ISSUE 3

COMPENDIUM

A Diales publication

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Goodwood 2016 Festival of Speed Sculpture
Designed by Gerry Judah | Engineered by Diales Technical

10 YEAR ANNIVERSARY

10 years of Diales

Birthdays are often a time to look back and reflect upon the challenges and achievements that the years have provided.

As Diales Expert Witness Services now reaches its 10th anniversary, which for any business is an important milestone, I think it is time to take a moment and look back at where we have been, and perhaps even more importantly, where we are going.

I remember the process by which we came to launch the Diales expert business very clearly. After a period of consultation with clients, it became clear that we needed to run our expert practice differently and present it in a clear and concise way to the marketplace.

After many attempts, and an online survey, to try and select the right name for this brand some intensive discussions led to the suggestion of keeping it simple and calling it "Driver International Arbitration Litigation and Expert Services" and clearly this was not a snappy title. After some careful checking to ensure that the initials now forming our new word DIALES did not mean anything unpleasant or rude in any of the many jurisdictions in which we work, we set about launching the brand which took place in June 2012 at the London Transport Museum. During the preceding months we completed the acquisition of Trett Consulting and our team swelled to the point, where at the launch party, we had 12 testifying experts on the Diales website, all of which attended the launch event. After a very enjoyable evening hosted by Clive Anderson, we headed off on the first steps of the adventure of growing what our expert practice would become.

One of the first things we were keen to achieve was to widen our expert practice from purely quantum and delay to include other technical specialisms. We found that there was a clear demand for these services as it began with requests for expert mechanical and electrical input from me! Stuart Macdougald-Denton joined in 2014 with Stuart Holdsworth joining in 2016. Together they rapidly grew a team of architects and engineers that have now formed Diales Technical and have undertaken work all over the globe for a very wide range of clients on some extremely large projects.

It's well known that behind every successful football team is a manager that will tell you that in order to support your main team, you need to have a really good quality training academy in place, producing the stars of the future. When I look at the 48 testifying experts that are currently on our website, I am delighted to see that many of them have completed the Diales development programme, which is carefully structured by Keith Strutt, using managed criteria in order to operate this group very effectively.

There are few businesses in our sector where someone can join as a quantity surveyor or architect and develop their career all the way through to being a testifying expert, and this is something that the Group is particularly proud of.

Over the last 10 years there have been a number of key milestones along the way. I vividly remember the first project where we provided a whole expert team of quantum delay, architectural, mechanical, electrical, and structural/civil experts. It worked particularly well, and all of the reports were co-ordinated and the management of documents, particularly drawings, was made much easier by having a pre-made co-ordinated team. This is a service that is of growing interest across our expert portfolio as clients and law firms tackle the challenges of very large disputes with an enormous number of documents to manage.

I mentioned earlier in this article that birthdays were also a time to look to the future. I hope to be writing a similar piece to this in both 5 and 10 years' time, and have decided to make myself a hostage to fortune by making some predictions for those announcements. I see our total number of testifying experts reaching between 60 and 70 in that period whilst maintaining the high standards of quality that Diales has become a byword for.

I can see that we will engage more marine oil and gas experts, as this is a growing part of the business, together with those with a close interest in renewables, a process for us which has already started with a couple of key appointments in the pipeline. I also expect us to have some more technology experts, both in the handling and the analysis of data and also in the delivery of software and hardware in integrated IT projects, where more and more disputes seem to be arising.

Equally important is that we retain our values and stick to our principles moving forward, ensuring that we do everything we can to maintain and improve quality as well as supporting our people who operate across the globe. From Michelle McMillan in Calgary and the new team led by Simon Braithwaite and Rob Otruba in New York, our many experts based in the UK and Europe, right through to the Middle East and Asia Pacific to Graham Topp in Australia.

Diales has become a truly global team of excellent people offering the best service in expert witness support to our clients that is possible, and while we will always strive to be better and to add new people, we can certainly look back over the last 10 years and be extremely proud of what we have achieved.

Mark Wheeler
Head of Diales - Quantum and Technical Expert

A Seat with a View

Getting the London Stadium ready for the Premier League

Rob Gray
Diales Associate Director

What do you do when you don't have a great view of the match? For West Ham United, which took over the London Stadium in 2015, the answer was to move the seats.

The London Stadium, built for the 2012 Olympics, is used for many sports throughout the year, along with football. The stadium plays host to athletics meetings, Major League Baseball and concerts, and each of these events requires a different arena arrangement to give spectators the optimal experience. For football, bringing the fans close to the pitch considerably enhances the atmosphere, but the challenge for the Hammers was how this could be achieved while still allowing rapid conversion of the stadium into its athletics configuration. The solution was to build two temporary stands on top of the track, which could be removed during the football off-season.

For events specialist Arena, however, it wasn't as simple as placing some seating over the track. The new seating had to

to be connected to the accessways and concourses of the permanent stadium, which meant a series of bridges had to be constructed between the temporary seats and permanent structure. As the seats were effectively moved forward, closer to the pitch, space became available for a new bar area, which required a new platform above the permanent seats.

Demountable platforms are an area where Diales has unique expertise, and, having collaborated with Arena on many complex temporary event structures in the UK and Middle East, we were on hand to develop a solution for the stadium.

Arena intended to use its ASD system, formed from steel-framed panels on large-diameter steel legs. This type of system is ideal for heavy-duty usage, and sufficiently robust to remain in place for long periods.

The shape of the stadium bowl, coupled with the constraints that arose from constructing on top of an existing stand, made the proposed structure unique from an events industry perspective, and the design of such a structure was particularly complicated. Diales' analysis capabilities meant we could develop bespoke 3D models of Arena's proposed build and consider its impact on neighbouring structures, both when the stadium was empty and when stands were at capacity.

The structure of the stadium itself presented further challenges. The geometry of the temporary seating differed substantially from the stadium structure, which meant the structural support did not align. The temporary seating also had to be capable of resisting the weight of a stand full of spectators, as well as the significant dynamic lateral loads that can be generated at sporting events, both during access and egress, and at particularly exciting points in the match. For these loads to be safely transferred to the ground and load-bearing parts of the permanent stands, a complex support structure was inserted under the temporary stand.

Protecting the athletics track and terraces from damage when the temporary stand was erected was vital. The athletics track is vulnerable to damage from heavy loads and can be very tricky to repair.

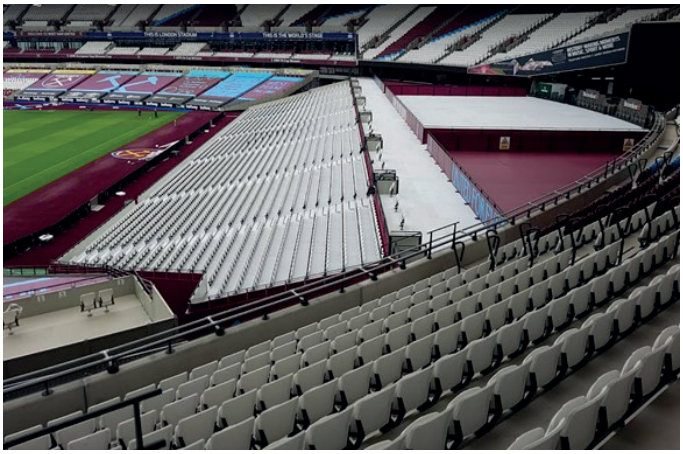
To protect the track from damage that can occur under concentrated column loading, large spreader plates were installed to evenly distribute the loads, and the columns were kept close together.

The terraces presented a different dilemma. The terrace segments span between raking beams, which hadn't been designed to carry columns – in effect, we were going to put loads onto the beams that the original designers would not have considered. Diales was able to reverse-analyse the beams, so we could work out what column loads they could carry. This analysis fed into the arrangement of the whole structure – in essence, the column loads were limited, and so the placement and spacing of columns was driven in part by the coordination of the ASD panel system with the positions of strong supporting structure.

Dynamic actions, particularly those associated with the movement of large groups of people in unison, can be hazardous in a stadium. A recent example was at Dutch football club NEC Nijmegen's Goffertstadion. In October 2021, part of the stadium collapsed while away fans were celebrating victory – the dynamic action of the fans jumping contributed to the failure of the terrace.

Transferring the loads these actions create back to the permanent stand posed a further challenge, as the lightweight temporary stand required stabilisation to keep its occupants safe and comfortable. This was further complicated by the constraints of the stadium bowl – there was no means of resisting the loads where the deck connected with the permanent stands. This issue was overcome by making the structures self-stabilising, with all loads transferred to ground level. This required a complex arrangement of bracing and strategically located ballast blocks, to hold the stand in position without damaging the athletics track.

With Diales' help, Arena managed to build the stands in accordance with the client's brief, while providing a stable and safe structure which did not compromise the integrity of the existing terraces or athletics track. West Ham fans have enjoyed the improved views and proximity to the pitch that the temporary stands have brought to the stadium.



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"1782"
What is all the fuss about?

Hamish Lal
Partner at Akin Gump Strauss Hauer & Feld LLP

The international arbitration world went into overdrive earlier this Summer when the US Supreme Court handed down a decision that effectively reduced access to so-called "1782 disclosure". Thus, in this article, we explain what is the so-called "1782 disclosure", look at how it was used in international arbitration, and assess what if anything is left unresolved by the U.S. jurisprudence.

Section 1782 Explained
Title 28 of the United States Code, Section 1782 headed "Assistance to foreign and international tribunals and to litigants before such tribunals" enables a party to a legal proceeding outside the United States to apply to an American district court with competent jurisdiction in order to obtain documents and evidence for use in the foreign proceeding. The pertinent portion of the text reads as follows:

> (a)The district court of the district in which a person resides or is found may order him to give his testimony or statement or to produce a document or other thing for use in a proceeding in a foreign or international tribunal, including criminal investigations conducted before formal accusation. The order may be made pursuant to a letter rogatory issued, or request made, by a foreign or international tribunal or upon the application of any interested person and may direct that the testimony or statement be given, or the document or other thing be produced, before a person appointed by the court. [...]

In short, Section 1782 empowers a U.S. district court to order a person who either "resides" or "is found" in the court's district to "give his testimony or statement or to produce a document or other thing for use in a proceeding in a foreign or international tribunal".

