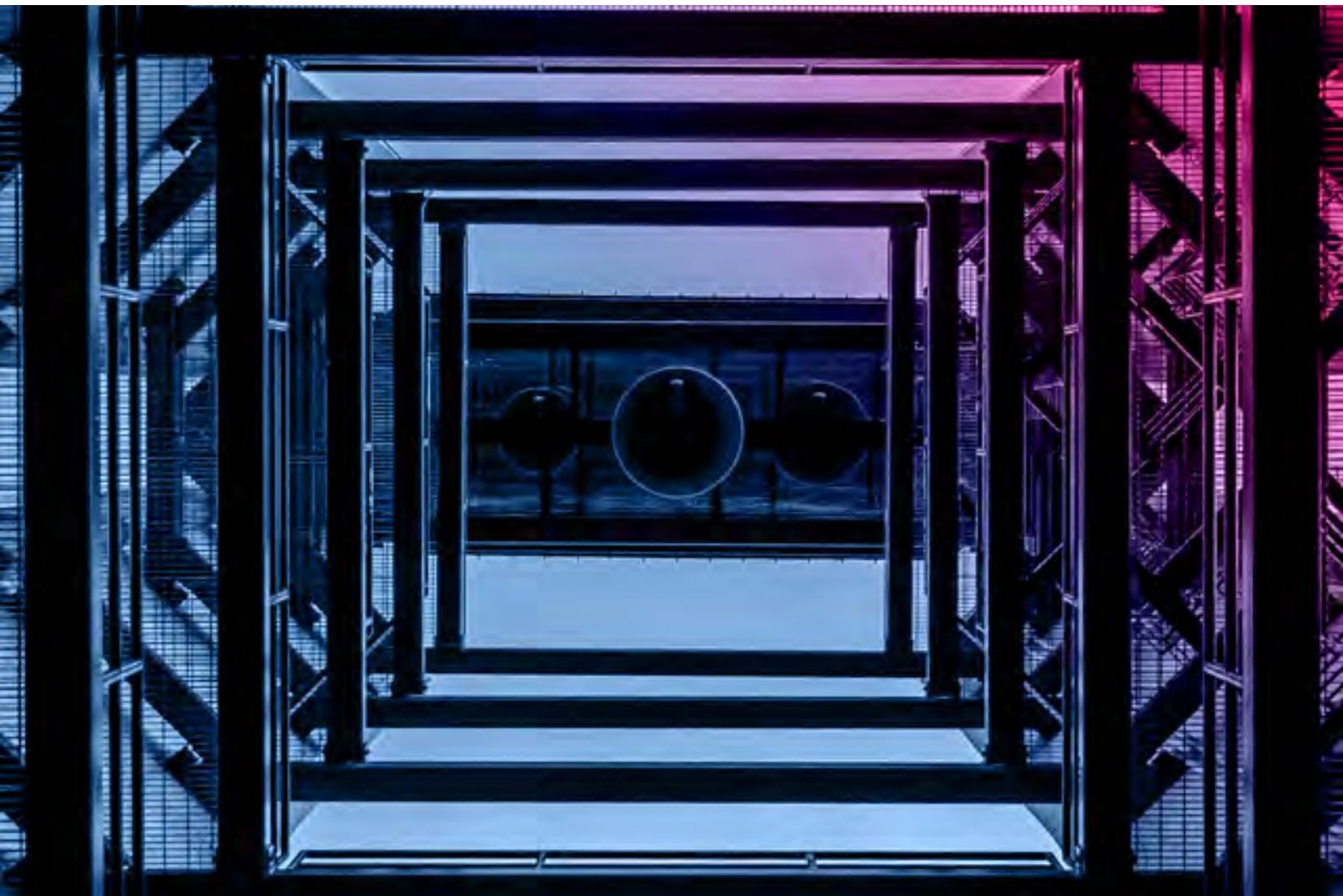


DGA

DGA GROUP EBRIEFING

October 2020



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MESSAGE FROM THE CEO

Welcome to our October 2020 EBriefing. In this edition, we have included a variety of articles providing practical advice, technical / educational briefings and thought-provoking ideas.

We have 5 articles authored by our staff from across DGA's global offices.

Jamie Cook [UK] has reviewed the development of technology in construction, which is gaining more prevalence given the changing work environment due to the pandemic. Scott Milner [UK] and John Donnelly [Australia] have both produced practical advice articles on the importance of verified timesheets for payment and the good practice of administering the RFI process respectively. Mark Murphy [Singapore] has provided guidance on valuing ex-gratia prolongation costs part funded by the Singapore Government through COVID-19 legislation. Stuart Andrew [UK] has provided an update on the Construction Industry Council (CIC)'s Low Value Disputes Model Adjudication Procedure.

I would like to thank our contributors for the time and effort they have committed to producing these educational and informative articles which are both useful references and meant to encourage discussion.

Turning to the DGA Group business, I am very pleased to announce the opening of our new Sydney office. Along with Melbourne we now have two offices in Australia giving us greater coverage to service our client base for our Oceania business. This now brings our total global office count to 16 across 7 countries. Details of our offices can be found at the end of this EBriefing.

Our younger team members in Australia are working closely with our Marketing and Communications department to develop our social media platforms, and I am pleased to announce that we are now on Instagram. Please do follow us on Instagram at '[@dgagroup](#)' for the instant updates the team are posting. I am looking forward to seeing what our younger team members, working in collaboration across our offices, can further develop in the sphere of social media.

I have previously reported on how the pandemic has impacted our global offices in different ways and I am happy to report that our Dubai office has formally re-opened. This is obviously constantly reviewed given the nature of the COVID-19 virus and we will keep our staff informed if there are any changes to working in our offices, on project sites or from home. We continue to service our clients' requirements no matter what the work base location necessitated.

I see from various Government announcements across the world that the common post COVID-19 economic recovery strategy is to create jobs via investment in significant infrastructure projects. Therefore, the future looks bright - we just need to get to the other side of the restrictions or develop a 'new normal' that we can live with until a vaccine is available.

Our teams are hosting an ever-increasing number of informative educational webinars and I would invite you to join these when you can. Details of up and coming webinars are provided in this EBriefing as well as on our website at www.dga-group.com.

Finally, I would like to wish our clients, staff and their families a safe and healthy future and hope that we will all be able to simply meet in a coffee shop for a chat and a catch up soon. Stay Safe.

If you would like to discuss any of the featured topics or any related matter, please feel free to [contact us](#).

LOW VALUE DISPUTES UNDER THE CIC LVD MAP GUIDANCE ON THE RECENTLY LAUNCHED ADJUDICATION PROCEDURE.

STUART ANDREW

Director, UK

As an update to our September 2019 article concerning low value dispute resolution schemes, the Construction Industry Council (CIC) launched its Low Value Disputes Model Adjudication Procedure (CIC LVD MAP) on 1 May 2020 by Webinar. This included presentations by Nick Raynsford Chairman of CICAIR, Niall Lawless Chair of the CIC ADR Management Board and Fergus Harradance, Deputy Director for Construction, Department for Business, Energy and Industrial Strategy (BEIS).

