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2013 – A year of growth across each of the Regions

Dave Webster – Chief Executive Officer, Driver Group plc

2013 was a great year for Driver Group as a whole. We achieved growth of 41% and increased our people count to around 350 as the planned development of the business was delivered in each of our five regions – Africa, Americas, Asia Pacific, Europe, and the Middle East.

Over the course of the year we have opened offices in Australia (Brisbane and Perth), Germany (Munich), Hong Kong, and Scotland (Aberdeen). We also acquired the minority interests in the Africa business which is now wholly owned by the Group. Alongside these office openings has been the recruitment of highly skilled, experienced, and motivated directors and senior staff who are adding greatly to the strength and depth that we have available.

Our network of offices and highly regarded staff now truly provide a global platform from which to serve our clients anywhere in the world.

A sector upon which we have focused during the year is the oil and gas market; which we can serve well with our project services offering and dispute avoidance consultants from our network of offices across the strategic locations of Aberdeen, Brisbane, Kuala Lumpur, Houston, Oman, Qatar, Singapore, and the UAE as well as in the oil fields in Africa from our

Johannesburg office. We now work for many blue chip organisations in this sector and our people are identifying many examples of where significant costs can be saved through high quality project controls.

DIALES, our brand from which we provide our high level delay and quantum experts, is developing very well. We have some of the most renowned experts in the industry working on many high profile matters. During the year, John Mullen co-authored a book on the matter entitled *The Expert Witness in Construction* and he joins Peter Davison and Stephen Lowsley as co-authors of *Evaluating Contract Claims* (with John Mullen) and *About Time* respectively. In the near future, David Bordoli's co-authored *Handbook for Construction Planning and Scheduling* will also be available (see this month's competition for more details on P.32). These, and our other experts, are currently acting on appointments ranging from airports, high rise developments, oil and gas, pipelines, power plants, process plants, and infrastructure projects throughout the world.

Driver Trett continues to increase its reputation for high quality dispute resolution advice and management across all forms of engineering and construction schemes and is now, judging by the blue



chip nature of the client base, the volume of repeat business, and clients appointing us across our regions, probably the market leader.

2014 is another year in which we plan to grow and develop our business to

better serve our clients. Plans are in place to serve the public-private partnership (PPP) and transaction advisory markets in America and Australia, and to enhance our project controls offering, particularly to the oil and gas and the power and process sectors. As we enter new territories, we will develop our project management business in the Middle East, while continuing to support the development of our traditional Driver Trett business, particularly in the new offices in Australia, Germany, and Hong Kong.

We hope that you will find this fifth edition of the *Driver Trett Digest* to be an interesting read; and would welcome your feedback and requests for topics you would like us to cover in our next instalment. Thanks go, as always, to the writers who have contributed to this issue, in particular our guest writers from outside of the Driver Group.

I would like to take this opportunity to thank all of our clients for repeatedly trusting us with their business and wish you all the best for 2014. □

COMPETITION

WIN

...a copy of

Handbook for Construction Planning and Scheduling

Co-authored by Driver's David Bordoli. Published Spring 2014

SEE PAGE 32 FOR DETAILS

Where and how arbitration costs are incurred and how to mitigate these costs?

NABEEL KHOKHAR – DIRECTOR, DRIVER TRETT EXPLORES THE PATH OF ARBITRATION FROM A HISTORY OF SIMPLICITY AND SPEED TO A MORE EXPENSIVE AND TIME CONSUMING PRESENT, AND SOME HELPFUL SUGGESTIONS FOR IMPROVEMENTS IN THE FUTURE.

Before diving into arbitration costs and their mitigation, I would like to look into the development of international arbitration itself. For if one wants to understand how the costs of this legal procedure are incurred, then one needs to look into the background and development of arbitration.

Over the last half century, international arbitration has begun to gain more support as a viable option to litigation. It is an undeniable fact that resolution of commercial disputes through litigation is lengthy and hence extremely expensive.

The advent of arbitration as a dispute resolution procedure provided parties with an alternative resolution method. It came with a label of being more efficient in terms of both time and cost, the exact opposite to litigation.

In 1965, Professor Philippe Fouchard, a former leading commentator on international arbitration described arbitration as, “an apparently rudimentary method of settling disputes, since it consists of submitting them to ordinary individuals whose only qualification is that of being chosen by the parties.”

Nearly 50 years on, this seems a rather simplistic description, but this was in fact the essence of arbitration. A simple form of dispute resolution that was to be cheaper than its litigation alternative.

However, as disputes became more complex and the amounts in dispute became larger, this simplistic approach



"Time is money..." Benjamin Franklin c.1748

began to become more complicated.

David Rivkin, an American arbitration commentator updated Professor Fouchard's description stating arbitration as: "Two business people taking their dispute to a wise business person in whom they both trusted, describing their respective claim and then asking the arbitrator to provide them with the best solution to their dispute."

Taking the Rivkin description, one could say that the two business people are now highly sophisticated multinational conglomerates, who take their multi million or billion currency dispute to an arbitrator or panel of three wise business individuals and ask him, her, or them, via highly expensive lawyers, to render a decision under the rules of an institutional body, that all charge the parties for their input into the process.

The simple process has now become a rather more complicated one and our simple alternative to litigation is

now barely recognisable. It has had to become more complex as the disputes became larger, arbitrators became professional in their own right, and parties began being represented by specialist arbitration lawyers who have taken control of the arbitral process. So much so that the actual users now feel out of control once the process begins. This has commonly become known as 'judicialization' and is one of the reasons cited for an escalation of costs.

In 2011, the Chartered Institute of Arbitrators held a conference in London entitled Costs in International Arbitration. It found:

- The typical amount spent by a party going through the arbitral process, from pre-commencement to post hearing, excluding enforcement, was in the region of £1.5m, where the median claim was just under £10m.
- In 25% of the cases of between £10m to £50m, the costs exceeded £5m.

- In over 50% the cases where the dispute exceeded £100m, costs exceeded £5m.
- Nearly 75% of costs were for external legal representation.

The findings are of course open to the usual statistical scrutiny, but it does demonstrate that arbitration is an expensive process and also provides a valuable indication into where arbitration costs are incurred, and hence where savings can be made.

Commencement of the process, exchange of pleadings, discovery and disclosure of documents, and the hearing itself are other areas where huge costs are incurred and it is not a coincidence that these are areas where lawyers are heavily involved.

Institutional fees and arbitrator costs are also areas where parties have to spend large sums of money. However, these costs can be reasonably accurately calculated. What makes parties nervous

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is when the costs have a high degree of uncertainty and therefore effective cost planning cannot be done.

An area of the process that has given parties many sleepless nights is its overall time-span. Parties feel that once the Request for Arbitration has been served, there is little control over how long it will be until the tribunal renders its award. This is despite institutional time limits and case management meetings where times are agreed.

The most common growing complaint of the arbitration process is that it has become increasingly inefficient. And the promise of it being a more cost-effective approach to dispute resolution is being clouded and lost in increasingly lengthy arbitrations that are costing more as time-spans get longer.

It is not disputed that the costs of international arbitration have sky rocketed in the last decades, but if we are to ultimately control such costs, then any attempt to bring them under control must look into and understand where and how they arose.

Benjamin Franklin in 1748, is commonly attributed to have stated that "Time is money".

This can be directly applied to international arbitration; as the time taken for resolution of disputes through arbitration is becoming longer, the costs incurred by the parties is becoming higher.

McIlwrath and Savage's 'International Arbitration and Mediation: A Practical Guide, 2010' states that the time for an international arbitral panel to render its award is generally in the region of one to two years and sometimes even longer. Many other commentaries define similar time frames.

So on the face of it, a solution to reducing the increasing cost of international arbitration is to streamline the process, to make it more efficient and hence more cost-effective.

In 2012, the International Chamber of Commerce (ICC) published its report on 'Controlling Time and Costs in Arbitration', wherein it suggested how the procedure could be made more efficient; to name but a few:

- More care and thought taken in drafting the arbitration clause
- More careful selection of counsel
- More thought into the selection of arbitrators
- Requiring a more robust framework for the proceeding
- Tribunals play an active role in promoting settlement

I am not going to list out the methods the ICC recommended for implementation of their suggestions but we have seen that the huge costs are incurred due mainly to high legal costs, largely as a consequence to an overly long process.

But, are there ways to mitigate the costs of arbitration even before the inevitable dispute has occurred? Is there work that can be done by the parties during the project's early stages that could reduce the length of any future arbitration(s)? Are there procedures, processes, and strategies that can be put in place within the party's respective structures that could also reduce the overall cost when a dispute makes its way to arbitration?

The most common growing complaint of the arbitration process is that it has become increasingly inefficient.

I would say "YES" to all the above questions.

To mitigate the costs of arbitration, one needs to look at the processes and procedures on the project that could lead to a speedier and cost efficient arbitral process such as:

Giving the possibility of serious disputes occurring on the project more recognition at the contract drafting stage. And so, at the time of drafting the contract, the arbitration clause is not, as often happens, completely neglected. The reason, more often than not, is that any comments made at this stage may reveal that the contractor is thinking about arbitration even before it has signed the contract.

However, this illustrates that the contractor is giving the possibility of arbitration some constructive thought, and not burying its head in the sand and taking the approach that disputes will not escalate; to

do this is naivety.

Promoting the use of simple and clearly drafted arbitration clauses which avoid uncertainty and ambiguity. This in turn minimises the time and cost from the very start of any dispute, where parties could be left arguing about the location, seat of arbitration, language, prevailing law governing the process and number of arbitrators and their jurisdiction. The ICC, in their above referenced report highlights this point and suggests that a simply worded clause is best. Recognition that disputes will arise and preparations for them, via well drafted clear and accurate arbitration clauses, will ultimately make the arbitral procedure more efficient and cost-effective.

More effective contract management by both parties on site is required. Knowledge of, and adherence to its contractual requirements and obligations during the construction phase can be key to future disputes either not escalating into fully blown arbitration or if they do, then clear and concise claims can result in more

streamlined processes.

Discovery and disclosure of documents phases have the potential of spiralling out of control. One way this can be avoided is for a contemporary document management system to be implemented on the project from commencement. Discovery and disclosure can be even more costly when this is not done and there is the need to introduce a system at the arbitration stage.

Disputes often flair up into arbitration when communication between the parties have broken down. Parties become entrenched in their position not based on their strengths but on ignorance of the other's position or even stubbornness. Open channels of communication throughout the life of the relationship of the parties can result in dialogue which can illustrate that the parties are actually not as far away from a settlement as

they originally envisaged. Therefore it is important that there are channels of communications open during the arbitral process and that at any stage the parties feel that there are opportunities open to settle the case. The arbitrators have a very important function here, wherein they can encourage the parties to consider settlement of the dispute at various points in the process. The ICC in the previously referenced commission suggest that the tribunal are proactive in this.

Judicialization can result in the parties having a feeling of being led by the lawyers and having little control over their disputes. They all too often consider the arbitral process to be overwhelming and do not realise that they can, at any stage in the proceeding, request the tribunal to suspend the process and begin some sort of settlement talks. Strong in-house legal counsels or positive senior management should be implemented and control over the dispute should be taken back.

Alternative Dispute Resolution (ADR) should be looked into at any stage of the arbitration process. The FIDIC contracts call for Dispute Adjudication Boards (DABs), either as standing or ad-hoc boards, however all too often their requirement is removed by the employer. By crossing out this clause, contractors are forced to initiate costly time-consuming arbitration for relatively minor claims. Or worse still, submit global claims to the tribunal for their decision. A standing DAB, formed at the correct time and properly utilised by the parties is an extremely powerful tool to reduce the costs of arbitration, as they resolve many of the disputes prior to them becoming fully blown arbitration proceedings.

Arbitration is here to stay, of that there is little doubt. And therefore the costs of it will also always be here. However the arbitral process needs to evolve and take a look at itself if it is to remain a credible avenue open to parties to resolve their disputes, particularly in the light of other alternative dispute resolution techniques. Nevertheless, arbitration will still hold the top spot in the league table of dispute resolution techniques for some time to come. And it can fulfil its promise of being a more cost-effective alternative to litigation, if the time-span of the proceedings is controlled, thereby ultimately mitigating its costs. □

Appropriateness of programmes and the 'ramblings of a planner'

CLIVE HOLLOWAY – PROGRAMME DELAY EXPERT, DRIVER TRETT SINGAPORE DISCUSSES THE COMMON SENSE APPROACH TO PLANNING.

Some years ago now, a work colleague of mine posed the question 'is it better to be vaguely right or precisely wrong' when measuring time delay and reviewing entitlements to an extension of time (EOT)? Most might seem puzzled by this expression, but to me it is a very good proposition, where such precise answers are calculated and generated, like 35.3 days' delay or EOT.

Experience v Calculation

For us practitioners that have been involved with planning and scheduling for over 30 years, such preciseness would raise alarm bells, because we know that programming can be much more uncertain, imprecise, and so vague in many ways.

In Search of Certainty

Although clients and contractors look for and like to receive precise answers, in reality this is not possible, and any such exactness is therefore dubious and questionable. Is it not much better for common sense and expert experience to override such preciseness generated by software and computers?

Computer Science

There seems to be an assumption that planners, when scientifically using computers and critical path analysis, can fulfill such aspirations, but one does not have to look far for criticism. Good planners will know the limitations of software and understand the sensitivity of the information they enter, and so appreciate the appropriateness, usefulness, and objectivity of any computer generated outputs.

Acceptance of Unreality

It is a concern that often on projects there



is collusion in acceptance of unreality by all parties, maybe due to the belief in precise answers. Despite any unreal assumptions and inevitable uncertainties, based on and from planned programmes that are no more than a best guess at the time (albeit an educated guess) and always will be, until time travel is invented that is. This is not a failure in planning; it is just the very nature and way of the construction business. The truth and reality of true situations is sometimes hard to accept.

Belief in the Software

Professionally trained and experienced planners will understand this impreciseness with programming and so can accept vagueness, and that being vaguely right is the best that can be expected. It is the planning software users (often called jockeys) that can't understand why their precise answers can and might be

precisely wrong. Planning software is after all just one of the tools that are available to the planner; it should not dictate or be relied upon as the utopia.

Lack of Planners

It seems that professionally trained planners and programmers are a rarity because the industry stopped training pure planners some years ago. There are many 'would be' planners that have either learnt the planning software or converted from site foreman or whatever, but they do not have the basic practical programming experience, they have not been taught the necessary skills or have knowledge of techniques.

Advent of Computers

The advent of computers has diverted the direction of planning and led to a plethora of users trained in software, but sadly

lacking in basic planning skills, which in turn has led to inferior planning controls and programming on projects. It is not suggested that there is a need to abandon planning software or computers, just an acknowledgement of shortcomings and acceptance of the limitations. The skills in the planning and programming of projects are a dying art.

Critical Path Paralysis

There seems to be a heavy reliance on critical path analysis (CPA) and a belief that it is a panacea. Whereas it is only a tool to help plan and manage a project as appropriate, to balance alternatives against uncertainty. And the higher the uncertainties in a project, then the precise CPA calculations are merely generated by guesswork, and so can only be vaguely

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right. And because the CPA maths is right, it does not mean that the answer is right, one has to make judgements at the time, this requires experience.

Procurement Example

For example, in procurement scheduling the guess as to how long an item might take to procure is only as good as what is estimated in the first instance, but the milestone commitment for delivery will hold fast. If at a later date this procurement scenario changes and the planned logic requires some adjustment, then it is appropriate to alter the schedule accordingly.

Appropriate Use of Technology

An experienced planner, trained in both the old and new methods of planning (with and without the aid of computers), will be more skeptical of, and less reliant on, today's sophisticated and computerised technology which offers the required speed of calculation for tighter project schedules. But caution has to be taken, and it is recommended that more time is spent studying the construction process and sequences, as the application of logic is paramount in the development of a

tried and tested and workable baseline schedule.

Benefits of the Software

The production of planned programmes using planning software is fairly simple and it allows planners to consider effects and 'what if' scenarios and impact progress updates, all by being able to time analyse the programme instantaneously. But if the information and data that is used has some deficiencies then the precise answer output could be wrong.

Planning is an Art not a Science

Good planners will intuitively know how events will drive and change the programme and sequences because they will understand the dynamics of the logic and not be so dependent upon the software.

Keep it Real and Credible

However, some method or other is required from which to analyse and quantify delay at the time that events occur and for most projects a prospective impact analysis using an approved project programme is as good as any. However, a competent delay analyst should understand the practical limitations of the programme and so retain

the real world picture rather than simply relying on the mathematical model result obtained from blindly applying an event to the CPA.

Likely or Not Likely

After all, the impact of a delaying event at the time must be likely to occur, however, often it is not likely and so the EOT delay claim fails at the first pass. Thus invoking the 'wait and see' stance until the actual impact is revealed. In theory, a sound reliable plan should predict the likely impact of a delay event at the time that correlates with what actually transpires.

Specify Rules

Setting the ground rules for planning and delay analysis methods for EOT assessments beforehand will also go a long way to avoid the distraction of arguing these out when the delay has happened and both parties are bent on protecting their own corner.

Improve Programme Credibility

There is a need to raise the profile and quality of the planning profession and so programmes, then project managers will 'buy in' and commit, and so help buildings to get built. This joint effort should mean that programmes will become more cred-

ible, and so help facilitate the granting of deserved EOTs more quickly and much closer to the time of the event, by being more convincing that the impact of a delay event is likely.

