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LAW BULLETIN

Treatment options for risks in construction, civil and mining projects

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Due to the various natures of risks which may be encountered in a major project and the differing weights which may attach to their consequences (and the differing 'treatments' which they may entail), it is not uncommon for parties to seek to identify these risks under headings or categories. This can include attempts to break the risks down into commercial (business or project prerequisite and sustainability) risks, construction (and/or operational) risks and third-party (act of God/government) risks — often each with their overlay of 'legal risks'. In this writer's view, one of the dangers of slavishly adopting such an approach is that it can tend to reinforce an assumed allocation of risk dependent upon the project delivery method being proposed and the respective interests of the various stakeholders.

By way of example, a contractor assessing the risks involved in bidding on a straightforward 'construct only' commercial office tower project may assume that so-called 'project risks', such as the availability of requisite planning approvals or the principal's financing, are matters solely the concern of the principal and, accordingly, focus on so-called 'construction risks', such as the impact of latent conditions, risks of delay and so on. While contractors, principals and financiers will, however, each attach varying levels of importance to various risks, a consideration of the totality of risks which may be encountered is essential in order to determine their impact and 'knock on' effect.

Accordingly, it is suggested that it is wise for each of the stakeholders to consider each and every risk which they identify as being relevant to the project as a whole, and thereafter seek to categorise those risks by the manner in which they are proposed to be 'treated', rather than seeking to 'fit' risks into general categories or seek to allocate them at the outset to the respective stakeholders as matters of concern only for the other project participants.

Where dealing with negative outcomes from risks identified and having to treat those risks in the context of a more traditional contract structure, risk mitigation is called into play, this being the process of finding solutions to counter risks. Instead of simply pricing for risks, there are other opportunities for mitigating risks, including:

- risk elimination (for example, not proceeding or proceeding on a different basis);
- risk reduction (for example, by undertaking further investigations/due diligence);
- risk transference (for example, by legal, contractual and insurance); and
- risk retention (for example, self-insurance, bearing a large deductible and internal management of risk).¹

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Often these mitigation strategies, particularly risk transference, are given effect contractually via the use of such means as contractual exclusions, limitations of liability, indemnity clauses, risk transference, guarantees, performance bonds and insertion of a risk premium.

Hypothetical case studies

The application of risk mitigation principles is best demonstrated in the context of a hypothetical contractor's response to two hypothetical projects, the first being a building project under a design and construction agreement and the second being a joint civil and mining project.

In these hypothetical case studies, the context in which the contractor undertakes a risk assessment at the tender phase will be in accordance with corporate limits documented, for example in tendering guidelines which may also detail limits of liability for key commercial risks. The proposal or tender will then be considered against a number of criteria, such as financial and funding risks, construction performance risks and design risks.

The issues for consideration under the financial and funding risks include payment risk and may also extend to issues such as maintaining positive cash flow through the life of the project; payment for on- and off-site materials; and the possible impact of security of payment legislation.

Construction performance risks, on the other hand, relate to the willingness or otherwise of the contracting party to accept general damages and consequential damages; liquidated damages; the provision of parent company guarantees; the requirement for operating company performance guarantees; guarantees for long-term performance of materials or equipment; and industrial relations risk.

In relation to design risks, a contractor may be asked to accept responsibility for process design and for guaranteeing the outputs from a plant or facility; it may be asked to assume fit-for-purpose obligations under a design and construct regime; or it may be asked to accept the risk of achieving development approval for a project.

In each instance, the tender will be

gauged against the criteria outlined, and if what the contractor is being asked to assume falls outside of those criteria, then that risk will need to be 'treated' — that is, negotiated or transferred to another party.

Having conducted such a review and proposed optimal methods for 'treating' the risk, ordinarily a number of key 'threshold' risks emerge which require special consideration as the viability of the project (or at least the contractor's involvement in the project) may become very much dependent upon the willingness to either assume, manage or transfer those risks.

