THE ADMISSIBILITY AND MANAGEMENT
OF EXPERT EVIDENCE IN ARBITRATIONS AND IN COURT:
WHO REALLY DECIDES THE TECHNICAL ISSUES?

by

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• The use of the Protocols to regulate experts' reports
• Early objections to experts’ reports
• The experts’ dialogue
• Concurrent expert evidence
• Focused objections to evidence.

10. A discussion of the perennial problem of documentary and oral hearsay evidence.

11. Appendices, the various protocols; examples of experts' dialogue agendas, some standard and bespoke contract provisions.

THE BASIS FOR IT ALL: FACT VERSUS OPINION EVIDENCE

In 1621 Lord Chief Justice Coke ruled firmly that a witness could not give evidence of his mere opinion. His evidence was to be confined to the facts as he saw, experienced or heard them. At the same time the courts were developing the modern dichotomy, by formulating a separate yet co-extensive rule to do with the admissibility of expert evidence. For example in 1554 in Buckley v. Rice Thomas, Saunders J said:

“If matters arise in our laws which concern other sciences and faculties we commonly call for the aid of that science or faculty which it concerns, which is an honourable and commendable thing for thereby it appears that we do not despise all other sciences but our own but we approve of them and encourage them.”

Who decides?

Two important decisions provide the foundations for the principle which animates the paper. Binnie J in the Supreme Court of Canada expressed the essence of the matter and described the purpose of expert evidence as:

“to assist the trier of fact by providing special knowledge that the ordinary person would not know. Its purpose is not to substitute the expert for the trier of fact. What is asked of the trier of fact is an informed judgment, not an act of faith.” [emphasis added]

The purpose of the paper is to discover the proper pathway to such an informed judgment and to ensure that the pathway is followed.

In an earlier Scottish case Lord President Cooper said that:

“Expert witnesses, however skilled or eminent, can give no more than evidence. They cannot usurp the functions of the jury or the judge sitting as a jury, any more than a technical assessor can substitute his advice for the judgment of the Court ... Their duty is to furnish the judge as jury with the necessary scientific criteria for testing the accuracy of their conclusions, so as to enable the judge or jury to form
their own independent judgment by the application of their criteria to the facts proved in evidence. The scientific opinion evidence, if intelligible, convincing and tested, becomes a factor (an often important factor) for consideration along with the whole of the evidence in the case, but, the decision is for the judge or jury. In particular the bare ipse dixit of a scientist, however eminent, upon the issue in controversy, will normally carry little weight, for it cannot be tested by cross-examination nor independently appraised, and the parties have invoked the decision of a judicial tribunal and not an oracular pronouncement by an expert”.

The opinion evidence rule was in turn accompanied by one of limitation, for the admission of expert evidence was once restricted by the common knowledge rule, which established that if the subject matter of the evidence did not range beyond what was the capacity of a lay person to decide then it would not be an appropriate subject for expert evidence. The rule has been abolished in many jurisdictions.

A fourth and seldom noticed rule sat at the intersection of the first three. An expert is entitled to give evidence that evidence of facts given by a lay witness is inherently unbelievable or improbable because it contradicts the laws of science or nature.6

Justice Learned Hand’s Paradox

Almost 100 years ago in his prescient article in the Harvard Law Review7, Justice Learned Hand presented an apparent paradox. It was a simple puzzle about expert evidence – if, because the court lacked the expert or scientific knowledge required to determine an issue in the cause, the court was given such expert or scientific evidence, then how in the initial absence of such scientific expertise could the court itself then proceed to evaluate and assess the scientific evidence which had been presented to it?

The thesis of the paper is that the paradox may be resolved by following the protocols discussed below. Confidence may be reposed in the decision of the court or tribunal upon expert matters if the following conditions are satisfied:

(i) The admission of expert evidence from a witness who is skilled by education training or experience in the particular field or discipline (the specialized knowledge rule).

(ii) The opinion expressed by the person in proven possession of such specialized knowledge must be wholly or substantially based upon that specialized knowledge as applied to clearly stated facts or assumptions (the basis rule).

(iii) The evidence clearly sets out the reasons which have led the expert to his conclusions in relation to those stated facts or assumptions (the reasons rule).

(iv) The evidence has been tested by means of a comparison with other expert evidence, cross-examination, discussion in conclave, concurrent evidence and analysed in the competing submissions of the parties.

6 See the CJC Protocol in England and Wales which states that: “Where there are material facts in dispute experts should express separate opinions on each hypothesis brought forward. They should not express a view in favour of one or other disputed versions of the facts unless, as a result of particular expertise and experience, they consider one set of facts as being improbable or less probable, in which case they may express that view, and should give reasons for holding it.” This direction is soundly supported by the decided cases.

(v) The court or tribunal has the benefit of what Dwyer\(^8\) calls the question whether “\textit{those (expert) evidential elements combine with other evidential elements}”.

These propositions provide a number of answers to the puzzle and they lie at the heart of tonight’s discussion and regulate the manner in which the subject should be addressed in practice.

\textbf{Intellectual Due Process}\(^9\)

I have hoped to show tonight that our subject has been of critical importance for what one writer in the field has neatly called ‘intellectual due process’, a useful expression to fasten attention upon the necessity for the tribunal to properly equip itself to truly decide the issues for itself upon the basis of admissible factual and expert evidence given only by those qualified to do so.

\textbf{A Caveat: “Wretches hang that jurymen may dine” (Pope)}

To some, the modern trends in court and in arbitration, which emphasise speed and a tight grip on the helm by the tribunal can be somewhat disturbing. It is of course wrong that forensic contest should be unduly rushed or more objectionably, pushed through by an overzealous tribunal. Having acknowledged the danger in such a tendency it is worth bearing in mind that the protocols discussed in the paper, one way or another involve the parties closely, and in various ways provide opportunities to the parties to refine and advance their cases and to include in the protocols, material designed to persuade the tribunal of the strengths of their respective cases.

\textbf{THE THESIS OF THE PAPER}

The paper is a thesis based upon the essential distinction between evidence of fact and opinion and acceptance of the a priori proposition that in the world of the courts and in arbitration, the same distinction is inherent in the common condition of admissibility which enables judges and arbitrators to admit evidence which they consider to be “\textit{relevant and material}”.\(^{10}\) Opinions given by witnesses who are not qualified to give such an opinion are as much the bane of arbitration as they are of court processes in all legal systems. The means by which such valueless opinions are screened out of arbitration is the same in principle as in the courts: the discrimen of “\textit{relevance and materiality}”. These rules are broken down and examined below. The only characteristics which ensure that an opinion is relevant and material, are the possession of relevant expertise and a reasoned opinion based upon that expertise.

From the first directions hearing and the formulation of the terms of reference, to the instructions given to the expert, to the second directions hearing which considers the experts reports and any possible objections thereto, to the directions given by the arbitrator to the experts to meet in conclave for the purpose of recording agreement and reasons for disagreement, to the hearing of evidence concurrently and to cross-examination, the making of proper findings and the proper expression of reasons by the arbitral tribunal, one simple brace of rules derived from first principles, will ensure that judges and arbitrators are able to design and conduct a “\textit{fair and efficient}” arbitration while at the same time honouring party autonomy and affording equality of treatment.


\(^{10}\) See for example the HKIAC Rules Article 14.1 “\textit{The arbitral tribunal shall adopt suitable procedures for the conduct of the arbitration, in order to avoid unnecessary delay or expenses, provided that such procedures ensure equal treatment of the parties and afford the parties a reasonable opportunity to be heard and present their case}.” See also HKIAC Rules Article 23.10 “\textit{The arbitral tribunal shall determine the admissibility, relevance, materiality and weight of any matter presented by a party, including as to whether or not to apply strict rules of evidence}.”
A habit of mind

What is intended to be set forth is a progressive revelation and exposition of the a priori and empirically derived principles which both establish and lie behind a scientific or technical rule, conclusion or opinion so that it may be opened up to the rational appreciation, evaluation and judgment of the non-technical mind and applied to the facts of any given case.

This process has a four-fold objective.

Firstly, it ensures that the parties, their lawyers and the members of any tribunal reviewing the original decision, benefit from a demystification and an explanation of the technical and scientific language used.

Secondly, to build confidence in the tribunal’s reasoning process by endeavouring to secure agreement to certain underlying technical facts and conclusions while at the same time defining and ascribing reasons for areas of disagreement.

Thirdly, to enable the tribunal, knowing and understanding the technical rule or theorem to then understand appreciate and evaluate the particular reasons why one or more experts have concluded that the rule does not apply in the instant case.

Fourthly, to ensure that the actual decision of the technical question is not made by default by the expert instead of the tribunal, because the correct evidentiary steps have not been followed. (I will come back to this.)

Fifthly, to avoid the “serious mistakes” referred to by Sir George Jessel MR in Thorne v. Worthing Skating Rink (1877) 6 Ch D 415 at 416-418 where the Master of the Rolls referred, in a patent case, to the plight of the court if it were not properly assisted by experts.

The real task should not be shirked

Adherence to this structure will enable the tribunal to avoid the flawed and intellectually unsound practice of simply “accepting the evidence of Professor X who was an impressive witness” without analyzing why that should be so. Scientific or professional reliability is not exclusively vouchsafed to the witness who, for reasons foreign to the inherent soundness of his or her evidence, is considered to have been able to present evidence to the tribunal in an impressive manner.11

That is not to say that the tribunal must set itself to become in short order, the equal of the expert in the very field in which he or she has spent a lifetime. That is and often cannot be, the object of the evidentiary approach advocated. For the tribunal to know, for example, that the experts on either side firmly agree with the relevant rule, equation, principle or theory and its antecedents and applications, is to enable the tribunal with some confidence to rely upon the rule and to decide whether it applies to the proven facts.