Raise the Profile

It seems that the planning discipline has been graded as low priority of late, especially in Asia, possibly even deemed too expensive and unnecessary, whereas it should be high profile. A good experienced planner with the relevant skills should be highly regarded, as after all programming is very important and if you get it wrong, it could cost your company a lot of money.

Common Sense

In conclusion to these ramblings, a common sense approach to programming is required, as planning can never be better than vaguely right (and is most likely to be precisely wrong). But that does not discredit it, so long as planners are prepared to say that the answer includes guesses, generalisations, and assumptions. And accept that it is not perfect, as it deals with possibilities rather than certainty. This might help planners align with project managers who have to be accountable for such things. □

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- Understand their duties to the court and their clients
- Have proven track records in delivering concise, detailed reports, on time, and often against challenging deadlines.
- Have access to highly skilled support teams to ensure rapid evidence processing, regardless of volume.
- If you are looking for an expert witness in quantum, delay analysis, or a technical discipline; the DIALES team will provide the right candidate, with an excellent reputation, track record, and supporting expert profile or CV.

Learn more about our experts by viewing their profiles www.diales.com/experts.html

The hounded expert witness – lulu and other dogs

FOLLOWING THE PUBLICATION OF HIS CO-AUTHORED BOOK THE EXPERT WITNESS IN CONSTRUCTION, JOHN MULLEN – PRINCIPAL, DIALES EXPLORES THE SIGNIFICANCE OF THE ROLE OF THE EXPERT WITNESS.

The work of the expert witness in construction disputes can be rewarding to practitioners, both financially and professionally. For a party, expert opinion can be essential to success. However, bad expert work can be disastrous for the instructing party and the expert.

The private nature of arbitration means that the poor performance of an expert is usually only known to those involved in the action or who hear anecdotally, although arbitration circles can be small. It is also the case that international arbitrators are usually restrained in their criticism of even the most incompetent or partial experts, for fear of a challenge to an award in the local courts. For experts who consider that a counterpart deserves a verbal “kicking” the reaction can be disappointment where an award accepts their evidence in muted terms such as “it is to be preferred”, without recording that the counterpart expert was witless, biased, or just plain bonkers.

The situation in litigation is of course different in most jurisdictions, with judgements being publicly available. A particular feature of the England and Wales courts over the last decade and more has been how the judiciary have not been shy to criticise some experts, and in very strong terms. The reaction to such judgements can vary from schadenfreude to “there but for the grace of God go I”, where critical judicial comment has been considered by people close to a case as unfair. However, many of the judgements do make for informative and entertaining reading. In the book *The Expert Witness in Construction* we have set out such judgements in some detail in the hope that experts, and those instructing them, might learn from the mistakes of others.



The failures of experts that have led to judicial censure usually arise out of the preparation of their written reports or oral evidence at trial. However, they can even occur before an expert’s appointment. A prize for shooting himself in the foot before being appointed would have to go to a once eminent architect, arbitrator, and expert who appeared before Mr Justice Laddie in *Cala Homes (South) Ltd v Alfred McAlpine Homes East Ltd* [1995] EWHC 7 (Ch), five years after writing an article “The Expert Witness: Partisan with a Conscience” setting out his views on the appropriate approach of an expert. In that article he had described three phases in the expert’s work. Of the second phase, preparation of the written report, he said: “[the Expert] will, with appropriate subtlety, be ‘a hired gun’.”

In his judgement Mr Justice Laddie quoted from this article and stated: “The whole basis of [his] approach to the drafting of an expert’s report is wrong.

... The judge is not a rustic who has chosen to play a game of Three Card Trick. He is not fair game. Nor is the truth.”

Thus, the ‘hired gun’ had indeed shot

himself in the foot, even before being enlisted.

Another common error by experts in preparing their reports is a failure to ensure that their evidence is their own work. In this regard, two non-construction cases provide entertaining reads.

In *Trebor Bassett Holdings Ltd & Anor v ADT Fire and Security Plc* [2011] EWHC 1936 (TCC) Mr Justice Coulson criticised most of the experts for both parties. One expert relied for his conclusions as to the cause of a fire, not on his own work, but from a blog, taken from the internet, and written by one of his students, under the heading Today, We Have Been Mostly Burning Popcorn echoing a catch-phrase of BBC TV’s *The Fast Show*. Another expert relied on modelling that had been carried out, not by him, but by a colleague and which was not fully explained in his report or even by the end of the trial. The judge concluded in relation to all four experts who appeared before him in that case:

“... the court has had to struggle with unsatisfactory and disparate expert evidence, often unrelated to the real issues, prepared and delivered in a variety

of places and in an unacceptably partisan way. Unsurprisingly, perhaps, this has created real difficulties in the preparation of parts of this judgement. It has also led me, very unusually, to be dubious about the reliability of all of the expert evidence that has been presented to me. This is emphatically not a case where the court is able to prefer one expert over another and let that approach dictate the result.”

In *Double D Communications Ltd v News Group International Ltd* [2011] EWHC 961 (QB) Mr Justice Eady found himself faced with a defendant’s expert who included material in his report from an internet discussion board. The judge observed:

“I am thus confronted with an expert who is unable to produce direct evidence himself but, instead, has resorted to total strangers via Google – who do not consider themselves qualified to answer his queries.”

In the same case, the claimant’s expert declined to identify much of the evidence upon which he had based his conclusions, citing confidentiality. Mr Justice Eady said:

“I would not attach any weight to [his] assessment unless it were possible to analyse and assess his reasoning processes...I am not prepared to proceed on an assumption that his conclusions must be correct.”

Both the *Trebor Bassett* and *Double D* judgements also saw experts criticised for their performance under cross-examination. In the first case one expert’s oral evidence was said to have degenerated into “bad tempered bickering”. In the second case one expert “found it difficult to answer questions in a straightforward or illuminating way. He tended to ramble off the

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point and appeared to be more of an advocate than an objective assessor". Another expert was found to be "determined to stick to his theories through thick and thin".

The experts in all of these cases will have relied upon their academic and professional qualifications for the authority of their evidence. The most amusing example of a witness' approach being wrong in preparing his written evidence and his compounding this in oral evidence, can be found in Mr Justice Ramsey's judgement in *BSkyB Ltd v HP Enterprise Services UK Ltd* [2010] EWHC 86 (TCC). Whilst this witness was one of fact, it was his purported academic qualification that became an issue. He had written that he held an MBA based on studies from 1995 to 1996 at Concordia College, St Johns, an island he flew to whilst

working on a project there for Coca Cola. However, opposing Counsel handed the Court two pieces of paper. The first was an MBA certificate from Concordia College, St Johns, which had been awarded to a "Lulu". Counsel then took the court to the second piece of paper – a photograph of his pet Labrador – Lulu. Thus, without any difficulty the dog had obtained a degree certificate in identical form to that relied upon by the witness. In fact, the dog had earned higher marks! In addition, both had received a commendation letter by a person purporting to be President and Vice-Chancellor of Concordia College. The witness had exhibited a fake degree, a deceit he then compounded by giving dishonest answers over three days to questions from both counsel and the court. Eventually it was established that there was not and never had been a Concordia College, Coca Cola office or

facility or airport on St Johns and it was not possible to fly onto the island. Finally, to evidence his 1995 to 1996 studies the witness had presented one text book, which on examination contained a bar code and markings showing it to be a more recent acquisition.

As to the consequences for expert and party, a most dramatic result came in *Gareth Pearce v Ove Arup Partnership Ltd, Remment Lucas Koolhaas and Office for Metropolitan Architecture (OMA) Stedebouw BV and the City of Rotterdam*; 2 November 2001 [2001] EWHC Ch; Lawtel 2 Nov 2001. The judge concluded that the claimant's expert: "bears a heavy responsibility for this case ever coming to trial – with its attendant cost, expense and waste of time."

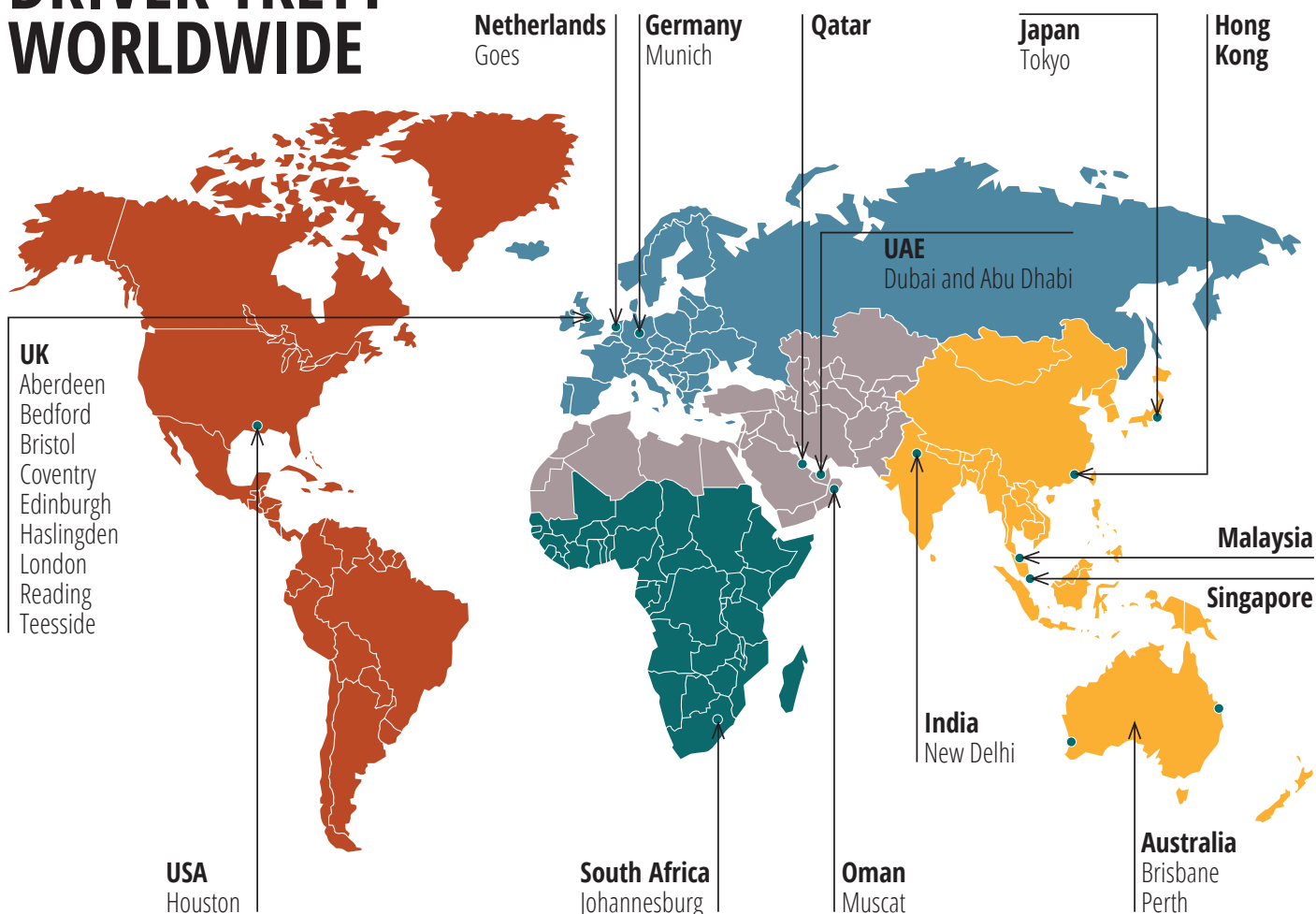
Not only did the claim fail, but the expert was referred by the judge to his professional governing body, the Architect's Registration Board. The expert, in turn,

made a claim for compensation alleging to have spent £100,000 clearing his name. The Lord Chancellor's Department rejected that claim.

Whilst the delay expert of whom the judge said in *Great Eastern Hotel Company Limited v John Laing Construction Limited and Laing Construction Plc* [2005] All ER 368 "I sadly conclude that he has no concept of his duty to the court" may have since found his career as an expert somewhat curtailed, it is understood that Lulu still successfully practices as an expert in fetching sticks and deterring intruders, but has dropped the "MBA" from her resume. If she can note and learn from the mistakes of others, it is hoped that construction experts and those instructing them might do the same. □

This article is based upon the book *The Expert Witness in Construction* co-authored by John Mullen and Rob Horne and published in 2013 by Wiley Blackwell

DRIVER TRETT WORLDWIDE



Retrospective delay analysis under the NEC

STEPHEN LOWSLEY – EXPERT, DIALES EXPLORES THE APPROACH TAKEN TO DELAY ANALYSIS UNDER THE NEC FORM OF CONTRACT.

Unlike the JCT contract form the NEC suite of contracts is highly prescriptive in respect of programme requirement, submission, and acceptance.

Without going into great detail, where delay occurs, any amendment to the completion date involves early warnings, notification, compensation events, quotations and the impacting of the accepted programme.

Compensation events which include both time and money are evaluated at the time, in a prospective manner, and represent a forecast. In making this forecast, the contractor can include risk allowances to cover the cost and time for matters which have a significant chance of occurring and are at the contractor's risk.

Also unlike the JCT contract form, under the NEC there is no opportunity to retrospectively review and amend the compensation events, even if it is found that in the event the forecast on which they are based was incorrect.

The NEC contract is based on a spirit of mutual trust and cooperation between the parties and such a philosophy is required to ensure assessment and acceptance of the compensation events in the prescribed manner.

If this process breaks down and if for instance there is no accepted programme and compensation events are not agreed then the contract provides no guidance as to what actions should be undertaken.

If the works are substantially progressed or complete, how retrospectively are the compensation events to be assessed?

For any such retrospective assessment there are really only two main options: programme(s) can be updated with progress and impacted to simulate what the contractor and engineer would have done at the time or a retrospective assessment can be based on the facts of what in the event actually occurred.

The Society of Construction Law Delay and Disruption Protocol (the Protocol) in respect of a general approach to retrospective delay analysis favours the first of these options stating that in deciding entitlement

to extension of time "the adjudicator, judge or arbitrator should as far as is practicable put him or herself in the position of the contract administrator (CA) at the time the Employer Risk occurred."

In order to do this the protocol recommends the use of an updated programme to reflect the status of the works at the time a delay event occurred and favours the use of a delay analysis technique known as Time Impact Analysis.

This generally reflects what is required by the NEC, however under the NEC, this technique is used on a prospective and not a retrospective basis.

If there is no accepted programme representing the status of the works at

including any time risk allowances.

Once the compensation event has been impacted, the resulting programme will then require a review and possible further amendment to ensure that it reflects a reasonable and realistic forward plan.

In my opinion, if the contractually prescribed compensation event process has not been undertaken by the contractor at the time, it is very difficult to undertake such a process retrospectively due to the numerous assumptions that need to be taken to assess what the contractor may or may not have allowed for at the time and what is reasonable.

What is considered as being reasonable allowances will be subjective and open to

The NEC contract is based on a spirit of mutual trust and cooperation between the parties and such a philosophy is required to ensure assessment and acceptance of the compensation events in the prescribed manner.

the time of the compensation event then in order to simulate what the contractor would have done at the time it may be necessary to rely on an 'unaccepted version' or to update an earlier accepted programme with progress.

In undertaking such a progress update it is well recognised that the resulting programming will need reviewing to ensure that it represents a reasonable forward plan. This may require some 'tweaking' in order to correct any software/logic anomalies or it may require some major amendment to reflect mitigation measures or a change in the sequence of the works actually being undertaken on site.

Activities will then need to be added and impacted onto the programme to simulate the forecast effect of the compensation event. A reasonable assumption will need to be made in respect of what the contractor would have allowed for

criticism and potential dispute.

In my opinion, no matter how conscientiously the above exercise is undertaken and no matter how reasonable it may be, there will be a strong argument to say that it is just one of very many possible reasonable permutations. This would imply that there are also likely to be very many and differing reasonable results.

A resulting assessment of 20 weeks delay may be considered as being reasonable, however so could an assessment of say 15 or 25 weeks. The quantification of the spread of these results will be difficult, if not impossible to assess and will again be subjective and based on opinion of what is considered as being reasonable.

In any retrospective delay analysis my general starting point is an investigation of what in the event actually occurred with a final analysis based on the facts.

Why theorise about what might have

occurred when the facts of what actually happened are clear?

Such an approach is subject to the availability of records and although record keeping is often poor there is rarely a case where no records exist. If the records are insufficient to undertake an as-built factual assessment it is highly likely that they will also be insufficient to carry out a detailed theoretical impact assessment.

During the course of the works the prospective approach required under the NEC, involves a forecast of delay with such a forecast, by implication representing a reasonable and likely outcome.

This being the case, there is strong argument to suggest that what actually occurred should not be too different to what would or should have been forecast at the time.

When considering retrospective delay under the NEC, in my opinion an assessment of delay based on what in the event actually occurred is the most appropriate approach.

Notwithstanding this, if both parties are in agreement, some form of time impact methodology to simulate what would have been undertaken at the time may be appropriate. I would suggest, however, that if the parties are not both strongly determined to come to a mutual agreement they may become more entrenched with arguments focusing on computer logic and what is considered as reasonable.