In order for a Section 1782 application to succeed, it must comply with three statutory requirements: (i) the district court has jurisdiction over the person from whom evidence is sought (in other words the individual targeted is either physically present or maintains a residence in the district and / or the corporation targeted is incorporated or has its principle place of business in the district - but - also if the business would be subject to personal jurisdiction in that district by virtue of its systematic and continuous activities there); (ii) the evidence is sought for "use in a proceeding in a foreign or international tribunal"; (iii) the request is being made by "a foreign or international tribunal" or an "interested person". Further factors a court should consider when exercising its discretion to grant or deny a discovery request include: (i) whether the target is a participant in the foreign proceeding; (ii) the nature of the foreign tribunal, the character of the proceeding underway abroad, and the receptivity of the foreign government or the court or agency abroad to U.S. federal-court judicial assistance; (iii) whether the request conceals an attempt to circumvent foreign proof-gathering restrictions or other policies of a foreign country or the U.S. and (iv) the request contains unduly intrusive or burdensome demands[1].

SECTION 1782 IN INTERNATIONAL ARBITRATION

Section 1782 was generally understood to represent a compelling strategic tool that could happily provide the benefit of liberal U.S. discovery rules as a means to obtain broader discovery for use in international arbitration seated outside of the U.S. The U.S. rules permit discovery of any non-privileged matter that is relevant to any party's claim or defence and proportional to the needs of the case, which implies extensive discovery of documents and electronically stored information, and also allow for depositions. The benefits of using Section 1782 are clearer in the context of foreign litigation proceedings where discovery rules are strict, such as in civil-law systems. However, arbitration proceedings are more nuanced and Redfern or Stern Schedules codify respective document production requests (typically made commensurate with so-called soft law). There is a tangible lack of empirical data available on how often 1782 applications were made but there is a view that the unclear limits on arbitrators' discretion to compel documentation production and the restricted means available to sanction non-compliance on document production made Section 1782 a handy mechanism in Counsel's tool box. Further, patently gathering evidence required to comply with document production orders can be challenging when documents and witnesses are located abroad or belong to third parties such that seeking the assistance of the local courts may be easier. From an academic or intellectual perspective, Section 1782 has unique and distinctive features as set out below by case law[2]:

- The application needs to be made by an "interested person" which is intended to include not only litigants before foreign or international tribunals but also foreign and international officials and any other person who has a "reasonable interest" in obtaining judicial assistance;
- The applications may be made on an *ex parte* basis by a party directly to a district court, without the need to notify in advance the party from whom discovery is sought or the adverse party in the foreign proceeding;
- The foreign proceeding need not be pending or even imminent but "in reasonable contemplation". In essence, this means that an interested person can therefore seek pre-action discovery;
- An applicant is not constrained by the fact that the sought-after material or deposition testimony would not have been discoverable had the proceedings been located in the "foreign tribunal" to which the application relates;
- Section 1782 enables an applicant to obtain information from an individual / entity which is not a participant in the foreign arbitration or litigation proceeding.

Parties to international arbitration have petitioned to U.S. district courts to seek discovery from third-parties based in the U.S., such as the parent companies and subsidiaries.

In addition, the availability of Section 1782 had an obvious impact on experts appointed in arbitration proceedings.

Some practitioners would be nervous about appointing U.S.-based experts given that they could be subject to broad discovery obligations and others sought to use Section 1782 as a means to obtain work product and related documents from such experts. Against this backdrop, a threat emerged that arbitral parties may use / abuse Section 1782 in order to obtain discovery in a manner that would not have been permitted by the foreign arbitral tribunal. However, it ought to be noted that the U.S. courts managed applications differently in the context of international arbitration and were more deferential to the will of the arbitrators[3]. In some cases it had been suggested that Section 1782 discovery should only be granted if the request is either made by the arbitrators themselves or with the consent of the arbitrators (thus restricting the availability of Section 1782 assistance after the appointment of the tribunal) so as to aid the international arbitration process and not distort it[4]. Others have viewed Section 1782 as a judicial intrusion into arbitration and considered that it would burden the arbitral process, increase the cost and duration of the document production phase of the arbitration and that applications under Section 1782 would bring undesirable publicity to confidential arbitrations.

END OF SECTION 1782 IN PRIVATE ARBITRATION

The wording of Section 1782 had led to conflicting decisions with regards to the meaning of the term "foreign or international tribunal" and whether Section 1782 encompassed all international arbitration. This question had been the subject of a long-standing "circuit-split". The 2nd, 5th, and 7th Circuits have held that 28 U.S.C. Section 1782 did not extend to private international arbitration, but in 2019 and 2020 respectively, the 4th and 6th Circuits held that it did.

In its decision dated 13 June 2022[5], the U.S. Supreme Court determined that Section 1782 is not available in support of foreign private international commercial arbitrations and at least some investor-state arbitrations.

The ZF Automotive decision concerned two separate disputes, later consolidated:

- The first dispute involved a private commercial arbitration between Luxshare Ltd., a Hong Kong-based company and ZF Automotive U.S., Ing, a Michigan-based manufacturer and subsidiary of a German corporation. In support of its fraud allegations against ZF Automotive in a sales transaction, Luxshare sought evidence from ZF and its officers based in the U.S. relying on Section 1782. The arbitration was seated in Berlin, governed by German law, administered and subject to the rules of the German Arbitration Institute: *Deutsche Institution für Schiedsgerichtsbarkeit* ("DIS"). The District Court granted the request and the U.S. Court of Appeals for the Sixth Circuit denied ZF's request for a stay.

- The second case involved an *ad hoc* investor-state arbitration, governed by the UNCITRAL Rules, brought pursuant to the Russia-Latvian bilateral investment treaty between a Russian entity, the Fund for Protection of Investors' Rights in Foreign States, and the Republic of Lithuania. The arbitration related to the alleged expropriation of AB bankas Snoras a Lithuanian bank whose Russian investor assigned its rights to the Fund. The fund sought discovery from AlixPartners LLP, a New York based consulting firm, and its CEO who was appointed temporarily as Snoras' administrator. The District Court granted the Fund's discovery request and the U.S. Court of Appeals for the 2nd Circuit affirmed the decision.

The U.S. Supreme Court has now clarified that a "foreign tribunal" is one that exercises "governmental authority" conferred by a single nation and an "international tribunal" is one that exercises governmental authority conferred by two or more nations. Therefore, an arbitral body may qualify as such if the relevant foreign nation or nations authorise the arbitration panel to exercise governmental authority – this is not likely in the context of international commercial arbitration. The Supreme Court therefore concluded that none of the arbitral panels qualified as such: (i) the first dispute is a "creature of an agreement between private parties who prescribe their own rules"[6] so that no government is involved in creating the arbitral panel or prescribing its procedure, and (ii) Section 1782 did not apply to the second dispute because "the [BIT] does not itself create the panel" but "instead it simply references the set of rules that govern the panel's formation and procedure if the investor chooses that forum."[7] It appears that access to Section 1782 in international commercial arbitration is now closed-off. Some may celebrate this latest legal development.

WHAT NEXT?

The U.S. Supreme Court has made clear that Section 1782 does not apply to international commercial / construction arbitration. This may now mean that arbitration agreements in international construction contracts should be amended by parties to expressly allow for broad / broader discovery. However, many of the limitations in respect of non-compliance will remain.

Experts working in international commercial arbitrations and who are based in the U.S. are likely to be happier following the ZF Automotive opinion.

With regards to investment arbitration, the ZF Automotive opinion only concerned *ad hoc* investor-state disputes, governed by the UNCITRAL Rules. It therefore remains unclear whether this ruling applies to investor-state disputes conducted under the International Centre for Settlement of Investment Disputes ("ICSID") Convention since an ICSID arbitral tribunal could meet the description of an intergovernmental adjudicative body that exercises governmental authority, for the following reasons:

> "ICSID was created by Member States through a treaty under public international law as a permanent institution that serves a public purpose common to the States participating in it.
>
> ICSID is governed by a body composed of representatives of the States participating in the ICSID Convention. It is administered by a Secretary-General, who is elected by that intergovernmental body.
>
> ICSID is a publicly funded international institution.
>
> ICSID is an organization under public international law with legal personality. It enjoys the typical privileges and immunities of an international organization under public international law.
>
> The participating States, through designations of persons to the Panel of Arbitrators and through the appointment of arbitrators in particular cases, enjoy a strong influence on the composition of ICSID arbitral tribunals and annulment committees.
>
> The institution of ICSID arbitration proceedings is subject to a screening process by the Secretary-General, an officer elected by a body composed of State representatives.
>
> The jurisdiction of an arbitration tribunal under the ICSID Convention is subject to two separate expressions of consent by the State party to the dispute. The first expression of consent is made through the ratification of the ICSID Convention, and the second expression of consent is made most frequently through a treaty or through national legislation. The focus on investment disputes between the host State and the foreign investor means that the origin of the dispute lies most often in

governmental acts affecting the investment.

ICSID arbitration takes place under arbitration rules adopted by an intergovernmental body.

ICSID awards are not subject to the scrutiny of domestic courts - ICSID has its own self-contained system of annulment. Once an ICSID award is upheld by an ICSID annulment committee, it is final and must be enforced by Member States under Article 54 of the ICSID Convention.

ICSID awards are recognized and enforced in all Member States like final domestic judgments of the national courts of those States."[8]

Similar open questions relate to arbitrations conducted pursuant to the Convention for the Pacific Settlement of International Disputes which established by the Permanent Court of Arbitration. It is possible that arbitrations before this intergovernmental organisation among 122 states[9], could be said to exercise governmental authority to resolve disputes.