The key to the achievement of that objective, is to set up a largely independent process, external to but controlled by the tribunal, to provide an opportunity for the experts to reach agreed conclusions or in the absence of agreement to furnish a set of reasons which explain the areas of disagreement in a form readily understood by the Tribunal by the application of rational thought.

11 For example at Princeton University in 1996 a survey was conducted of jurors whose task was to assess complex scientific testimony in an experiment which consisted of them viewing four versions of a video of an imaginary civil case concerning product liability. The participants were shown a combination of either a highly qualified or an adequately qualified plaintiff’s expert. The defendant’s expert witness was in all cases highly qualified and gave complex testimony. What the researchers drew from the experiment was that when they were required to deal with complex evidence the jurors used the expert’s qualifications and curriculum vitae as the basis for their preference.
Armed with an understanding of those reasons, the tribunal may then come to a concluded view upon the technical questions which is genuinely its own. It may then decide to prefer the opinion of one expert over another, upon the basis of a real evaluation of the evidence rather than the form of the expert in the box.12

A preference for the personal qualities of one of the experts is not to be substituted for a thoroughgoing analysis of the evidence of both experts.

**The danger of “cognitive shortcuts”**3

If that truly cannot be achieved then one or other or both of two things have gone wrong. Either, the experts’ reports, the chosen vehicle for bringing forward the evidence to the Tribunal, are flawed in structure and content or the tribunal has not properly managed the expert evidence process.

The fundamental requirement that the tribunal itself must actually decide all issues is closely linked with the requirement that the tribunal give proper reasons. In the European Union for example, the duty to give reasons is regarded more and more as a necessary feature of a fair trial.14

The decision to embed these integers in each of the numerous stages of the forensic contest ensures that the tribunal and the parties remain properly focused only on what is relevant or material and that the proceedings are therefore conducted efficiently.

It is worth examining how the original precepts remain an essential part of each procedural step.

- **Procedural Order No. 1** Timetable for the pleadings, choice of law
- **Procedural Order No. 2** Terms of Reference
- **Procedural Order No. 3** Filing of factual evidence
- **Procedural Order No. 4** Experts’ Reports and Production of Documents
- **Procedural Order No. 5** Objections
- **Procedural Order No. 6** Conclave – meeting of experts
- **Procedural Order No. 7** Concurrent evidence

Note: this of course is an oversimplification and Procedural Orders are often far more numerous and extend over a greater range of subjects.

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12 The tribunal may accept part of the evidence of one expert one and part of the other. May reject both. Difficult to reject both if in agreement.
13 See Erica Beecher-Monas op cit.
14 See Dwyer op cit at p. 39.
PROPOSITIONAL ABSTRACT

Each of the following contentions are exclusively intended to foster develop and achieve the stated aims of arbitration

Stage 1 The first directions hearing. Setting a fair course for the journey. The indispensability of the experts’ protocol to any arbitration hearing expert evidence and particularly the example of construction and engineering arbitration. The setting (restatement) of the ethical and professional structure for the work of the expert.

Stage 2 The formal contents of the experts’ reports are determined by the first protocol and the following fundamental conditions of admissibility:

1. possession by the witness of specialized knowledge based upon the witness’ training, study or experience.
2. evidence of an opinion of that witness that is wholly or substantially based on that knowledge as applied to stated relevant facts or factual assumptions.
3. reasons for the conclusion reached.

Stage 3 The expert’s dialogue: expert evidence case management best practices by the arbitrator.

Stage 4 (A) Admissibility of Evidence: there are no imported technical rules of evidence. In the absence of the now rare omnibus importation of the technical rules of evidence from a State court structure, the arbitrator has a broad discretion, which like any discretion must be exercised rationally. Accordingly, there are principles: it is not a free for all.

(B) Hearsay: probing the heart of the problem. There is in truth, no requirement for any additional admissibility rules to supplement the overarching requirement of “relevance and materiality”. Hearsay evidence can be sensibly dealt with by the application of the relevant rule and material and by decreasing the weight to be attributable to hearsay evidence when all of the relevant circumstances are taken into account. Disciplined principle is the handmaiden of a procedurally consistent, focused, well run arbitration and should not be sacrificed in favour of a procedural Alsatia.

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A helpful list of matters to be discussed and resolved at the first directions hearing is set out in the paper presented by Professor Doug Jones.
ARBITRATION CLAUSE
THE FONS ET ORIGO

POINTS OF CLAIM, DEFENCE, REPLY.
(CROSS CLAIM IF ANY)

CROSS MATCHING THE PLEADINGS

TERMS OF REFERENCE
(E.G. I.C.C. ARTICLE 18)

EMERGENCE AND DEFINITION OF
FACTUAL ISSUES

EMERGENCE OF TECHNICAL ISSUES
FOR THE EXPERTS.
OPINION EVIDENCE

EMERGENCE OF LEGAL ISSUES
The Admissibility and Management of Expert Evidence in Arbitrations and in Court: Who Really Decides the Technical Issues?

GATEWAY
“RELEVANT AND MATERIAL”

RELEVANT FACTUAL EVIDENCE
i.e. Evidence that could rationally affect, directly or indirectly, the assessment of the probability of a fact in issue in the proceedings.16

OPINION EVIDENCE
Gateways and preconditions
See above.

OPINION EVIDENCE
(EXPERT EVIDENCE)
PATHWAY TO RESOLUTION

EXPERTS ‘CONCLAVE’ OR MEETINGS

HEARING & RESOLUTION OF OBJECTIONS TO EXPERT EVIDENCE

JOINT REPORT RECORDING
AGREEMENTS, DISAGREEMENTS
AND SHORT EXPLANATION FOR DISAGREEMENTS

Preparing the way for either:

CONCURRENT EXPERT EVIDENCE FORUM

TRADITIONAL CROSS-XAMINATION

OVERALL OBJECTIVE TO ENABLE TRIBUNAL TO DECIDE FOR ITSELF

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16This requires a minimal logical connection between the evidence and a fact in issue.
CONCLUSION

An examination of each of the steps implemented by the court or the arbitral tribunal reveals that a consistent approach, animated by key principles which have been identified at the beginning of the proceedings, then very outset, drives each stage of the process, so that at its end the tribunal of fact is properly equipped to decide technically or scientifically laced questions. Once that thematic approach is first implement its influence is continuous.

The ultimate purpose of any arbitration and the award in which it culminates is to enable enforcement domestically or internationally through the mechanism of the 1958 New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards.

These objectives establish a noumenon which must be satisfied. From this one can extract one overriding rule to be followed in the conduct of the arbitration, equality of treatment. Party autonomy and the powers given to arbitrators have the result that while the overall rule must be complied with, there is no prescription as to how it is to be satisfied. Hence an arbitration may be designed according to its inherent requirements and in order to be conducted “fairly and efficiently”.

See HKIAC Rules Article 14.1.
APPENDIX 1

A DIALOGUE OR CONCLAVE BETWEEN STRUCTURAL ENGINEERS

Suppose that the subject matter of the dispute between the owner and the contractor is a multi-storey concrete building. Radiating cracks have been observed in the concrete slabs in the area surrounding the base of the columns on at least two floors in the building. These cracks are at the location of the beam to column connection. The columns are concrete columns and the concrete slabs constituting the beams are say 500mm thick and have been reinforced by steel reinforcing rods. An engineer’s report concludes that the structure is liable to fail because in his opinion the nature and character of the radiating cracks at the beam to column connection indicates to him the real possibility of a catastrophic failure by punching shear at the column to beam connections. His stated concerns are increased by signs of evident deflection in the concrete beams. One employee in the building gave a graphic account of pencils rolling off his desk, an occurrence the reporting engineer attributes to deflections of the concrete beams.

The reporting engineer has documented the results of his physical inspection of a number of the beam to column connections and has observed certain factors which are recorded in his report. He has then expressed his opinion as to what these physical manifestations reveal as to the nature of the structure and its liability to fail as a consequence of punching shear.

The report also speaks of the way in which the reinforcing steel bars have been placed within the concrete slabs themselves. In particular the engineer’s report refers to suggested design and as-built deficiencies to the depth of placement of the reinforcing bars and whether or not the reinforcement is present in sufficient quantity and in the appropriate locations to provide the degree of strength anticipated and called up by the designing engineer.

The engineer’s report also deals with the loads imposed on each of the beams, the design loads and expresses a view as to the likelihood of failure of the column to beam connection at particular live loads.

The competing theory is one that acknowledges that the concrete beams were too slender either because they were designed that way or because of errors in construction and that such slenderness caused the slabs to deflect. In addition, it is suggested that some of the cracking may be attributed to the beam deflections and that remedial concrete topping to the beams would solve the problem of the deflecting beams.

This report advances the conclusion that the principal’s engineer’s contention that the building should remain untenanted until it is demolished, is unduly alarmist and should be rejected. The contractor’s expert’s report also concludes that the cracks which have been observed, are in the main, plastic shrinkage or curing cracks, which are not uncommon and should give no cause for concern.