Every case is different and as a delay analyst, I need to keep an open mind in respect of the approach to be adopted. As an example, if compensation events have been particularised and impacted, but not agreed, it may be more appropriate and cost-effective to provide opinion in respect of whether such actions were reasonable, rather than expending a great deal of time investigating what actually occurred.

Notwithstanding my above comments in respect of an as-built factual approach, in a recent case, based on specific facts, a prospective approach was considered as being appropriate.

Any comments, feedback, and advice in respect of this would be warmly welcomed. □



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Avoid disputes by improving project forecasts

**BRAD D BARTH – VICE PRESIDENT INDUSTRY SOLUTIONS, HARD DOLLAR
EXPLORES ADVANTAGES OF EFFECTIVE PROJECT FORECASTING AND THE
TOOLS AVAILABLE FOR IMPROVEMENT.**

When it comes to project disputes, there are often no clear winners. Instead of the profit of successful project completion and positive business relationships, disputes can mire contractors and owners alike in years of litigation, sapping energy and resources away from their core businesses.

Therefore, avoiding project disputes in the first place should be an imperative for all involved. One way an engineering, procurement, construction manager (EPCM) or contractor can do this is by improving project forecasting. This can help them identify issues while they are still manageable and then set proper expectations with owners before they metastasize into much bigger problems. By identifying and sharing potential issues earlier, contractor and owner are in a much better position to work together to resolve them.

Today, too many companies use a simple project forecasting method in which they analyse actuals to date from their accounting system and then extrapolate those numbers into the future. This rudimentary method tries to 'look forward with a rear-view mirror' and can lead to significant performance surprises as projects near completion. It simply does not account for the uniqueness of remaining project effort.

The preferred forecasting method is to continuously create bottom-up estimates for remaining work in which the same detailed cost calculations used to create the initial estimate are leveraged to recalculate the cost of remaining work. This bottom-up technique helps to more clearly identify issues and refine at-completion estimates in active projects. It can also provide insights and accuracy

"An ounce of prevention is worth a pound of cure"

- Benjamin Franklin, 1735

that might otherwise be missed. Details such as resource availability, the impact of learning curves on crew productivity, and site conditions can all impact the re-forecast in a way not captured by simply looking at results to date. Performing detailed re-estimates on a regular basis can help EPCMs and contractors improve forecast accuracy, identify problems earlier, and achieve better overall results.

What's holding the industry back? Existing systems often stumble by addressing only part of the reforecast

equation. For example, estimating-only systems do not capture trends and as-builts to forecast remaining work, while accounting systems lack the detailed assumptions and cost modelling tools required to perform bottom-up forecasts. A more complete solution is needed.

To avoid these problems, many EPCMs and contractors are deploying complete "project cost management" systems such as Hard Dollar's HD PCM to achieve cost confidence throughout the project life-cycle. These integrated solutions combine comprehensive estimating functionality with advanced project control features to bridge across the project initiation, planning, and execution phases. Project cost management systems provide the early visibility EPCMs and contractors need to identify and avoid problems before they turn into disputes, an ideal solution for all involved. □

Q&A: Mark Wheeler

MARK WHEELER – MANAGING DIRECTOR, DRIVER GROUP EUROPE DISCUSSES THE GROUP'S PRESENCE IN EUROPE, INCLUDING OUR ONGOING RELATIONSHIPS WITH CLIENTS AND PLANS FOR DEVELOPING OUR EXPERT WITNESS SUPPORT SERVICES.

How would you describe your role within Driver Group?

I have been in the business now for over eight years and the role has evolved into Managing Director for Europe. We have a large group of very talented and highly motivated people and so this role is about co-ordinating the efforts of our team and managing the business forward so that what we can offer clients is more than the sum of the parts. An example of this might be if we have a client anywhere in the world who requires oil and gas support through Aberdeen; German-speaking quantity surveying; or support in a Dutch language contract, we can provide it along with claims, quantity surveying, and dispute resolution wherever those services are required. Clients that use the team have at their disposal a really powerful tool to help develop their own businesses and it's my job to make sure that they're aware of the full potential we can offer as a business.

What are your aims for the business in the region?

Europe is a very well established market for us although there are significant opportunities to expand into mainland Europe with Mark Castell's team, from our bases in Germany and the Netherlands. I think that we already have a market leader position in claims and dispute resolution and our Project Services team is going from strength to strength every year. One of my key aims is to ensure that we gain proper recognition in the legal market place for our extensive range of expert services to support litigation and arbitration.

What services do you provide in the region?

Europe is the place where Driver Group provides all of its services, and we endeavour to provide them to all of our clients. This can involve placing quantity



surveyors through the Project Services team, arranging for estimates and take-offs to be done from Bedford and Reading, providing commercial support and strategies, drafting documents and contracts right through to claims drafting preparation and defence and expert witness. We're still active in dispute resolution, particularly in adjudication and mediation, and it would be wrong of me not to mention our training services which I think must be industry leading in terms of the depth of quality we offer. In our last round of seminars, 98% of the 1000 people who attended rated them as either good or excellent, which is something I am exceptionally proud of. And finally, Chris Walsh's team in Driver

Corporate Services provides a key service for insolvency practitioners in banks and lenders, that will continue to grow.

Any plans for expansion?

We continue to expand our expert witness services by developing our existing skilled staff and recruiting new faces to join the team, our project services team is now well established in the North West of the UK and the oil and gas team is doing well in Aberdeen so all of these are areas for expansion along with continued growth in mainland Europe.

Are you recruiting for any key roles?

We are always looking for new good

members of staff and key roles are often very difficult to fill. We are however currently looking to recruit additional experts to our DIALES team and I'd be delighted to hear from anyone with a track record in expert witness work who would potentially like to join us.

What can clients expect from Driver Group and Driver Trett that they don't currently get in the market place?

Virtually all of our clients stay with us on a repeat basis so we must be doing something right! I think that if you had to sum up what we do in each business stream, Project Services, Driver Trett, and DIALES it is that we have within the business the best and most experienced people at the cutting edge of what they do. Our staff write the textbooks on how to deal with being an expert witness, carrying out delay analysis, planning and programming, and quantum and claims. They are leaders in their field and I would say that, often, it's this experience and quality that makes the difference between the client getting a good result and a poor result. Driver is capable of making a significant positive difference to our clients' businesses.

Are there any particular sectors you will be focusing on in the next few years?

We already have pretty good sector wide coverage and we'll be continuing to deliver in the rail sector which has shown significant growth in recent years, our push into oil and gas will continue as will our presence in the power sector. Offshore engineering and wind is another area that we are keen to remain strong in and we're beginning to see a renaissance of our building and civil engineering clients requiring our services on their own increased turnover and workload. □

Float, Float On...



DAVID BORDOLI – EXPERT, DIALES EXPLORES THE OWNERSHIP OF THE FLOAT.

Ranking near to the top most frequently discussed topics amongst planners and schedulers is the question 'who owns the float?' In an attempt to revitalise the query, it may be better to ask 'what does it mean if the contract says who owns the float?'

Float is spare time in a project schedule. The SCL Protocol¹ defines float as:

"The time available for an activity in addition to its planned duration."

Float is a valuable asset that provides flexibility to rearrange the sequence, timing, or duration of activities without affecting the completion date of the project and can be used to absorb delays to the progress of activities. Float is often erroneously referred to as contingency. However, the casual muddling of the terms masks their very different functions. Contingency is time periods inserted into the schedule specifically to take account of known or unknown risks and is therefore not spare time; float and contingency are not the same.

Where the contract is silent on the matter there are three options:

- The contractor owns the float
- The employer owns the float
- The project owns the float

The generally accepted position is that neither party owns the float and it can be used on a first-come, first-served basis with the proviso that both parties must act reasonably. For instance, if the employer used up all of the float in the schedule by continually issuing information late, but not so late as to delay the completion of the project, would it be reasonable for the contractor to subsequently have to pay liquidated damages for some subsequent minor delay that itself just tipped completion past the contract date?

Contingency periods, or 'time risk allowances' as the NEC/ECC suite of contracts refer to them, are reckoned to be for the use of the party that makes the allowance for them in the project schedule. For instance, the contractor might make an allowance to take account of adverse weather conditions, unforeseen ground conditions or just to provide a buffer in case the works do not progress as planned. Similarly, the employer might add a contingency period between the contractual completion date of the project and the date on which the facility is to be put into use (although this will rarely be shown on the contractor's project schedule).

Contractors will often assert that float is, in fact, contingency periods that they have built into their schedules. In most situations this is not the case and tends to be an 'after the event' statement to protect its use of float. Usually, if the contractor is minded to manipulate the float periods in a schedule, this is done after the initial compilation of the schedule where the natural float periods are calculated and revealed. Given this information, the scheduler can adjust the activity durations, sequence, and logic links to reduce the available float and to conceal it within the duration or sequence of activities. A more appropriate solution would be to add contingency period to the schedule to provide for time risk as shown in Figure 1 (overleaf).

The meaning of float and contingency outlined above is not a universal one. In Scandinavian countries float and contingency are not recognised as separate entities but there are different types of float:

In most construction projects the time schedule contains a certain number of explicit or latent 'buffer days', i.e. additional days that are not actually needed for completing the project activities but are 'in reserve' so to speak. These buffer days are also known as

float. Furthermore, float may appear in the form of an agreed number of days reserved to cover delays caused by adverse weather conditions. If such days are not spent on bad weather, they become available. More often float occurs because the contractor is ahead of the agreed time schedule or because the employer reduces the scope of work. This type of float can usually be deduced from the progress reports presented at the site meetings².

The NEC/ECC suite of contracts is one that stipulates that 'time risk allowances' are shown in the programme submitted for acceptance. However, what has become known as 'terminal float' (spare time or float between the planned completion date and the contractual completion date) is treated as a time risk allowance or contingency. Paragraph 63.3 of the Guidance Notes says:

"Any float in the programme before planned Completion is available to mitigate or avoid any consequential delay to planned Completion. However any terminal float between planned Completion and the Completion Date ... is not available If planned Completion is delayed, the Completion Date is delayed by the same period. If planned Completion is not delayed, the Completion Date is unchanged³."

The NEC/ECC approach is in direct contrast to the findings in *Glenlion*⁴ where the contractor had scheduled the works to be completed before the contractual completion date, the court held that such terminal float (to use the NEC terminology) must be used up before any extension of time could be awarded. Similarly, in the South African *Ovcon*⁵ case the contractor scheduled the works to be complete in 11 months rather than the contractual period of 15 months. The court found that the contractor was not entitled to claim for delays that resulted in the works being completed in more than 11 months but less than 15 months.

A few, mainly bespoke contracts or specifically amended standard forms, shift the ownership of float to one party or the other. The precise terms of the contract must be taken into account but broadly there are two positions:

- the employer having the benefit of the

CONTINUED ON PAGE 12



CONTINUED FROM PAGE 11 ➔

float

- the contractor having the benefit of the float

If the contract allows that the employer has the benefit of the float an initial analysis of the effects of a delaying event that is the responsibility of the contractor will, superficially at least, give rise to a delay to the contractual completion date of the project and potentially put the contractor at risk of liquidated damages.

Consider the scenario in Figure 2. In the as-planned schedule there is float between activity 2 and 3. A delay occurs to activity 2 which in normal circumstances would consume some of the float but as the float 'belongs' to the employer, the contractor is unable to use it, so activity 3 and completion of the project is delayed.

If there are no further delays to the works then the 'delay schedule' is clearly nonsensical. The contractor would not artificially delay the start of activity 3 just to preserve the employer's float. What would most likely happen is that activity 3 would start and finish on time and there would be no delay to the completion of the works. In that instance, the effect is that the float was shared on a first-come, first served basis.

However, reverting to shared ownership of float provides no benefit to the employer. While the hypothesis is untested, it is likely that the extended date could be treated as a back-stop position for the employer, in that the contractor would start activity 3 following the as-planned schedule. However, if any delaying events that were the responsibility of the employer occurred and affected the progress of activity 3, the contractor would not be able to claim an extension of time until the delays exceeded the back-stop date. Furthermore, they would be liable for liquidated damages for any period between the planned completion date and the back-stop date.

Nevertheless, in reality it is unlikely that a prudent contractor, knowing the likely implications of an employer float ownership clause, would schedule the works such that there were significant amounts of float. It is likely that it would schedule the works using float manipulation techniques or contingency periods (as described above and in Figure 1) to minimise float in

the schedule.

If the contract allows that the contractor has the benefit of the float, an initial analysis of the effects of a delaying event that is the responsibility of the employer will, superficially at least, give rise to a delay to the contractual completion date of the project and provide the contractor with an extension of time.

Consider the scenario in Figure 3. In the as-planned schedule there is float between activity 2 and 3. A delay occurs to activity 1 which in normal circumstances would consume some of the float but as the float 'belongs' to the contractor, the employer is unable to use it, so activity 3 and completion of the project is delayed.

Again, if there are no further delays to the works then the 'delay schedule' is clearly illogical. The contractor would not artificially delay the start of activity 3 just to preserve its float. What would most likely happen is that activity 2 would start and finish late but activity 3 would start and finish on time and there would be no delay to the completion of the works. Similarly, in that instance the effect is that the float was shared on a first-come, first served basis.

Once again, reverting to the shared ownership of float provides no benefit to the contractor. Although the hypothesis is untested, it is likely that the extended date could be treated as back-stop position for the contractor as it would start activity 3 following the as-planned schedule. But if any delaying events that were the responsibility of the contractor occurred that affected the progress of activity 3, the employer would not be able to charge liquidated damages until the delays exceeded the back-stop date. Furthermore, the employer would be required to provide an extension of time for any period between the planned completion date and the back-stop date. The contractor might also argue that it was in its contractual rights to retain the float and complete the works by the back-stop date but by consuming some or all of the float mitigated potential delay to the completion of the works.

While possible solutions have been suggested above, a proper interpretation will only be found if such matters come before the courts. As matters regarding extensions of time and the like applicable to NEC/EEC contracts and terminal float are

Figure 1. Natural Float, Manipulated Float and Contingency

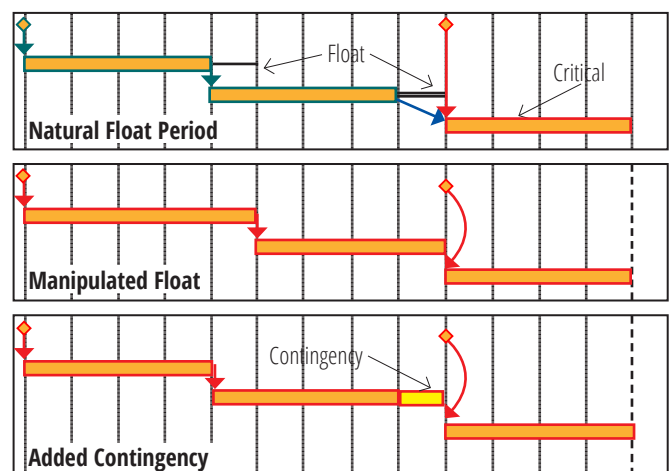


Figure 2. Employer Owns the Float

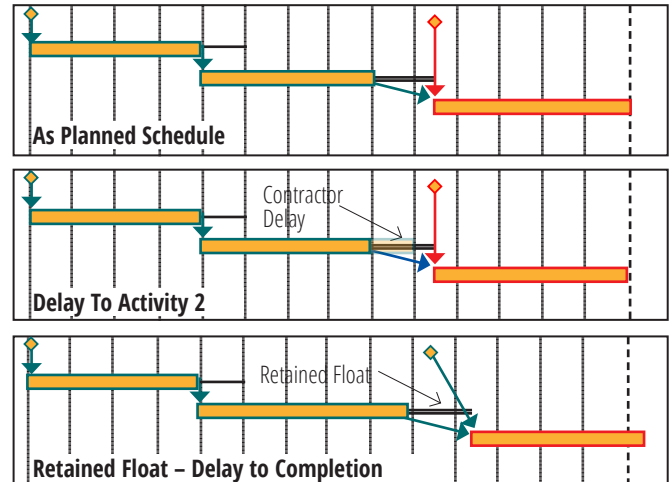
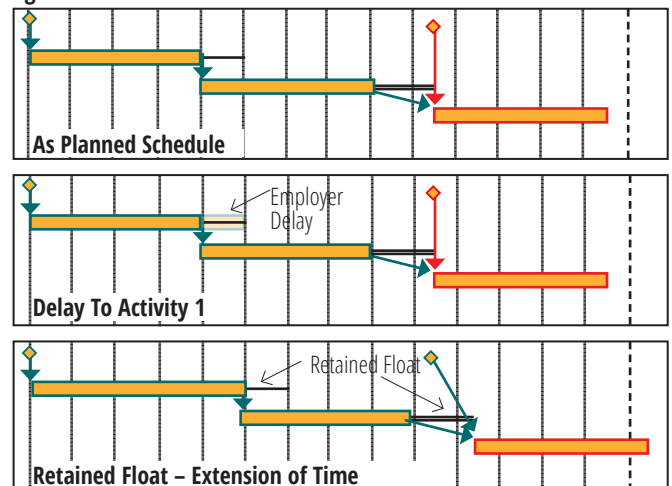


Figure 3. Contractor Owns the Float



yet to come before the courts, it probably means that the analysis of delays in float ownership circumstances is unlikely to be clarified anytime soon. □

1 The Society of Construction Law Delay and Disruption Protocol. The Society of Construction Law, (October 2002). At pages 56 and 62.