1. Intel Corp. v. Advanced Micro Devices, Inc., 542 U.S. 241, 246–47 (2004) ("Intel Corp."), at [264-265].
2. See in particular Intel Corp. at [256-264].
3. 28 U.S.C §1782 As A Means Of Obtaining Discovery In Aid Of International Commercial Arbitration – Applicability And Best Practices, New York City Bar International Commercial Disputes Committee, February 29, 2008 at pages 30-32.
4. Hans Smit, American Assistance to Litigation in Foreign and International Tribunals: Section 1782 of Title 28 of the U.S.C. Revisited, 25 SYRACUSE J. INT'L L. &COM. 1, 5 (1998), at page 8 "Recourse to Section 1782 should be left as simple as possible in order to keep the provision of assistance to foreign and international speedy and efficient.".
5. ZF Automotive US inv. V. Luxshare Ltd., No. 21-401, together with No. 21–518, AlixPartners, LLP, et al. v. Fund for Protection of Investors' Rights in Foreign States (U.S. Jun. 13, 2022)
6. ZF Automotive, Opinion of the Court at slip. 8.
7. ZF Automotive, Opinion of the Court at slip. 14.
8. Webuild S.p.A. (formerly Salini Impregilo S.p.A.) v. Republic of Panama, ICSID Case No. ARB/20/10, Legal Opinion by Christoph Schreuer, The Nature of ICSID Arbitration for purposes of 28 U.S.C § 1782, dated 7 July 2022.
9.https://pca-cpa.org/en/about/introduction/contracting-parties/

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Technology in Dispute Resolution

This article considers the use of technology in the dispute resolution arena from our experts' first-hand experience. It does not intend to offer a definitive view, but rather to explore how computer-based technology is being implemented now and potentially in the future, and what the possible limitations might be.

Hooman Baghi & Stuart Holdsworth
Diales Technical Experts

Technology enables legal teams, clients and experts to work collaboratively, and has also impacted the way that they work with their own supporting and assisting teams. Dispute resolution has undoubtedly become more flexible, and the human-machine interface has become more user-friendly as the technology has matured and become more accessible in the industry, including, but not limited to, programme and planning software, and communication tools such as Zoom and MS Teams.

THE IMPLEMENTATION OF TECHNOLOGY DURING COVID-19

Since COVID-19 there has been considerable discussion about the role of technology in the dispute resolution process, including the role of the virtual court and arbitration. Whether or not the adoption of a virtual court was a long-term objective, COVID-19 has made this a practical reality and resulted in technology playing a greater part in many aspects of the dispute resolution process.

COVID-19 restricted the ability for people to meet, and inhibited the usual court process. Computer based technology enabled the court process to be maintained by overcoming the limitations on the movement and congregation of people posed by COVID-19.

International arbitrations benefited the most from technology during the travel ban. This has allowed the legal profession to maintain a dispute resolution service with some form of human interaction, albeit without the emotions of a live court environment.

These transformations are likely to have created efficiencies in terms of time, cost, presentation, and logistics, and may well become a permanent feature of the dispute resolution process as their benefits are fully realised.

Some of the software being used in dispute resolution has not been developed specifically for this purpose, but has been adopted from technology developed for other commercial uses which existed prior to COVID-19. This software is utilised alongside other specific software that had been previously developed for the court process.

Only time will tell whether technological advances will continue to be introduced into the dispute resolution process at the same pace as during COVID-19, or whether the court system will revert back to previous ways of working.

ARTIFICIAL INTELLIGENCE IN DISPUTES

It is widely agreed that the courts in general are overburdened, and most disputes take a long time to proceed and resolve. Some papers published concerning machine-developed advanced AI propose replacing humans in the legal system, similar to Online Dispute Resolution (ODR) where the complaints can be automatically logged online, and question whether in the future the AI algorithm will examine the evidence and resolve the issue without any human interaction.

An AI system is likely to be more emotionally objective and give what is considered to be a strictly 'logical' outcome, but may miss the subtle nuances that become apparent in a court room and may not be able to accurately replicate the court's decision-making methodology and reasoning behind the damage awards. It is also difficult to envisage how the cut and thrust of the cross-examination process can be mimicked by the AI process.

In the AI decision-making world, the human interaction, emotion and body language are missing. Some might prefer to avoid the hostile environment of an open court by having an AI resolution, but many will favour the human interaction and emotion it gives.

Although AI may have its limitations when it comes to the judgment process, it can be very helpful in managing large amounts of case data that requires review. Recent advances in AI technology mean that lawyers and practitioners have more sophisticated AI tools at their disposal to rapidly process data and identify relevant information, such as through a sophisticated dictionary that can perform comparative language checks (synonyms, antonyms, etc.,). In the future, it may be possible to narrow the issues by AI processes identifying the points of agreement and disagreement from the data set. However, the outcome of the AI will only be as good as the data set that it is given, and it may not be able to identify missing information that could be critical to the dispute. The security of the system must also be a primary concern to prevent hacking with a desire to skew the outcome.

In summary, assistive technology can provide critical tools to gather and process information for dispute resolution purposes. Assisted technology is currently a useful solution for discovery, helping to reduce costs relating to document searches related to discovery. In time, AI technology may develop and be used for judicial decision-making as legal teams and clients gain confidence in the quality of the decisions through a process of trial and error and appeals that determine to what extent the AI judgment is determinative and binding.

However, AI is currently not mature enough to engage with real-life problems and resolve disputes without any human input. The most difficult issue to resolve using AI is the outcome of the dispute, for which currently no technology seems to exist and is likely to require some sort of self-learning software similar to DeepMind.

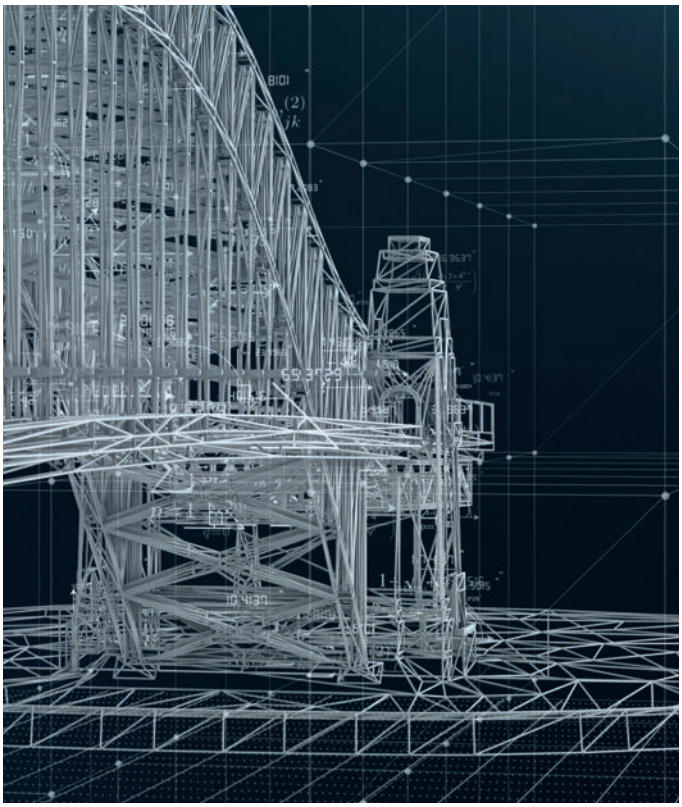
It is possible that if the necessary technology can be developed, AI could become useful for low value disputes or disputes requiring a rapid turnaround.

When a subject matter of the dispute is highly technical, AI may or may not be able to partially fulfil the role of arbitrators with an appropriate degree of expertise, but the outcome, decision and awards remain the most critical part of the process that currently cannot be relied upon.

VIRTUAL AND AUGMENTED REALITY

There may also be a place in the court or arbitration system for an immersive, 3D environment, such as VR (Virtual Reality) or AR (Augmented Reality), which can be a more engaging way to communicate complex information. Presently, 2D visualisations are generally used. An immersive virtual 3D reality may be more useful in visualising complex issues and explaining them to the court or the tribunal, such as a 3D model of a bridge collapse or other events that have multiple causes. Platforms like Metaverse or Second Life, etc., provide realistic environments for users where they can immerse themselves using VR headsets.

The 3D immersive experience may be the next practical stage in adoption of computer-based technology if this has an advantage over the 2D visualisation process. Although Diales Technical has not yet ventured into using VR such as Metaverse, it is proud to be one of the firms using advanced technology to gather facts and evidence using in-house developed technology to speed up the process. Diales employs computer-based technology in many forms and systems to assist our experts in dispute resolution services.



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Time to reflect

David Wileman
Diales Delay Expert

When I was asked to provide an article for the Diales anniversary Digest, I was reticent. Mr Battrick, a long-time colleague, and all-round good chap, in his usual encouraging words, advised that this was an opportunity to set out an article that would be read for possibly the next few years on the basis that Driver Trett still receives communications in relation to the last Diales Digest issued back in April 2018, some four years ago.

However, as a delay expert I am always conscious that it is difficult to write articles about delay and more specifically the analysis of delay, given the fact that we still have many forms of Contract, different methodologies, very different quality levels of planning on Projects (and as-built data) and as a consequence, numerous ways to analyse delay. It is no surprise that the Society of Construction Protocol and the numerous AACE® International Recommended Practices documents provide different ways to analyse delay.

The comment that the Diales Digest may be read for (hopefully at least a few) years to come made me think about "time" in a more prosaic manner. Firstly, where has all the time gone? I started as an apprentice in NEI Parsons – a behemoth of the power industry in the 1970s and 1980s. I then moved to the AMEC Offshore at Wallsend. Again, this was a huge fabrication yard at the forefront of oil rig / FPSO fabrication. From there I went onto McNulty Offshore, working on some of the most complex FPSOs and modules, including the Anasuria and the Banff disputes - which ultimately led me to consultancy.

Whilst working at these companies I had the fortune of becoming a planner, at the start of the computerised planning era. By mid-1980s, the planning office at NEI Parsons took delivery of a state-of-the-art colour plotter. In the late 1980s and 1990s I was neck deep in Artemis programming. I do not know one planner who used Artemis in these decades that does not remember it fondly. Then, by the mid 'noughties', I started to work on projects that were planned on Primavera P6, Powerproject and Microsoft Project software packages, to name but a few.

Times change. Software changes. Knowledge changes. However, there is one thing that does not change, and that is change itself. I have witnessed substantial developments in the planning industry over the last 35 years, but I imagine these will pale in comparison to what will be achieved in the next 35 years.

What will the future hold for planners and delay experts in general?

The following are my thoughts as to how planning and delay analysis will progress in the ensuing years:

1. **4D assessment of delay** – as software is becoming increasingly cheap and flexible, the link between Project 3D models and the programme (both in terms of as-planned and as-built) will increase the regularity when this form of assessment is utilised and finds its way into disputes.