From that time onwards the proceedings moved forward in the manner of a stately Saraband as each interested party from the building contractor, the leading engineers, the architects, the suppliers of the concrete and steel reinforcing, the approving authority all hastened to deny liability and point the finger of blame at each other. During the whole of this time the initial report of the respected engineer who had made the doomsday diagnosis hung like the proverbial sword of Damocles over the heads of all parties. With his death the report gained almost reverential respect.
While this phalanx of lawyers and consultants proceeded with their work, and reports were exchanged at leisurely intervals, no one was prepared to unconditionally certify the safety of the building for occupation: the stigma deepened and stuck: it was simply referred to as “that building in X street” yet everyone knew what was meant. The taxi drivers at the airport needed only to be asked to take the endless parade of consultants and lawyers to the Y Building, no street or number was necessary. It had become infamous and except for regular visits from men in suits, it remained empty.

At the same time the building was observed, measured, drilled, scraped and the key suspects in the movement caper were taped with tell-tales. Concrete slabs were viewed and scanned with the most modern instruments. Where was the reinforcing steel? At what depth were the rods set within the concrete slabs? Were the shear keys in place, were they properly designed? Was the reinforcing steel coverage complete through the slab? But most attention centred on the radial cracks in the slabs adjacent to the columns. No observer dared to stand on or too close to them. They were regarded with reptilian awe and respect. They were measured, photographed and sketched. The slabs were studied microscopically for signs of deflection. Were deflections in the slabs responsible for the cracking? Was the cracking simply shrinkage or some other kind of benign concrete cracking? Foundations were studied. Geotechnical studies were ransacked and scoured in a determined search for an alternative building which had exhibited signs of settlement cracking.

The scene would have done justice to a gloomy anxious gathering of courtiers, chamberlains, physicians Princes, Princesses and Cardinals at the death bed of a King Emperor.

Faced with an impasse the builder retained the services of three eminent structural engineers one from the antipodes, one from North America and one from London. Who better? After all they were the men who were telephoned immediately the Kobe earthquake struck in Japan.

A long lost underground river and its alluvial progeny began to figure in the case theory of some of the defendants. Could the foundations of the building have been undermined? The River Styx was more fondly regarded.

Provided with mountains of information ranging from the original design to all the as-built records, then the results of measurements observations and tests they separately then collectively expressed the view that the column-to-slab connections would not fail in normal service. The building would not fail progressively floor by floor in a mechanism described as “punching shear”, in which each column-to-slab connection would scrape off the columns like husks of corn, leaving the slabs unsupported. They would then progressively pancake upon the slab below until the multistory building became a ghastly pile of concrete and steel at ground level.

The three wise men also applied a generous factor of safety to their design and as built calculations. But nothing would convince the plaintiff. The building was doomed in the court of public opinion.

The contractor then obtained permission to roll the dice. After all no matter what any expert opined, the plaintiff was going to demolish the building and rebuild.
So what happened?

The defendant’s legal advisers obtained permission to test the concrete slabs to failure. One slab was progressively loaded hydraulically, while a table of props stood ready to support it if it failed in shear and slumped. As the load imposed steadily increased it passed through the design factor of safety and did not fail in shear until a much considerably greater load had been imposed upon it than was ever contemplated. A Pyrrhic victory? Yet the dream of every construction lawyer to see for himself what really would have happened, was realized. Terms not to be disclosed.

These facts enable a number of topics to be developed as a basis for dialogue between the experts.

A DIALOGUE BETWEEN STRUCTURAL STEEL EXPERTS

Exercise/Discussion

• How can the search for the causes of failure and the allocation of responsibility be assisted by a properly constructed dialogue between the experts?

• How can the subject matter be chosen and allocated between the experts from various disciplines as a prelude to discussion?

• What discrete questions can be developed to frame the discussions?

A COMMENTARY ON THE EXPERTS’ PROTOCOL

It is often said that the element which ensures the success of the experts’ dialogue procedure is the important matter of peer respect and its corollary, peer pressure. These two sentiments exert an important influence both in the dialogue and in the giving of concurrent expert evidence: the so called “hot tub”, an unhelpful if not silly expression. Where both experts are aware that each other’s opinions have been based upon theoretical, empirical and experimental bases which highlight each other’s shared experiences then there is a tendency for the experts to think along similar lines to a point, at least where those lines of thinking diverge, the points of divergence will also exhibit and depend upon features within common experience. It will often simply be a case whether or not those shared experiences are in fact productive of a particular rule or lead to a particular conclusion in the instance case. Whatever the ultimate result may be, the experts will nevertheless be speaking a common language while drawing upon a reasonably co-extensive experiential base and applying their educational, tertiary and professional aptitudes and education in a manner which owes much to their common background. The knack is for the arbitrator to give full and fair play to the capacity/potential of those forces to bring about agreement and a better understanding of the reasons for disagreement.

For example one expert will soon learn or sense that one of the reasons for a particular difference of opinion between him and the other expert is that one expert, let us suppose it is an engineering matter, has taken a conservative design approach and so, the discussion may then turn to the reasons for that approach being adopted, what is the experiential or perceived reason for that conservative approach and why is the factor of safety in the relevant design code not enough? Why did the beam to column connection fail? At what load would the concrete beam fail and so on?
Similarly, engineering and construction programmers may differ as to the appropriate manner in which the particular structure or project should be constructed. There are two distinct and important elements lying behind such differences. Firstly there is the legitimate difference of opinion which is open upon the question how a structure should best be constructed. For example some programmers favour a particular type of form of scaffolding, other programmers might have had happy experiences with different forms of scaffolding. Secondly, subject to the constraints of the contract, it is up to the contractor to devise the best way for him to complete the structure in accordance with his contractual obligations. If there are differences of opinion of either kind then it is important for the arbitrator to have laid before him as early as possible a description of the differences so that he can see for himself into which category they fall.

Modern works programmes enable the reader to interrogate the programme in order to analyse the twin capabilities of manpower and equipment and to work out precisely what resource levels lie behind the programming assumptions made in the programme itself.
APPENDIX 2

DIRECTIONS TO BE IMPLEMENTED AFTER THE EXCHANGE OF EXPERTS’ REPORTS IN ACCORDANCE WITH EARLIER DIRECTIONS

1. Slab Deflections

Direct that the structural engineers for all parties are to meet without legal advisers and client representatives for the following purposes namely:

(i) to seek agreement as to the extent of any deflections to any of the concrete slabs referred to in the schedule hereto;

(ii) to seek agreement upon the question whether such deflections are increasing and if so at what rate;

(iii) to seek agreement upon appropriate means by which to measure any continuing deflections.

Where there is agreement upon any of the above subjects then such agreement should be recorded in a joint report signed by all experts in agreement. It is envisaged that such joint report will be admitted into evidence.

Where there is disagreement by any consultant with any of the conclusions in the joint report then the reasons for such disagreement shall be set out in a separate report signed by the engineer or engineers concerned.

2. Causes of Slab Deflections

Direct that having considered each of the other reports the structural engineers meet to discuss whether there are any grounds for agreement in respect of any of the reasoning or conclusions in the respective reports.

In particular, before discussing in detail the reasoning and conclusion in the various reports the experts should consider and discuss whether there is any agreement upon appropriate foundational material such as:

• Appropriate authoritative text books or other publications.

• The validity and application of particular rules, formulae and relationships.

Any agreement reached should be recorded in a joint report to be signed by the engineers concerned.

Any disagreement and the reasons therefore, should be set out in detail in a report to be signed by the engineers concerned.
3. **Slab Design**

Direct that having read and considered the reports of the other engineering experts that all the engineering experts meet discuss and consider what the appropriate design for the beams should be.

In particular and without limitation such discussion should consider:

(i) live loads

(ii) dead loads

(iii) wind loads

(iv) factors of safety.

If after discussion the experts agree upon matters relating to the subject of beam design then they are to prepare a joint report expressing such agreement and the agreed reasoning in support of such agreement.

In the case of any disagreement then the experts -

4. **As-Built Characteristics of the concrete slabs**

Direct that having read and considered the reports of each other expert, all engineering experts meet and discuss the as-built characteristics of the beams referred to in the schedule hereto and in particular, without limitation:

• characteristics and specifications of the concrete used.

• the nature and sufficiency of the formwork.

• the nature, sufficiency, location and extent of the steel reinforcing within each beam.

• the conditions, in which the concrete was mixed, transported, poured and cured.

• identify documents and evidence relied upon.

5. **Departures or Variations between As-Built and Design**

Experts are directed to meet and discuss whether there have been found to be any departures, or

• what they are

• evidence to demonstrate.

If agree, then joint report.

If any disagreement then report setting out reasons.
6. **Design of the column to slab connections**

   See texts.

7. **Radial cracking**

   Experts are to meet for the purposes of agreeing:

   (i) shape location pattern and mapping

   (ii) photographs

   (iii) specify and agree different types of cracking in concrete and the distinguishing features of each for example shrinkage, plastic and so on.

8. **Remedial work**

   Specify any suggested remedial work including a Work Method Statement. Each of the other experts to comment upon each other’s proposal.
APPENDIX 3

A GOLDMINING EXAMPLE:

The role of the Court and the arbitral tribunal in defining at least some of the questions to be dealt with by the experts

A large gold mining operation in the South-East Asian region of the southern hemisphere was to be upgraded. As part of the upgrade a Semi Autogenous Mill (a SAG mill, so called) was designed, built, supplied, installed and commissioned by a well known international manufacturer of such equipment. When the mill was operating and was fed with ore from the mine, heavy steel balls within the mill pounded the ore, enabling the gold residue to be separated from it.

The company operating the mine on behalf of the owners was responsible for procuring and installing the motors for the SAG mill, the civil works and foundations, the mill feed system and the mill water supply system. The owners and the owner’s agent operated the SAG mill and all upstream and downstream equipment throughout commissioning. The owners, their agents and engineers were present during all aspects of the commissioning process. The owner’s agents were described as the Construction Manager and the Commissioning Manager, respectively.