2 Who Owns The Float?—A Scandinavian Perspective. Jacob C Jørgensen et al, The International Construction Law Review, (2013) pp 379-394. At p 380, Introduction.

3 NEC3 Engineering and Construction Contract – Guidance Notes. Thomas Telford Ltd, (June 2005). At para 63.3, pp77-78.

4 Glenlion Construction Ltd v The Guinness Trust (1988) 39 BLR 89.

5 Ovcon (Pty) Ltd v Administrator, Natal 1991 (4) SA 71 (DCLD).



What is coming over the horizon?

Governments and organisations, at a corporate level, use horizon scanning to assess threats and mitigate risk. So it is not a huge leap to see the value in applying the same principles to projects.

Instead of attempting to find out what is going on in the macro world that might affect a country's government or an organisation, the challenge is to find out those events that might influence, positively or negatively, the successful outcome of a project. As with governmental or corporate horizon scanning the aim is to discover what it is that you do not know about your project.

Everyone processes information differently. Perspectives on any issues will be determined by the individual's own personal window on the world. When a situation arises on a project each person acts on the information that they receive and responds in their own and unique way based on their preconceptions, perception, and emotions. Their resulting behaviours can be positive or detrimental to the progress of the project and yet the behaviours themselves are seldom considered as risks in themselves. On the other hand, they are a risk and therefore can, and should, be monitored and managed.

The premise of the monitoring and management mentioned above is that the information and knowledge the project

EDWARD MOORE – CHIEF EXECUTIVE OF RESOLEX LOOKS AT HOW CONSTANTLY SCANNING THE PROJECT HORIZON FOR ISSUES CAN PREVENT THEM FROM ESCALATING INTO COSTLY DISPUTES AND DELAYS.

needs is contained within the delivery team. The challenge is gaining access to it and understanding it in the context of the project.

The two key areas to identify are:

- 1)** specific risks which are either new to the project or the delivery team feel are not currently being managed or mitigated effectively.
- 2)** the divergence of perception between delivery teams about a known risk or general project progress.

Horizon scanning for new risks, or ineffective management or mitigation, enables them to be communicated across the project delivery team so that all parties are aware of the risks and their role in managing or mitigating them. The elimination of surprise provides for a clearer and more strategic approach to risk on the project.

The divergence of perception between teams is a more difficult risk to quantify, after all it is just personal opinion, some of them may in fact be wrong, so why go to the bother of understanding it?

As I touched on at the start of this piece, it is an individual's perception, or opinion, that drives their behaviour on the project. Therefore, if key individuals or different parts of the delivery team have diverging opinions about issue 'X' they are unlikely to have a coherent approach to resolving or managing it. From our experience, this is the seed of a dispute.

All of us working in the project dispute market are acutely aware of the moment on a project where a manageable issue turns into a dispute. The red mist descends, personal and professional egos stand between swift consensual resolution and full blown dispute. There is, however, a time of opportunity when a growing issue can be worked through without substantially affecting the project. Provided that the issue is identified and dealt with early. It is at this moment where the delivery of professional dispute services offer almost incalculable value to clients and the issue can be resolved in tandem with the progression of the project.

"We are always looking for innovative ways in which we can add value to the services we offer our clients. Working with

them to manage disputes and prevent unnecessary dispute escalation is far more effective where we have early warning of developing issues. The underlying issues may be technical or down to communication failure but the sooner we identify and rectify the problem, the sooner the project can move on." said Alastair Farr, Managing Director of Driver Trett Asia Pacific

When articulating the value of effective horizon scanning on a project it is important to consider the real cost of escalating disputes. Unlike insurance which, until something goes wrong, is just a cost. By taking the results of a horizon scanning exercise, and effectively communicating them across the project delivery team, you can increase engagement and actually decrease the likelihood of issues escalating into disputes or unmanaged risks damaging the project. The transparency of information and knowledge on the project also enables the ever limited project resources to be effectively targeted at areas of the project most in need at the most appropriate time.

Edward is Chief Executive of ResoLex who deliver a project horizon scanning service called RADAR. For further information please visit www.resolex.com or contact Edward Moore at edward.moore@resolex.com. □

WAIT and SEE for EOT

CLIVE HOLLOWAY – PROGRAMMES DELAY EXPERT, DRIVER TRETT SINGAPORE EXPLORES THE CURRENT 'WAIT AND SEE' APPROACH BEFORE APPLYING FOR AN EXTENSION OF TIME AND THE NEED FOR MORE CERTAINTY IN BASELINE PLANNED PROGRAMMES.

Matter of Fact

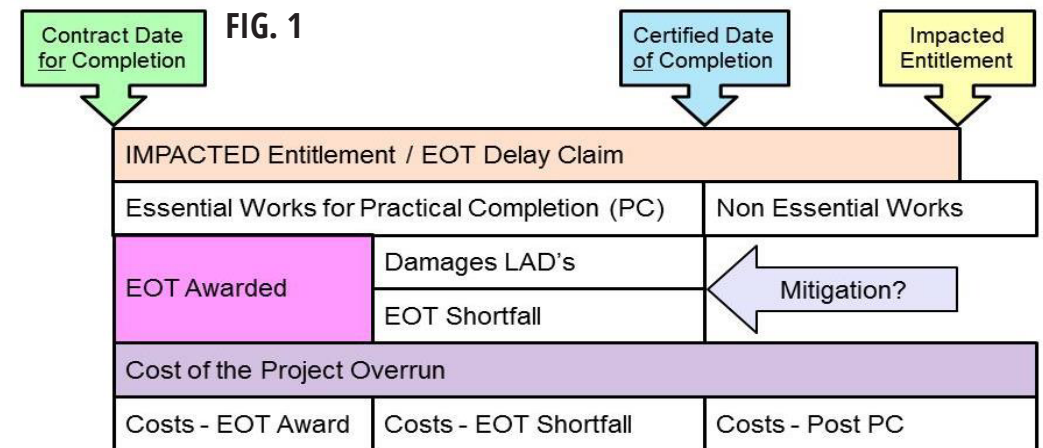
There is a school of thought that says delay is simply a matter of fact. However, this seems to promote the 'wait and see' scenario; where in the assessment and evaluation of main contractor extension of time (EOT) entitles the resident engineer (RE), contract administrator (CA), and supervising officer (SO) opt to 'wait and see' if a delay does actually transpire (as a matter of fact) subsequent to the event occurring; instead of awarding EOT based on theoretical projections of as-planned programmes, of what might happen as a result of the relevant delay event.

Programme Deficiencies

We all know that the omissions, faults, and deficiencies that are inherent in baseline planned programmes, make them unworkable, not feasible from the outset, and so unreliable; other commentators seem to concur by saying that planned programmes are a 'best guess' at the time of drafting, and with the often scant information available, as is only to be expected at the early stages of a project. As a result, planned programmes, and the impacted effects generated, are often wildly wrong and so can be misleading.

Prospective or Retrospective

Of course there is always the option to 'wait and see' what delay actually transpires at the end of the project, so EOT would then be based on a retrospective factual view of delay. Though contracts seem to promote for EOT to be assessed and awarded prospectively, based on the likely impacts and theoretical entitlements. However, if EOT is not awarded then contractors are left with uncertainty, because the RE/CA/SO might not accept that the likely delay and impact, based on these deficient programmes, is in fact likely, and so opts to 'wait and see' what actual delay does in fact transpire.



Robust and Credible

Therefore, there is a need for more robust baseline planned programmes, to provide more certainty; however this would require more information to be made available to the planner, when drafting the programme during those early stages of a project. This, in turn, might then make any as-planned impacts of relevant delay events and 'what if' scenarios more credible when presented to the RE/CA/SO and so may secure an EOT early on, based on the likely impact, instead of waiting for the actual impact. A sound reliable baseline plan should predict the impact of events with some accuracy, and so should ultimately reflect the as-built situation, and so mirror the actual effect that results in retrospect.

Constructive Acceleration or Mitigation

Of course the contractor does not want to 'wait and see', and if no EOT is awarded during the currency of the project when it is clearly due, then constructive acceleration is often claimed. This is where the date for completion is not extended as it should have been, and so to avoid delay damages being incurred the contractor has little option other than to accelerate the remaining outstanding works at his

cost. However the client would counter this with an argument that an entitlement to an EOT is not warranted and so the contractor is obliged to mitigate. If subsequent to this an EOT is awarded in the 'wait and see' situation at the end of the project then the cost of mitigation and/or acceleration would appear compensable.

Actual Delay

However, with reference to contracts that only make provision for an EOT to be awarded based on actual delay rather than likely delay then one would have to 'wait and see', in any event. The other point to make is that costs should not be linked to a prospective method, as costs can only relate to actual delay. So we have to 'wait and see' for costs and apply a factual based analysis of delay. The problem being that if a full EOT is granted to coincide with the actual date of completion, the contractor might have incurred costs to mitigate or accelerate the works to achieve completion. Whereas if the contractor's EOT entitlements had been granted earlier in the project, then the impacted date for completion and so claim for EOT might have been for a longer period, than what was in the event actually achieved.

FIG. 1

The graphic above should be fairly self-explanatory and provides a typical representation of the situation at the end of a project, in the 'wait and see' situation, and differentiates the various issues that can confuse the parties with respect to time entitlements, exposure to damages and monetary recompense.

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FIG. 2

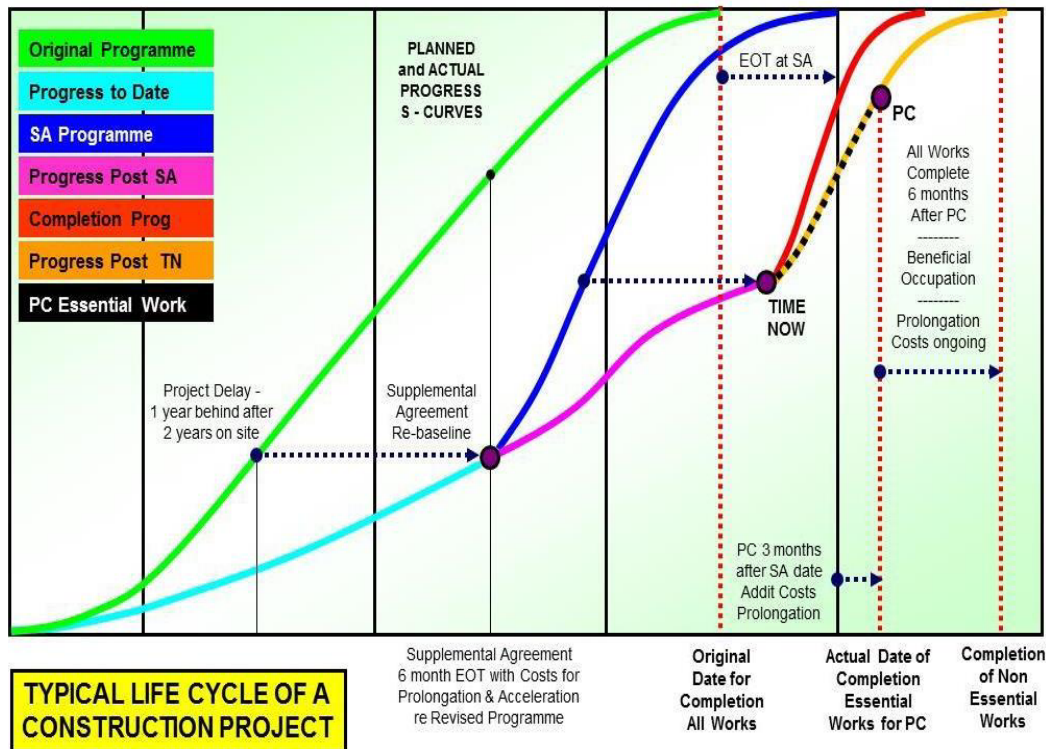


FIG. 2

The progress s-curve graphic above should be fairly self-explanatory and provides a typical representation of the life cycle of a project, and also differentiates the various issues that can confuse the parties with respect to time entitlements, exposure to damages and monetary recompense.

Typical Issues

Often EOT delay entitlements to time are claimed in excess of the certified date of completion for a project, leading one to wrongly assume exaggeration, whereas ongoing costs post the certified date of completion are incurred completing works deemed non-essential for operational purposes or substantial completion. In fact, the prioritising of the works to achieve what is deemed essential for completion could mean that mitigation measures have been necessary. The contractor's exposure to damages will be curtailed at the certified date of completion and when this is compared with what EOT has been granted, the shortfall in EOT and damages will be revealed. Although the ongoing non-essential works post the certified date of completion would not be penalised by way of damages, this prolongation and the cost of the overrun and its recovery would be a contractor risk.

Reference to Case Law

In the *Walter Lilly vs Mackay* case the judge provided comment on the debate re methods of delay analysis and

compared the prospective and retrospective approach; essentially what the judge said was that this debate is sterile because if each approach was done correctly, it should produce the same result. This article highlights why it is rare for the same result to be generated; as it all depends on the exactness and robustness of the original planned programme. Because base plans are poor, the prospective impact and likely effects are unreliable, and they tend to exaggerate matters; so the likely impact is not convincing, hence the tendency is to 'wait and see' what actual impact results. So the retrospective view after the event (based on facts, and with the benefit of hindsight) is often different to the prospective view of what might happen at the time the event occurred (based on predictions using poor plans).

Common Sense

Thus, any prospective analysis will require the sense checking of the results generated by the poor plans, if not then contemporaneous records might have established misguided perceptions, which might have shaped the contrac-

tor's priorities and may have directed perceived criticality. Therefore, a retrospective analysis of actual delay often contradicts these contemporaneous misguided perceptions. Also, in the analysis of delay, one has to consider; concurrency and contractor default events, as-planned critical paths that can change, the as-built critical path can be different again, planned sequences that are often not followed, different methods of working that are sometimes chosen, and then there is the obligation to mitigate, which is confused when EOT is not awarded in a timely manner!

Summary

As this article suggests, the tendency on projects, rightly or wrongly, is to 'wait and see' for EOT (poor baseline planned programmes being a major reason for this) and so EOT is granted later based on facts from as-built programmes. The planned date for completion plans to complete 100% of the works however the actual date of completion is often certified at say 95% complete, leaving the remaining 5% non-essential works to be carried out post completion. □

Back to basics persuading the adjudicator

**MICHAEL TURGOOSE – DIRECTOR,
DRIVER TRETT REVISITS THE
BASICS AND PRACTICALITIES
OF ADJUDICATION.**

Adjudication in its current form has been with us since the Housing Grant Construction and Regeneration Act 1996 was implemented for contracts entered into on or after 1 May 1998.

During the past 15 years or so much has been written by the legal profession, particularly with regards to the legal minefields surrounding adjudication, and I'm the first to recognise and admit there's nothing wrong with that. For example, we all need to know how and when a dispute has crystallised and the circumstances under which an adjudicator can over-step his jurisdiction or fall foul of the rules of

adjudication. Quite often the managing director based in a London addressed head office, for example, will not be the person who will deal with the day to day conduct of proceedings and submissions.

- A brief outline of the dispute and an outline of the issues to be addressed. This need not be extensive but it should at least indicate whether the dispute is building or civils related etc, and whether it concerns quantum and/or planning type matters. The full detail of the dispute is to be set down in the Referral.
- The procedure or rules governing the adjudication. Is the adjudicator to follow the Scheme or some other contractual provisions which meet the requirements of the Act?

nominating body been approached for the appointment of the adjudicator? If wrongly appointed, the adjudicator must resign.

The Referral submission gives the claimant the opportunity to detail its case. The following bullet points hopefully assist in concentrating the thought process and indicating the required content:

- The narrative – make it clear and concise.
- Set down the nature and extent of the dispute in full.
- Set down the material facts relied on.
- State the contract provisions/supporting legal cases relied on (where relevant).
- Apply the facts to the law.
- Fully cross reference any supporting documents relied on to the narrative – make the submission easy to navigate.
- Summarise the contentions.
- Detail the relief required under the contract.
- Conclude with a clear statement reflecting identically the questions as set down in the "Notice of Adjudication".

In the Response

- Generally follow the order of the Referral and apply the same principle headings.
- Use the same paragraph numbering system as that employed in the Referral.
- Employ a 'Scott Schedule' where appropriate to aid understanding of the arguments and quantum involved.

In the Reply to the Response (If any)

- Deal only with matters raised in the Response which are 'new' – don't regurgitate the whole of the Referral again.
- Where possible, use the same paragraph numbering system as that employed in the Response or at least refer to the paragraph being

commented on. The adjudicator should be able to track the arguments through each party submission.

The Adjudicator's Meeting (if any)

- Advise the adjudicator in advance of the names and responsibilities of attendees.
- Bring to the meeting only 'relevant' personnel.
- Nominate a competent representative – 'spokesperson'.
- Deal only with matters raised by the adjudicator.
- The meeting is not an opportunity to advocate your case.

In General

- Comply timeously with all reasonable directions of the adjudicator.
- Ensure all correspondence with the adjudicator is copied simultaneously to the other party. Make this clear on the face of the document you send so no doubt arises.
- Do not telephone the adjudicator unless the adjudicator has directed otherwise. No unsolicited communications to the adjudicator.
- Be courteous and professional in all correspondence.