Case study 1: hypothetical design and construct building contract

In this study, after careful analysis and evaluation, the following key risks have emerged.

- **Risk: delay in award of tender/ access to site** — The contractor is required to submit a tender, which is to remain open for acceptance for a period of three months. Tender prices are to remain firm and are not to be subject to adjustment up to completion, and no adjustment is to be made to the tender price should commencement on site be delayed beyond the period of three months from acceptance of the tender.
Treatment — The contractor can address this risk by requiring the ability to claim escalation if access to the site is not available within a certain timeframe or, alternatively, can make its tender conditional upon a 'sunset date', after which it has an ability to renegotiate its fixed lump-sum price.
- **Risk: site conditions** — The contract requires the contractor to accept full risk of all site conditions. The principal takes no responsibility for the accuracy or completeness of any information which has been provided to the contractor by the principal and any reliance on such information is said to be at the contractor's own risk.
Treatment — The contractor's alternatives are either to accept the risk and rely upon the site information provided by the principal or, alternatively, to ensure that it has an opportunity to undertake its own investigations as to the site and satisfy

itself in relation to all site conditions which may impact upon the works. It also has the option of seeking to qualify its tender and negotiate provisions in relation to latent conditions which afford itself acceptable rights of recovery in the event that site conditions differ from those understood by the parties.

- **Risk: design responsibility** — The contractor is required to accept the risk of the design of the project and agrees to take a novation of consultancy agreements already in place between the principal/developer and the existing design consultants. The contractor is to accept responsibility for the designs prepared by the consultants prior to their novation to the contractor and under its contract it also provides a fitness-for-purpose warranty.

Treatment — The contractor can qualify its tender by only accepting responsibility for the designs prepared after its involvement in the project, or can ensure that it has reviewed the designs prepared by the consultants prior to the date of novation and is satisfied with them. In relation to the fitness for purpose obligation, the contractor should ensure that the statement of purpose uses clear, objective and measurable terms.

- **Risk: ambiguities in documentation** — The contractor is asked to assume the risk of ambiguities in the project brief and for any error in or between the design documents arising before or after the date of the agreement. There may be errors between the design documents produced prior to novation and those produced subsequent to novation, by the same or different consultants.

Treatment — If this risk is to be accepted, a thorough review of all documents will be required and the contractor will need to ensure that the consultancy agreements allow the contractor to recover any loss it suffers arising out of defective design documents prepared by the consultants prior to their novation.

- **Risk: extensions of time** — The circumstances in which the contractor may be entitled to an extension of time are limited and the question of whether the

superintendent may take into account any float built into the contractor's program is unclear. The contractor is not entitled to a proportional extension of time for concurrent delays and its entitlement to an extension of time in respect of changes in legislative requirements is also unclear.

Treatment — If the contractor is to accept this risk, it needs to consider any exposure it may have for either general or liquidated damages in the event of late completion and also its ability under its program to accelerate the works to complete on time in the event that it is delayed. In either event, it will wish to include an allowance in its tender in respect of this risk. More likely, it will wish to clarify the circumstances in which it is entitled to an extension of time (with or without the right to claim additional costs), particularly in relation to neutral events of delay.

- **Risk: interface risk, fit-out works** — Under the contract, the contractor may be required to undertake fit-out works for tenants (by way of a variation to the contract), or tenants may be entitled to engage their own fit-out contractor in which the contractor is responsible for coordinating the fit-out works with the contractor's own works. The contractor is not eligible for any extension of time or increase to the contract sum in respect of this.

Treatment — This interface risk between the tenants' contractors and the contractor is one in respect of which the contractor would wish either to make provision for extension of time or disruption to its own works or, alternatively, to seek to build in a contingency. The contractor would wish to ensure that it was not accepting the risk of coordinating other contractors, or the risk of the failure of a tenant's design to comply with the principal's design and construction requirements.

Case study 2: hypothetical joint mining and civil project

In this study, after careful analysis and evaluation, the following key risks have emerged.