Developed by the CIC in conjunction with a number of leading industry bodies, this new procedure has been designed to encourage the use of adjudication on disputes relating to a value up to a limit of £50k. There are ten Adjudicator Nominating Bodies who can be approached for the appointment of Adjudicators, including the RICS.

In 1994 the Latham report on the state of the UK construction industry was immensely critical, describing the industry as being so rife with disputes that any solution would be welcome. Housing Grants, Construction and Regeneration Act 1996 ("the Construction Act") was enacted in 1998 in response to the report and subsequently amended by the Local Democracy Economic Development and Construction Act 2009, which was introduced in 2011.



One of the key recommendations by Latham was for a quick and simple procedure to resolve disputes. This was enshrined in S108 of the Construction Act. The intention was to enable "bite sized" disputes to be settled early and quickly by Adjudicators, most of whom were industry professionals, without delaying the progress of works and without the immense involvement of lawyers and the courts.

Adjudication has been hugely successful in terms of the number of disputes that are resolved using the process, with a vast reduction in arbitration and litigation.

With the evolution of adjudication there has been an increase in the complexity and costs involved in the process with some seeing it as being 'mini litigation'. Parties costs are not, in general, recoverable and the legal complexities concerning jurisdiction and other challenges mean that most parties require some level of legal advice.

In recent years, the legislative frameworks have become convoluted and harder for firms to understand, and thus use the adjudication process, which disincentives many parties from using adjudication. It has been described by

some as 'onerous and time consuming'. It has been suggested within the industry that adjudication no longer provides a cost-effective process, typically where the value of claim is less than £30k therefore, for many low value disputes, it was simply not worth pursuing it through adjudication.

The CIC LVD MAP sought to address this by developing an industry wide procedure for adjudicating disputes of less than £50k, that do not involve multiple or complex issues, is Construction Act compliant, and is supported by BEIS. That procedure is the CIC LVD MAP, which provides parties with a straightforward structure and programme to manage lower value disputes.

The CIC LVD MAP Rules provide for a streamlined and cost-effective process, under which:

- An Adjudicator, who is an expert in the subject matter in dispute, will be nominated and will use his expertise to decide the matter within 28 days;
- The Adjudicator is expected to limit the length, or time for submission of any statement, response or argument;
- The parties are required to limit their documents to no more than one A4 lever arch file (or electronic equivalent) per submission; The parties are able to represent themselves;
- Decisions are temporarily binding unless and until the dispute is decided at litigation or arbitration;

- Adjudicators fees are fixed, and range from £2k for disputes up to £10k to £6k for disputes between £25k and £50k;
- All participating Adjudicator Nominating Bodies have an agreed uniform fee for nominating an adjudicator of £250.

The CIC LVDP MAP can either be incorporated into the Contract directly by reference or, alternatively, the Parties may agree to use the procedure on an ad-hoc basis when a dispute arises.

Currently, the CIC LVD MAP is not incorporated into standard forms of contract such as those published by JCT or NEC. If you do wish to have the option of using this procedure then, subject to legal advice, it is likely that an amendment along the following lines will need to be added into the contract, together with a definition for 'Low Value Dispute':

The Parties agree that any Low Value Dispute arising from a Contract for the carrying out of construction operations may at any time be referred to adjudication in accordance with the CIC LVD MAP.

There is currently an increasing level of interest in this procedure as parties recognise the benefits it can provide in dealing with low value and less complex disputes.

Stuart Andrew is a member of the RICS Panel of CIC LVD MAP Adjudicators and can provide further information on request.

ONLY A MATTER OF TIME[SHEETS]

SCOTT MILNER

Director, UK

This article concerns the 'old chestnut' of timesheets and approval by the other party (the payer or its representative) in accordance with the agreement. One would be excused for believing it should be simple to disprove time, however, where time has been recorded and verified, it is not always so easy to disprove and correct the time later if the agreed verification procedure has been followed but other contemporaneous records suggest that the time is incorrect.

Whether there is a specific agreement for the contractor to be reimbursed for his plant and/or labour on a time basis or a provision in a lump sum agreement for the resource involved with additional or substituted work to be recorded and valued as 'daywork', these often include the requirement for timesheets, setting out full details of the resource and time spent, to be submitted periodically to the other party's authorised person for checking and/or authorisation for payment. Take a typical JCT Building Contract, for example, the recovery of time expended on daywork is on the proviso:

"...in any case vouchers specifying the time daily spent upon the work, the workmen's names, the plant and the materials employed shall be delivered for verification to the [Contractor (if sub-contract version) or the Architect/ Contract Administrator or his authorised representative (if main-contract version)] not later than 7 days after the works has been executed".

Many contractors and subcontractors will endeavour to follow this procedure but often ignore the fact that it is one of the last resorts for the valuation of a Variation. However, that is not the issue here. Below are two cases that consider disproving the time recorded in unverified timesheets and verified timesheets.

UNVERIFIED TIMESHEETS: *JDM Accord Ltd v Secretary of State for the Environment, Food and Rural Affairs, 16 January 2004, TCC*

In 2001, the UK witnessed the outbreak of the foot and mouth disease and, in response, the culling of herds of cattle around the UK as a measure to stop the spread of the disease. In light of this, DEFRA entered into a contract with JDM to construct burial sites and infrastructure works for which JDM was to be paid a reasonable rate for such labour and materials as it provided subject to the time/resource record being countersigned at the time by a DEFRA representative.

To achieve this, the parties agreed that a DEFRA representative was to be based on each site and his/her job was to record



the activity being performed, the resources and time spent. The record (which I will call the timesheet) was then to be signed each day by an employee nominated by JDM and by the DEFRA representative.

JDM produced timesheets to back up its claim for payment. Unfortunately, the timesheets were not on all occasions counter-signed at the time by a representative from DEFRA because many sites had no DEFRA representative present or where there was such a representative, in some cases the timesheets were not verified. DEFRA challenged the unverified timesheets and resulting invoice.

Given the nature, urgency and speed the works had to be performed, this method of recording the resources was the only reasonable means for JDM to prove its entitlement. Arguably, JDM had fulfilled its side of the bargain and DEFRA had not. However, does this make the unverified time or resource recorded right or wrong?

In respect of DEFRA's challenge, HHJ Thornton QC held:

"It would be to allow DEFRA to take advantage of its breach of contract if DEFRA was to be allowed to make any more extensive challenge to the time sheets than it could have done following their verification by one of its site based representatives. Thus, for any time sheets now in issue which had not been verified by DEFRA on site, DEFRA now has the evidential burden of showing that the contents of the time sheet were inaccurate."

In practical terms, therefore, DEFRA is restricted in its attack on the time sheets to showing that they contain arithmetical or other patent errors, that they are subject to some general error such as not allowing for deductible meal breaks, were fraudulently produced or were produced by a process which was inherently unreliable such that no weight may be placed upon them."

Where the unverified timesheet is claimed to be wrong, HHJ Thornton QC made it perfectly clear: (a) the paying party has the burden of proof of showing that the timesheets contained obvious errors such time for rest, meal breaks included or perhaps a process was created of concealing the error(s); and (b) in the absence of such proof, the timesheets and resulting were contemporaneous and had to be paid.