The adjudicator's role is to decide on the facts and hold on the law.

natural justice.

However, as a practicing adjudicator I know from first-hand experience it's worth spending some time revisiting the basics and reconsidering the practicalities of adjudication. Remember, the whole process is geared towards persuading an impartial third party of the merits of your case. The adjudicator's role is to decide on the facts and hold on the law.

Starting with the *Notice of Adjudication*; this is intended to be a simple document which alerts the opposing party and nominating body or named adjudicator to a dispute to be decided by a third party. It should contain the following information

- The full names and registered addresses of the parties to the dispute. Ideally, it should also contain the name and address of the individual who will be overseeing the conduct of the

- Most importantly, the Notice must include a clear statement of the relief sought by the Referring Party. This is where the adjudicator discovers what he is being asked to do. Anything that follows in the Referral then aims to persuade the adjudicator on the matters identified in the relief sought.

It would be unusual for a Notice of Adjudication to extend beyond three or four sides of A4 paper. Once the parties are identified; the contract and adjudication provisions are known; and the issues and redress sought are set down, then anything else can be saved for the Referral submission.

Of prime importance to the adjudicator is whether the Notice of Adjudication convinces him he has jurisdiction to act. Amongst other things, has the right

Ensure that all hard copy documents are submitted in a good quality two or four hole file which hasn't been overfilled and won't fall apart in the post. All too often the received documents are falling out of the ring binders and/or the files are damaged through inadequate packaging. The same applies to the appendices. Ensure all programmes, drawings and such like are presented in plastic holders strong enough not to tear and fall out of the body of the file.

If you rely on extracts from text books or case law ensure the relevant passages are highlighted for the adjudicator to easily find and to read in context. Don't expect the adjudicator to have to trawl through a thirty page commentary on a legal case just to find the two lines being quoted in the narrative.

In all, most of the above is straight forward and relatively obvious but it is surprising how often the basics are overlooked in the heat of the moment. □

The changing approach to delay analysis

**STEPHEN LOWSLEY – EXPERT,
DIALES DISCUSSES THE CHANGES IN
APPROACH TO DELAY ANALYSIS.**

I started to become involved with contractor's claims as well as formal expert assignments in the mid 1990s. At this time, the generally accepted approach to delay analysis was usually heavily based on critical path analysis and the utilisation of computer software.

Being new to the game I found that on paper the use of the delay analysis techniques available was quite compelling, particularly a technique referred to as the 'collapsed as-built' which seemed to be in vogue at the time.

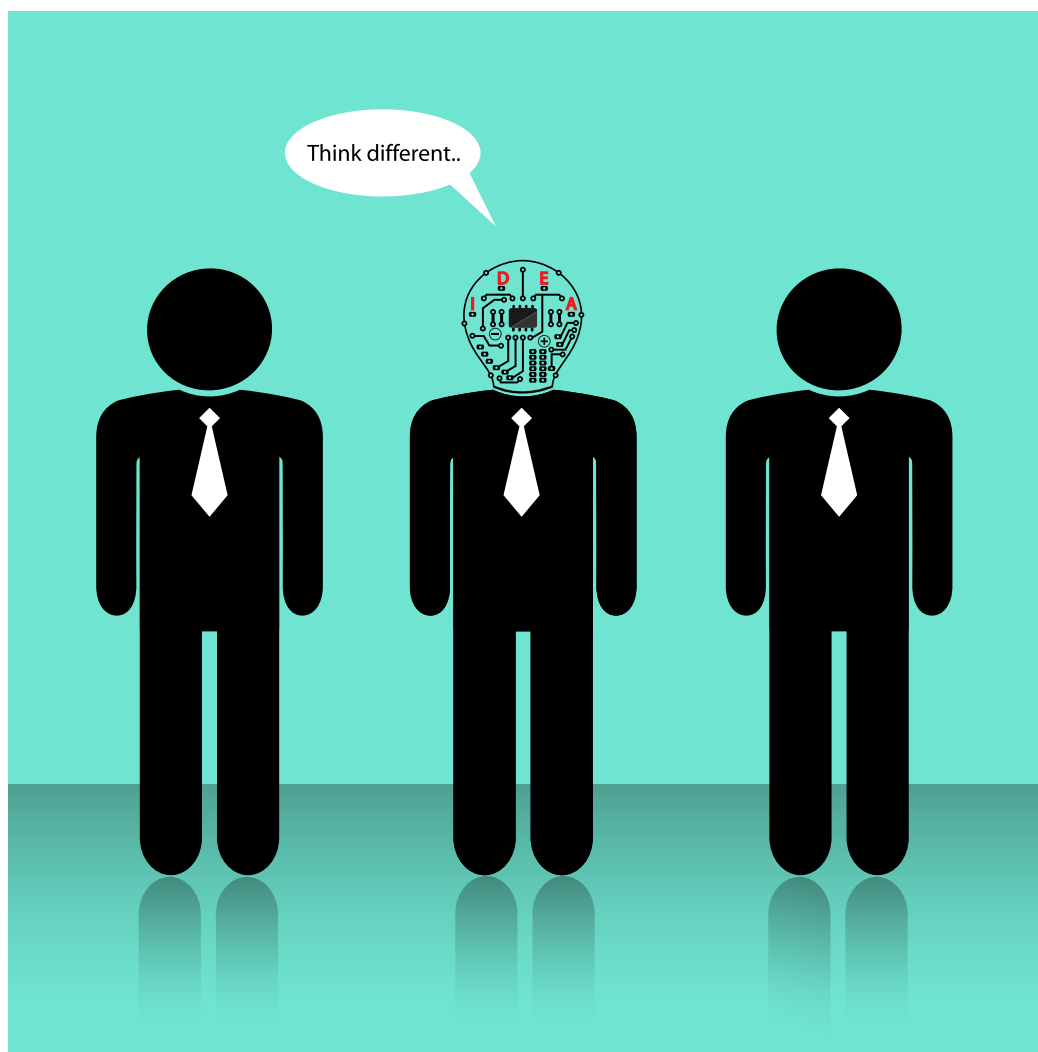
It was only when I tried to use the various techniques that I began to see problems with their application and the results produced. I therefore adopted a more pragmatic approach based on my experience of the construction process.

Unfortunately, adopting such an approach often brought with it some criticism, particularly from the lawyers, due to the fact that I had not adopted a recognised critical path based methodology. How could I possibly say that the delay events were on the critical path? How could I prove cause and effect?

Above all, how could I possibly be a programming expert without producing lever arch files full of programmes to accompany my report?

Today the opposite is likely to be true and I would expect some criticism if I produced a report and solely relied on some form of detailed computer based analysis accompanied by volumes of detailed programmes consisting of many thousands of activities.

In my opinion, over the last 10 to 15 years there has been a fundamental change in the way that delay analysis



is approached with this change being reflected in the views of the courts.

Back in 2002, Judge Humphrey Lloyd in the case of *Balfour Beatty v London Borough of Lambeth*¹ stated, "Despite the fact that the dispute concerned a multi-million pound refurbishment contract no attempt was made to provide any critical path."

The judge goes on to comment that the foundation must be the original programme, subject to substantiation, and

that success will be dependent, "on the soundness of its revisions on the occurrence of every event, so as to provide a satisfactory and convincing demonstration of cause and effect. A valid critical path (or paths) has to be established both initially and at every later material point since it (or they) will almost certainly change."

Based on the above, it would appear that Judge Humphrey Lloyd was advocating a critical path based 'scientific' approach. It is also interesting to note that Judge

Humphrey Lloyd offers no guidance as to any approach, should it be found that the original programme and revisions are shown to be unreliable or simply not available.

At the same time and in October 2002, a prescriptive approach to programming and delay analysis was recommended by the Society of Construction Law in their Delay and Disruption Protocol. This protocol

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suggests that the most reliable form of delay analysis is the technique known as 'time impact analysis' and that it is appropriate to employ it for both the prospective and retrospective analysis of delay.

My own experience at this time was that the use of a computer modelled, critical path based technique was still looked on favourably, although often referred to as a 'black art'. In 2004 and 2005, comments made by Judge Wilcox indicate some doubt as to the reliability of complex analyses.

In 2004, in the case of *Skanska v Egger*², Egger's expert had produced a report of hundreds of pages accompanied and supported by 240 charts. It was found that this analysis relied on untested facts and facts that were proved to be incorrect, prompting Judge Wilcox to say that the reliability of any sophisticated analysis is only as good as the data put in.

Skanska's expert had employed a less complex analysis and was described by Judge Wilcox, "...as someone who was objective, meticulous as to detail and not hide bound by theory as when demonstrable fact collided with computer programme logic. His analysis was accessibly depicted in a series of charts..."

The following year, 2005, Judge Wilcox makes similar comments in the case of *Great Eastern v Laing*³.

Laing's expert had used a technique which involved impacting the planned programme with the alleged delays with Judge Wilcox commenting that the technique, "takes no account of the actual events which occurred on the Project and gives rise to a hypothetical answer." Judge Wilcox further considered that the critical path defined by Laing's expert "collided with reality".

The approach taken by Great Eastern's expert was described by Judge Wilcox as being, "impressive and comprehensive" with the data being, "objectively evaluated and reflected in expressed opinion."

Although in the above two cases it is difficult to assess the techniques that were preferred by Judge Wilcox, he clearly did not look favourably on the complex, computer based techniques provided by Egger's and Laing's experts.

Two years later, in 2007 in the Scot-

tish case of *City Inn v Shepherd*⁴, Shepherd's expert had used a simple planned v as-built approach and accepted that a weakness was that it did not "identify the critical path and therefore needs to be used with great care and understanding". This was criticised with *City Inn* saying that without identification of the critical path Shepherd's expert could provide no meaningful opinion.

Lord Drummond Young said that *City Inn*, "clearly went too far in suggesting that an expert could only give a meaningful opinion on the basis of an as-built critical path."

City Inn's expert had used an as-built critical path analysis which was found to be flawed mainly because of the applied logic. In respect of this, Lord Drummond Young considered that a major difficulty, "is that in the type of programme used to carry out a critical path analysis any significant error in the information that is fed into the programme is liable to invalidate the entire analysis."

Lord Drummond Young concluded that it was easy to make such errors and because of the errors identified said, "Consequently I think it necessary to revert to the methods that were in use before computer software came to be used extensively in the programming of complex construction projects".

He went on to state, "Those older methods are still plainly valid, and if computer-based techniques cannot be used accurately there is no alternative to using older, non-computer based techniques."

In respect of critical path analysis techniques, I concur with Lord Drummond Young's opinion that, "any significant error in the information that is fed into the programme is liable to invalidate the entire analysis."

Critical path analysis provides a precise answer and therefore requires precise data and not only error, as considered by Lord Drummond Young, but general uncertainty will give misleading results.

This problem was succinctly described by lawyer Doug Masson who, when discussing problems with applied computer logic and causation, said "CPA [Critical Path Analysis] becomes as stable as a house of cards" In 1995, the time

any significant error in the information that is fed into the programme is liable to invalidate the entire analysis.

at which this comment was made, it was in my opinion insightful and probably considered as being a little radical.

In the 2012 case of *Walter Lilly v Mackay*⁶ due to a lack of contemporaneous programmes both experts agreed that, "it ought nevertheless to be possible to form conclusions on criticality during this period, based on an objective view of the available evidence."

Mr. Justice Akenhead commented that "both delay experts' approach ...involved in reality doing the exercise that the Court must do which is essentially a factual analysis as to what probably delayed the Works overall"

I think that the judge's use of the phrase "probably delayed the Works overall" is very pertinent. The use of critical path for the analysis of delay gives the illusion of certainty, whereas in reality it is often very difficult to define the causes of delay with such certainty, opinion will be based on the 'balance of probabilities'.

Although I have 'cherry picked' the above case law and references they reflect the trend that I have experienced over the last ten years or so, that is a move away from complex computer based methodologies to a more pragmatic view based on experience and the facts of what actually occurred.

When preparing an expert report, I endeavour to provide transparency and apply common sense experience rather than theory, and above all I rely on the facts.

I am not suggesting that the computer is switched off and un-plugged, the use of critical path analysis can be invaluable, however it is important to understand the potential shortcomings and difficulties. I do, however, have some concerns in respect of the sole reliance on a critical path based model as it is likely to be overly complex, difficult to interrogate, contrary to the facts and misleading. □

1 Balfour Beatty Construction Ltd v The Mayor and Burgesses of London Borough of Lambeth [2002] BLR 288

2 Skanska Construction UK Ltd v Egger (Barony) Ltd [2004] EWHC 1748, TCC

3 Great Eastern Hotel Company Ltd v John Laing Construction Ltd [2005] 99 ConLR 45

4 City Inn Limited v Shepherd Construction Limited [2007] CSH 190

5 Masson, D. Following the Critical Path, Contract Journal 16 Feb 1995 P34-35

6 Walter Lilly & Company Limited v Giles Patrick Cyril Mackay [2012] EWHC 1773 (TCC)

CASE STUDY: GAS TERMINAL

Defence of a delay and extension of time claim with associated costs

THE CLIENT

A large worldwide oil and gas organisation.

THE PROJECT

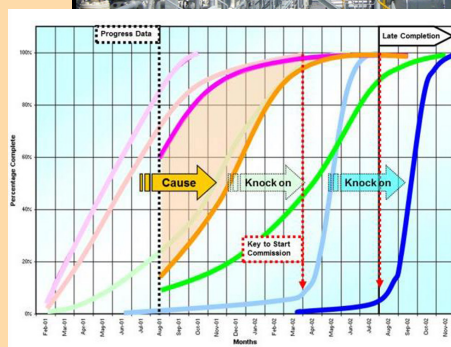
The construction of a gas offshore facility, pipeline, and onshore terminal in South Vietnam, which was awarded to a major Australian main contractor, and the contract works included for the engineering, design, procurement, manufacture, fabrication, delivery to site, assembly, installation, construction, testing and commissioning, and start up.

THE DELAY

The client was of the opinion that the project suffered delay primarily due to the contractor failing to expedite orders for the long lead major items of plant and equipment, and so obtain vendor data to enable the engineering design to be further progressed and detailed, to allow fabrication and manufacture to commence, and the approved for construction civil details and foundation dimensions to be finalised. However, the contractor claimed that the delay was due to many global issues, and so created numerous heads of claim, the main bone of contention, being the alleged inadequacies of the base design. The contractor not only was looking for an extension of time (EOT), but also recompense of all costs related to the delayed periods.

THE BRIEF

To analyse, assess, evaluate and establish the appropriate EOT that was due to the contractor, based on the problems encountered throughout the project as outlined in his claim. The direct effects of delays were easily identifiable in



most cases, however the consequential effect upon the overall completion of the project was not as easy to find. The client knew and accepted that he was at fault to some extent and to a certain degree by instructing change, but felt that the contractor was taking advantage of the situation to recover time and money for his own defaults and inefficiencies. Not surprisingly concurrency was a major factor and the timing and significance of events was an issue. It was necessary to demonstrate that in any event the works would not have been completed any earlier but for the contractor's own delays. Although, an EOT entitlement

wanted to assess how much EOT the contractor was in fact due, in order to fairly assess and reasonably evaluate the appropriate compensation and so pay costs that were factually due and not that were fictitiously claimed.

THE ANALYSIS

An as-built programme was quickly developed from progress data and site photographs and this was compared with the planned programme. Productivity curves were produced from the contemporaneous site records for the key elements of the work, to identify where the project suffered delay. It

was apparent, based on the theoretical likely impact of the relevant events at the time, this did not automatically entitle costs as this would require a factual analysis of actual delay and consequences that transpired. However, in the absence of this from the contractor the client

was clear that early on in the project the procurement operation off-site in Australia did not perform and resulted in the team being relocated to site. The consequential affect delayed the procurement of the major items of plant and equipment and although unforeseen ordinances delayed the civil works, ultimately the concrete base foundations were constructed months ahead of the plant and equipment arrival on site. The contractor's culpability and own default was revealed as the most significant delay issues.

THE RESULT

Several letters of rebuttal of the contractor's claims were issued and the threat of arbitration was subdued. A realistic figure was formulated to reflect the client's potential exposure and so, in any future negotiation, the client would be well informed of what the claim was really worth, and in a strong position for striking a settlement deal. □

PLAYING ON THE WING

PETER DAVISON – HEAD OF DIALES PROVIDES SOME THOUGHTS ON THREE-MEMBER TRIBUNALS AND THE ROLE OF PARTY NOMINATED ARBITRATORS.

Having spent practically all my, now historic, rugby career in the front row I never thought I could ever be a 'wing man'. However appointments to three member arbitration tribunals have resulted in me being a wing man in my professional life working alongside another wing man^{1, 2} and a tribunal chairman.

The adoption of arbitral tribunals composed of three members is common, particularly in arbitrations with an international element, but there is sometimes misunderstanding of the

the opportunity it offers for the members to share the workload and discuss the issues and matters arising, is especially valuable.

benefits of such tribunals and especially the role of arbitrators nominated for appointment to the tribunal by one of the parties to play a role as a wing man. Some of the obvious issues are:

- Is the wing man merely present to represent the party that nominated him?
- Can the wing man leave all the procedural issues to the tribunal chairman?
- What should he do if he disagrees with his colleagues on the tribunal?