2. **Recording 'as-built' data through the use of fixed cameras and live stream video** – I have had the pleasure of preparing an as-built programme using photographic evidence that was retained to show the construction of the external envelope of the building in question. The quality of the data allowed, by way of example, every lift of each section of the shuttering to be easily determined.

3. **Artificial Intelligence** - development of planned programmes, based on data from past projects, should provide a much higher degree of confidence in the forecast programmes.

4. **Interactive reports** - capable of being prepared to allow the reader to control certain aspects of the report to, by way of example, allow the reader through animation to instantly see the effect of an event on the programme.

5. **Programmes** - will be prepared by project managers on handheld tablets, and the hand drawn programme will then be capable of being incorporated into the planning software.

6. **Increased use of drones** - to undertake reviews of works not readily accessible and wholesale assessments of site progress.

7. **Status snapshots / progress updates** - of rooms taken using 3D imaging techniques.

8. The revision of **productivity norms** by using exo-skeletons.

9. The use of **autonomous robots** to walk through sites, continuously capturing progress status and 3D imagery; and,

10. The impact of **3D printing** replacing procured materials.

All of these technological developments are here already, or will be with us before long. What do they all have in common? Technology, and the ability to develop these systems in a reliable manner, including the need to be able to handle large amounts of electronic data.

The speed of introduction of this kind of technology into project and company systems will be determined by the enthusiasm of the sub-contractors, contractors and employers reflecting the perceived benefits from each Party's standpoint. If deemed to be cost effective, or considered to give a company a competitive edge, the speed of the introduction of such systems could be rapid, given the speed at which new software is currently introduced.

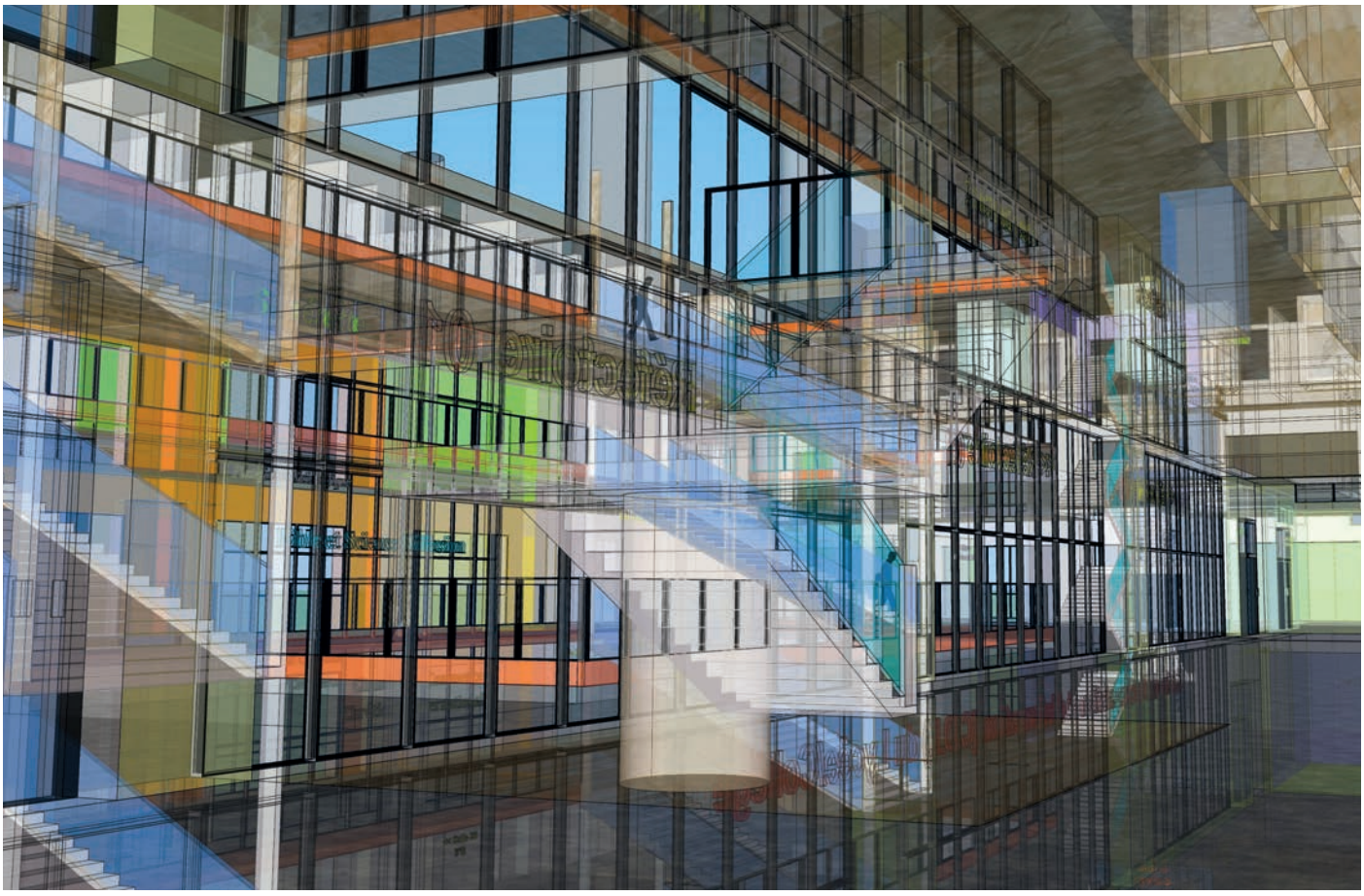
However, the speed of introducing this kind of technology into expert reports may run at an entirely different pace. In simple terms, CPR Part 35.3(1) sets out that the overriding duty of the expert is to *help* the court on matters within their expertise. For a short sentence, there is more than one part to focus on, but key in the consideration of the material to be included in a report, is the word, 'help'.

Unlike project planners, who have flexibility in deciding how and when planning systems are developed, the expert and the expert's report are slightly more restricted when considering how and when to use data from new technologies, owing to the determiner that their report must always 'help'.

The expert report must be readily understood by all Parties and the data underpinning the analysis must be capable of being effectively scrutinised.

Unless and until the data provided by these new technologies can be presented in a manner in which it can be disseminated and understood will render the report of little use. An expert report is not prepared as an attempt to prove that the expert is the cleverest person in the room and any report that does not set out the opinions of the expert in the manner that can easily be understood by the client, legal team, Counsel, Judges and opposing experts will be of little use.

In summary, as planners, we may have new inventions and systems to look forward to playing with, that will rapidly affect the manner in which a project is planned, and the as-built status recorded. However, as delay experts, we need to ensure that the data which these systems provide is as robust and subject to interrogation as the systems we have in place now. Failure to do this will result in significant wasted costs and delay experts on the wrong end of a decision having to explain to its client why! The answer, 'but I used cutting edge technology' in my report, will not suffice!



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Assisting the court or tribunal

Tom Comerford
Diales Quantum Expert

One of the primary purposes of expert evidence is to assist the court or arbitral tribunal in its reasoning and decision-making process on matters that are within the expert's expertise. Legal and arbitral processes often have differing requirements of expert evidence, depending on the geographical location, nature and format of the proceedings. This article explores ways in which, in general terms, a party-appointed expert can provide assistance to a court or tribunal in the context of construction disputes.

Ordinarily, expert evidence in construction disputes is independent opinion evidence, as distinguished from factual evidence, and is usually contained in written reports and/or statements included as part of the parties' submissions. That independent opinion evidence may be presented and tested in court or arbitration proceedings.

The expert's primary duty is to the court[1] or tribunal, but, as established in the case of Jones v Kaney[2], the expert also has a duty to his or her client not to be negligent.

THE ADMISSIBILITY OF THE EXPERT'S EVIDENCE

The admissibility of evidence will, in many cases, be governed by the applicable rules of evidence, be at the tribunal's discretion or be by agreement. These are likely to limit what is presented as evidence.

Generally, expert evidence requires leave of the court to be presented[3], albeit this differs in the case of institutional procedural rules[4] in arbitration.

The Civil Procedure Rules ('CPR') Part 35.4 requires, amongst other things, the court's permission to call an expert or put in evidence the expert's report. The directions order or procedural order is where the court or tribunal typically conveys the details of the expert and other evidence that will be allowed and these may specify the issues which the expert should address. Those issues will logically relate to the disputed issues and the parties' positions in relation to those. The expert does not decide the disputed facts or the law (including contractual liabilities or obligations).

The expert's opinion evidence can assist the court or tribunal in various ways, sometimes in the understanding of the factual evidence, particularly in the case of specialist technical matters or, by setting out the facts, literature, materials or anything else that the expert has relied on in forming their opinions, in order for the court or tribunal to make findings of fact. In other instances, such as in complex factual situations, where there may be large amounts of data, for example in construction disruption disputes, depending on how the evidence is presented, the expert often assists in effectively marshalling, distilling and communicating the facts as part of the rationale for his or her opinion.

THE EXPERT'S CREDENTIALS

To be capable of being of assistance to the court or tribunal it is expected that, ordinarily, experts will have either, or a combination of, relevant education, knowledge or experience in their field of expertise. The 2011 Law Commission report on 'Expert Evidence in Criminal Proceedings in England and Wales' set out four requirements relating to the admissibility of expert evidence.

This included, under the heading of 'Relevant Expertise', that the expert must have the relevant experience, in that the individual "has acquired by study or experience sufficient knowledge of the subject or experience to render his [or her] opinion of value". In his Sir Michael Davies Lecture to the Expert Witness Institute in June 2015, Sir Vivian Ramsey noted that whilst '...that was said in the context of criminal proceedings, the same could be said in terms of civil proceedings.'

The expert also needs to have knowledge of the standards that are to be expected of them. Following the common law duties arising from the Ikarian Reefer[5] case, the Ministry of Justice provided rules, directions and guidance as to the standards with which experts are expected to comply, in the following:

1. Civil Procedure Rules Part 35 - Experts and Assessors[6]
2. Practice Direction 35 - Experts and Assessors[7]
3. Civil Justice Council's ('CJC') Guidance for the instruction of experts in civil claims[8]

Whilst these are only mandatory in litigation, they may also be incorporated in bespoke arbitration rules, or by the agreement of parties to the arbitration. In some arbitration proceedings, particularly where the institutional rules are limited on prescriptive details as to party-appointed experts, it may be the case that the Chartered Institute of Arbitrator's 'Protocol for the Use of Party-Appointed Expert Witnesses in International Arbitration' or the 'IBA Rules on the Taking of Evidence in International Arbitration' might apply. In other cases, local laws may well apply, but in any event, it is important that the expert is aware of these rules, directions, guidance notes and protocols, and complies with them.