- **Risk: mining lease** — The project is contingent upon the principal obtaining a new mining lease, and the date of the lease being granted is not certain. In the meantime, the contractor is expected to expend resources towards the project and to pre-mobilise. The project cannot proceed if the lease is not granted.

Treatment — This risk can be adequately addressed in the contractor's response, so that in the event of delay in issuing the mining lease, the contractor can review its ability to meet time and milestone achievements stated in the tender documents, and review pricing if necessary. The contractor will also need to propose a basis for calculation and recovery of its costs in the event that mining lease approval is not forthcoming by a certain date.

- **Risk: purchase of fleet** — In order to put itself in the best position to be awarded the contract/s and achieve or better the project milestones, the contractor will be required to commit to acquiring a fleet prior to entry into a firm contract with the client.

Treatment — This risk can be treated by preserving to the contractor a right to claim holding and delay costs, and to negotiate an agreement for compensation from the principal, where commitments are made by the contractor pre-contract with the agreement of the client.

- **Risk: interface risk** — The project will involve interface between both civil and mining components of the project, and between the project and the clients' other mining operations.

Treatment — This risk can be addressed by allocation of interface risk to the client if separate contracts are awarded for the civil and mining components; if the contractor is awarded both the civil and mining contract, the interface risk with the mine owner's existing operations can be addressed through careful negotiation of contractual provisions.

- **Risk: wall design** — A significant design aspect has arisen in relation to a wall to protect against water inundation of the mine pit and whether or not a water-impervious cut-off wall needs to be constructed.



Treatment — After investigating the feasibility of the risk of water inundation of the mine pit being met by the contractor's insurer, the risk can be addressed by specific allocation of the risk to the client, as ultimately whether to incur the cost of obviating the risk of disruption to the client's operations is an economic decision for the client.

- **Risk: scope of works/fit for purpose** — The proposed contract seeks to ensure that design, fit for purpose, whole-of-life and functionality risk is borne by the contractor.

Treatment — This risk can be addressed on an interim basis by appropriate qualifications and statements contained in a statement of clarifications and departures within the response to the tender proposal which make it clear that this risk allocation will be reviewed based upon the final revised scope of works, and any additional information available at the time of negotiating the contracts.

- **Risk: cultural heritage** — Cultural heritage management plans are included with the proposal documents, imposing obligations on the contractor which must be complied with and procedures which must be followed when a cultural heritage discovery is made. Under the proposed contractual allocation of risk, the discovery of a cultural heritage item will entitle the contractor to an extension of time, but will not entitle the contractor to additional costs.

Treatment — The cultural heritage management plan should be reviewed in detail to ensure that the contractor can comply with the obligations therein set out. As cultural heritage is clearly a concern at this site, the contractor should consider including an allowance in terms of time and money in its

proposal for the discovery of an item of cultural heritage.

The role of the adviser

These case studies illustrate the role that an adviser may have, once risks have been identified, in suggesting 'treatment' options for those risks. From a lawyer's perspective, having identified critical areas of concern in relation to risks that a client is being asked to assume and after proposing options for treatment of those risks, it is of course imperative that the ultimate legal documentation accurately reflects the treatment of those risks as agreed between the parties, and accurately reflects the agreed risk allocation.

Pleasingly, there has been a move away from the practice of simply putting the contractual documentation 'in the bottom drawer' once the contract has been negotiated. Rather, parties are now commonly investing the time and effort in preparing working guides or manuals concerning the rights and obligations of the parties to the contracts, cross-referencing these to the relevant contractual provisions and noting time requirements. Provided such a guide is duly observed, this can form a critical feature of day-to-day risk management, particularly having regard to time bars often contained within contracts and the recent impost of security of payment legislation. ●

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Endnote

1. Chinyio E and Fergusson A 'A construction perspective on risk management in public-private partnership' in Akintoye A, Beck M and Hardcastle C (eds) *Public-Private Partnerships — Managing Risks and Opportunities* Blackwell Science, Oxford 2003 p 114.

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