These are just some of the issues apparent to anyone unfamiliar with wing play in the arbitral context, along with the basic issue of why the parties would prefer

to have three arbitrators instead of one!

Disadvantages of three member tribunals

The disadvantages of a three arbitrator tribunal are usually easily identified, the most obvious being the need to pay the fees and costs of three tribunal members rather than one and the difficulties that often occur in coordinating and agreeing dates for hearings to suit three arbitrators rather than one. The latter disadvantage can cause further difficulty in the internal arrangements of the tribunal when it is necessary to consult or confer in respect of interlocutory applications and submissions or for the drafting of awards. This internal difficulty is often exacerbated by geographical separation of the tribunal members.

It is therefore sometimes considered that the deliberations of a three-member tribunal will necessarily take longer, and cost more, than an arbitration by a sole arbitrator.

There is, of course, always the potential for further internal stress within the three member tribunal arising from clashes of personality or culture where the tribunal members are drawn from different countries and have probably not previously worked together, or have even been aware of each other prior to the appointment. Such stresses are inevitably increased if it appears that an arbitrator is not acting impartially or does not respect the confidentiality of the tribunal's deliberations during or after the reference.

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In practice, some of the difficulties caused by geographical separation can be significantly reduced by modern telecommunications and the use of video conferencing is becoming more common in addressing at least some of these issues. The problems of personality clashes are simply a hazard to be balanced against the advantages of a three-person tribunal and impartiality and confidentiality are discussed further later, as are the difficulties raised by the issuing of minority or dissenting opinions.

Advantages of three member tribunals

On the positive side, the most obvious advantage of a three-member tribunal is the opportunity it offers for the members to share the workload and discuss the issues and matters arising, especially valuable on large and complex cases where the potential for testing views within the tribunal can be very valuable. This advantage is further enhanced where the parties require a range of qualifications within the tribunal, technical and legal, or where the parties are of different nationalities and are reassured if the composition of the tribunal reflects the parties themselves. That is not to suggest that selection for nomination should ever be purely the desire to have one of one's own countrymen on the tribunal, the overriding criteria must always be the candidate's ability to act as an impartial and independent arbitrator on the issues before the tribunal.

Having a tribunal with varied backgrounds and qualifications is an obvious plus on matters such as large international construction projects where claims and counterclaims might easily encompass alleged variations to the works, delay and/or disruption to programmes of work, late or defective design information, materials being supplied contrary to the contract specifications and work being executed to defective designs or with defects of workmanship. Such a range of disputes within a reference is not uncommon, nor does it begin to be an exhaustive list of potential allegations, so the facility of having tribunal members for a large construction related dispute with technical or commercial experience, architects, engineers, or quantity surveyors, alongside one or more legally

qualified arbitrators, is readily understood. Equally it might be desirable for one or more of the arbitrators to have experience of a particular industry rather than general construction industry experience, e.g. in the field of oil and gas installations, or marine construction, etc. The same can of course be readily applied to arbitrations in other spheres and it has been suggested by leading figures in the field that a tribunal composed of two suitably experienced professionals with a legally qualified chairman is possibly an ideal arbitral tribunal¹.

There is, however, always the matter of balance. As the wing men are nominated by the parties, there will generally be no consideration of how a balance is to be achieved, leaving the possibility of a tribunal with two party nominees with identical backgrounds when two from differing disciplines might have been preferable. If the ideal is to be achieved there may, in theory, be a case for the appointing body to control appointments to achieve a required balance, but in practice this would almost certainly cause more difficulties than it would solve.

More easily overlooked is the equally important ability to have a tribunal representing the geographical base of the parties when the parties are from different countries or regions with different cultures and legal systems. If this means party nominated arbitrators being from the same country as the party that nominates them then there is an obvious preference for the third member, usually the chairman, to be from a different country to the parties to provide a tribunal that does not have an apparent geographical or cultural bias. Indeed, some arbitral rules require the third arbitrator to be from a different country to the parties in the absence of agreement otherwise⁴.

It is important, however, that a party nominating an arbitrator to a tribunal understands that, once appointed, the arbitrator's duties and obligations are independent of the nominating party and the arbitrator has a duty to act objectively and impartially. To arbitration practitioners and others familiar with the process this might seem self-evident but there is a need for arbitrators not only to be impartial and independent but also to be seen to be so. Without such qualities, arbitration falls into disrepute and loses not only the confidence

of the legal authorities that users rely on for enforcement of awards but also the confidence of the business community that constitute the customers of arbitration services.

One does not need to look too far to find evidence that the confidence that arbitration needs to command is not always perceived by the international business community. For example, in arguing the case for revisions to the law in the UAE in order for that region to win more business, a prominent business leader stated:

"Major issues that are taken for granted in other financial and economic powerhouses, such as precedent setting, a speedy trial, judges who understand the business world, unbiased arbitrators and binding contracts

a tribunal composed of two suitably experienced professionals with a legally qualified chairman is possibly an ideal arbitral tribunal

are not guaranteed in the UAE⁵."

There is therefore at least a perception that arbitrators in some regions are not always unbiased and one of the prime aims of the appointment procedure for tribunals must be to promote and protect the concept of impartial and independent arbitration.

Appointments and duty

The UNCITRAL Model Law⁶ states at Article 10 that the parties are free to determine the number of arbitrators but, failing such determination, there shall be three arbitrators. The default position under the Model law is therefore for a three-member tribunal. The procedure in Article 11 for the appointment of arbitrators then provides for each party to appoint one arbitrator with the two arbitrators so appointed then appointing the third arbitrator, with provision for court appointments in the event that the parties or nominated arbitrators fail to appoint as required.

Article 12 requires that any person approached in connection with a possible appointment as an arbitrator has to disclose any circumstances that could provide reasonable doubt as to their ability to act impartially or independently in the referral, and there is an ongoing obligation on the arbitrator to disclose any circumstance that could lead to their impartiality or independence being challenged.

The requirement for arbitrators to be independent and impartial is therefore intrinsic to appointments under UNCITRAL model laws.

The rules of a number of international appointing bodies do not have the three-member tribunal as the default option but have a sole arbitrator preference unless the parties have expressed a desire for a number of arbitrators, with the proviso that the appointing body can appoint three arbitrators if it is considered that the dispute is such as to warrant an appointment. Such provisions are found, for example, in Article 8 of the ICC Rules⁷ and Article 8 of the DIAC Rules⁸.

Both the ICC and DIAC Rules, at Article 9.2 and Article 9.1 respectively, require arbitrators to be, and remain, independent and impartial. The DIAC Rule specifically stating that an arbitrator shall not act as an advocate for any party in the arbitration. The arbitrator will also need to consider the rules of professional bodies of which he is a member as these may also contain relevant codes of practice and guidelines.

Similarly the LCIA⁹ imposes a positive obligation of independence and impartiality on arbitrators with Article 5 having a formal certification process, and party appointments being respected subject to power of veto by LCIA in extreme circumstances. □

For the full article please follow this link to the Driver Trett website <http://www.drivertrett.com/doc/53.pdf>

¹ 'Wing Man' is a term commonly used to describe the co-arbitrators sitting either side of the chairman in a three person tribunal

² In this paper references to the masculine are intended to include the feminine.

³ E.g. Lord Mustill, Closing Address at inaugural CIARB Mustill Lecture, Leeds City Hall, 8th October 2010

⁴ For instance, LCIA Rules 1998, 6.1

⁵ 'UAE needs to revisit laws to win business', Mishal Kanoo, Deputy Chairman, Kanoo Group, Gulf Business, October 2010

⁶ UNCITRAL Model Law on International Commercial Arbitration, as adopted by the United Nations Commission on International Trade Law on 21 June 1985

⁷ International Chamber of Commerce, Rules of Arbitration as in force from 1 January 1998

⁸ Dubai International Arbitration Centre, Arbitration Rules 2007

⁹ London Court of International Arbitration Rules, 1998, 5.2

Focus on...Africa

JOHN MESSENGER – REGIONAL MANAGING DIRECTOR FOR DRIVER GROUP IN AFRICA INTRODUCES THE ARTICLES WHICH FOCUS ON THE REGION.

As we head into another new year we are pleased to present a Digest focused on Africa, one of the world's most exciting developing regions. Driver Group Africa has been established in South Africa since 2009 and services the whole of the African continent from its Midrand offices near Johannesburg and Pretoria.

This edition of the Digest includes contributions covering all of our African business streams.

Warren Eales talks about the importance of programme planning, the current shortages of experienced planners, and his plans for training courses aimed at improving matters at both the site level and corporately; something which virtually all clients and contractors will be acutely aware of.

From our initial success in South Africa we are planning to expand our PPP services to all of our other international regions over the next 12 months. Maggie Sellwood sets out the key factors for success on any PPP project wherever it might be.

Christo de Witt outlines the new project services offering which Driver Group Africa are now providing for larger projects with longer term staffing requirements.

We also have valuable contributions from three invited guest writers.

For those organisations looking to move into Africa we have an interesting article on the prospects for the sub-Saharan region from our guest writer Paul Runge. Driver Group Africa would be delighted to help any organisation looking at the African region with assistance and local support.

Charles O'Neill talks about the need for high level risk management to avoid the ever increasing numbers of serious project failures. Charles was formerly the Chief Operating Officer for the investments divi-

sion of a major international contractor where he developed and implemented a practical system of risk management covering all levels of their business.

Vaughan Hattingh offers a view on the development of arbitration in South Africa and its growing acceptance by the courts.

We trust that you will find something of interest in this edition and would welcome a call if there is anything which we can help you with. Wherever in the world you might be located Driver Group has a local office that would be pleased to assist. □



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The importance of good practical programme management

WARREN EALES – DIRECTOR OF PROGRAMME MANAGEMENT, DRIVER GROUP EXPLORES THE NEED FOR PRACTICAL PROGRAMME MANAGEMENT ON A PROJECT OF ANY SIZE.

Delays and problems on projects leading to claims and disputes frequently revolve around issues with the project programme and quickly expose both the client's lack of specified programme management requirements and the contractor's failings in establishing, and monitoring, and updating a representative schedule for the works. A loss of programme control of a project deprives the project manager, the client and the contractor of the critically important management tool that allows them to understand and assess the implications of any proposed change or delay

on the project. Resort to the contract rarely provides a useful basis for resolving these matters and hence the situation often worsens and ultimately leads to attempts to 'forensically' reproduce the actual programme as it developed on site. All of this simply emphasises the importance of good practical programme management throughout any project of whatever size.

Much of the problem stems from a serious lack of experienced programme planning staff on site during the construction period and perhaps also from the fondness for programming software which

is often too sophisticated and cumbersome for the job in hand. The advent of 'accredited users' has not improved the situation as it has simply yielded large numbers of 'planners' who know how to operate the software but do not have the construction knowledge or experience to create/derive the key activity sequences. It is easy to produce vast, and seemingly detailed, programmes by replicating repeat operations without ever understanding the true logic. This lack of knowledge and experience does not seem to have held back the cost of planning personnel which seems to escalate daily and in turn feeds the 'job hopping' phenomenon which is now widespread.

In an attempt to help this situation, Driver Group Africa is now offering a training

course for planners and site managers which is aimed at raising awareness of the issues and at lifting standards. Seta accreditation is currently being sought for this course which we offer to organisations for group bookings. It is anticipated that, following accreditation, the courses will be offered for individual bookings and will be run on a regular basis. A further version of the course is aimed at contractors and clients at the corporate level with a view to providing advice on a programming infrastructure that services larger numbers of projects and provides for corporate oversight. □

For more details of the planning training offered by Driver Group Africa please contact warren.eales@driver-group.com or johannesburg@driver-group.com.

Key success factors for PPP projects

MAGGIE SELLWOOD – ASSOCIATE DIRECTOR, DRIVER GROUP CONSIDERS THE REQUIREMENTS FOR SUCCESS IN PUBLIC-PRIVATE PARTNERSHIPS.

This article identifies some key success factors for public-private partnership (PPP) projects and whilst these are well known, many potential PPP opportunities continue to be delayed or prevented as a consequence of these factors not being adequately addressed. It therefore seems appropriate to revisit some fundamental requirements for success, which also form the basis of Driver's Transaction Advisory service offering to a wide range of clients involved in the development, procurement and management of PPP projects.

Clear Government commitment with appropriate policies, legislative and regulatory framework

Governments have a key role to play in developing an environment conducive to PPPs, as concessioning of infrastructure services is complex and raises new sets of questions for

the public sector administration.

To provide confidence to investors, governments require a robust enabling policy and regulatory framework at national and local level. In addition, it is a prerequisite for transparent approval and bidding procedures. The private sector will expect government to be a competent partner in discharging its obligations in terms of policy and reform planning, project development, and contract oversight. It will also expect that the government has established the appropriate legal and other frameworks to set targets, monitor progress, evaluate progress, report progress, enforce the contract provisions, and handle disputes.

A government's commitment is demonstrated through a public statement of the reform strategy and expectations of PPP; through stakeholder consultation and transparency of process; through

the provision of adequate funding and support for the process; and appointment of a champion. It is essential for governments to retain qualified and experienced experts who are able to provide sound advice on the range of issues and to ensure the coordination between the various finance and sector ministries at national and local level.

Political changes and powerful vested interests can all constrain the PPP process. The government has to set out the case for PPP in a convincing and transparent manner, anticipating concerns and questions. In this way, broader support for PPP can be earned to withstand shorter-term political pressures. Popular support for PPPs is ultimately gained through results of improved service and reasonable costs. Government has to be seen as advocating the process that will be accountable to the people and provide benefits.

Thorough Feasibility Assessment

A comprehensive and rigorous feasibility is critical to attract investment and to ensure the long term success of PPPs. It is essential to demonstrate the project is technically, financially, and legally viable as a PPP, or whether conventional procurement is appropriate. It further sets out the procurement process through to contract negotiation and financial close and provides a staged framework for treasury sign off and approval, prior to procurement. The critical elements of the feasibility assessment are outlined below.

Financial Viability Bankability

A PPP project is considered bankable if lenders are willing to finance it, with the majority funded on a project finance basis where a special purpose vehicle is established to ring fence the project revenues and debt liabilities. They are sometimes funded by sponsors of the concession company or

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a combination of both. It is critical that the financial risks are assessed thoroughly, the financial risks tend to be related to:

- Reliance on optimistic revenue assumptions and predicted levels of demand from a poorly chosen 'baseline' case lack of attention to the project's
- Financing needs at the early stage, which leads to larger amounts of debt in projects than is optimal or bearable
- Financing with short-term debt, with an unjustified assumption that short-term debt can be refinanced at the same or even better terms; and floating rate debt that creates interest rate risk

If a project faces bankability issues, the government may consider providing guarantees, but the impact of this on risk allocation and its future implications needs careful consideration.

Affordability and Value for Money

Successful PPPs have a clear business plan that defines its purpose and how it will be funded, its operating model, a governance plan, and an implementation plan. This business plan ensures that all partners understand the key success factors, and that the PPP is prepared to address all challenges that may arise.

Affordability relates to the capacity to pay for building, operating and maintaining the project, be it the capacity of users to pay for the services or that of the government that has identified the need for the asset to be built. An affordability assessment requires a careful analysis of the expected operating and maintenance costs, together with the levels of cash flow required to repay the loans and provide a return to the investors. During the financial modelling, alternatives are assessed in terms of a range of capital, operating and maintenance cost estimates, appropriate cost escalation indices, assumed financing structure, and PPP contract terms.

In PPPs where users pay directly for the service, the government needs to examine the capacity and willingness of users to pay, especially if tariffs need to be increased from current levels. The public sector may need to subsidise the service in order to make it affordable and the use of



public subsidies can impact the value for money of a PPP arrangement, requiring that the efficiency savings from the PPP option be large enough to compensate for the use of public funds.

A PPP project achieves value for money if it costs less than the best realistic public sector project alternative (a hypothetical version of the project) which would deliver the same services, the 'public sector comparator'. The key question in assessing value for money is whether the greater efficiency of the PPP project is likely to outweigh factors that might make the PPP more costly. The assessment should also take into account the potential non-financial benefits such as the accelerated and enhanced delivery of projects. The likelihood that a PPP project will provide value for money is higher when all or most of the following conditions are met:

- Major investment is involved, which would benefit from the effective management of risks associated with construction and delivery.
- The private sector has the expertise to design and implement complex projects.
- The public sector is able to define its service needs as outputs that are written into the PPP contract ensuring effective and accountable delivery of long-term services.
- Risk allocation between the public and

private sectors can be clearly identified and implemented.

- It is possible to estimate on a whole-life basis the long-term costs of providing the assets and services involved.
- The value of the project is sufficiently large to ensure that procurement costs are not disproportionate.
- The technological aspects of the project are stable and not susceptible to short-term or obsolescence.

Adequate Assessment Risks and Appropriate Risk Allocation

Concession agreements are typically long-term and relatively complex forms of contract compared with other methods of procurement. Risks therefore need particular consideration, both in the short term with respect to the construction period, and in the long term operation of the assets, ownership and handover arrangements, and the projected income return and realisation of the benefits. The concession agreement should clearly define the allocation of responsibility of the risks and have flexibility to accommodate changes over the lifetime of the concession.

