter relevant to the cause of the problem.

Engineers as expert witnesses in litigation cases should resist going beyond this role. The following Guidelines have been formulated to minimise the future occurrence of the problems experienced in some recent litigation cases. These Guidelines are to be read with the Code of Ethics (IEAust 1981).

## **GUIDELINES**

### **GUIDELINE 1:**

Before accepting a commission as an expert witness in a case against another engineer, the member should insist on the right to discuss the matter with the other engineer involved.

Previous Guidelines (eg. ACEA 1986) have recommended that no contact be made between opposing experts, with the only contact being written notification to the subject engineer that the engineer's work is being examined (Fargher 1979, page 15). The legal profession

# *Guidelines for Members Reviewing the Work of Other Engineers for the Purposes of Litigation*

has supported this lack of contact because it preserves 'legal professional privilege'.

However, recent recommendations (eg. IPENZ 1984, page 61, CEASA 1986, Section 15.05, Note 2a) have argued that consultation between the engineers involved increases the chance of a realistic settlement without a Court hearing. Even if the case proceeds to Court, this consultation will very likely substantially reduce the length of the hearing (Herriott 1987).

## **GUIDELINE 2:**

An engineer acting as an expert witness must always remain objective and impartial

As outlined in Reference 3, Note 10, the prime objective of an expert witness is to assist the Court in arriving at a just decision. In the giving of evidence the engineer may be required to give opinions on matters whether or not they are favourable to the engineer's client (Antill 1976). It is very easy for an engineer to become involved in the Court case and to support a satisfactory outcome for his/her client. However, the engineer should guard against becoming an advocate for the client, and should remain dispassionate as to the outcome of the court case.

## **GUIDELINE 3:**

The engineer should avoid being judgemental, and should not offer an opinion as to negligence.

It is the role of the Court to provide the judgement on these issues.

The National Committee of the Australian Geomechanics Society is aware of recent instances where at least five engineers have given similar judgemental type statements. Comments have been similar to "...the backfill has settled because of negligent supervision of the earthworks at the time of construction".

As outlined in Ref.8 and Ref.5 page 62, negligence is a legal concept, not an engineering term and a finding as to negligence is a matter for the Court and the Court only.

The engineer should thus try to avoid giving either praise or blame.

## **GUIDELINE 4:**

An engineer should refrain from using law reports as truths.

The National Committee of the Australian Geomechanics Society is aware of several instances where engineers have quoted a Court judgement, or Act of Parliament to emphasise a particular point. For example, comments have been similar to "...based on the Smith vs. Jones case, it could be argued that the engineer should have carried out an inspection of the earthworks".

Court judgements are based on the evidence presented in the particular case and although they set legal precedence, legal interpretation is an evolutionary process. Engineers should avoid the interpretation of legal matter unless they have specific competence (i.e. legal training and experience in law).

## **GUIDELINE 5:**

The engineer should only give an opinion on the departure from acceptable practice when it is relevant to the cause of the particular problem.

There have been at least two instances where engineers have given opinions on matters in other engineer's reports or designs, that were not relevant to the particular cause of the problem. These resulted in engineers defending unnecessary claims.

Different engineers may adopt different approaches to solve a geotechnical problem. For example, the number of boreholes to carry out the site investigation will differ from engineer to engineer. When commenting on this, another engineer must recognise that many different approaches are acceptable and only give an opinion when the specific approach adopted was relevant to the actual problem forming the subject of the litigation.

This is particularly important in a field such as

# *Guidelines for Members Reviewing the Work of Other Engineers for the Purposes of Litigation*

geomechanics, because it deals with earth materials which are inherently variable and extremely complex, so that much of our work is still based on "engineering judgement". The expert witness should avoid the intrusion of personal preferences but limit his/ her evidence to the technical cause of the actual failure.

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*Editors' Note: This article is republished in accordance with the direction of the National Committee of the AGS to remind members of their duties and responsibilities. Together with the Codes of Ethics of IEAust and AustMM, it will be republished every two years.*