In addition, experts may also be subject to the codes, practice statements and guidance notes of the professional bodies of which they are members, such as:

1. The Academy of Experts' Code of Practice for Experts.
2. The Expert Witness Institute Code of Professional Conduct and Practice.
3. The RICS Practice Statement and Guidance Note - Surveyors Acting as Expert Witnesses 4th Edition amended 2020.
4. The RIBA Code of Professional Conduct and Guidance Notes 2019.
5. The ICE Code of Professional Conduct 2014.

THE EXPERT PROCESS

A comprehensive understanding of the duties of an expert, the rules applicable and the standards required of the expert will be invaluable in navigating the steps in proceedings[9] that a party-appointed expert may encounter[10], which could include[11]:

1. Preparation and subsequent exchange of reports, including answers to written questions arising.
2. Meeting of experts[12].
3. Joint reports/statements.
4. Supplemental reports.
5. Presentation and testing of opinion evidence at the hearing or trial.

THE EXPERT'S REPORT

What constitutes a report that helps the court or tribunal will vary depending on the complexities of the dispute, and be particularly so in some technical matters. In the case of Weatherford Global Products v Hydropath & Ors [2014] EWIHC 2275 (TCC), the judge made a criticism that:

> "There seemed to be a belief that the judge was a specialist electronics and electrical engineer who would understand, without any explanation, precisely how the technology worked, how the alleged deficiencies came about, how the various suggested fixes might work, how the experiments were to be understood and how the final device... worked. Lawyers and experts need to explain if necessary in words of one syllable all these matters."

The above quote was included in James Bowling's[13] article in The Academy of Experts' The Expert and Dispute Resolver, Winter 2014 edition, where he went on to give some useful guidance on how to prepare an expert report, as follows:

> "...report writing is a skill which can be learned - but only by really hard work to identify, appreciate and understand the key issues, marshal them into the right order, and then write a report which addresses them in a logical way. If this is done right, you will find that the report, in effect, writes itself. The really hard thinking comes in identifying and crystallising the right approach in the first place. Once that analysis has been done, your experience and qualifications should enable you to write a clear, concise answer. Remember, if you don't start by identifying the right questions, you won't get to the right answers."

In addition to the rules, directions, guidance notes, protocols and professional standards referred to previously, the expert's report should address the requirements of his or her instructions, within any budgetary constraints, and include references to the information that the expert relies on (providing copies of such where necessary).

The opinions arrived at should be supported by the facts and/or the expert's reasoning.

The CJC's Guidance helpfully provides detailed best practice in relation to the content of expert reports, including where a sequential exchange of reports is required[14].

Practice Direction 35, paragraph 3.2, recognises that there may be a range of opinions. This is not uncommon in many construction cases, given the nature and extent of the matters in dispute. This often requires the expert to give opinions based on alternative assumed facts for the assistance of the court or tribunal. Practically, and in terms of proportionality of cost, in complicated cases, such as in a delay analysis where there may be different factual outcomes, this can be very difficult.

EXCHANGE OF EXPERT REPORTS AND MEETING(S) OF EXPERTS

The preparation of a well-structured and compliant report, adopting the guidance above, that clearly deals with the issues, should result in a focused document, more readily capable of comparison, which can then be exchanged on an 'open'[15] or 'without prejudice'[16] basis. Such a report should assist in the next step of the expert process, that being a constructive 'without prejudice'[17] meeting of experts to further agree points and narrow the differences[18]. Meetings of experts in court proceedings, without a prior exchange of reports, is not uncommon, albeit it will still be necessary for the expert to have undertaken a number of the steps, he or she would have done prior to the drafting of the report, in any event.

Mindful of any issues the court or tribunal may have specified to be discussed and any agreed agenda, at the meeting, the experts may agree on, amongst other things, the issues, terminology, methodology and the points that they concur on. By way of example, the early agreement of the methodology for a delay analysis, or a disruption claim, can have significant time and cost advantages. Practice Direction 35, paragraph 9.2, sets out what is required from the experts meeting in the form of a statement that identifies the extent of agreement, points of and reasons for any disagreement, actions if any to be taken to resolve any outstanding points of disagreement, and any further material issues not raised and the extent to which they are agreed.

If the experts reach agreement on points or issues, then that is expected to hold significant evidential weight. Given that the experts' joint statement is most likely to be presented to the court or the tribunal, in my experience, it is important that this statement is clearly written and accurately records the experts' positions in order to be of the greatest assistance.

In some cases, supplemental reports may be required on the points that remain in disagreement and the same principles as set out previously in relation to the experts first report should be adopted.

The opinions contained in individual reports and joint statements, particularly as to the points in disagreement, may be adopted and tested at the court trial or tribunal hearing. This can be in the form of questions from the judge or tribunal, cross examination, concurrent witness evidence or re-examination.

The expert needs to be fully prepared for this, and be able to respond to questions in a calm, considered, clear and unambiguous manner.

HOW NOT TO ASSIST THE COURT OR TRIBUNAL...

Inevitably, there are many ways in which an expert does not assist the court or tribunal, examples of which can include:

i. Accepting an appointment on an incentive-based fee.
ii. Lacking in independence and/or objectivity.
iii. Stepping outside the expert's area of expertise.
iv. Acting as advocate.
v. Selective use of evidence.
vi. Failure to test the validity of materials provided to them.
vii. Accepting instructions from lawyers that will not knowingly result in a credible report.
viii. Undertaking poor analysis.

There have been numerous published accounts of where experts have fallen short of their duty to assist the court or tribunal which I do not repeat here, but which serve as a continuous reminder of the need for the expert to act in an objective, independent and impartial manner.

SUMMARY

In summary, a party-appointed expert should fully understand the duties of an expert, and the rules and protocols that are applicable to the proceedings, and the standards that are to be expected of them.

The expert is expected to have either, or a combination of, the relevant education, knowledge or experience of the issues in dispute. With these attributes, the expert should produce a report that is compliant, assists the court or tribunal in understanding the facts, is logically structured and addresses the key issues in a coherent, concise and reasoned manner.

The expert's meetings play an important part in agreeing points and narrowing the differences, thereby assisting the court or tribunal in focusing on the matters that it needs to address. Clear and well drafted joint statements are important in this process, and experts should be prepared to invest time in developing those statements.

In the event that the dispute continues to a court trial or tribunal hearing, then the expert needs to be fully prepared for such. The expert must be able to respond to questions and cross-examination in a calm, considered, clear and unambiguous manner that assists, where possible, the court or tribunal in its understanding of the facts and in its decision-making process.

In short, a good expert can be of assistance to the court or tribunal, by providing written and oral clarity on matters within the expert's field of expertise, working with other experts to narrow differences, and assisting the court to understand the facts on disputed issues in reaching its decision.

1. In the context of this article the references to 'court' or 'litigation' are references to the courts of England and Wales.
2. Jones v Kaney [2011] UKSC 13.
3.This is not the case in Scotland, for example.
4.For example, see Article 20 of the LCIA Arbitration Rules 2021, or Article 27 UNCITRAL Arbitration Rules to name but a few.
5. The Ikarian Reefer [1994] 2 Lloyds Rep 68.
6.www.justice.gov.uk/courts/procedure-rules/civil/rules/part35.
7.www.justice.gov.uk/courts/procedure-rules/civil/rules/part35/pd_part35.
8.www.judiciary.uk/wp-content/uploads/2014/08/experts-guidance-cjc-aug-2014-amended-dec-8.pdf.
9.In arbitration proceedings these will differ between memorials (submissions and witness/expert evidence filed together) or pleadings (submissions filed in advance of witness/expert evidence) and, arbitration proceedings differ from court proceedings.
10. These will differ in the pre-action stages.
11. In some arbitration proceedings, the procedure may be agreed by the parties, or as the tribunal determines appropriate.
12. Ordinarily held on a 'without prejudice' basis, in that the content of the discussions is not referred to unless agreed by the parties.
13. James Bowling is a barrister at 4 Pump Court and former editor of the 'Cases' for the TEDR.
14. See paragraphs 48 69 of the Civil Justice Council's Guidance for the instruction of experts in civil claims.
15. Disclosed to the tribunal and used in evidence.
16. Only disclosed to the parties and experts and not the tribunal.
17. Confidential and not disclosed to the tribunal.
18. The expert's role is not to settle the case.

Goodwood 2019 Festival of Speed Sculpture
Designed by Gerry Judah | Engineered by Diales Technical