Successful PPPs require appropriate allocation of risk, PPP is not simply a vehicle to transfer all risks to the private sector, as perceived by some government organisations. A risk management plan

should be developed by each party early in the PPP process for political, technical, financial and commercial, legal, and project/site specific risks so that in the event of a particular risk arising it becomes a matter of implementation rather than delay and discussion.

Justifying the PPP option also depends on the ability to identify, analyse, and allocate project risks adequately, including any risk-sharing between the parties. Failure to do so will have financial implications for the public sector and/or the failure of the project to achieve its objectives. The risk assessment at feasibility stage needs to be revisited during procurement to ensure potential bidders have adequately addressed the private sector risks and risk mitigation during the finalisation of the concession agreement. Risk management is an ongoing process which continues throughout the life of a PPP project.

Conclusions

Whilst these key success factors appear obvious and necessary, in Driver's experience, whilst some attempt is made by the public sector to address them, feedback from a number of lenders is that too few bankable projects are put forward. Whilst the projects may themselves be suitable for PPP, their financial, legal and technical viability is not adequately demonstrated to provide the confidence needed for investment.

DRIVER SERVICE OFFERING

Driver has developed the Transaction Advisory and Project Management service offering on the basis of our in-depth knowledge and understanding of the critical success factors of PPP projects. This ensures that the parties involved including government, bidding consortia and lending organisations have the confidence to procure our services at any stage in the PPP process to ensure that the benefits of PPP are realised.

Driver is currently the lead transaction advisor on a number of major PPP projects in Africa and now intends to roll out this service offering across our geographical regions. □

Further details are given under strategic project management on our website at www.driver-group.com

The demand for managed project services

CHRISTO DE WITT – DIRECTOR OF DRIVER PROJECT SERVICES, DRIVER GROUP EXPLORES THE BENEFIT OF THE INTEGRATION OF INDIVIDUALS AND TEAMS FOCUSED ON PARTICULAR PROJECT CONTROLS.

While global growth remains relatively subdued, emerging economies like South Africa and other Sub Saharan African countries are experiencing an upturn in their economies, driven by the quest for minerals and by development programmes such as the New Partnership for Africa Development (NEPAD), the Programme for Infrastructure Development in Africa (PIDA), the Presidential Infrastructure Coordination Commission (PICC), and the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), to name but a few. These programmes have been established to “fast track” development. These well-established programmes have had varying degrees of success, but are supported by institutions such as the World Bank, Development Bank of Southern Africa (DBSA), and the African Development Bank (AfDB) who contribute significantly to infrastructure development and social progress to improve the quality of growth of the African continent.

Current development projects in the power, transportation, water supply, mining, and the petrochemical sectors are large by any international standards and the list of further major infrastructure investment seems virtually unlimited.

This expansion in infrastructure development has emphasised the hugely significant skills shortages which not only affect Africa but are a major problem throughout the world.

Large projects frequently bring a further set of additional staff problems associated with location, long construction periods, and the scale of the numbers of

people needed to man the delivery teams of both clients and contractors.

Organisations and projects worldwide now compete within a relatively small pool for competent construction industry professionals. Although there are some tax benefits for Africa nationals working outside their own country, Africa frequently does not compete well against areas such as the Middle East which offer significant tax incentives.

As most organisations have cut back on permanent staff over the years, the solution to staffing large projects (and now the smaller undertakings as well) has been the ability to draw staff from wherever they can be obtained and to form bespoke teams for each project. This approach brings its own problems as teams, systems, etc. all have to be set up each time and little experience or history travels from one project to the next. An improvement on setting up complete teams from scratch can be a version of the task force approach in which particular elements of the project controls requirement are packaged to separate organisations who provide personnel and systems to sit within the contractor's or client's own organisation. The client or contractor then retains the responsibility to manage the various project control packages and to integrate them together.

The process of finding enough personnel to form the necessary teams is fraught with problems, cultural and language differences simply add further to the difficulties. Most project organisations are therefore now plagued with shortages of staff, poor levels of experience and capability, and a high turnover of the staff



that they do manage to attract. The cost of this in terms of recruitment costs, inefficiencies, and lost time are significant and feed the picture of under-performance, over-runs, claims, and disputes that pervades the industry.

In setting up Driver Project Services business stream, we set out to develop services which are culturally attuned to the African market place and which address the current problems. Searching for staff overseas will undoubtedly continue and we will need some overseas staff to help guide the work in the short and medium terms, in the long term however the solution lies with focusing on local resources and finding ways of using them whilst they gain experience.

Mentoring is fine but you cannot ‘put an old head on a young pair of shoulders’ or short-circuit the process and time it requires to develop experience. Fundamental skills development gained from a mixture of direct training and ‘on the job

experience’ is what is required, underpinned by senior people and a system of guidance which recognises the need to build good people into stand-alone professionals.

Driver Project Services aims to provide key individuals and teams focused on particular project controls, (i.e. quantum, programming, change control, contract administration, etc.) to work in client and contractor's teams and under their direction. What distinguishes our approach is that we will provide regular reviews of progress and performance aimed at ensuring that our people meet the standards expected of them and support them with ongoing bespoke training. The team can be further supported by the Driver global team of experts who have wide experience not only in solving existing problems on live projects but also in assisting contractors and clients to prevent these problems occurring in the future. □

Sub-Saharan Africa's 'hotspots', 'warm spots' and 'bubbling spots'

PAUL RUNGE – FOUNDER AND OWNER OF AFRICA PROJECT ACCESS, SETS OUT THE PROSPECTS FOR THE SUB-SAHARAN AREA.

Most of Sub-Saharan Africa is experiencing an economic boom. Countries have been registering 5-8% growth rates over a sustained period and there has been a major increase in project flow over the past few years. This flow is not only positive from the point of view of quantity but also from that of improved quality.

Our invited writer, Paul Runge from Africa Project Access, sets out below the prospects for the sub-Saharan area.

Sub-Saharan Africa is endowed with what the world wants: mineral resources, oil and gas, and agricultural commodities. A wide array of companies including the formal colonial powers, China, India, Brazil, and those less talked about such as Turkey, are involved in what observers call the 'third scramble for Africa', this time based on resources and commodities. Despite fluctuations in world prices the situation has globalised and it seems that the whole world is now beating a path to Africa. In Mozambique's coal-rich Zambezi Valley for example, companies from Australia, India and Kazakhstan, (amongst others) are active. Mineral riches are however often stranded at remote sites without the necessary land and port infrastructure to exploit them. Governments are therefore trying to attract 'big ticket' investors and donors to enable them to develop these resources. Logistics, as well as finance, permeate the strategies of the operators and investors, such as the rail lines required for the evacuation of Mozambique's coal. Companies are compelled to seek strategic alliances and form consortia to optimise their efforts and to provide the capital required.

Areas where there is major activity can be described as 'hotspots' while 'warm spots' are showing considerable potential

but have yet to be fully exploited. There are also 'bubbling spots' which have yet to be sufficiently appreciated by the investor community. These development nodes and their major anchor projects act as catalysts for national and regional economic development and support the growth of major infrastructure and communication/transportation corridors. A good example is the relatively recent gas finds in the Mtwara area of southern Tanzania which have galvanised the Mtwara Corridor and rendered feasible a number of other projects along the route.

Undoubted 'hotspots' with considerable current activity include:

- The Tete area of Mozambique's Zambezi Valley based on the vast deposits of coking and steam coal.
- The Solwezi/Lumwana area of Zambia's North West Province with major copper deposits.
- The Pemba area of northern Mozambique based on the huge gas reserves of the Rovuma Basin.
- The Mtwara area of southern Tanzania also centred on the Rovuma Basin reserves.
- Numerous iron ore projects along central and West Africa.

'Warm spots' with considerable known potential but held up by political issues, overriding transport difficulties, technical complications and other factors include:

- Guinea Conakry based on some of the richest iron ore deposits in the world at Simandou.
- The Lake Albert area of Uganda where substantial oil deposits remain largely undeveloped.

- Botswana with its huge coal potential but transport challenges.
- South Sudan with its large oil reserves but political problems with its northern neighbour and an as yet undeveloped alternative transport route to the sea.
- The Belinga area of Gabon where concessions pertaining to the iron ore deposit have yet to be fully clarified.

'Bubbling spots' that may emerge as major opportunity areas include:

- The Luapula Province of Northern Zambia where manganese deposits and agricultural potential could be realised once the rail route to Lobito in Angola is completed.
- The Niassa Province of northern Mozambique which is reported by some to have coal deposits in excess of the Zambezi Valley.
- Southern Angola where there is mineral and iron ore coupled with agricultural potential.
- Growing activity in southern Madagascar on the back of the ilmenite operations there.
- The Arusha area of Tanzania which is being stimulated by mining activity.
- The Kimpese area of the DR Congo where major limestone deposits will be fuelling industrial activity.

The recent discovery of oil in northern Kenya will lead to another 'bubbling spot'. The eastern DR Congo has undoubted wealth including a share of the Lake Albert oil reserves but unrest there remains a major impediment.

These 'hot, warm and bubbling spots' are developing against a general backdrop of consistent on-going activity across the region such as:

- The oil production from Nigeria, Angola

- and other long-standing oil producers.
- Oil from new oil countries such as Ghana and Côte d'Ivoire.
- Mining production from South Africa
- Nigeria's emphasis on mining.

There are also wider initiatives including the development of agricultural potential and a number of urban developments such as Konza City in Kenya, Kigamboni in Tanzania, la Cité du Fleuve in the DR Congo and the new Kitwe city in Zambia to name just four. The number of industrial and value-add projects, for example in mineral and agro-processing, are increasing as Africa wisely seeks to benefit raw product locally.

Governments, operators, investors, and even donors, have for the past few years been hyping up their projects in the 'hot' and 'warm' spots. Expectations are high and must be met if Africa is to avoid losing the current wave of optimism and a return to the Afro-pessimism that has held the sub-continent back for so many years.

Capital investment requirements are huge and can only be met through the partnership of the private and public sectors aimed at maximising economic growth. The public sector alone has neither the capacity nor the capability to cope with even a fraction of Africa's needs. The international community is fickle and delays, disputes, and other negative news could lead to the weakening or loss of a major opportunity. For the private sector to be involved they have to see serious political will and effective regional collaboration which is capable of delivering the projects to completion.

International companies seeking to work in Africa will find no shortage of opportunities. They may however be put off by the lack of experience within the public sector and the amount of time required to develop projects from inception to commencement. As with all developing areas, fortune will favour the brave and those dedicated enough to see it through. □

The need for a new approach to construction risk management

CHARLES O'NEIL – INVITED AUTHOR FROM CONTRACT DYNAMICS LOOKS AT THE APPROACH TO CONSTRUCTION RISK MANAGEMENT.

Construction comprises one of the world's biggest industries; a major employer, the generator of vast revenues, and an economic barometer. The industry has made giant strides technically over the last few decades with equipment, materials and techniques, but surprisingly it has not made similar advances in effective risk management (RM) and projects continue to run off the rails worldwide every year, both in developed nations and emerging ones.

The following are recent examples of major project disasters and the publicly perceived reasons for their failures. The information quoted is readily available on the internet.

Berlin's New International Airport

Currently three years behind programme and reportedly €2bn over budget, including construction costs and compensation to service operators and retailers – the principle cause being the failure of the project management to comply with fire regulations plus a large number of functional design deficiencies that have been unearthed late in the day.

http://en.wikipedia.org/wiki/Berlin_Brandenburg_Airport

Edinburgh Trams, Scotland

More than three years behind programme and reportedly costing three times the original budget of £375 million for a substantially reduced service – the principle causes are widely accepted as being poor political decision making and City Council inexperience in managing a project of this scale and complexity, with no significant blame being aimed at the contractors.

http://en.wikipedia.org/wiki/Edinburgh_Trām



Australia – Wonthaggi Desalination Plant, Victoria, and Brisbane Airport Link

These two PPP projects have each incurred reported construction losses in excess of \$500m, with the principle cause in each case being significant under-estimation of the primary costs and risks.

<http://www.leighton.com.au/investor-and-media-centre/asx-announcements-and-media-releases> – Annual Report 29 Sept 2011 & subsequent reports

These are large-scale examples in three countries, but there are many more such examples around the world on projects of all sizes.

The ramifications of project failure are widespread and include:

- High cost over-runs with heavy financial and reputational losses for developers, investors, government clients, lenders, and contractors
- Significant delays in programme and delivery of the proposed services
- Claims and disputes between the stakeholders, which are costly in both time and money
- Breakdowns in business relationships
- Political fallout

Given these outcomes you would think that far more thought and practical effort

would be dedicated to implementing more effective RM systems in order to reduce the probability of failure.

It is actually a failure of the project management (PM) application that is causing the problems and the RM system should be able to expose it and rectify it.

In examining this problem from a practical standpoint, there are two obvious questions:

- 1) "Why do these project disasters continue to occur all over the world on a regular basis in this age of much more advanced management training, when virtually all participants in the industry have systems and processes in place to protect their interests, be they developers, builders, government authorities, investors and so on?"
- 2) "What is wrong with these RM systems and what can be done about it?"

After 40 years' experience in major projects in several countries I have concluded that people are the problem; not a lack of RM systems, with most companies having their own in-house versions. I know that plenty of other people have reached the same conclusion, but I am amazed that so little has been done on an industry basis to tackle this 'people problem' from a practical point of view.

I have identified 31 common causes

of failure in projects (17 pre-contract and 14 post-contract). This article is not long enough to permit me to list and explain them all, but they will be dealt with in detail in my forthcoming practical handbook to be published in 2014. All 31 common causes of failure are related to shortcomings in management in one way or another and always as a result of the human input. They are mostly at senior level with the principle stakeholders; including the client, the bid team, design consultants, project and construction managers and service contractors. The common element is invariably the human input and not the technical processes.¹

With all projects, whether successful or otherwise, whether publicly or privately controlled, it remains a fact that the outcome is a direct reflection of these human inputs at the different levels of management. It is also a fact of life that whenever there is a problem it can invariably be traced back to a breakdown in communication or reporting somewhere that overrides the RM controls. This is a human problem and the best systems and processes in the world will not overcome it.

When a strong-minded project manager overrides or ignores fundamental issues such as compliance with fire regulations, it still amounts to a breakdown in communications because either the reporting systems or other stakeholders have not sounded the alert to responsible personnel further up the chain of command. As another example, mid-level managers can sometimes be a problem if they have a misguided ego-driven sense of power and enough autonomy to block communications up and down the company's communication and reporting chain.

Given the scale of the problem, there has been surprisingly little practical guidance on how and why human behaviour so often interferes with risk management to the detriment of a project. It is not hard

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to demonstrate that this takes place at all levels, with estimators, commercial, financial and legal managers and advisors; with site managers, senior management and all the way to the boardroom.

An effective RM structure will expose such situations quickly and before real damage is done, but at the risk of over-simplifying the complex issues involved, I believe a fundamental new approach to RM is required that places much more emphasis on human behaviour.

What areas of risk management are we talking about?

Essentially those that are the most vulnerable to 'people' related faults, such as:

- Overly optimistic bidding through underpricing and a failure to understand the full requirements (e.g. statutory approvals, etc.) creating the falsehood due to commercial pressures, a failure to manage the bid, or simple stupidity.
- Unrealistic and unrepresentative reporting i.e. continuing the falsehood and failing to speak up.
- Failure to create the team and integrate it together. One of the worst problems that we give ourselves is to set out on a new enterprise, (huge in its size and complexity) with a completely new group of people and organisations, with no established pattern or idea for how the management systems will be put together and run. It's a recipe for disaster!

Failure to manage the work properly. This leads to failure to adhere to normal standards and practice even when they are in place, such as health and safety (H&S), quality assurance (QA), use of codes of practice, etc. The lack of supervision and management sends the wrong message to staff and fails to identify problems and catch them before they become a disaster.

RM covers any potential issue that is likely

to jeopardise the project at any stage of its life, including but not limited to the following:

- Realistic budgeting and control of costs and margins (i.e. the failure to produce realistic budgets, maybe to conceal the likely truth in order to get approval).
- Cash flow management and unrepresentative financial reporting.
- Planning and programming.
- Project reporting i.e. failure to report properly, unwillingness to recognise and reveal problems, or the misguided intent of keeping quiet and fixing problems alone.
- Resources generally – key people suitability, all personnel, consultants, plant and equipment including lack of competent people, staff shortage and staff who do not recognise and take responsibility.
- People management, team spirit, and employee satisfaction.
- Project meetings – a lack of scheduled mandatory meetings with specific purposes, involving all stakeholders and with accurate minutes distributed promptly.
- Quality assurance.
- Communications and stakeholder relationship management.
- Authority approvals (failure to recognise requirements and adequately identify all of them causes huge delay, loss of income, liquidated damages, etc.).
- Health, safety, and environment.
- Issues, claims, and disputes.
- Corporate governance breakdowns e.g. breaches of bank covenants.
- Business relationships and reputations.
- Corporate social responsibility; community and political considerations.
- Task management.

So what happens on the good projects?

The elements for success are common and distinct and invariably include:

- Careful planning, realistic contract prices and programmes.
- Robust specifications and contract documents.
- Good leadership and competent, professional teams for all stakeholders.