Commissioning Chronology

(a) 23 August 2005 No load test run commenced and successfully completed by 1 a.m. on 24 August 1995.8 Fuller Daily Diary Report dated 23 August 2005.

(b) 27-28 August 2005 300 TPH test run performed. FFE visually checked and verified the alignment periodically and monitored the thickness and temperature of the oil film between the bearings and trunnions and other characteristics of the operation of the mill through a DCS.9 Fuller Daily Diary Report dated 28 August 2005.

(c) 28 August 2005 During the evening, the 300 TPH test run was interrupted because of problems that the supplier of the SAG mill motors (Siemens) was having in programming the motors (Siemens contracted directly with KCGMES for the supply and commissioning of the motors).

(d) 29 August 2005 FFE field personnel measured the clearances between the SAG mill bearings and trunnions and confirmed that the alignment was within tolerances. The mill was fully assembled and had a charge of material at the time of the measurements.10 Fuller Daily Diary Report dated 29 August 2005.

(e) 30 August 2005 Operation of the SAG mill resumed. FFE recorded in its Daily Diary Report that all temperatures and clearances (i.e., alignment) were “good”.11 Fuller Daily Diary Report dated 30 August 2005.

(f) 31 August 2005 Final commissioning test (600 TPH test) began. FFE continued to check and verify satisfactory alignment.

---

(g) 1 September 2005  600 TPH test completed.

(h) 3 September 2005  FFE sent a fax to Minproc requesting concurrence that practical completion was achieved as of 10 a.m. on 2 September 1995.

(i) 4 September 2005  KCGM and KCGMES concurred through Minproc’s fax to FFF that practical completion was achieved on 2 September 1995. A punch list was attached to the fax.

OPERATION

Following practical completion, KCGM took control of the mill, completed demolition of the pre-existing facilities, and placed the mill into commercial production using its own personnel. At KCGM’s insistence, Minproc demobilised from the site on 16 September 2005.

Operational Chronology:

(a) 6 September 2005  Mill shut down due to motor synchronization problem.

(b) 12 September 2005  Mill operated at 1160 TPH (note capacity per Specification was 950 TPH).

(c) 13-16 September 2005  Mill operated up to 1000 TPH, sometimes for entire shifts. No record of any issues or concerns regarding the thickness or temperature of the oil film between the mill and bearings or other operating indicia of alignment.

(d) 16 September-14 October 2005  Mill operated without bearing problems and at times in excess of the as-designed operating weight of the mill charge load.

(e) 15 October 2005  DCS data showed erratic operation between 4.00 am and 12.00 noon. Oil thickness spiked up and then dropped to what appeared to be a level where there may have been metal-to-metal contact between the mill and bearings (called “wiping”). Mill weight not increasing at the time. DCS displayed weight at below 450 mt.\textsuperscript{22}

(f) 16 October 2005  Thunderstorm at plant. Mill down five times on vibrations and six times on low pinion oil flow to NDE east side.

FAILURE

16-17 October 2005. DCS data for the period of 10 p.m. to 1 a.m. show:

(a)  DCS showed mill charge weight rapidly increased to over 600 mt.

(b)  Feed rate was relatively flat and well below peak feed rates earlier in the month.

(c)  Trunnion oil temperature started to increase.

\textsuperscript{22}DCS Chart 585/800 for the period 20:00 10.15 to 02:00 10.16.
(d) High temperature alarm sounded just after midnight. Minutes later, the high temperature shutdown set point was reached. The mill shut down. KCGM operators did not inspect the mill or the bearing or investigate or determine the cause of the automatic shutdown.

(e) Operators restarted the mill 3 times over the next hour, twice within a span of 30 minutes, each resulting in a further automatic shutdown.

(f) After the third automatic shutdown, KCGM’s operators finally investigated the mill and found that the mill had wiped the discharge end bearing causing extensive damage to the bearing.

**POST FAILURE**

(a) 17 October 2005 A KCGM maintenance superintendent went to the mill after starting his 3 p.m. shift and observed the feed chute was retracted 5 to 6 metres from the mill feed end and that there was a bobcat excavator inside the mill, emptying the charge out through the feed end. He observed that the charge appeared to rise up at least the centre line of the trunnion. [Note: This was indicative of a severely overloaded condition. Normal operating mill charge load should have been substantially below the centre line at about 28% mill volume].

Memo from R Crew of KCGM reported “*The thickness of the oil film is measured continuously and on the discharge end, the film thickness reduced from 60% (normal level) to around 20%. This occurred 2 1/2 hours before the failure as a transient event and then maintained a thickness of around 20% until the failure ...*”

The memo also reported that the mill “*was loaded with a charge that was higher than normal but was a weight that has been used since commissioning*”. There was no report or record of a bearing failure at those weights prior to 16-17 October.

(b) 18 October 2005 FFE’s Jan Majewski and Brian Field attended the site. Majewski took photographs showing the mill was loaded above the feed port and rear opening of the trammel (i.e., above the centre line of the mill).

(c) 2 November 2005 Contrary to standard industry practice, KCGM failed to purchase spare bearings prior to commissioning. As a result, the discharge end bearing had to be removed and sent off site for re-machining. Upon return to the site, it was swapped with the feed end bearing. KCGM had difficulty aligning the mill and installed shims in the spherical seat between socket base at the discharge end to obtain correct alignment. (Note: Shims were not needed or installed during the original alignment of the mill at the time of erection). KCGM purchased new bearings.

(d) July 2006 KCGM replaced both original bearings with the ones that were purchased in 1995. Change-out originally planned for September but moved forward to July when it was noted that mill lift had deteriorated and shims on discharge bearing had moved. Significantly the bearing change out was concurrent with other maintenance works.
DIRECTION

Direct that the parties’ experts are to meet and discuss the following questions:

1. Describe the mechanisms of failure of the bearings.

2. Was the failure caused by the misalignment of bearing and trunnion that existed at the time of erection?

3. Were customary checks made to verify alignment?

4. Was correct alignment achieved with no charge and before liners and gear?

5. Was the alignment verified within tolerances specified after liners, gear and with charge load?

6. Were the bearings correctly aligned at 2 September 2005?

7. Were proximity probes necessary to align the bearings?

8. Was the bearing assembly able to self-align under changing load conditions?

9. If the mill was not capable of self-alignment, should it have failed under lower load conditions than at the failure load?

10. Was the mill overloaded at failure:

   (a) per design operating load of 28% volume with 10% balls?

   (b) per design structural load of 35% volume with 15% balls?

11. Did KCGM’s mill operating activities cause or at least substantially contribute to the failure?

12. Did KCGM’s mill operating activities contribute to or cause the bearing damage?

13. Did manufacturing tolerances of the trunnion contribute to or cause the failure?
## RESPONDENT’S OBJECTIONS TO REPORT OF LONGSTREET
15 MARCH 2011

<table>
<thead>
<tr>
<th>Section</th>
<th>Part to which objection taken</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole of Affidavit</td>
<td></td>
<td>Relevance – does not provide a basis for the opinions expressed in the Report or establish that the expert has ‘specialised knowledge’ on which those opinions are substantially based.</td>
</tr>
<tr>
<td>Paragraphs</td>
<td>Whole</td>
<td>Relevance – documents referred to in paragraphs 3-16 of the Report do not provide a basis for the opinions expressed in paragraph 23.</td>
</tr>
<tr>
<td>Paragraphs</td>
<td>The first two sentences</td>
<td>Not substantially based on specialised knowledge – witness has no banking experience outside Hong Kong.</td>
</tr>
<tr>
<td>Paragraphs</td>
<td>Second sentence</td>
<td>Witness not qualified to give evidence on content or effect of Swiss law.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not substantially based on specialized knowledge – witness has no banking experience outside Hong Kong.</td>
</tr>
<tr>
<td>Paragraphs</td>
<td>Whole</td>
<td>Witness not qualified to give evidence on content or effect of Swiss law or Swiss banking practice.</td>
</tr>
<tr>
<td>Paragraphs</td>
<td>Whole</td>
<td>Relevance – witness’ training and experience does not provide a basis for the opinions expressed in paragraph of the Report or establish that the expert has ‘specialised knowledge’ on which those opinions are substantially based.</td>
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<tr>
<td></td>
<td></td>
<td>Relevance – FATF ‘Recommendations’ do not provide a basis for the opinions expressed in paragraph 23 of the Martin Report.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conclusion – asserts rather than describes experience in client identification and verification.</td>
</tr>
</tbody>
</table>
APPENDIX 5

Experts’ reports

(1) An expert’s report must (in the body of the report or in an annexure to it) include the following:

(a) the expert’s qualifications as an expert on the issue the subject of the report;

(b) the facts, and assumptions of fact, on which the opinions in the report are based (a letter of instructions may be annexed);

(c) the expert’s reasons for each opinion expressed;

(d) if applicable, that a particular issue falls outside the expert’s field of expertise;

(e) any literature or other materials utilized in support of the opinions;

(f) any examinations, tests or other investigations on which the expert has relied, including details of the qualifications of the person who carried them out; and

(g) in the case of a report that is lengthy or complex, a brief summary of the report (to be located at the beginning of the report).

(2) If an expert witness who prepares an expert’s report believes that it may be incomplete or inaccurate without some qualification, the qualification must be stated in the report.

(3) If an expert witness considers that his or her opinion is not a concluded opinion because of insufficient research or insufficient data or for any other reason, this must be stated when the opinion is expressed.