VERIFIED TIMESHEETS: *Premier Engineering (Lincoln) Limited v MW High Tech Projects UK Limited, 18 September 2020, TCC*

In February 2018, MW engaged Premier to provide manpower (trades and supervisors) and materials, to a large construction project in Hull known as the Energy Works Hull Project. MW usually specified its requirements on a weekly basis for the week ahead. Premier would supply them, and the men would be employees of and paid by Premier at hourly rates. It was for MW

to allocate work for Premier's men to do from time to time. Entry to the site on arrival and exit on departure was to be through turnstiles that recorded who had been on site and for how long.



The system that was operated was that, normally at the end of each week, Premier presented timesheets to MW setting out the hours that their men had worked plus other items such as allowances for travel. Premier initially maintained a sheet for signing in and out to support the hours that would be entered on the timesheets, though this paper system was later superseded. Also included on the timesheets would be incentive hours where MW had offered an incentive in particular circumstances: a typical example would be that if a man worked a particular number of hours or shifts he would be paid an additional bonus. The timesheets would almost always be signed by a representative of Premier to vouch for their accuracy. On presentation of the timesheets to MW, a responsible person would sign them off.

They would then be used by Premier as the basis of their invoicing, as contemplated by the agreement between the parties. It was common ground that the invoices were checked by MW on receipt. MW would then raise an internal Sub-Contract Payment Request which would specify the amount for payment to the subcontractor. That document was counter-signed by two senior employees and finally authorised for payment by another, yet more senior employee. There would be a supporting sheet which would show the extent of any reductions that had been made to Premier's invoice and where the reduction had been made. In some (but by no means all) cases, MW would then issue a Payment Notice.

The Judge (The Hon. Mr Justice Stuart-Smith) found signed timesheets are primary evidence of hours worked. As such, the whole purpose of the system is that they should be capable of being relied upon for the meaning they bear. Their effect, subject to mistakes, should be to record hours worked (and, in the present case, other bonuses and provisions such as holidays and travel) and to provide a solid and reliable foundation for invoicing. Other evidence may take the form of objective data (turnstile or biometric data): unless excluded by agreement there is no limitation on the evidence that might be relevant and admissible.

MW took issue with the time recorded in some of the verified timesheets and looked to other records to disprove or question the resource time that had been claimed by Premier.

TURNSTILE DATA

Where a claim for payment is made based on timesheets, turnstile data may be useful evidence against which to check a contractor's claimed hours. On this project, Premier distrusted the turnstile data for two main reasons: (i), they had reason to believe that the turnstiles did not always function and record workers' movements properly; and (ii), some part of their men's working days were spent outside the turnstiles for a number of reasons including use of offices and facilities for food, relaxation, safety briefing before the start of each shift (the latter being chargeable but would not be accounted for by turnstile data) were outside of the perimeter; and Premier carried out some work outside the perimeter.

Perhaps on this point a view could have been made of the 'reasonable' time that should have been expended outside the working area for food and rest and removal of that time from the timesheets. The Judge was of the opinion that the turnstile data, even if admitted, did not provide sufficient detail to support findings on productivity because it provides no evidence about what was being done by men outside the turnstile perimeter and no measurement of their productivity either outside or inside it.

The Judge went onto to find that in May 2018, there was an agreement between the parties to exclude turnstile data to check the timesheets.

PROGRESS/ PRODUCTIVITY DATA

MW disclosed one or more documents recording Premier's progress and occasional other documents which set out targets and achievements for subcontractors. Where Premier featured on these other documents, the relevant line on the document would usually cover the work of more than one subcontractor. The Judge held that these documents were inadequate evidence on which to draw conclusions about Premier's productivity or the reasons why subcontractor's targets were not achieved where that was shown on the sheets. Neither those documents nor any other evidence that has been brought to the attention of the Court would enable a judgment

to be made about the effectiveness of Premier's work that gave rise to that progress or whether there were reasons extrinsic to the quality of Premier's workforce and work which contributed to or determined the level of progress achieved from time to time.

The Judge further held, MW would have known if Premier's men were simply not working (or available to work) significant proportions of the times that they had been requisitioned by MW and should have been working and for which they were billing week by week. And, if they had known any such thing, MW would have been on Premier's back in no uncertain terms because of their financial need to accelerate. Similarly, if Premier's men had been unproductive because of incompetence or inadequate supervision by Premier, MW would have complained and there would be documentary references to such complaints: but there were not.

To be fair to MW, what the Judge alludes to in terms of recording productivity could, in my view, only be met by MW personnel recording more frequently (perhaps daily) and in greater detail, the task each labourer (or group of labourers) was performing and the time taken. That is an enormous task and it is arguable whether this is at all possible on a large industrial project with significant labour levels, disciplines and different tasks being performed from day to day.

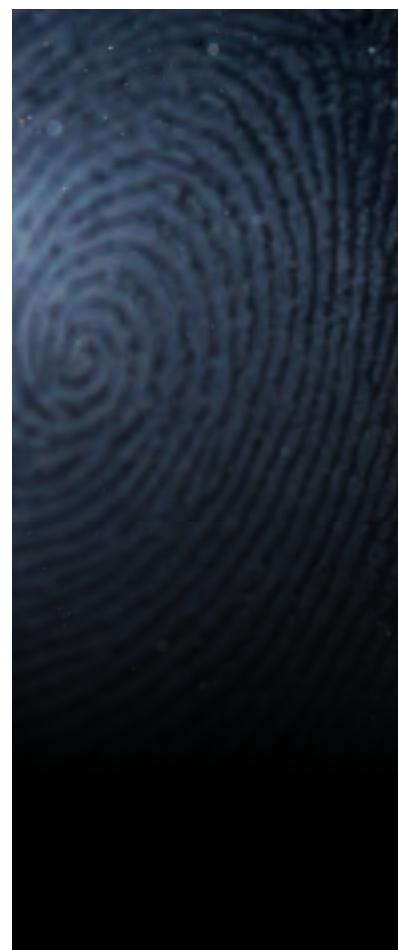
BIO-METRIC DATA

The judge noted that modest differences between timesheets and objective data from turnstiles or the biometric clock (e.g. finger print scanning for the purposes of clocking time in and out) were to be expected; but it is important to note that the parties did not agree that Premier should be paid with the detailed information from the objective data as the primary or determinative source of invoicing.

While objective data (whether from the turnstiles or the biometric clock) may assist in determining when men started and finished their working day, they do not assist in determining what they were doing during the day or why they were doing what. Consequently, the Judge rejected the use of objective data in support of MW's primary case, which it described as "Excessive breaks".

WHAT CAN BE LEARNT FROM THE ABOVE CASES?

Where the unverified timesheet is claimed to be wrong due to a paying party's failure to verify the time at the agreed intervals, JDM case makes it clear that the paying party has the burden of proof of showing that the timesheet contain obvious errors.