- Efficient contract management platforms.
- A proactive level of participation and cooperation by all stakeholders.
- Excellent communications and respectful relationships.
- Clear project objectives, backed by strong team spirit from all stakeholders.
- Realistic and achievable objectives, including design, budgets, and programmes.
- Well documented systems and processes.
- Robust RM throughout the life of the project, with the key methodology being early warning through constant monitoring and anticipation, together with an inclusive stakeholder communication process.

You will note that all of the above areas have a strong human element and it is almost taken for granted that the teams involved will be right on top of the technical aspects.

The list might seem basic and fundamental, but if any of these areas are badly structured or handled then the effect on the overall project can be serious.

The prime objective of my approach to RM has been to identify and analyse this human involvement and the effect it has in both successful and failed projects and I have used this to revise the RM and control processes in order to substantially reduce the chances of project failure.

This data and the revised processes enable senior management to better understand and control human behaviour in all phases of the design and construct process and results in a far more robust risk management system. This then improves the bidding and delivery processes and greatly reduces the possibility of a construction contract becoming an unexpected financial and reputational disaster.

In summary, this new focus:

- Enables senior management to devise more effective RM processes.
- Provides a bigger-picture understanding to up-and-coming players in the industry at all levels from estimating to site and corporate management.
- Is a valuable aid to recruitment by

showing why well-rounded employees require more skills than just technical expertise.

If you accept the contention that the human aspects are equally or more important than technical skills, then it follows that personal or soft skills should carry significant weight when recruiting and positioning people, whether it be for long term employment or short term for a specific project.

A strong focus on personnel assessment and positioning has proved very beneficial in respect of performance, team involvement, and job satisfaction.

Conclusions

- RM has failed to provide a practical answer which stops massive project failures.
- A new approach is needed which is practical in its application, applied at the right time, with high level authority.
- A strong focus is needed on compiling a good team of people that take personal responsibility and putting them to work in an environment in which systems and processes support them but do not obviate the need for thought and involvement.
- No matter at what stage a project has reached the application of a good practical review of these issues is virtually bound to be beneficial and should help to avert a disaster.

The writer is collaborating with Driver Group Africa to provide high level risk management services in the African region and then throughout all of the Driver regions. These services address both client and contractor risk management requirements and can be applied at any stage in the project lifecycle. In the case of clients it is recommended that risk review commences at the feasibility stage. In the case of contractors it is recommended that risk review is embedded from the earliest bid stages. In all cases it is recommended that risk review is carried out independently and with high level sponsorship and reporting lines. □

References: 'Risk Management for Construction, Engineering and PPP Projects – The Human Dynamics behind Success or Failure (to be published in 2014).

Adjudication – The South African experience

IN THIS ARTICLE OUR INVITED WRITER VAUGHAN HATTINGH OF MDA CONSULTING (PTY) LTD CONSIDERS THE EVOLUTION OF SOUTH AFRICAN ADJUDICATION PRACTICE.

The move toward statutory adjudication:

Maiketso and Maritz¹ investigated the implementation of adjudication in South Africa (SA) finding that "... adjudication has found acceptance in the SA construction industry. However, it still has some way to go before its potential can be realised in full. Certain challenges need to be overcome to enable this to happen, which range from the contractual, institutional and legislative framework, to matters of skills and training..." and concluding "... [E]nforcement of the adjudicator's decision is critical to the success of adjudication..."

The potential development of adjudication in the South Africa construction industry was considered by Maritz² who concluded that, "...[E]xperience in other countries who have introduced adjudication has shown that adjudication without the statutory force is not likely to be effective. Enforcement of the adjudicator's decision is critical to the success of adjudication and before South Africa introduces an Act similar to Acts such as the Housing Grants, Construction and Regeneration Act 1996 (UK), the Construction Contracts Act 2002 (NZ) or Building and Construction Industry Security of Payment Act 2004 (Singapore) adjudication will remain largely ineffective and, therefore, underutilised in the South African context..."

The South African Construction Industry Development Board (CIDB) has made a concerted effort toward introducing mandatory statutory adjudication into the South African construction industry practice by initiating the procedure stipulated in section 33 [Regulations] of the CIDB Act 38 of 2000.

During September 2012 the Board approved draft regulations consisting of Part IV C titled Prompt Payment and Part IV D titled Adjudication (the draft regulations) including a Standard for Adjudication (the



Standard) which have been submitted to the Minister of Public Works³, advising that the draft regulations be promulgated by the Minister of Public Works as regulations under and in terms of section 33(1)⁴ of the CIDB Act 38 of 2000. In a publication titled "Subcontracting in the South African Construction Industry; opportunities for development" the CIDB states on page 17 that, "It is anticipated that the CIDB Prompt Payment Regulations could be enacted in 2013".

The legislative framework, which encompasses a system of statutory adjudication, will (once implemented) solidify a desperately needed "speedy mechanism for settling disputes in construction contracts on a provisional interim basis and requiring the decision of the adjudicators to be enforced pending the final determination of disputes by arbitration, litigation or agreement..."⁵ into South African jurisprudence and construction practice significantly contributing toward "delivery, performance and value for money, profitability and the industry's long term survival in an increasingly global arena..."⁶.

The South African High Courts support:

Neither the United Kingdom's Housing Grants, Construction Regeneration Act, 1996 (referred to as the HGCRA) nor the Scheme for Construction Contracts (the Scheme) (enacted under the HGCRA) entrenches a procedure for enforcing adjudicator's decisions. The HGCRA simply provides that adjudicator's decisions are binding unless, and until, overturned by agreement, arbitration, or litigation⁷ Paragraph 23 (2) of the Scheme similarly provides that the decision is binding pending final resolution by agreement, arbitration, or litigation. The absence of an enforcement mechanism entrenched in the legislation itself was initially perceived as a critical flaw in the legislation. Fortunately the English courts have consistently adopted a robust approach in the enforcement of adjudicators' decisions⁸ made through the statutorily regulated adjudication procedure ensuring that Parliament's intention in introducing the legislation is not thwarted.

In both Basil Read (Pty) Ltd v Regent

Devco (Pty) Ltd⁹ and Freeman, August Wilhelm N.O, Mathebula, Trihani Sitos de Sitos NO vs Eskom Holdings Limited¹⁰ the High Court of South Africa has exhibited a clear willingness to adopt a similarly robust approach to enforcement of adjudicators' decisions made through the application of the ad hoc adjudication procedure widely applied throughout the South African construction industry.

The South African High Court's willingness to adopt the robust approach to the enforcement of adjudicators' decisions has been reinforced through two recent decisions in the High Court of South Africa in an unreported judgement of the South Gauteng High Court on 3rd May 2013 handed down by D T v R Du Plessis AJ in the matter between Tubular Holdings (Pty) Ltd and DBT Technologies (Pty) Ltd¹¹ and by Splig J Esor Africa (Pty) Ltd / Franki Africa (Pty) Ltd JV v Bombela Civils JV¹².

In Tubular Holdings (Pty) Ltd and DBT Technologies (Pty) Ltd disputes arising in connection with a subcontract between Tubular Holdings (Pty) Ltd and DBT Technologies (Pty) Ltd on the Kusile Coal Fired Power Station Project were referred to a Dispute Adjudication Board (DAB) consisting of a single member. Tubular applied to the South Gauteng High Court by motion application for an order compelling DBT to comply with the DAB's decision.

The issue between the parties before Du Plessis AJ related to the interpretation of the standard clause 20.4 of the FIDIC Conditions of Contract 1999 (First Edition). Du Plessis AJ summarised the dispute as follows "... [T]he applicant submits that the parties are required to give prompt effect to the decision by the DAB which is binding unless and until it is set aside by agreement or arbitration following a notice of dissatisfaction whereas the

CONTINUED ON PAGE 30



← CONTINUED FROM PAGE 29

respondent says that the mere giving of a notice of dissatisfaction undoes the effect of the decision..."

In granting Tubular an order for specific performance Du Plessis AJ specifically in regard to clause 20.4 of the FIDIC Conditions of Contract 1999 (First Edition) held that, "...[T]he scheme of these provisions is as follows: the parties must give prompt effect to a decision. If a party is dissatisfied he must nonetheless live with it but must deliver his notice of dissatisfaction within 28 days failing which it will become final and binding. If he has given his notice of dissatisfaction he can have the decision reviewed in arbitration. If he is successful the decision will be set aside. But until that has happened the decision stands and he has to comply with it..."

In Esor Africa (Pty) Ltd / Franki Africa (Pty) Ltd JV v Bombela Civils JV a dispute arose in connection with construction works executed by Esor Africa (Pty) Ltd / Franki Africa (Pty) Ltd JV consisting of certain piling and lateral support work on the Gautrain rapid rail link project. The dispute was referred to a single member DAB in accordance with clause 20.4 of the FIDIC Conditions of Contract 1999 (First Edition). Esor Africa (Pty) Ltd / Franki Africa (Pty) Ltd JV made application for an order for specific performance compelling Bombela Civils JV (respondent) to comply with the DAB's decision. The dispute between the parties before Spilg J required to be resolved by "a proper interpretation of the dispute resolution clauses dealing with the effect of a DAB decision". The dispute resolution clauses referred to by Spilg J were the standard clauses contained under clause 20 [Claim, Disputes and Arbitration] of the FIDIC Conditions of Contract 1999 (First Edition).

In granting Esor Africa (Pty) Ltd / Franki Africa (Pty) Ltd JV an order for specific performance Spilg J concluded that "[I]n order to give effect to the DAB provisions of the contract the respondent cannot withhold payment of the amount determined by the adjudicator, and in my view is precluded by the terms of the provisions of clause 20 (and in particular clauses

20.4 and 20.6) from doing so pending the outcome of the arbitration. In my view it was precisely to avoid this situation that the clauses were worded in this fashion".

Conclusion

The South African High Court's robust approach to enforcing adjudicators' decisions is summarised by Spilg J in Esor Africa (Pty) Ltd / Franki Africa (Pty) Ltd JV v Bombela Civils JV as follows "[T]he court is required to give effect to the terms of the decision made by the adjudicator. The DAB decision was not altered and accordingly it is that decision which this court enforces", and has been further reinforced recently in Stefanutti Stocks (Pty) Ltd v S8 Property (Pty) Ltd¹³.

The South African High Court's consistent willingness to adopt this robust approach is contributing to the increasing adoption of ad hoc adjudication into South African construction practice and will be critical in underpinning any future form of mandatory statutory adjudication. □

1 Maiketso N C and Maritz M J, What are the requirements for the South African construction industry to fully utilise adjudication?, Royal Institute of Chartered Surveyors, 12 Great George Street, London, SW1P 3 AD, United Kingdom, September 2009.

2 Maritz M.J, An Investigation into the Adjudication of Disputes in the South African Construction Industry, Head of Department, Department of Construction Economics, Faculty of Engineering, Built Environment and Information

3 Section 8 of the CIDB Act 38 of 2000 provides that the Board ... may advise the Minister on policy and legislation impacting on the construction industry or propose amendments to this Act to the Minister.

4 Section 33 (1) of the CIDB Act 38 of 2000 provides that ... the Minister may, by notice in the Gazette, make regulations not inconsistent with this Act with regard to any matter that is required or permitted to be prescribed. In terms of this Act and any other matter for the better execution of this Act or in relation to any power granted or function or duty imposed by this Act.

5 Mr. Justice Dyason in the landmark United Kingdom case of Macob Civil Engineering Limited v Morris Construction Limited [1999] BLR 93, TCC at page 97

6 Construction Industry Adjudication Procedure, March 2004, First Edition of CIDB document 1014, downloadable from www.cidb.org.za

7 Section 108(3) of the Housing Grants, Construction Regeneration Act, 1996.

8 See for example Balfour Beatty Construction Ltd v the Mayor & Burgess of the London Borough of Lambeth [2002] EWHC 597.

9 An unreported decision of the South Gauteng High Court handed down on 09 March 2010.

10 An unreported judgement of the South Gauteng High Court dated 23 April 2010.

11 An unreported judgement of the South Gauteng High Court dated 03 May 2013.

12 An unreported judgement of the South Gauteng High Court dated 12 February 2013.

13 A judgement of the Gauteng High Court dated 23/10/2013



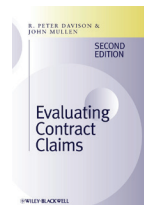
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The Driver Trett APAC team with Group CEO Dave Webster L to R: Garth McComb, Dave Webster, Philip Allington, Peter Ho, Alastair Farr, and David Hardiman.

NEW DRIVER TRETT HONG KONG TEAM AND OFFICE LAUNCH

Long-time business partners Peter Ho and Philip Allington have joined the Driver Group to open a new Driver Trett office in Hong Kong. Philip, a delay analyst, went to Hong Kong 15 years ago having been a business partner of Steve Lowsley and Clive Holloway now of Coventry and Singapore Driver Trett offices. Peter, a quantum analyst, arbitrator, and mediator, returned to Hong Kong in 1996 after 18 years with Northcroft in London. The two joined to be directors of Harold Crowter Associates and Ho and Allington, and later as partners at EC Harris, all based in Hong Kong and with regional responsibility. They now lead Driver Trett's newest addition in the APAC region. APAC and UK-based leaders joined them for a business launch cocktail party at the Conrad Hotel in Hong Kong on 16th January 2014.

UK Spring Breakfast Seminar series – Reporting under the NEC

DRIVER TRETT ARE PLEASED TO ANNOUNCE THE 2014 SPRING BREAKFAST SEMINAR SERIES.

The seminar will be a scenario based presentation employing up-to-date reporting techniques and software. Using an NEC3 Option C project example this seminar will illustrate some of the challenges and opportunities which can arise when managing the evaluation of compensation events and reporting regularly upon progress and costs. Issues covered will include:

- The provision of alternative quotations and relevant time scales
- Monitoring the accuracy of progress updates
- The management of time risk allowance
- Reporting on Margins and pain/gain share

Demand for these events is always high and places are offered by invitation only. Even by invitation many dates are often over-subscribed, so please book early to ensure you space. Further details can be found at <http://www.drivertrett.com/knowledge/seminars.shtml>, or contact your local office (see page 22 for details). Locations and dates are also listed below

LOCATION	VENUE	DAY	DATE
Exeter	Sandy Park Stadium	Thursday	06/03/2014
Swansea	Liberty Stadium	Tuesday	04/03/2014
Bristol	Bristol Golf Club	Wednesday	12/03/2014
Manchester	Lancashire County Cricket Club	Tuesday	18/03/2014
Glasgow	Glasgow Hilton	Wednesday	19/03/2014
Leeds	Thorpe Park	Monday	24/03/2014
Chelmsford	Essex County Cricket Club	Wednesday	02/04/2014
Derby	Hilton East Midlands Airport Hotel	Tuesday	01/04/2014
Co. Durham	Wynyard Rooms	Monday	02/04/2014
Coventry	Windmill Village Hotel	Thursday	03/04/2014
London	The Thistle Euston Hotel	Thursday	03/04/2014

Congratulations to our last competition winner, Martin Doherty of E & I Engineering, who received a copy of John Mullen's co-authored book – The Expert Witness in Construction.

HANDBOOK FOR CONSTRUCTION PLANNING AND SCHEDULING

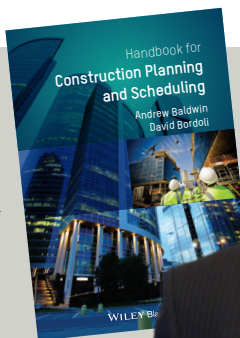
This handbook presents the key issues of planning and programming in a clear, concise and practical way in a readily acceptable format whereby individual chapters and sections can be accessed and read in isolation to provide a guide to good practice.

The book provides a text to accompany learning, a reference document which, supported by web-based information, provides information on the background to planning and scheduling together with guidance on best practice and practical methods for the application of construction planning and scheduling on different types of construction work.

Question for the competition

Question: Who invented the bar chart?

- A: Geoff Reiss
- B: Henry Gantt
- C: James Kelley
- D: None of the above



For your chance to win a copy of Handbook for Construction Planning and Scheduling, on its release in Spring 2014, please answer the question opposite. Email your answer, along with your name and contact details, to info@drivertrett.com with 'WIN' in the subject line. Closing date for this competition is 1st March 2014. The winner will be notified by email after this date and receive their copy of the book on its release.

In the next issue

Starting with the next issue, the Digest will be distributed once every six months. As always, we will be covering all industry sectors and include news and articles from around the globe. Please keep an eye on the website <http://www.drivertrett.com/knowledge.shtml> to keep up to date with ad hoc articles, Digest preview, seminars, and training events. The Digest will always aim to be topical, and respond to requests and questions from our readers through the articles we publish. If you would like to submit a question or an article request to the Digest team please email info@drivertrett.com with DIGEST in the email subject line.

We are always pleased to receive feedback from our readers, and welcome the opportunity to develop the Driver Trett Digest into a valuable read for those involved in the global engineering and construction industry.

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Regular news and event updates are made to the website, so be sure to visit, or follow us on LinkedIn to keep up to date with our latest seminars and news.



BYTE 1: FIDIC RAINBOW SUITE 4

In the fourth of a series of articles on the FIDIC suite of contracts, authors Paul Battrick and Phil Duggan look at studying project contracts themselves.



BYTE 2:

PLAYING ON THE WING

Following on from the taster of Playing on the Wing on page 20 of this issue you can download the full article as a Digest Byte. Peter Davison, head of DIALES, comments on the role of party nominated arbitrators.