(4) If an expert witness changes his or her opinion on a material matter after providing an expert’s report to the party engaging him or her (or that party’s legal representative), the expert witness must forthwith provide the engaging party (or that party’s legal representative) with a supplementary report to that effect containing such of the information referred to in subclause (1) as is appropriate.

Experts’ conference

(1) Without limiting clause 3, an expert witness must abide by any direction of the court:

(a) to confer with any other expert witness, or

(b) to endeavour to reach agreement on any matters in issue, or

(c) to prepare a joint report, specifying matters agreed and matters not agreed and reasons for any disagreement, or

(d) to base any joint report on specified facts or assumptions of fact.

(2) An expert witness must exercise his or her independent, professional judgment in relation to such a conference and joint report, and must not act on any instruction or request to withhold or avoid agreement.
## APPENDIX 6

### AN EXPERTS’ DIALOGUE

<table>
<thead>
<tr>
<th>Conference</th>
<th>Participants</th>
<th>Terms of reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Messrs Lee and McClellan</td>
<td>In relation to each of the periods listed below,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. <strong>Identify</strong> to each other Key Assumptions each relied on by each expert respectively which influenced:</td>
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<tr>
<td></td>
<td></td>
<td>(a) the chosen methodology employed by that expert; and</td>
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<tr>
<td></td>
<td></td>
<td>(b) the determination by that expert of which activity was, at any one time, controlling the progress of the works (i.e. the critical path of the works).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. <strong>Identify</strong> together or to each other which of those Key Assumptions is common to both experts and in respect of which periods. Explain why, despite those common assumptions, their methodology is different or the one cannot adopt the methodology of the other.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. <strong>Identify</strong> together or to each other which of the Key Assumptions, not being common, dictate the methodology chosen by each in respect of each period listed; alternatively, if they cannot agree, the respects in which they differ, and why.</td>
</tr>
<tr>
<td>2.</td>
<td>Messrs. Magruder and Grant</td>
<td>1. <strong>Identify</strong>:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(a) all issues on which the experts substantially agree;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(b) all issues of substantial disagreement;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(c) in respect of any area of disagreement, a short statement by each expert of the reasons for such disagreement.</td>
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<tr>
<td></td>
<td></td>
<td>2. If the areas of disagreement are based on or affected by different factual assumptions made by the experts, <strong>identify</strong>:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(a) those different assumptions made by each expert respectively; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(b) whether if each were to apply the factual assumptions of the other whether they would agree on the conclusion, or if they would still disagree, why.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. How EOTS calculated which method and why.</td>
</tr>
</tbody>
</table>
APPENDIX 7

EXPERTS

[r 23.01] appointment of arbitration expert

(1) A party may apply to the arbitrator for an order:

(a) that an expert be appointed (a Court expert) to inquire into and report on any question or on any facts relevant to any question arising in a proceeding;

(b) fixing the expert’s remuneration, including the cost of preparing the expert’s report;

(c) for the attendance before the arbitration; and

(d) terminating the liability to pay the remuneration.

The arbitrator may give instructions relating to the inquiry and report including the carrying out of an experiment or test.

The arbitrator may make an order of his/her own motion – see rule 1.40.

(1) If the arbitrator makes an order under paragraph (1)(b), the expert’s remuneration is payable jointly and severally by the parties.

[r 23.02] Arbitration expert’s report

23.02 (1) The arbitration expert must provide the report to the arbitrator within the time fixed by the arbitrator.

(2) The arbitration expert’s report must:

(a) be signed by the expert;

(b) contain particulars of the training, study or experience by which the arbitration expert has acquired specialised knowledge;

(c) identify the questions that the expert was asked to address;

(d) set out separately each of the factual findings or assumptions on which the Court expert’s opinion is based;

(e) set out separately from the factual findings or assumptions each of the expert’s opinions; and

(f) set out the reasons for those opinions.
[r 23.03] Court expert’s report – use at trial

23.03  (1) A report that complies with the above requirements will be admissible at the hearing as the evidence of the expert.

(2) A party may apply to the Arbitration for an order to cross-examine an arbitration expert before or at trial.

Other expert’s reports on the question

23.04 A party who has delivered to another party interested in the question a copy of another expert’s report that complies with the above provisions may apply to the arbitrator for leave to adduce the evidence of the other expert on the question.

Note: The question is referred to in r 23.02

Rules 23.05-23.10 left blank

PARTIES’ EXPERT WITNESSES AND EXPERT REPORTS

Calling expert evidence at the hearing

23.11 A party may call an expert to give expert evidence at an arbitration only if the party has delivered an expert report that complies with the above requirements to all other parties

[r23.12] Provision of guidelines to an expert

23.12 If a party intends to retain an expert to give an expert report or to give expert evidence, the party must first give the expert a copy of the Protocol dealing with guidelines for expert witnesses in proceedings in the arbitration.

Contents of an expert report

(1) An expert report must:

(a) be signed by the expert who prepared the report;

(b) contain an acknowledgement at the beginning of the report that the expert has read, understood and complied with the Protocol;

(c) contain particular of the training, study or experience by which the exams acquired specialized knowledge;

(d) identify the questions that the expert was asked to address;

(e) set out separately each of the factual findings or assumptions on which the expert’s opinion is based;
Evidence of experts

(1) If two or more parties to an arbitration intend to call experts to give opinion evidence about a similar question, any of those parties may apply to the arbitrator for one or more of the following orders:

(a) that the experts confer, either before or after writing their expert reports;

(b) that the experts produce to the arbitration a document identifying where the expert opinions agree or differ;

(c) that the expert’s evidence in chief be limited to the contents of the expert’s expert report;

(d) that all factual evidence relevant to any expert’s opinions be adduced before the expert is called to give evidence;

(e) that on the completion of the factual evidence mentioned in paragraph (d), each expert swear an affidavit stating:

   (i) whether the expert adheres to the previously expressed opinion; or

   (ii) if the expert holds a different opinion;

   (A) the opinion; and

   (B) the factual evidence on which the opinion is based.

(f) that the experts give evidence one after another;

(g) that each expert be sworn at the same time and that the cross-examination and re-examination be conducted by putting to each expert in turn each question relevant to one subject or issue at a time, until the cross-examination or re-examination is completed;

(h) that each expert gives an opinion about the other expert’s opinion;

(i) that the experts be cross-examined and re-examined in any particular manner or sequence.

(2) Provide an expert’s report for use as evidence in proceedings or proposed proceedings, or to give opinion evidence in proceedings or proposed proceedings.
General duty to the arbitration

(1) An expert witness has an overriding duty to assist the arbitration impartially on matters relevant to the expert witness’s area of expertise.

(2) An expert witness’s paramount duty is to the arbitration and not to any party to the proceedings (including the person retaining the expert witness).

(3) An expert witness is not an advocate for a party.

Duty to comply with the arbitrator’s directions

An expert witness must abide by any direction of the arbitrator.

Duty to work co-operatively with other expert witnesses

An expert witness, when complying with any direction of the arbitrator to confer with another expert witness or to prepare a parties’ expert’s report with another expert witness in relation to any issue:

a. must exercise his or her independent, professional judgment in relation to that issue,

b. must endeavour to reach agreement with the other expert witness on that issue, and

c. must not act on any instruction or request to withhold or avoid agreement with the other expert witness.

Expert’s reports

(1) an expert’s report must (in the body of the report or in an annexure to it) include the following:

a. the expert’s qualifications as an expert on the issue the subject of the report;

b. the facts, and assumptions of fact, on which the opinions in the report are based (a letter of instructions may be annexed);

c. the expert’s reasons for each opinion expressed;

d. if applicable, that a particular issue falls outside the expert’s field of expertise;

e. any literature or other materials utilized in support of the opinions;

f. any examinations, test or other investigations on which the expert has relied, including details of the qualifications of the person who carried them out; and

g. in the case of a report that is lengthy or complex, a brief summary of the report (to be located at the beginning of the report).

(2) If an expert witness who prepares an expert’s report believes that it may be incomplete or inaccurate without some qualification, the qualification must be stated in the report.
APPENDIX 8

Sir Laurence Street AC KCMG, former Chief Justice of New South Wales, has drawn and implemented appropriate directions, which Sir Laurence explains as follows:

Expert evidence in arbitrations and references

The conventional adversarial procedure is not always well suited for the elucidation of contested issues involving expert opinion. The constraints inherent in the conventional procedure of examination in chief, cross-examination and examination in reply do not always enable the expert to give of his/her best. This is frustrating for the expert as well as being less than satisfactory as an exercise in communicating the expert’s opinion to the tribunal.

With the dual object of cutting down the length of the conventional process and of enabling the conflicting expert opinions, as well as the reasons for that conflict to be more fully understood, I have formulated a standard interlocutory direction. In practice this is tabled for discussion between the representatives of the parties at an interlocutory hearing, preferably at an early stage of the preparation of the dispute for final hearing. A copy of this direction appears in next column [below].

There are two comments that I should make in relation to this standard direction:

(1) It is not a direction to be arbitrarily imposed in every case involving conflicting expert opinion. It provides, however, a basis for discussion at the interlocutory hearing as to how best to approach the question of expert evidence. Whether any direction at all, and if so what precise form it should take, will be a matter for consideration in relation to the particular dispute in hand.

(2) Paragraph (iii) involves a procedure not to be lightly entered into. In particular it is necessary to ensure that the representatives of the parties are comfortable with the procedure. Experience indicates that the latter portion of subparagraph (d) of paragraph (iii) is usually accepted as a sufficient reassurance in that regard. It is also necessary to preserve an ongoing flexibility in relation to following through this procedure at the hearing. Due to a variety of factors it may be perceived not to be working satisfactorily. In that event it may be appropriate to revert to the conventional process of examination in chief, cross-examination and examination in reply. I should add that, although this prospect is always a matter to keep in mind, I have not myself on any occasion encountered the need to revert to the conventional process.