Whilst each case will turn on its own facts, the Premier case seems to be clear that if there is an agreement for use of specific data collection or approval system to verify timesheets, in the event of a dispute regarding the verified time, that data is the primary evidence of the agreed time and, subject to what the parties may have included in the agreement or agreed post agreement, secondary/ objective data may (or may not) be used to disprove the verified time.

In light of the Premier decision, it is recommended that if parties are willing to value work on a time expended basis, the agreement should, as a minimum, include provisions such as:

- Specify how the time is to be collected and verified.
- If more than one source of data collection is to be used which data collection tool is to take precedence in the event of conflict in the data.
- The frequency of verification and adjustment.
- Whether all time is recoverable or only the hours that the labour is productive at the work face.
- From which point of entry is time data collected (e.g. at entry to the site or the nearest time collector to the work face).
- If on reviewing the timesheet the payers representative does not agree with the time, take issue and record this in writing at the time.
- As an alternative to the above, a provision in the agreement and a statement on the template that signature on the timesheet is not to serve as conclusive evidence that the hours recorded are correct for the purpose of payment or is to serve only for the purpose of payment on account subject to the verification using one or more of the agreed data collection sources.

For further contractual advice on protecting your position on matters such as records and time keeping, please contact the writer or your nearest DGA office.

"THE BETTER THE QUESTION, THE BETTER THE ANSWER" GOOD PRACTICE FOR PROCESSING RFIs

JOHN DONNELLY

Director, Australia



As the complexity of construction projects increases, Requests for Information (RFI's) have equally become more complicated and costly.

Multiple parties and disciplines are involved in the preparation of the necessary documentation relating to construction projects. Document management and version control is critical but unfortunately frequently results in discrepancies, ambiguities and differences between the numerous documents that constitute the scope of work.

In this environment it is no surprise that recent research identified the average number of RFIs per project in Australia is 650 with the median turnaround time for processing each RFI being 8 days and the resulting additional direct costs only being \$910,000.00 per project.

The research concludes that this is "eating unnecessarily into contractors' profit margins" at an average rate of 1% of a contractor's profit margin per project.

Some of the key findings of the report are summarised below:

- The average number of RFIs per project is 650
- The median turnaround time for RFIs is 8 days
- Around 5,200 hours is spent dealing with RFIs on each project in Australia
- The average cost of processing each RFI is \$1,400 [based on 4 hrs admin @ \$100/hr plus 4 hours technical @ \$250/hr]
- The total cost per project is \$910,000.00 [650 x \$1,400]
- On commercial projects only half or less than half of the total RFIs had occurred by the time the project had reached 50% completion
- The later the RFI occurs in a project's completion the more likely it is that the cost and time impact will be greater

It is significant to note that the report further acknowledges that in addition to these direct financial costs there is also the cost of rework and variations that may arise from RFIs. The amount of \$910,000.00 per project is therefore conservative.

Therefore, if on your project, it takes more than the median 8 days turnaround time for each RFI then it is critical to review your practice and procedures for dealing with RFIs.

The following 10 points should be considered:

1. What is being asked

The wording of the RFI is critical and the question being asked should be concise, clear and leave no room for confusion as to what is being requested.

It is recommended to separate different issues that may require a response from different disciplines e.g. Mechanical Engineer or Electrical Engineer and not group things together which may only delay the overall response time.

2. Why is it being asked

The background or the context as to why the question is being asked is important and must be communicated as part of the RFI to ensure a relevant response is provided.

3. A picture tells a 1000 words

Photos / videos / drawings / sketches can be very helpful in identifying particular problem areas and communicating the issue to all parties to view and gain a quick understanding of the issue.

4. Software

A suitable cloud-based system will assist in minimising the delays by enabling all relevant parties to view the RFI simultaneously and in real time. Bearing in mind the research paper, referred to above, indicated that there are on average 650 RFIs per project the process for managing this volume of RFIs needs to be as efficient as possible.

However, no matter how good the software never forget item 1, above, as the better the question the better the answer. So, make it clear and be specific and refer to the necessary context as to why the question is being asked in the first place.

5. Template

Develop an RFI template. This can then be replicated across different projects ensuring that all the key information is communicated.

6. Tracking and Monitoring

Maintain a project wide register of RFIs with unique numbering, date of creation and date of response

7. Response Time

Identify when the response is needed in order to minimise subsequent delays.

8. Submit Early

Submitting an RFI when the issue is critical or near critical is more likely to result in project delays. The above research identified that the later the RFI occurs in a project's completion the more likely it is that the cost and time impact will be greater.

9. Response to RFI

Ensure that the recipients give a response to the RFIs and check if they are adequate or not. If the responses meet your requirements, mark the RFI status as 'closed out'. If not mark it as "outstanding" in the log / register.

10. Determine the **impact of the responses** on the project programme and costs.

If there is an impact, log the response as a potential variation and review it with the project team.

I have certainly worked on numerous claims and disputes where the volume of RFIs and the time taken to process them has resulted in further significant time delays to the project completion and associated in-direct costs / damages.

For example, if the particular activity affected by the RFI is a critical activity in the programme then the in-direct delay and / or disruption costs during the overall median 8 day turnaround time will be significant.

It would not be unexpected for these further in-direct delay costs / damages to be greater than the initial direct costs of \$910,000.00 identified above, therefore, this is clearly an area worth paying attention to and making sure you have adequate contract administration procedures in place to process RFIs efficiently.

As the report concluded, there certainly is a "strong economic imperative for efficient control of RFIs on projects." For assistance setting up an RFI template or to discuss the best form of technology to use please contact me directly or your local DGA office.

1. Published in the current edition of Construction Research & Innovation.

The research was a collaboration between the University of Melbourne, led by Dr Ajibade A. Aibinu, senior lecturer in quantity surveying and construction economics, and the Aconex Data Analytics team.

Citation: Aibinu, A.A, Carter, S., Francis, V., and Vazera AIBINU, A.A, Carter, S., Francis, V., and Vazera, P. (2018) Necessary evils: Controlling Requests for Information (RFIs) to reduce cost and improve margins, Construction Research and Innovation, Vol.9, Issue 4.

VALUING EX GRATIA PROLONGATION COSTS ON PUBLIC PROJECTS IN SINGAPORE

MARK MURPHY Associate Director, Singapore

INTRODUCTION

Like most countries worldwide, the Singapore Government implemented certain measures earlier this year to curtail the rising number of COVID-19 infections. On 07 April 2020 the Singapore Government passed the '[COVID-19 \(Temporary Measures\) Act 2020 \(Act 14 of 2020\)](#)' and the '[COVID-19 \(Temporary Measures\) \(Control Order\) Regulations 2020](#)' ("Circuit Breaker"), introducing mandatory requirements for, inter alia, special safe management measures for the building and construction industries. These measures have resulted in substantial delays being incurred on many construction projects.