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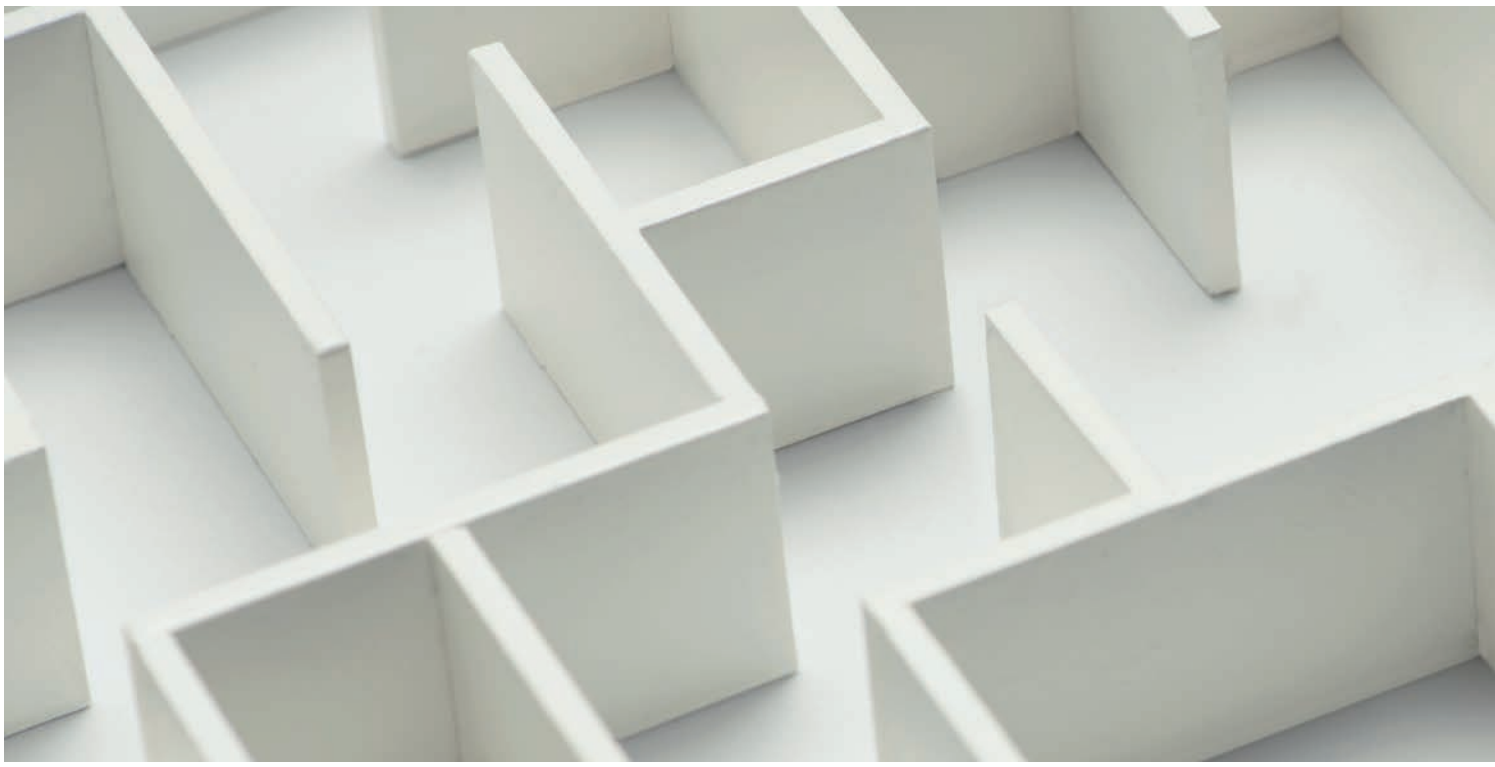


Adjudicator Decisions

What makes you think they really understand the matter?

Andrew Agathangelou
Diales Delay Expert

Adjudication proceedings for delay experts, are high risk. Many adjudicators have a commercial or quantity surveying background, rather than a project management or planning background, which can often lead to variable outcomes in the decisions reached by the adjudicator regarding the causes of delay. This means that a delay expert must write and structure his report in a way that addresses the needs of the adjudicator. Too often, expert delay reports are written for the benefit of the party employing the delay expert, rather than for the benefit of the adjudicator. This means that too much technical detail is provided, using language that an experienced planner or site manager will understand, but an adjudicator may or may not be familiar with.

Writing an expert delay report, using language that an adjudicator can understand and follow, increases the probability that the adjudicator will find favour with the evidence presented.

This is more difficult than it suggests, because some of the causes of delay are complex, as is the explanation as why a particular delay event delayed overall completion when there might be many competing delay events.

The primary requirement of an expert delay report is to assist the adjudicator or tribunal to understand the matter in hand, hence the requirement to find the balance between the use of technical language (to explain a particular issue), and the use of more straight forward language and explanation that is understandable for an adjudicator, without being dumbed down or sounding patronising.

An example of where more straightforward language might have helped an adjudicator to decide on a matter that was difficult to explain, and decide which party held the risk, occurred on a refurbishment project in which the existing roof needed to be demolished to make way for an additional storey. The contractor designed and constructed a temporary scaffold roof over the existing roof to allow its demolition, but crucially, part of the temporary scaffold roof was propped back to the existing roof. This meant that the existing roof could not be fully demolished until an entirely new second temporary scaffold roof was designed and constructed by the contractor over and above the first temporary scaffold roof, which was then removed and allowed the remaining existing roof to be demolished.

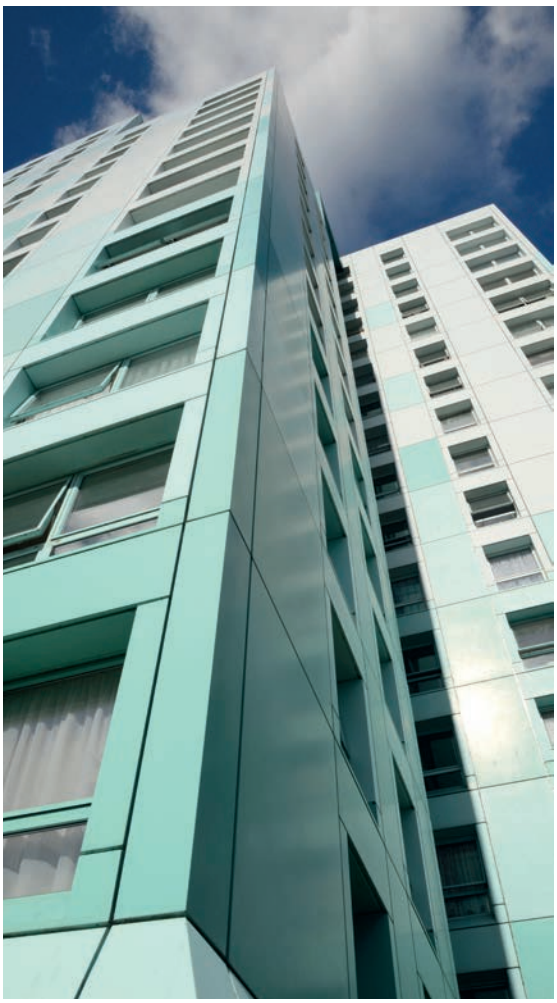
Essentially, the contractor's design of the first temporary scaffold roof was incorrect and should never have been propped against the existing roof to be demolished.

The resultant delay was a risk for which the contractor held the risk.

However, the adjudicator appeared to confuse the responsibility for the design of the second temporary scaffold roof, because this roof was founded in part, back to the existing structure which meant that the Employer's structural engineer agreed to provide comments to the contractor's second temporary scaffold roof design.

The adjudicator decided that the second design did not form part of the contractor's temporary works, and held the Employer liable for the delay to the roof demolition because of the length of time it took to produce a temporary scaffold roof design that would allow the existing roof to be demolished.

Much technical language was used in the Employer's witness statements and in the evidence provided by the Employer's structural engineer, which meant that the essential message of the contractor's incorrect first design was lost amongst all the technical detail. This resulted in the adjudicator essentially missing the key piece of evidence in which the contractor was liable for the design of both temporary scaffold roofs, and ultimately made the wrong decision.



Part B, or Approved Part B? That is the question.

Ambiguities in the statutory fire safety Building Regulations Part B and the practical guidance of Approved Document B

Rob Foster and Ben Chamberlain
Diales Associate Director and Diales Technical Expert

The fire safety requirements of the Building Regulations are under ever closer scrutiny, as construction disputes relating to the flammability of external wall cladding and insulation, on high-rise residential buildings, continue to arise following the Grenfell Tower fire in 2017. But should designers bear liability where such products were specified and installed?

In England and Wales, the Building Regulations are approved by the Secretary of State pursuant to the Building Act 1984. Within the Building Regulations 2010, the fire safety requirements were described at Schedule 1, Part B. Of particular relevance to insulation in external walls was section B3.(4), which required that: "The building shall be designed and constructed so that unseen spread of fire and smoke within concealed spaces in its structure and fabric is inhibited." Additionally, section B4.(1) related to external fire spread and required that: "The external walls of the building shall adequately resist the spread of fire over the walls and from one building to another, having regard to the use and position of the building." Both statutory requirements had remained unchanged since 1985.

The government also issues practical guidance about how building design and construction may meet the statutory requirements by way of a series of Approved Documents. This guidance is updated periodically. At the time of the Grenfell Tower refurbishment, the relevant fire safety publication for high-rise residential developments was 'Approved Document B, Volume 2 – Buildings other than dwellinghouses, 2006 edition incorporating 2007 and 2010 amendments' ('ADB').

Although amendments were made to ADB in 2013, the guidance relevant to insulation and cladding, at sections 12.5 – 12.9, remained unaltered. Changes were also made to ADB in 2018, 2019, and 2020. However, current claims pertaining to external wall insulation and cladding tend to relate to projects begun under ADB 2010 (or earlier revisions). As such, that is our focus here.

Arguably, there were ambiguities in sections 12.5 – 12.9 of ADB, which we shall examine below. There is also a question mark regarding the extent that designers can rely on the Approved Documents to discharge the statutory obligations of Schedule 1, Part B, given that the recently produced (July 2020) 'Manual to the Building Regulations, A code of practice for use in England', states:

"...simply following the guidance does not guarantee that your building work will comply with the legal requirements of the Building Regulations."

So, whilst the requirement at section 12.7 of ADB that: "In a building with a storey 18m or more above ground level any insulation product ... used in the external wall construction should be of limited combustibility ...", is unequivocal, the arguments around cladding specifications are more nuanced, however. Since the Grenfell fire, much of the ensuing debate has understandably centred around Aluminium Composite Material ('ACM') cladding systems.

In hindsight, it is tragically apparent that non-fire rated ACM cladding panels did not meet the requirements of section B4.(1) of the Building Regulations. Despite the product's evident failure to meet this statutory minimum, Paul Hyett, an architect, and former president of the Royal Institute of British Architects ('RIBA'), does not believe that the designer's specification of the ACM cladding, of itself, was unreasonable. In expert evidence to the Grenfell Inquiry, Mr Hyett argued that the cladding system that was installed was subject to a test certificate from the renowned British Board of Agrément ('BBA') affirming that: "... the [ACM] panels maybe regarded as having a Class 0 surface ...".

Independently verified certificates published by the BBA are intended to give specifiers peace of mind that products are fit-for-purpose, safe, and comply with regulations and best practice guidelines. 'Class 0' is the external wall surface classification for the spread of flame, which is a prerequisite for materials used on residential buildings 18m or higher, (or closer than 1m from the boundary) under section 12.6 and Diagram 40 (see Figure 1) of ADB.