STANDARD DIRECTION ON EXPERT EVIDENCE

Direct that:

i) On or before the parties exchange the names, fields of expertise and witness statements of the experts whose opinions will be advanced as evidence;

ii) (a) thereafter the parties arrange for their respective experts in each field of expertise to meet together as soon as reasonably practicable and on so many occasions as may be necessary to prepare the report referred to hereafter;
(b) it will be the purpose of the meeting and the responsibility of the experts to strive to reach agreement on as much as possible of the expert opinion relevant to the dispute;

(c) the meeting of experts is encouraged to call by unanimous agreement on the parties or either of them to obtain and provide any additional data or information the experts may need with a view to reaching agreement, a copy of any such call to be lodged by the claimant with the arbitrator/referee;

(d) either party shall be at liberty to apply for a direction that such call be complied with;

(e) the experts shall prepare a condensed joint report stating in the first part the matters upon which they have finally been able to reach agreement and stating in the second part the matters upon which they have not been able to reach agreement; the report shall be accompanied by annexures prepared by each expert stating in condensed form the opinion of the expert on each matter of disagreement including the reasons why the expert does not agree with the opinions of the other experts;

(f) the original report shall be sent to the claimant on or before who shall forthwith, lodge it with the arbitrator/referee and send a copy to each other party; and

(g) evidence may not be received from an expert who has without adequate reason not participated in such meeting and report.

iii) at the hearing

(a) as each field of expertise arises for consideration each expert in that field will verify by affirmation his/her witness statement, the joint report and his/her annexure to the joint report. After these documents have been admitted into evidence all the expert witnesses in that field shall participate in a continuation of their meeting at which they will discuss with each other the matters of disagreement;

(b) for the purposes of such discussion the experts will be seated facing each other at a table placed between the arbitrator’s/referee’s table and the bar table;

(c) the discussion will be chaired by the arbitrator/referee who will guide the discussion and will intervene with the object of the matters of disagreement being examined and analysed so as to enable the arbitrator/referee to reach a determination upon them; and

(d) the representatives of the parties will be at liberty with the permission of the arbitrator/referee to intervene in the discussion and, prior to the arbitrator/referee reaching a determination on any matters of disagreement, they will be permitted to question the experts and make submissions to the arbitrator/referee.
APPENDIX 9

DESIGN AND CONSTRUCT CONTRACT

35.5 Extension of Time for Practical Completion

(a) When it becomes evident to the Contractor that anything, including an act or omission of the Principal, Principal’s Representative or the Principal’s employees, consultants, other contractors or agents, may delay the work under the Contract, the Contractor shall promptly notify the Principal’s Representative in writing with details of the possible delay and the cause. Without limiting the generality of the above, the Contractor shall notify the Principal’s representative of the Contractor being delayed by any cause of delay for which the Principal is entitled to an extension of the time within which the Principal is obliged to perform its obligations relating to the commencement, progress or completion of any work under the RTA Development Agreement or the Council Master Deed within 7 days of the Contractor becoming aware of the occurrence of the cause of delay.

(b) If:

i) The Contractor is or will be delayed in reaching Practical Completion by a cause in respect of which the Contractor is entitled to claim an extension of time as provided in clause 35.6;

ii) The Contractor both

   (A) within seven (7) days after the commencement of the delay, gives the Principal’s representative a written claim for an extension of time for Practical Completion in accordance with this Clause 35.5 setting out the facts on which the claim is based together with sufficient information and supporting documents to enable a proper and full assessment by the Principal’s Representative; and

   (B) before fourteen (14) days after the delay ends, gives a notice of the number of days extension claimed in accordance with this Clause 35.5;

iii) the Contractor:

   (A) has complied with all reasonable instructions of the Principal’s Representative with respect to the cause of the delay;

   (B) has taken all proper and reasonable steps necessary and within its control both to preclude the occurrence of the cause of the delay or disruption and/or to avoid or minimize the consequences thereof and has demonstrated this to the satisfactory of the Principal’s representative; and
(C) has demonstrated to the satisfaction of the Principal’s Representative that the Contractor has been actually delayed in achieving Practical Completion of the Works (by the Date for Practical Completion where the delay occurs before the Date for Practical Completion) having regard to the critical path under the relevant Works Program, the Contractor shall be entitled to an extension of time for Practical Completion. If the contractor does not comply strictly with the notice and other requirements of this clause, the Contractor shall not be entitled to an extension of time for Practical Completion and the Date for Practical Completion will not be set at large even if the cause of the delay is an act of prevention.

35.6 Causes for which Extension of Time may be claimed

The causes for which the Contractor may claim an extension of time are:

(a) any of:

i) directions by Authorities;

ii) delays by Authorities; or

iii) other causes expressly stated in the Contract to be a cause for or justify a claim for an extension of time for Practical Completion;

where they:

iv) occur after the Date of Project Definition (except in the case of the cause referred to in clause 3.9(b))

v) occur on or before the Date for Practical Completion;

vi) are not caused or contributed to by the Contractor or any Subcontractor, and

vii) could not have been anticipated by a competent contractor prior to the Date of Project Definition; and

(b) events occurring at any time after the Date of Project Definition which are:

i) delays caused by

   (A) the Principal;

   (B) the Principal’s Representative;

   (C) the Principal’s employees or agents (other than Separate Contractors).
APPENDIX 10

Clause 17.2 Excusable Delays

(a) If the BOP Contractor is delayed in achieving a Key Milestone, Practical Completion of the Balance of Plant or any Stage (as the case may be) or Completion by:

i) Any act, omission or delay of the Owner (including any default by the Owner of its obligations under this Contract), the Project Lender, the Project Lender’s Engineer or any of their respective employees, agents, representatives, surveyors or contractors (but not including the Power Island Contractor).

   (A) Other than by reason of the proper exercise of their respective rights, duties and obligations in accordance with the terms of his Contract (including exercise of the right to have defective or non-conforming BOP Works corrected or re-executed; or

   (B) Unless it would not have occurred but for an act, omission or delay of the Power Island Contractor or any of its respective employees, agents, representatives, surveyors or contractors.

ii) Force Majeure;

iii) Subject to clause 18.3, a suspension under clause 18;

iv) A change which is the subject of a Change Order in accordance with clause 12 (other than a Change which is the subject of a Change Order in accordance with clause 12.5(d)) in respect of which the parties have agreed to extend the relevant Key Milestone Date, the relevant Guaranteed Practical Completion Date or the Date of Completion (as the case may be);

v) Change which is the subject of a Change Order in accordance with clause 12.5(d), is deemed under this Contract to be a Change or is determined under the dispute resolution provision in clause 34 to be a Change;

vi) A change in the BOP Works necessary to comply with a Change in Law;

vii) An event described in clause 38.4 of this Contract;

viii) Any arrangements made or directed by the Owner for dealing with, or removing Artefacts under clause 21.6=5(b)(ii)(b);

ix) Power Island Extension Event;

x) Any delay caused by the Power Island Contractor (including its subcontractors) including a breach of the Coordination Deed by the Power Island Contractor (which is not a Power Island Extension Event);
(b) The Extension of Time Claim must describe in reasonable detail the event causing the Excusable Delay, the effect of the event on the BOP Works the length of Excusable Delay (or likely length of the Excusable Delay) for which an extension of time is claimed and the measures taken or to be taken to minimize such Excusable Delay.

(c) In the event of a continuing cause of Excusable Delay of a particular nature, the BOP Contractor will be required to submit further Notices in writing together with further details on which further claim or claims are based at intervals or not more than twenty-one (21) Days until the BOP Contractor is no longer by the relevant cause of Excusable Delay.

(d) It is a condition precedent to any entitlement to an extension of time under this clause 17 that:
   
   i) the delay affects the critical path for the BOP Works; and
   
   ii) the BOP Contractor has strictly complied with all notice requirements in this clause 17.

Clause 17.4 Concurrent delays

(a) Notwithstanding anything else in this Contract, but subject to clause 17.4(b), where more than one event causes concurrent delays and the cause of at least one of those events, but not all of them, is not an Excusable Delay, then to the extent that the delays are concurrent, the BOP Contractor is not entitled to an extension of time to the relevant Milestone Date, the relevant Guaranteed Practical Completion Date or the Date for Completion (as the case may be).

(b) Clause 17.4(a) will not apply if the concurrent delay occurs after the relevant Guaranteed Practical Completion Date and the cause of the Excusable Delay is one or more of the events described in clauses 17.2(a)(i), 17.2(a)(iv) and 17.2(a)(v).