Following the Circuit Breaker's activation, the Building and Construction Authority ("BCA") of Singapore issued a series of circulars, focused on the Construction industry regarding a variety of matters. Of the numerous support and stimulus packages implemented by the Singapore Government, one aspect of these related to assisting contractors who were faced with mounting costs on government construction projects ("Public Projects"). On 29 June 2020, the BCA issued a circular titled "[Circular on Ex-Gratia Co-Sharing of Prolongation Costs due to COVID-19](#)"ⁱ ("BCA Cost Circular") and on 25 September 2020, the BCA issued amendments to the BCA Cost Circular titled "[Circular on Treatment of Claims Arising from COVID-19 in Public Sector Construction Contracts](#)"ⁱⁱ ("Prolongation Cost Template").

In the BCA Cost Circular and the Prolongation Cost Template, the Singapore Government agreed that, following the award of an extension of time ("EOT") for delays incurred during the Circuit Breaker, and the disruption incurred post-Circuit Breaker, they would fund a share of the prolongation costs on an ex-gratia basis.

GOVERNMENT CONTRACTS IN SINGAPORE AND WHAT THEY SAY

Public Projects in Singapore typically use the Public Sector Standard Conditions of Contract ("PSSCOC") as their standard form of contract, wherein Clause 22.2 of the PSSCOC expressly precludes a contractor from recovering prolongation costs regardless of whether an EOT has been awarded for a compensable event. However, that is not to say that a contractor is precluded from recovering additional costs under other provisions of the PSSCOC, e.g. variations, loss and expense, etc., but these are not the subject of this piece.

i At the time of writing, there have been 11no. Amendments to the regulations

ii <https://www1.bca.gov.sg/docs/default-source/bca-restart/circular-on-co-sharing-of-prolongation-costs.pdf>

iii <https://www1.bca.gov.sg/docs/default-source/bca-restart/circular-treatment-claims-covid-19-public-sector-construction-contacts.pdf>

As contractors have experienced unforeseen and increased costs because of COVID-19, the recovery of prolongation costs has become a topical issue within the construction industry. The



Singapore Government, through the BCA, has sought to aid and assist those contractors performing Public Projects, hence why the BCA Cost Circular and Prolongation Cost Template appear to be on an ***ex-gratia*** basis.

Additionally, in the Prolongation Cost Template, the Singapore Government, per the BCA, agreed to 'waive a contractor's obligation under Clause 14.3(1)^{iv} of the PSSCOC regarding the submission of notice and substantiation of their EOT claim'. Also, the BCA has granted contractors a default period of four months EOT for the common periods of delay, i.e. from the Circuit Breaker's activation (07 April 2020) to the date on which all foreign worker dormitories were cleared of COVID-19 (06 August 2020). The default EOT would not be applicable should a project have continued during the Circuit Breaker, or if works had resumed "***substantially on site before 6 Aug 2020***".

VALUING PROLONGATION COSTS PER THE BCA COST CIRCULAR

On Public Projects, the Bills of Quantities ("BOQ") are both set out and priced differently from private projects, in particular the 'Preliminaries and General' bill ("Preliminaries") where items are predominately priced as lump sums. In these instances, it is natural to wonder how a contractor can identify the time-related items and prepare its prolongation cost claim per the BCA Cost Circular.

Some solace can be sought from the BCA Cost Circular, where broad guidance is provided on certain cost headings where it states:

- "Prolongation costs will include:
 - a) Plant and equipment costs;
 - b) Site maintenance costs. Manpower cost incurred by the contractor's own manpower for site maintenance is excluded;
 - c) Other costs such as extension of project insurance and performance bonds and storage etc;
- and exclude:
 - a) Manpower costs (i.e. salaries, accommodation and transportation of employees

iv This clause prescribes the "conditions precedent to any entitlement to an" EOT

and workers and foreign worker Levy (FWL) as these are already covered by other government relief measures such as Job Support Scheme and FWL waiver/rebate); and

- b) Compliance costs for Restart (i.e. safe management measures such as segregating workers or cohorting of workers by projects at their places of accommodation, etc).
- c) Other costs covered by government relief measures (e.g. rental waivers)."

Further guidance is provided within the Prolongation Cost Template, where the BCA provides a template document^v and example of how to calculate these prolongation costs, with instructions that "contractors can adopt and modify the template as necessary".

Using the Prolongation Cost Template as guidance, some examples of how to calculate and substantiate prolongation costs, per the categories in the BCA Cost Circular, are set out below.

PLANT AND EQUIPMENT ("P&E") COSTS

Where P&E costs are included in the Preliminaries, and a contractor was paid these on a monthly basis, then a contractor could use this monthly sum from the previous payment certificates to calculate the P&E costs for the EOT period; adjusted for those days outside the EOT period, e.g. those days between the start of April 2020 and the Circuit Breaker's activation date.

Given the likelihood that this sum may not represent the actual costs incurred during the Circuit Breaker, it may not be a suitable method to value P&E costs.

Where a contractor had hired items of P&E present on the project site during the Circuit Breaker period, these costs could be demonstrated by providing purchase orders, invoices, proof of payment (e.g. cheque, bank remittance), inventory lists, photographs, etc; with appropriate cost adjustments for non-EOT periods.

Where a contractor has their own items of P&E present on the project site during the Circuit Breaker period, a contractor would need to calculate and demonstrate the depreciation costs for such P&E. A contractor could use the P&E identification number (e.g. number plate), inventory lists, photographs, etc. to match the item of P&E to the annual audited accounts, demonstrating both ownership and the value of yearly depreciation. The value of yearly depreciation can be adjusted to reflect the proportional value of EOT period within the annual depreciation value.



^v <https://go.gov.sg/bca-template-prolongation-costs>.

The operational and maintenance costs of P&E during the Circuit Breaker, e.g. fuel, spare parts, repair, etc., would follow the same advice as above, namely provision of purchase orders, invoices, proof of payment (e.g. cheque, bank remittance), inventory lists, maintenance logs, photographs, etc; with appropriate cost adjustments for non-EOT periods.

Insufficiencies in the BCA Cost Circular and the Prolongation Cost Template make it unclear whether aspects of these costs will be subject to challenge from the Superintending Officer ("SO"). The challenge being, whether a contractor should have, or at least attempted to, demobilised some if not all P&E on site prior to the Circuit Breaker's activation to minimise the costs incurred.

Whilst some contractors might attempt to include the cost of tools in their prolongation cost claim, Public Projects typically include a provision whereby the cost of tools is included in the unit rates of measurable components to the BOQ, and would therefore be considered non-time-related costs.

SITE MAINTENANCE COSTS

The Prolongation Cost Template identifies five sub-categories that a contractor may seek to recover costs against:



- Vector and pest control;
- Site security;
- Utilities;
- Housekeeping; and
- Additional works performed to secure the site for the absence during the Circuit Breaker.

As highlighted above, one possible method of valuing these costs could be to use the monthly sum paid from previous payment certificates to calculate the cost of these items for the EOT period; with appropriate cost adjustments for non-EOT periods.

Given the likelihood that this sum may not represent the actual costs incurred during the Circuit Breaker, it may not be a suitable method to value the site maintenance costs.

Where these works have been subcontracted, to demonstrate these costs a contractor could provide purchase orders, invoices, proof of payment (e.g. cheque, bank remittance), inventory lists, maintenance logs, photographs, etc.; with appropriate cost adjustments for non-EOT periods.

Where these works have been performed by the contractor, these costs could be demonstrated by providing invoices (for materials, fuel), proof of payment (e.g. cheque, bank remittance), inventory lists, maintenance logs, photographs; with appropriate cost adjustments for non-EOT periods. However, per the BCA Cost Circular, a contractor is precluded from recovering the cost of “the contractor’s own manpower” expended in performing these works, so such costs would need to be segregated and omitted.

Whilst the BCA Cost Circular precludes the recovery of **“Manpower cost[s] incurred by the contractor’s own manpower for site maintenance”**, the Prolongation Cost Template suggests that manpower costs of a third-party engaged to perform site maintenance works during the Circuit Breaker period may be recoverable, though this may be subject to challenge from the SO.

Whilst not finite, if incurred, some additional costs that could potentially be included in this cost category might be:

- Dewatering / generator maintenance (if not included in P&E costs);
- Traffic diversion;
- Hoarding / signs / lighting maintenance; or
- Ground settlement monitoring / maintenance (if not performed by the respective government agency).

OTHER COSTS

Under normal circumstances, the number of cost items that could be recovered within this category may be extensive. However, compliance with the Circuit Breaker means that a contractor will likely not have incurred some of these costs and therefore, they cannot be claimed, e.g. transportation, stationary, waste disposal, drinking water etc.

The Prolongation Cost Template identifies five sub-categories that a contractor may seek to recover costs against:

- Project insurance;
- Performance bond / Security deposit;
- Storage costs;
- Site office rental; and

- Temporary occupation licence ("TOL") land licence.

A similar calculation approach could be adopted for these costs as was provided above for P&E and Site maintenance costs, where costs are paid on a pro-rata basis of the contract duration, for hired items or contractor owned items; with appropriate cost adjustments for non-EOT periods.

However, the BCA Cost Circular indicates that where a contractor has utilised "**government relief measures**" these costs are not recoverable. Whilst there are certain insufficiencies in the BCA Cost Circular, the Prolongation Cost Template suggests that a contractor may be able to claim the difference between the actual costs incurred and the sum paid through "**government relief measures**", e.g. "**Site Office rental (after deducting other govt rental rebates)**". In the absence of clarity regarding whether this would be applicable to all costs under this category, these costs may be subject to challenge from the SO.

An example of some additional costs that could potentially be included in this cost category might be:

- Site Management costs for those personnel the "government relief measures" did not cover;
- The difference between the actual cost of Site Management incurred and the sum paid through "government relief measures";
- Site office equipment / air-conditioning units / kitchen goods (if not included in the "Site Office rental");
- Mobile telephones / tablets / walkie-talkies (if not included in Site maintenance costs);
- Hoarding hire / depreciation;
- Temporary works, e.g. scaffolding;
- The difference between the actual cost of head office overheads and profit incurred, and the sum paid through "government relief measures", adjusted to account for those involved in the project and likewise if involved in multiple projects;
- Loss of potential profit; or
- Extension of medical insurance / Visas (if provided for staff).

Should a contractor choose to pursue these costs, then along with a reasonable calculation of the cost, a contractor would need to substantiate the basis of its calculation. Such documentation might include signed timesheets, accounting records / ledgers, payslips, contract agreements, purchase orders, invoices, proof of payment (e.g. cheque, bank remittance) inventory lists, photographs, use of a recognised calculation formula (e.g. Eichleay formula, Emden formula, Hudson formula), etc.

However, as previously mentioned, the insufficiencies in the BCA Cost Circular and the Prolongation Cost Template, make it unclear whether the inclusion of these costs would be permissible or would be subject to challenge from the SO.

CONCLUSION

Whilst the BCA Cost Circular and the Prolongation Cost Template offer guidance on costs that can be included in a contractor's ex-gratia prolongation cost claim, the insufficiencies in these circulars and inclusion of certain text, such as "[contractors can adopt and modify the template as necessary](#)" and "[after deducting other govt rental rebates](#)", suggests a contractor may still be able

recover certain costs that initially did not appear permissible.

However, in the absence of clear comprehensive guidance from the BCA on these matters, should a contractor attempt to recover costs for some of these less definitive matters, then it may well be the case that they are subject to the SO's

interpretation and could be challenged.

It is suggested that where possible, should a contractor intend to apply for the ex-gratia prolongation costs, they may want to consider substantiating all costs, showing where costs have been adjusted to account for non-EOT periods, potentially helping to avoid challenge by the SO, and ultimately delaying their payment.

Should assistance be required with the calculation of prolongation costs, DGA have numerous experienced professionals in Singapore and worldwide, who are both able and willing to help.



THE USE OF NEW TECHNOLOGIES TO DEMONSTRATE EXTENSION OF TIME (EOT). ALL PART OF THE "NEW NORMAL" UNDER COVID-19?

JAMIE COOK

Senior Consultant, UK

INTRODUCTION

The coronavirus outbreak (and subsequent lockdown measures) has resulted in all businesses and industries having to rethink the way they work. Many workforces around the world are now working from home, or remote working, and are relying on new technology to do so.

While the construction industry is often perceived as a manual industry, with the majority of staff working on site in the job location, the pandemic has forced contractors and clients alike to adjust to new ways of working, with the industry forced to strive for more innovative ways of working. DGA believe this presents the construction industry with an opportunity to rethink how we implement and use technology.



Many projects are still planned "on paper" and this creates a disconnect between the office and the site. In our experience, providing planning services and assisting with independent expert advice (in adjudication, litigation and arbitration), the industry still relies heavily on such "paperwork". We are often presented with several years of information, and of course, this contains many errors, with many potentially valuable sources of data missing altogether. There seems to be a reluctance to use new technology in the industry.

In the context of a claim for EOT, it is vital to find all such sources of information, as the validity of a delay event claim will turn on the facts. It has to be assessed on its individual merits, including the factual evidence, the complexity and circumstances surrounding the event and of course, in accordance with the contract and applicable law. All too frequently problems arise, as parties may even be unable to agree exactly when a delay occurred, let alone the extent and impact of that delay.

Over the last decade, technologies such as “blockchain” (used for Bitcoin and cryptocurrencies) have been developed which have huge potential to transform businesses and the manner in which we work. We believe such technology has the potential to assist in roles such as my own (the demonstration of delay / delay analysis) by providing an effective way for the parties to agree records, identify the true extent of delays, and assess the impact of those delays.

TECHNOLOGY USE IN PLANNING PROJECTS

Construction projects tend to be complex, requiring the careful coordination of people, materials, and plant, as well as paper exercises such as document records and approvals. Projects often commence despite there being uncertainty and unknowns (such as incomplete design information, uncertain ground conditions, and so on). As a consequence, it is common for delay to occur.

Because of the volume of paperwork required, delay claims are often submitted, assessed and agreed months after the event. In many cases, the delay in making the claim comes because of the difficulty in collating said paperwork.

This article considers some key questions in this area:

Can technology solve this problem?

What technology is available?

How can the industry benefit from using it?

Below I consider how new and emerging technology can improve this process, as I feel it can help to provide a level of project transparency which helps to solve disputes and demonstrate delays. This article discusses the technology available to the construction industry and the potential ways it can help.

BIM 4D

BIM or Building Information Modelling is one of the fastest growing and developing construction technologies. The term “4D” arises from the linkage of the project’s programme (the “time” dimension” with the project’s existing 3D model (usually based around a CAD model).

A BIM model should be far more complex and extensive than a simple 3D model. While the CAD system enables the graphical representation of construction drawings (that were traditionally paper-based), the integration of BIM within the model allows the linking of that representation to a variety of datasets from multiple sources. A model may, for instance, capture both the pricing information for components of a construction project and the order in time that those components are needed in the build (the programme information).

An example showing an As-Planned v As-Built 4D BIM model is provided below:

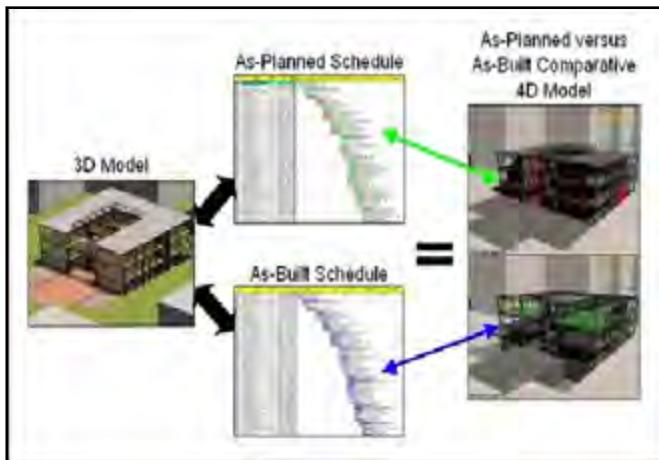


Figure 1 – showing that one could visualise the difference between as-planned v as-built progress at a given point in time.

Once compiled, such a model should be continuously updated during the execution of works by the people and companies carrying out the work. A well kept model will serve as a vital source of project information both during and after the project: it can be useful for managing everything that changes in the programme, and eventually, be the repository for all as-built information about the project.

BIM can, therefore, serve as a 'single source of truth' for all project participants, from initial planning and design, to construction, management and operations, up to the date the building is decommissioned or demolished. In relation to my planning work, BIM potentially has the ability to provide a "live As-Built" programme which could be relied upon for any subsequent delay analysis.

In order to be most useful, all information about a component is needed, from costs and lead-in times, to the duration of installation/construction,

BIM 4D DGA GROUP CASE STUDY HONG KONG

DGA Group was engaged by the Main Contractor on the M+ Project, Hong Kong's new museum of visual culture, located at the West Kowloon Cultural District. At the time of our engagement the project was 18 Months behind the original Contract completion date with the Employer lacking confidence in the programme to completion.



DGA coordinated and managed the implementation of a 4DBIM model to identify and enhance the project programme.



This enabled the Main Contractor to accurately re-plan the programme to completion, restoring confidence with the Employer. As an additional bonus, under our remit the model assisted the Contractor to identify a number of key heads of claims that had not previously been identified or demonstrated.

including the sequence of component installation, and dependencies on, and for, other areas of the build (in essence what would historically be considered predecessors and successors). A colour coding system can be incorporated into a BIM 4D model, adding the advantage of being able to visualize delayed activities and their impact on the project completion.

BLOCKCHAIN

The construction industry is regularly cited as being highly fragmented, with (in particular) large capital infrastructure programmes often being highly distributed and difficult to manage effectively. Crossrail, for example, employed a huge number of suppliers and workers at the peak of construction. Managing such supply chains (keeping track of work progress, schedules, payments) takes significant resources and effort, and individual projects (within the wider programme) experience varying delays and claims.



I believe blockchain technology, used in the underlying technology of Bitcoin, may be able to help such issues, to make the process more efficient, transparent, and accountable between all parties involved in the project.

In simple terms, Blockchain is a type of "distributed ledger" which is also highly reliable and secure. "Distributed" means that the database is scattered across multiple shared locations, similar to a cloud data system. Some of the advantages of blockchain technology include:

- a) Decentralised data: records are stored on multiple nodes across an array of locations, which reduces the risk of data loss (e.g. from fire, theft, hacks, and corrupt file systems). It disperses the power and control over the data because no single administrator retains control of the information.
- b) Transparency: the decentralised technology means that everyone holds a copy of universally agreed upon transaction records.
- c) Time-stamping: this is built into the system, and will reduce the ability for parties to disagree on key time matters (approval dates, timing of late information, etc.)

The system does not need to wholly supplant the procedures already in place on a construction site, but using a blockchain layer will facilitate and record those processes within an automatic, unchangeable record. Every task order, approval and work completion can be registered and made traceable.

Construction contracts often involve complex challenges such as unforeseen issues, changes in programme, or health and safety problems, which can result in claims and disputes. Blockchain technology could optimise the project plan and enhance collaborative working (something that modern contracts such as NEC encourage).

If started from day one, Blockchain technology would allow all parties to receive project updates delivered in "real-time". If and when disputes arise, the transparent, time-stamped, record will make it much simpler to establish the "facts" in an efficient manner.

The potential applications for blockchain technology in the design and construction industry are endless. Project information could be made universally available to every level of the project team, leaving no excuses for a breakdown in communication. Clients, design consultants, general contractors, subcontractors and suppliers could all be given the ability to update the project database in real time.

Opening these lines of communication could improve many areas. Deliveries could be tracked, inspections shared, schedules updated, change orders processed and submittals reviewed, all in real time, while maintaining a complete historical record of the processes and contractual obligations and timelines surrounding them.

The use of "Smart Contracts"

While many of the above uses are still "in the pipeline", Blockchain technology is particularly applicable to the development of 'Smart Contracts'.

A Smart Contract is essentially:

- a) A set of undertakings, specified in a digital form including a protocol within which the parties perform these promises.
- b) A recording of the legal agreement between the parties that is written in a language that is both human-intelligible and machine readable.
- c) An algorithm which automates some or all of the performance of the agreement.

Being essentially software, such contracts need somewhere to operate, and this is where blockchain technology is ideal. Combining blockchain technology and smart contracts allows a single 'source of truth' for all contract data, providing an audit trail of design approvals, data verification and project management decisions.

Using blockchain technology, smart contracts and a BIM construction model ought to minimise the possibility for disputes. For example, the signing for receipt of materials could trigger a smart contract clause that automatically triggers payment under agreed timescales.

With development, smart clauses could be constructed to drive contractual notices, such that the fact of delay is managed more automatically.

The implementation of Smart Contracts (and Blockchain) is still a long way off as the industry is still getting used to BIM 3D, and often struggles even to move into BIM 4D. However, it gives the industry something to think about, and I am excited to see how the technology will be used.

ELECTRONIC SITE RECORDS

Site records are one of the sources of information used in demonstrating delays, and are vital for the demonstration of as-built progress.

Traditionally, this is done by keeping a paper based daily diary, which is then often typed in some electronic form, but this method relies on memory and handwritten notes made on site at the end of a day, and is time consuming (and, perhaps, not always reliable). Detailed, high quality records are difficult to achieve using a “paper” based process.