Mr Hyett's argument rests on the basis that the architectural profession should be able to rely on manufacturers' published data and, particularly, BBA Certificates. Without confidence in such technical information, the profession would be 'fumbling in the dark' and, if the elements of each and every project had to be independently tested and certified, the construction industry would effectively grind to a halt.

Mr Hyett attested to the Inquiry that, although more detailed information of the cladding's behaviour in relation to fire was contained at section 6 of the BBA Certificate, the designer's acceptance of the 'Class 0' designation at face value was reasonable. However, section 6 of the BBA Certificate was less clear-cut. It stated that the 'Class 0' classification only applied to specific colours, and that alternative hues would require testing in line with ADB. Further, section 6.5 stated that: "For resistance to fire, the performance of a wall incorporating the product, can only be determined by test from a suitably accredited laboratory, and is not covered by this Certificate." Also, can a designer simply accept a satisfactory surface spread of flame test result, which points to compliance with ADB section 12.6, without regard to ADB sections 12.5, 12.7 and the overarching requirement to comply with the Building Regulation B4.(1). Surely not!

External wall cladding is a significant cost and design element of both new build and refurbishment projects. Additionally, commonly used RIBA appointment contracts usually include the requirements for architects to exercise reasonable skill, care, and diligence in the discharge of their services. Whilst the 'Architects Code: Standards of Conduct and Practice', published by the Architects Registration Board, enshrines "competence" as an expectation of the profession. As such, it is arguable that a competent designer, exercising reasonable skill, care, and diligence, should take more than a cursory glance at key technical data. So, should inconsistencies in BBA Certificates, such as those highlighted in the previous paragraph, prompt further technical probing of products and materials with manufacturers?

This point aside, there has also been considerable examination of the flammable polyethylene core sandwiched between the two sheets of 0.5mm thick aluminium that make up ACM cladding panels. The 'Class 0' rating, stated in the aforementioned BBA Certificate, only applied to the aluminium face of the composite panel and not to the plastic core. So, was it necessary to interrogate the complete make-up of the product prior to specifying it?

In Mr Hyett's opinion, it was reasonable for designers to assume that the 'Class 0' classification of the Reynobond ACM applied to the product as a whole, including the core. Therefore, it was reasonable for designers to specify such products on high-rise buildings; notwithstanding any shortcomings in the technical data, where responsibility rested with manufacturers and/or certifying bodies.

However, section 12.5 of ADB also advises that: "The use of combustible materials in the cladding system ... may present such a risk [for fire spread] in tall buildings." This appears to refer to the system as a whole, suggesting that designers needed to take a holistic review of cladding systems, which, it could be argued, would include the make-up of composite materials, in order to discharge statutory obligations under the Building Regulations.

There has also been much debate regarding the nomenclature of the ACM polyethylene core and whether it falls within the definition of "filler material" under section 12.7 of ADB: "Insulation Materials/Products", which requires the materials used to be of limited combustibility. In the immediate aftermath of the Grenfell fire, the government was quick to clarify its own position on this matter and wrote to local authority and housing association chief executives declaring that: "For the avoidance of doubt; the core (filler) within an Aluminium Composite Material (ACM) is an "insulation material/product", "insulation product", and/or "filler material" as referred to in Paragraph 12.7 ...".

Dr. Barbara Lane, a fire engineering expert, disputes this definition, however. In her own evidence to the Grenfell Inquiry, Dr. Lane asserted that: "... an ACP [ACM] rainscreen cladding layer is not an insulation material or product ....

It could be said that this point of view supported by British Standard 8298-4's recommendation that rainscreen cladding, separated by an air gap, should be disregarded from thermal heat loss calculations. But is this an adequate differentiation, as to whether or not the core is helping prevent heat loss, it is often formed using a combustible insulation material?

Although the term "filler" is used commonly in the construction industry, Dr Lane also asserted that the polyethylene core of ACM panels was never termed thus, prior to the Grenfell fire. Her view was supported by Mr Hyett. In this context, his reading of "filler material" was that it "... relates to a product or material such as mineral wool, or PIR insulation – that is something consisting of the same material ...throughout its make up." Following this logic, there would have been no requirement for the ACM core to meet the limited combustibility requirements of 12.7 of ADB; but should the general warning at section 12.5 regarding: "...combustible materials in the cladding system..." have been heeded? Or was it sufficient to ensure that the cladding surface had 'Class 0' designation, as required by section 12.6?

The historic use of products such as ACM cladding in high-rise buildings is often attributed to these alleged ambiguities within ADB; confusion over ADB's practical guidance status against the statutory requirements of Schedule 1, Part B of the Building Regulations, as well as certification that blurred the distinction between compliance with sections 12.6 and 12.7 of ADB, which left designers operating within a somewhat grey, and sometimes confusing, framework. Whilst the question of whether compliance with ADB itself is sufficient to comply with Schedule 1, Part B of the Building Regulations remains open for debate.

Had the Grenfell fire not occurred, and its immediate lessons been learnt, it is quite probable that non-fire rated ACM cladding would still be used on high-rise residential buildings today. However, since the fire, the practical guidance within ADB has been updated and clarified, and now precludes the use of combustible materials in the construction of external walls for high-rise residential buildings.

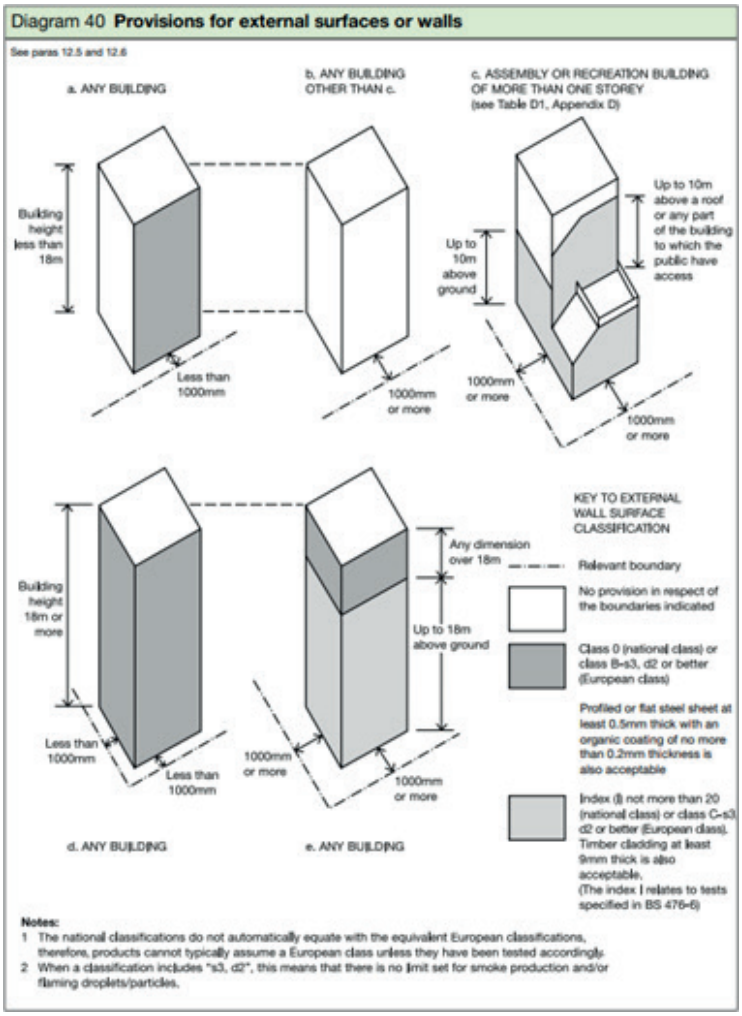


Figure 1 - Diagram 40, ADB

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Building Back with Better Commercial Management

The author, John Mullen's, 40 years of experience in construction and engineering should give a mature view of which management failures most commonly lead to problems that can end in claims, dispute and increased costs. Recently combining that experience with an informal survey of the worldwide perspective of colleagues across Driver Group's multiple offices confirmed that similar issues repeat across continents and project types. In the limits of this short paper, they are only set out in summary and are far from comprehensive, focussing on the most commonly reported, starting with project inception and ending with dispute resolution.

Management failures can start from inception phase, with:

- Rushed procurement;
- Premature procurement based on incomplete design and/or site acquisition;
- Lack of involvement of end-users;
- Passing risks to the contractor that it is least able to control;
- Lack of understanding of local laws, regulations and culture.

Enquiry documents lay fertile ground for later problems where they:

- Use an inappropriate standard form;
- Mismatch contract strategy to design certainty / complexity;
- Use ill-conceived one-off terms;
- Poorly amend a standard form;
- Contain onerous provisions;
- Are lazily drafted;
- Are over-lengthy;
- Are ambiguous or contradictory;
- Ignore laws, regulations and culture.

At tender stage the opportunity to mess things up passes to the contractor in its pricing, where that activity involves:

- 'Buying' the job;
- Failing to identify and price risks;
- Lack of co-ordination between tender and project teams;
- Failing to understand completion requirements;
- Failing to recognise particular project restrictions / circumstances;
- Naïve pricing based on a previous 'similar' project.

Particularly where a tenderer gets such aspects wrong, the damage is exacerbated if the employer then makes its selection:

- Solely or principally on price;
- Without establishing that the contractor understands, such as:
  - Scope;
  - Specification;
  - Programme;
  - Risks.
- With no requirement for programme, method statements or resource details.

Post-contract, all parties can be responsible for failures of project management arising from:
- Lack of awareness or understanding of contract terms;
- Lack of experienced staff;
- Unrecorded verbal agreements;
- Parking contractual requirements 'in good faith';
- Supply chain mismanagement;
- Lack of a fit for purpose electronic project file structure.

As design progresses and is issued, the most common causes of problems include:
- Lack of a realistic Information Requirements Schedule;
- Late design information;
- Inaccurate design information;
- Incomplete design information;
- Contradictory / incompatible design information;
- Late approval of contractor designs;
- Designs that ignore local regulations.

On a project of any complexity the programme should be an essential tool in managing both works and the design.

However, common errors include:
- Not following any express contractual requirements such as for sectional completion;
- Using a flawed or inadequate baseline programme;
- Lack of regular programme updates;
- Failure to regularly monitor against programme;
- Unrealistic updates:
  - Under-reporting effects;
  - Slanting effects.