Clause 17.5 Assessment of an Extension of Time Claim

(a) If the BOP Contractor is entitled to an extension of time to (as the case may be):

   i) the relevant Key Milestone Date;

   ii) the relevant Guaranteed Practical Completion Date; or

   iii) the Date for Completion,

the Owner must, within 15 Business Days after receipt of the Extension of Time Claim, grant a reasonable extension of time having regard to the following:

iv) in determining the amount of the extension, the Owner must have regard to whether the BOP Contractor has used all reasonable endeavours and has acted diligently and in accordance with Good Design and Construction Practices to avoid or remove the circumstances constituting the Excusable Delay and to mitigate the effect of the Excusable Delay provided such an obligation shall not require the BOP Contractor to incur additional costs to make up the time lost;
v) the extension of time will be limited to the actual delay in achieving the relevant Key Milestone, Practical Completion or Completion (as the case may be), caused by the excusable Delay (without regard to whether the BOP Contractor can or cannot, in respect of each Unit, achieve the Key Milestone by the Key Milestone Date, Practical Completion by the Guaranteed Practical Completion Date or Completion by the Date for Completion);

vi) if the BOP Contractor is entitled to an extension of time in respect of a Change, the amount of time agreed by the Owner and the BOP Contractor in accordance with clause 12 or determined by an Expert as contemplated by clause 12.5(d);

vii) If the BOP Contractor is entitled to an extension of time in respect of a change in the BOP Works necessary to comply with a Change in Law, the amount of time agreed by the Owner and the BOP Contractor in accordance with clause 13 or determined by an Expert as contemplated by clause 13.5(d);

(b) A failure of the Owner to grant a reasonable extension of time or to grant an extension of time within 15 Business Days will not cause the relevant Key Milestone Date, the Guaranteed Practical Completion Date or the Date for Completion (as the case may be) to be set at large. However, if the Owner does not respond to an Extension of The Claim (either by approving or not approving the claim) within 15 Business Days, the BOP Contractor may refer the matter for dispute resolution in accordance with clause 34.

**Clause 17.6 Cessation of Excusable Delay**

The BOP Contractor will, as soon as practicable, given Notice to the Owner of the end of each Excusable Delay.
APPENDIX 11

Changes to time

The Contractor is responsible for managing progress to meet Contractual Completion Dates for Milestones (if any) and for the Works. These dates or times for Completion are initially given in the Contract Information, but may be adjusted under clause 41 (Site Conditions), 52 (Variations), 54 (Extensions of time) and 56 (Acceleration).

Clause 54 Extensions of time

Under the conditions set out in clause 54 the Principal will extend the time for Completion if there is nothing the Contractor can reasonably do to avert circumstances beyond its control to avoid delay. Refer also to clause 25 Time management and 69 Completion.

(a) If the Contractor is or will be delayed in reaching Completion, the Contractor will be entitled to an extension of time for Completion for the number of days assessed by the Principal, if the Contractor satisfies the Principal that all the following conditions apply:

(i) The cause of the delay was beyond the control of the Contractor (including an act, default or omission of the Principal, but not including a Variation instructed or agreed by the Principal or otherwise determined).

Extensions of time for Variation are dealt with under clause 52 and Schedule 5 (Agreement with Valuer or under clauses 72 to 75).

(ii) The Contractor has taken all reasonable steps to avoid and minimize the delay and its effects.

(iii) The Contractor has given to the Principal each of the notices required under clause 54.2 and 54.3.

(iv) The delay occurred to an activity or activities on a critical path of the then current Contract Program, as provided for in clause 25 and the Contractor has submitted this Contract Program with the notice required under clause 54.3.

(b) The Contractor must give the Principal notice of the delay, its cause, relevant facts and its expected impact, as soon as practicable after the delay commenced.

(c) Within 14 days of commencement of the delay, the Contractor must give the Principal notice of the extension of time claimed, together with the information required under clause 25.11 and other information sufficient for the Principal to assess the claim. If the delay continues for more than 14 days, the Contractor must give a further notice every 14 days thereafter, until after the delay ends, if the Contractor wishes of claim or further extension of time, together with further information of the kind required by this clause 54.3.

(d) An extension of time is only given for delays occurring on days on which the Contractor usually carries out work for the Contract.
(e) When concurrent events cause a Contractor, then to the extent that the events are concurrent, the Contractor will not be entitled to an extension of time for *Completion* notwithstanding that another cause of the delay is such that the Contractor would have had an entitlement to an extension of time.

(f) The Principal may in its absolute discretion for the benefit of the Principal extend the time for *Completion* at any time and for any reason, whether or not the Contractor has *Claimed* an extension of time. The Contractor is not entitled to an extension of time for *Completion* under this clause 54.6 unless the Principal exercises its discretion to extend the time for *Completion*.

(g) This clause 54 is subject to the provisions of any other clause in the Contract which entitles the Contractor to an extension of time for *Completion*.  

APPENDIX 12

Example clauses

1 Extension of time clause referring to critical path:

Final paragraph of Clause 35.5 of AS4300-1995:

Notwithstanding any other provision of the Contract, it is a condition precedent to the Contractor being entitled to an extension of time to the Date for Practical Completion that it:

(a) gives notice of its Claim for an extension of time strictly in accordance with this Clause s35.5 and Clause 46; and

(b) provides evidence that to the reasonable satisfaction of the Superintendent that:

(1) completion of the Works has actually been delayed;

(2) the delay to the Works is demonstrated by reference to the critical path shown on the Contractor’s Program current immediately prior to the date the cause of delay first arose; and

(3) the Contractor has consistently taken all reasonable steps to eliminate or minimize the delay, including rescheduling, reprogramming and expediting and adjusting the sequence of activities.

2 Program updating clause:

Clause 33.2 of AS4300-1995:

Clause 33.2 Contractor’s Program

For the purposes of Clause 33, a Contractor’s Program is a statement in writing showing:

(a) the major activities in the work under the Contract;

(b) the dates by which or the times within which key decisions are to be made or information provided; and

(c) the timeframes for completion for various stages or parts of the work under the Contract.

The Contractor shall not, without reasonable cause, depart from a Contractor’s Program.
The Contractor’s Program must:

(a) be consistent with the dates shown in the Contract for:

   (1) commencement of the Works and the Date for Practical Completion; and

   (2) the date for access to the Site; and

(b) show:

   (1) a duration and sequence of, and the interrelationships between, the planned events and activities which comprise the work under the Contract;

   (2) a project calendar clearly denoting which days are work days (allowing for restrictions on working time and contingencies) for which Contractor is responsible under the Contract;

   (3) the start and finish dates and the planned completion percentages for each week, Sunday to Sunday, and the working days allowed for in each week;

   (4) the numbers of man hours estimated and actual for each activity;

   (5) the sequence of activities which constitutes the critical path or paths for the Works;

   (6) order dates, supply lead time and Site delivery dates for all critical and major items, including those to be supplied by the Principal, as well as details of off-site manufacturing and fabrication activities;

   (7) the preparation of and approval process for all designs and documents required;

   (8) the time allowed for testing and commissioning of plant and equipment;

   (9) all deadlines for engagement of suppliers and subcontractors and for all procurement of items;

   (10) all deadlines for instructions for work or items the subject of Provisional Sums; and

   (11) anything else required by the Superintendent.
The Contractor must:

(a) update the Contractor’s Program on a monthly basis and at such other times as the Superintendent directs; and

(b) submit the updated Contractor’s Program to the Superintendent.

The Contractor’s Program, as updated, must:

(a) take account of delays in the progress of the Works and incorporate any changes in methods, times or sequences of activities;

(b) continue to show the original Contractor’s Program including the Date for Practical Completion as adjusted; and

(c) mark up the as-built status of the Works versus the updated Contractor’s Program.

The Contractor’s Program is for information only and does not constitute any waiver, extension or alteration of the Contractor’s obligation to achieve Practical Completion by the Date for Practical Completion or meet any other deadline under this Contract, which shall only be extended or altered where expressly provided under the Contract.

If the Superintendent does not agree with:

(a) the Contractor’s Program, it must inform the Contractor in writing of its reasons and within 5 days of such notice the Contractor must submit a further Contractor’s Program to the Superintendent; and

(b) a further Contractor’s Program, it may require the Contractor to further amend the Contractor’s Program.
APPENDIX 13

THE INSTITUTE OF ARBITRATORS & MEDIATORS AUSTRALIA

THE CONCLAVE OF EXPERT WITNESSES

J I Muirhead

1. The conclave is a process for adducing evidence from expert witnesses. It has been in use in arbitrations and Court references in New South Wales since about 1999. The popularity of the Conclave lies in the economy in time it offers in comparison with the traditional method used in the Courts under which each witness is cross examined and re-examined in turn, firstly with witnesses called by the plaintiffs and then later those called by the defendants.

2. The conclave replaces those processes; it tests the evidence in chief of the experts. If the tribunal has been wisely selected for its particular knowledge of the subject matter of the dispute the debate between experts can be focused on the real issues. The points of difference are defined if not narrowed. They may even be agreed.

3. The process is made very much easier where all the evidence in chief is in the form of sworn written statements submitted in advance, including replies. The Courts customarily make orders to this effect in New South Wales before referring matters out and arbitrators who are familiar with that system also frequently do so.

4. It is established law that the opinion evidence of an expert witness is only relevant and hence only admissible if it is formed in relation to the physical facts and contractual context of the actual case being tried. Furthermore expert witnesses should reveal the factual and intellectual basis to their opinions. (Makita (Australia) Pty Ltd v. Sprowles CA 40357).

5. For this reason it is at least desirable that in the hearing of evidence in a case the factual evidence should be taken first. Relevant and valuable opinions can only be arrived on the basis of the facts of the particular matter. Witnesses have to apply their general and advanced learning and experience in the subject matter of the issues to be determined in the case on the factual background and the fact established by the investigations in the particular case. Witnesses have to be instructed that it is inadequate and insufficient and simply not acceptable for them to state opinions or advance arguments on points in debate, on the basis of unstated assumptions, generalizations or on facts from some other case, even if similar.

6. In any event, at the outset of a conclave it is essential to establish in the minds of all witnesses taking part in the process the factual background to be adopted by them as the basis of all the opinions they express and the positions they adopt in debate. This may well differ from the background which they have been asked to assume by the party which has engaged their services and on which their written statements have been based.
7. This background of facts may be based on the statements of evidence from the witnesses to fact, on observations made at a view, on the evidence of geotechnical or metallurgical or other testing carried out at the site or on particular things or components that are the subject of the dispute. The tribunal may provide the expert witnesses with a statement of preliminary facts found by it.