Providing a way to record information electronically, and integrating this with photographic, location and weather information (and any other such evidence), would achieve a higher level of quality and detail.

Producing such records electronically, contemporaneously and on site, can greatly improve their regularity and reliability, and good records significantly benefit the parties, and provide good information for subsequent analysis. The information can be uploaded as it is made, and can then be secured and backed up (in the cloud or using blockchain).

Such records allow for quicker access in the case of a dispute, and (for my work) allows more accurate and reliable delay analysis (with base information that is clearer and more accurate).

DRONES AND 360 DEGREE CAMERA PACKS

As they have improved in stability, reliability and price, the use of drones on construction projects has grown dramatically. However, even simple video recording using a 360 degree “walkaround” pack will provide a valuable “static” record at the point it is made.





Their use has enabled many clients and contractors to collect detailed real-time data about what is happening on site, which provides huge benefits when carrying out a delay analysis. The primary tasks drones are currently used for include:

- (i) Monitoring progress on large sites, with the ability to validate and control completed work over a large area in a short timescale. The faster you are able to check and validate a task, the faster you can move on to the next task, saving time in the overall construction, and ensuring that deadlines are met.
- (ii) Capturing progress photos / footage and reports. It is often valuable to have a "set route" for a drone to follow, with key photographs extracted from specific locations, and a video running to ensure that the same positions on site are recorded at the same time. An ability to watch multiple video streams alongside each other enables a visual identification of what has happened between visits, and a check / correlation against planned progress will allow the identification of parts of the project that are becoming delayed (and the ability to take proactive steps that may reduce those delays).

Extended services are also becoming available, as the use of drones and video recording alongside digital mapping and imaging tools is allowing the full digitisation of surveying and setting out services against existing structures and/or landscapes.

In my view, the regular use of video surveying systems can significantly improve the reliability of post contract delay analysis, with the clear reality of change and delay being captured in "real time" to demonstrate the issues on site to all parties involved.

CONCLUSION AND SUMMING UP

The use of new technologies holds great potential. Used proactively and regularly, such technology can be a positive force in the industry:-

- The improvements in smart contracts will enable easier supply-chain management, and more defined and smoother contract administration (such as automated payment control systems).
- Using BIM and blockchain technologies more often should be used more regularly to improve and ensure the consistency and reliability of project records, and reduce the scope of disputes.
- Applying video recording and progress tracking systems integrated with other electronic

site progress recording methods, so as to improve the depth of these records.

The construction industry should be (and is) looking at how we can use different technological advancements to improve the way we work. Much of the technology is already here to help us build efficiently, safely, and on time, and to assess and record issues as they arise. It is only a matter of time before the more technological advanced processes and systems become more readily available. This will make my life easier, when seeking to assess and demonstrate delay!

If you need assistance in managing projects, tracking progress, or recording, making, or defending claims, DGA Group can provide the necessary level of support. We can provide consultant and/or seconded project-level team support, or can help in the assessment of specific issues, including preliminary reviews and recommendations for how to manage claims or disputes. Ultimately, we are able to provide detailed, fully independent dispute resolution and Expert Witness support as needed for both Quantum and Delay matters.

If you would like more information about the specific case study, or how BIM could be applied to your project needs, please contact our trained BIM consultant anel.idriz@dga-group.com.

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NEC3 & 4 ENGINEERING & CONSTRUCTION CONTRACT (AND SUBCONTRACT)

The NEC Engineering and Construction Contract (and Subcontract) is one of the most frequently used standard form contracts for building and civil engineering projects

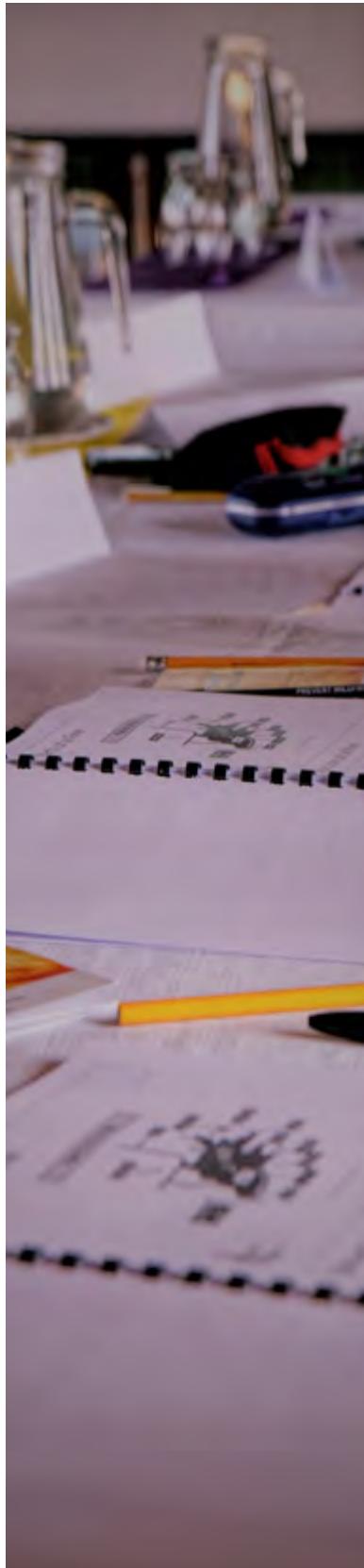
This one-day course is presented by one of our experienced Directors who are frequently called to provide contractual advice, expert evidence with regards to quantum or to be party representative in Adjudication. The course considers the main pricing options, the frequently used secondary options, the parties duties, co-operation, communications, early warning, risk register, programme, providing the works/ Works Information, change control, compensation events (and an introduction to the approach to assessment for the purpose of quotations for a change to the Prices and/or key date or Completion), the schedule of cost components/ Defined Cost and payment with reference to Y(UK) 2 and the Housing Grants, Construction and Regeneration Act 1996, as amended.

UNDERSTANDING AND USING THE JCT STANDARD BUILDING CONTRACT AND DESIGN & BUILD CONTRACT 2016

Overview

The JCT Standard Building Contract and Design and Build Contract remain the two most frequently used contracts in the United Kingdom. In 2016, a number of changes to the previous editions of the JCT were published by the Joint Contracts Tribunal.

This one-day seminar is presented by experienced and dual qualified professionals. It will provide the delegates with a comprehensive understanding of the key parts of both contracts in order that they can understand each party's liability and obligations. Reference is made to case law as part of explaining some of the provisions of the previous editions (and how this applies to the current editions) and operation of the contract.



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Price of each course

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What's included in the Price

The presentation, slide handout, CPD certificate

Dates and times

To be published shortly

WHAT TO DO NEXT?

If you are interested in hearing more about our forthcoming public courses, please email dgagroup@dga-group.com. Further details will be sent once dates have been confirmed.

Terms & Conditions apply

MORE INFORMATION

If you would like to find out more details about any of the subjects covered in this Ebriefing please contact DGA Group through the contact details below or at DGAGroup@dga-group.com

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