All projects carry elements of risk, especially in relation to ground or weather conditions, resource availability and resource cost escalation. All too often such risks are managed without identifying them early enough, or fully anticipating their potential, or with a flawed response to start with.

Whilst change may be considered inevitable and/or desirable, mis-management often includes:
- Failure to limit the scope of change;
- Lack of timely quantification of time and cost effects;
- Exaggerated external pricing;
- Understated internal reporting;
- Denial of valid claims;
- Lack of / inexperienced staff:
  - to quantify and submit;
  - to review and respond.

If a contractor cannot properly control, monitor and report its costs then it will not only undermine its margins, but it may resort to making claims to recover the loss. Common failures of cost management include a lack of cost control; lack of a properly detailed financial budget; failure to regularly monitor costs against budget; and inaccurate reporting.

Processes around Interim Payments can be burdensome and time consuming. Mismanaged, they can lead to a range of issues such as claims for interest, instigation of dispute procedures and even contractor failure.

Common errors include:
- Excessive use of 'payments on account';
- Inaccurate measurement and valuation;
- Omission / undervaluation of valid claims;
- 'Cash flowing' the contractor;
- Issues in relation to Payment Notice procedures;
- Late payment.

Problems that arise from the various examples of pre- and post-contract failures such as set out above do not have to lead to claims, but if they do, parties often exacerbate the negative effects by failures of claims management such as:

- Contractor failures:
  - Late submission;
  - Exaggeration;
  - Poor preparation;
  - Flawed methods of delay analysis;
  - Using inaccurate records;
  - Using flawed methods of quantification;
  - An inability to quantify the effects of disruption.
- Employer / Contract Administrator failures:
  - The self-defensive Contract Administrator;
  - Denial of valid claims;
  - Late recognition of valid claims;
  - 'kicking the can down the road' until Final Account or Completion.
- All parties:
  - Adversarial attitudes;
  - Lack of objectivity and use of exaggeration and emotive language;
  - Unrealistic reporting;
  - Tactical invention of counterclaims.

Record keeping can be a key part of managing change and limiting its scope for causing problems. Those records may be of:
- Events;
- Effects;
- Resources;
- Allocation.

In relation to such records, change management can be undermined by failures such as:
- Lack of records;
- Partial records;
- Inconsistent records that are hard to combine;
- The wrong type of records;
- Reliance on emails for saving data;
- Inaccurate / one-sided records such as minutes.

Alongside records, contractual notices are a key component for the successful resolution of any claims that arise.

Common errors include:

- Lack of awareness of contract requirements;
- Failure to implement contract requirements:
  - In good time;
  - In right form / details;
- Defensive responses to Notices;
- Disputes regarding 'Conditions precedent'.

In the event that a claim becomes a dispute, efficient resolution can often suffer from:

- Exaggerated claims and counterclaims;
- Unrealistic negotiation positions;
- Attorney / advisor inexperience;
- Use of Experts:
  - Too late;
  - Poor quality;
  - The 'hired gun'.

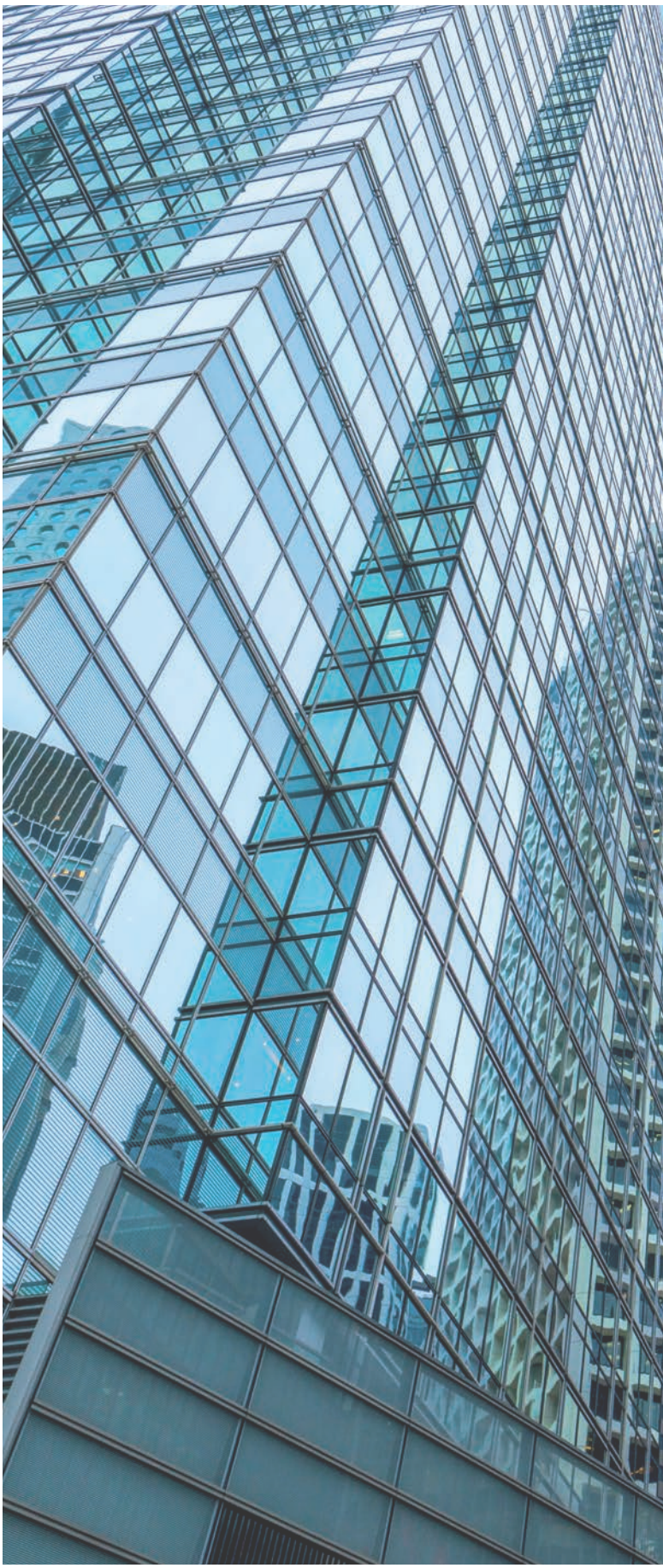
Many other examples of bad management practice have persisted through the years and jurisdictions, causing unnecessary delays, costs and disputes. The above is the most common reported within the Group. It also seems to the author that these are perennial failures that have repeated throughout his career and that some markets seem to do little or nothing to learn from.

The root causes of such bad management practices can perhaps be summarised as the following short-list:

1. Combinations of inexperienced parties and poor quality advisors.
2. Unrealistic expectations.
3. An emphasis on cost rather than value for money.
4. Lack of training and retention of good people.
5. Poor communication.
6. A lack of personal and professional integrity.
7. Failure to learn lessons from past failures.

If the construction and engineering industries, through the food chain from clients to suppliers, could all address these broad issues, then perhaps the bad management practices that repeatedly seem to prejudice their abilities to achieve goals in relation to time, quality and costs would be reduced and even avoided entirely.

John Mullen
Diales Principal and Quantum Expert



Diales news

Michelle McMillan is promoted to Director for Canada

Michelle McMillan is a Delay, Quantum and Project Management Expert at Diales, and we are delighted to share that she has recently been promoted to Director for Canada.

We caught up with her in this Q&A to get to know her better.

WHY DID YOU CHOOSE TO SPECIALISE IN THE RESOLUTION OF CONSTRUCTION DISPUTES?

I am a Civil Engineer by education. One of my first assignments was working on the Owner's team for the Petronas Towers in Kuala Lumpur Malaysia, at the time the tallest buildings in the world. I just naturally fell into the role of negotiating disputes on the project and my project manager suggested this might be a career path for me. I have now been loving working in the dispute resolution area of construction for over 25 years, so I guess it was good advice.

WHY DID YOU CHOOSE TO JOIN THE DRIVER GROUP?

There are so many reasons as to why I decided to join in 2020, but on the top of my list was the people I would be working with, underpinned by the company values and ethos. The Driver Group genuinely has some of the most talented people I have worked with to date. They are not only technical, project and claims specialists, but they are also experts at collaboration and communicating knowledge. The company's ethos, "Worldwide Expertise, Delivered Locally", means that we combine our industry knowledge with a real understanding for the intricacies of our local markets. This enables us to give our clients the best possible service and outcomes.

YOUR PROMOTION TO CANADIAN DIRECTOR, WHAT ARE YOU LOOKING FORWARD TO?

I am excited to take on the challenges in my new role, but I have big shoes to fill. Kevin O'Neill who was my predecessor, has been with the company since they started in the Canadian market in 2014. Following in Kevin's footsteps, I'm looking forward to leading our diverse and talented Canadian team and continuing to expand our local and global presence.

Outside of my daytime responsibilities, I enjoy teaching at the University of Calgary as part of their Project Management Certificate program. I enjoy learning from and teaching others. Approaches to resolving constructions claims in Canada have evolved over the past 25 years, and I hope to continue working with the construction industry to resolve construction disputes quickly, fairly, and in the most cost-effective ways possible.

For more news, visit: **diales.com**

Get to know us

Part of the Driver Group, Diales has access to 31 offices in 18 countries, spread over five continents.

DIALES EXPERTS:

- Understand their responsibilities to the court, tribunal. and to their clients.
- Have participated in formal conflict resolution processes; they have given testimony, and they have been cross-examined.
- Are experienced in producing concise, detailed reports, on time, and within tight deadlines.
- Have access to global support staff through the Driver Group plc, enabling them to meet client requirements and maintain excellent standards.

SECTORS

Our expertise supports the delivery of major projects worldwide, and bridges the gaps between the construction, legal, and financial sectors.
Our specialist experience includes the following sectors.


MINING


BUILDINGS


INFRASTRUCTURE


ENERGY


PROCESS AND INDUSTRIAL


TRANSPORT


OIL AND GAS


MARINE

CONTACT US

Our regions cover the Americas, Asia Pacific, Europe and the Middle East. Contact us to discuss your enquiry, and we will put you in touch with your local contact.

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