8. For the reasons mentioned above, in the process of adducing evidence the conclave follows on after the statements of evidence submitted by the witnessed including all replies. Where there are differences between expert witnesses as to the facts, the tribunal should state the version of the facts, which seems to it to be preferred and to be used as the basis of the opinions stated and then debated in the conclave. If the tribunal is uncertain at that time as to the facts it is usual to ask experts to state their opinions on both bases and to decide the matter on both the facts adopted and the opinions stated.

9. It is preferable for Counsel for the parties to be present. They may then form a view as to whether they should seek to cross-examine any expert witness after the conclave, if it appears that doubts remain in the evidence or on the credibility of a witness.

10. Witnesses should be asked to make an affirmation or oath before the start of the conclave. They should be reminded of their obligations as expert witnesses and their responsibilities to the Arbitrator or the Court, of which a hearing of a Court reference is an extension. They must set aside any loyalty or sympathies or partisan feelings they may have for the party or the solicitors which engaged them.
APPENDIX 14

DEBEVOISE & PLIMPTON LLP

DEBEVOISE & PLIMPTON LLP PROTOCOL TO PROMOTE EFFICIENCY IN INTERNATIONAL ARBITRATION

International arbitration can provide significant advantages for parties to cross-border disputes, such as a neutral forum, input into selecting the decision-maker and nearly worldwide enforceability of awards. With seemingly greater frequency, however, parties to international arbitrations express concerns about increased length and cost of the arbitration process. These concerns have caused some parties to question the value of international arbitration as an efficient dispute resolution mechanism.

To respond to these concerns, the international arbitration practitioners at Debevoise & Plimpton LLP have developed this Protocol To Promote Efficiency in International Arbitration. This Protocol identifies specific procedures that generally make an arbitration more efficient. Through this Protocol, we express our commitment to explore with our clients how such procedures may be applied in each case. In each arbitration, parties, counsel and arbitrators should take maximum advantage of the flexibility inherent in international arbitration and should use only the procedures that are warranted for that particular case. The procedures set out here are therefore not meant to be inflexible rules. However, through their consideration, we believe that we can improve the arbitration process and thereby enable our clients to enjoy the advantages of international arbitration.

Formation of the Tribunal:

1. Before appointing arbitrators, we will ask them to confirm their availability for hearings on an efficient and reasonably expeditious schedule.

2. We will ask arbitrators for a commitment that the award will be issued within three months of the merits hearing or post-hearing briefs, if any.

3. We will work with our opposing counsel to appoint a sole arbitrator for smaller disputes or where issues do not need the analysis of three arbitrators.

Establishing the Case and the Procedure:

4. We will encourage consolidation and joinder of parties and disputes to avoid multiple proceedings when possible.

5. When possible, we will include a detailed statement of claim with the request for arbitration, so that briefing can proceed promptly once the procedural calendar is established.

6. We will propose and encourage the arbitral tribunal to adopt procedures that are appropriate for the particular case and that are designed to lead to an efficient resolution. We will use our experience in crafting such procedures and we will not simply adopt procedures that follow the format of prior cases.
7. We will request the arbitral tribunal to hold an early procedural conference, usually in-person, to establish procedures for the case. Although in-person meetings may cost more because of travel time and expense, they often ultimately save costs by allowing a more complete discussion of the procedural issues that may arise. We will seek to set the merits hearing date, as well as all other procedural deadlines, in this first procedural conference.

8. We will request our clients and opposing clients to attend any procedural meetings and hearings with the arbitral tribunal, so that they can have meaningful input on the procedures being adopted and consider what is best for the parties at that time.

9. When appropriate to the needs of the case, we will consider a fast track schedule with fixed deadlines.

10. We will explore whether bifurcation or a determination of preliminary issues may lead to a quicker and more efficient resolution.

**Evidence**

11. We will limit and focus requests for the production of documents. We believe that the standards set forth in the IBA Rules of Evidence generally provide an appropriate balance of interests.

12. We will work with opposing counsel to determine the most cost-effective means of dealing with electronic documents.

13. We will, when possible, make filings electronically and encourage paperless arbitrations. When cost-effective, we will use hyperlinks between documentary exhibits and their references in memoranda.

14. We will use written witness statements as direct testimony to focus the evidence and hearings.

15. We will avoid having multiple witnesses testify about the same facts.

16. We will encourage meetings of experts, either before or after their reports are drafted, to identify points of agreement and to narrow points of disagreement before the hearing.

17. We will generally brief legal issues and consider presenting experts on issues of law only when the tribunal and counsel are not qualified to act under that law.

18. We will divide the presentation of exhibits between core exhibits and supplementary exhibits that provide necessary support for the claim or defense but are unlikely to be referenced at a hearing.

**The Hearing**

19. We will consider the use of videoconferencing for testimony of witnesses who are located far from the hearing venue and whose testimony is expected to be less than two hours.

20. We will consider the use of a chess-clock process (fixed time limits) for hearings.
21. We will not automatically request post-hearing briefs, but we will consider in each case whether they would be helpful in promoting the efficient resolution of the issues. When post-hearing briefs are appropriate, we will ask the arbitral tribunal to identify the issues on which it may benefit from further exposition, and then seek to limit the briefing to such issues.

22. We will also consider alternative briefing formats, such as the use of detailed outlines rather than narrative briefs, to focus the issues and to make the briefs more useful to the tribunal.

**Settlement Consideration**

23. We will investigate routes to settlement, including by suggesting mediation, when appropriate, either at the outset of the case or after an exchange of submissions has further clarified the issues.

24. Where applicable rules or law permit, we will consider making a “without prejudice except as to costs” settlement offer at an early stage. This will not only protect our client’s costs position, but it may lead the opposing party to consider potential outcomes more seriously.

25. When appropriate, we will ask arbitrators to provide preliminary views that could facilitate settlement.
APPENDIX 15

TYPICAL TRIBUNAL ORDER FOR ‘HOT TUBBING’

The evidence of the parties’ expert witnesses of like discipline may be taken concurrently, using the procedure colloquially called ‘hot tubbing’. Subject to control and further directions from the tribunal, the procedure shall be as follows:

1. Each expert of like discipline will in turn confirm on oath the reports and joint statements that comprise their written evidence.

2. Each expert will then, in turn, identify those issues upon which agreement has not been reached between the experts and briefly explain the reasons for disagreement with the other expert. This may be either of the expert’s own volition or in answer to questions from counsel for the expert’s instructing party.

3. Those items or issues upon which the experts do not agree will then be subject to the following procedure, taking each item in turn. The order in which those items or issues are subject of this procedure is to be decided by the tribunal.

   (a) Each expert may then be cross-examined on an item or issue.

   (b) At the end of the cross-examination of an expert and/or both experts on an item or issue, members of the tribunal may question either or both experts on that item or issue.

   (c) The party cross-examining may then ask further questions arising out of the tribunal’s questions on that item or issue.

   (d) The party calling the expert may then re-examine that expert on that item or issue. Steps (a) to (d) shall then be repeated for each item or issue in turn.

4. Finally, the experts shall be asked to confirm if they wish to add anything to the evidence that they have given as a result of the procedures above. Anything added in answer to this question, shall be subject to stages 3 (a) to (d) above.
APPENDIX 16

SOME COMMENTS UPON THE “SACHS PROTOCOL” OF 2010

In 2010 Dr Klaus Sachs presented his thoughts on the subject of management of expert evidence, at the ICCA Annual Conference in Rio de Janeiro. The gist of the Sachs Protocol is that it begins with a firm preference for tribunal-appointed experts over party-appointed experts. The arbitrators select one expert from each list put forward by the opposing parties. The experts owe the same duties of independence and impartiality to the tribunal as always, however they are paid out of the deposits made by the parties into the arbitration, in the same way as the arbitrators themselves.

There then begins a process in which the experts work with the arbitrators not the parties. A cordon sanitaire is placed around the experts so that an individual expert could not communicate with the parties or others, however the expert team may, as a team, request information and assistance from the parties. Dr Sachs writes his prescription in this way:

“It is advisable that the terms of reference provide, inter alia, that (i) both experts retained must be impartial and independent; (ii) the task of the expert team is to assist the tribunal in deciding the issues in respect of which expert evidence is adduced; (iii) the expert team shall only address issues identified in its terms of reference; (iv) the expert team is expected to submit a joint report providing only the joint and mutual findings; (v) each member of the expert team shall refrain from communicating separately with the parties, the tribunal or any third party; (vi) the expert team shall prepare its report ‘from scratch’ and shall rely only on its own expertise; (vii) the expert team shall seek any input and assistance required from the parties; (viii) in preparation of the report, the expert team shall carefully examine all briefs and documents submitted by the parties and shall address the parties’ views and concerns; and (ix) the expert team shall be prepared to testify during an oral hearing and to respond to questions asked by the tribunal and the parties and their counsel and consultants.”

Discussion

• What if any problems can be envisaged for the practical implementation of the Sachs Protocol?
• Does it have any advantages over the nuanced use of protocols advocated in the paper?
• How would the Protocol really work in practice?
• How does it compare as a decision making model to the protocols discussed in the paper? Does the Sachs Protocol place more decision making capacity in the hands of the expert team at the expense of the tribunal?
• Does the Sachs Protocol create a parallel hidden chamber with a life of its own?
• Other comments.
Further reading: