Tales of the Unexpected

Focus on Legal by **Stephen W Rae**

Risks in construction are plentiful. Time, quality, availability of resources, weather and financial risks (funding, exchange rates, etc) are but a few. However, if you ask any contractor the risk which concerns him most in construction projects, and particularly civil engineering projects, the answer will invariably be that which arises once ground is broken — unforeseen ground conditions and obstructions.

Nonetheless, it appears to be an established common law principle that where a contractor undertakes to execute works of construction, he shall do all that is necessary to bring such works to completion, save to the extent express words provide otherwise[1]. A contractor cannot avoid carrying out the works for the agreed price if, for example, the soil conditions were wholly different from those contemplated. The principle is succinctly stated in *Halsbury's Laws of England*[2] as follows:

> "*It is no excuse for non-performance of a contract to build a house or to construct works on a particular site that the soil thereof has either a latent or patent defect, rendering the building or construction impossible. It is the duty of the contractor before tendering to ascertain that it is practicable to execute the work on the site...*"

The principle behind the rule appears to be derived from a number of early cases[3]. Accordingly, it would seem to be the general law that a contractor should satisfy himself as to the ground conditions prior to entering into the contract. But just how practical is this? To what extent is a contractor able to enter upon a proposed site and take boreholes in order to "satisfy himself" as to the nature of the ground, during the tender process? I. N. Duncan Wallice, editor of *Hudson's*[4] states:

> "*...the opportunity and time for investigation by tendering contractors is often, in practice, extremely limited, and the only thorough pre-contract investigations and studies, through no fault of the contractors, will have been carried out by the owner's advisors over perhaps a very long period, so that well drafted compensatory provisions for difficult site conditions might be expected to reduce the tendering contractor's pricing risk and so result in lowered tender prices...*"

In acknowledgment of this practical difficulty, international opinion appears to adopt the view that notwithstanding the common law position, the employer should take

1. Thorn v London Corporation (1876)
2. Second Edition Volume 3, Paragraph 386
3. Bottoms v York Corporation (1892); McDonald v Workington Corporation (1893); Nuttall and Lynton and Barnstable Railway (1899)
4. Eleventh Edition, Paragraph 4-057, Page 513

responsibility for conditions in the ground[5]. It is this reasoning which lies behind clauses found in certain forms of contract that purport to afford relief to the contractor where adverse physical conditions are encountered. However, in Hong Kong the standard forms of contract in use are inconsistent on this point. The Hong Kong Institute of Architects (HKIA) form does not provide any relief for unexpected difficulties encountered by the contractor in executing the ground works; nor do any of the Hong Kong Government forms of building or civil engineering contract[6]. On the other hand, the Mass Transit Railway Corporation (MTRC) and the Kowloon-Canton Railway Corporation (KCRC) forms of contract[7] more appreciably reflect international opinion as to the allocation of risk for ground conditions with the inclusion of clauses 38.1 and 15.4 respectively, affording relief for unforeseen physical conditions and artificial obstructions.

For the purposes of this article I wish to focus on the KCRC form. KCRC clause 15.4 provides:

> "*If, during the execution of the Works, the Contractor shall encounter physical conditions (other than weather conditions or conditions due to weather conditions) or artificial obstructions which could not, in his opinion, reasonably have been foreseen by an experienced contractor at the date of the Letter of Acceptance, the Contractor shall, as soon as practicable thereafter, and in any event within 28 days of encountering such conditions, give written notice thereof to the Engineer...*"

And at clause 15.7:

> "*If the Engineer shall decide that the physical condition or artificial obstruction the subject of a claim for additional time and/or payment, could in whole or in part have been reasonably foreseen by an experienced contractor at the date of the Letter of Acceptance, he shall so notify the Contractor in writing as soon as he shall have reached that decision...*"

It is perhaps interesting to note that the provision is not limited to ground conditions. The word 'ground' does not appear in the clause and as such any physical condition or artificial obstruction, whether in the ground or otherwise, would arguably give rise to entitlement (subject to the qualifications as to weather, foreseeability and notice). In practice, however, the type of physical condition or artificial obstruction forming the subject of a claim brought under this clause will, in order to qualify as being 'unforeseen', generally be that which occurs in the ground. 'Physical condition' is arguably a wide reaching phrase. In relation to the ground, it may cover running sand, hard rock or water, but may also extend to any characteristic of the sub-soil[8]. Artificial obstructions will usually cover such items as uncharted utilities and abandoned piles or foundations (although it has been known for contractors to contend that an obstinate Resident Engineer amounted to an artificial obstruction).

However, the key as to whether an entitlement arises under KCRC Clause 15.4 is

5. See, generally, the collection of papers from the Hong Kong conference on "Whose Risk?" reproduced in International Construction Law Review 2001, pages 302 to 485. See also "Risk Management" by Max W Abrahamson — International Construction Law Review, 1983-84.
6. However, the contractor under the Government forms is excused of performance under clause 15 where the works are found to be legally or physically impossible, in which case the Architect/Engineer is obliged to order a "necessary" variation to overcome such impossibility pursuant to clause 60(1).
7. MTRC Conditions of Contract for Civil Engineering and Building Design and Construction (1998); KCRC General Conditions of Contract for Civil and Building Works (1998).
8. Humber Oil Terminals v Harbour and General Works (1993), where it was found that although the type of sub-soil encountered was foreseen, its performance under the applied stress of a jack-up barge at a given moment amounted to an unforeseen physical condition.

being able to satisfy the qualifying words " ...which could not... reasonably have been foreseen by an experienced contractor..." contained in this provision. As might be expected, it is this phrase which causes the most difficulty in practice. Clause 15.4 is similar in all material respects to Clause 12 of the ICE conditions of contract. In Keating the editors observe[9]:

> "*Although expressed objectively, the intention is plainly to allow or disallow claims by reference to the particular circumstances of the Contract, but attributing to the real Contractor an objective degree of foresight. ...Determining whether a condition could reasonably have been foreseen habitually gives rise to the greatest difficulty of interpretation in a civil engineering arbitration...*"

In his book *Engineering Law and the I.C.E. Contracts*, fourth edition, Max W Abrahamson considers the question of foreseeability in respect of clause 12 of the ICE conditions of contract (5th Ed). Abrahamson provides the following learned observations and guidance:

> "*Is a claim excluded only if an experienced contractor could have foreseen that the conditions or obstruction must occur, or is it sufficient that that there was a possibility, however remote, that the conditions might occur? The mere fact that some risk of meeting the conditions was foreseeable can hardly be enough, since an experienced contractor will know that anything can happen, particularly in work underground. It is suggested that a claim is barred only if an experienced contractor could have foreseen a substantial risk.*"

Thus, if Abrahamson's views are to be accepted[10], the occurrence of a physical condition or artificial obstruction can only be said to have been foreseen if an experienced contractor would have considered there to have been a substantial risk of it arising. Such risk must have been substantial at the time the contract came in to existence. The fact that the substantial nature of the risk became apparent during the execution of the works will, it is suggested, be an irrelevant factor. Should there not be a substantial risk, but such does nevertheless occur, it will be said to have been unforeseen.

In determining whether or not a risk was substantial cognisance will need to be taken of the general nature and extent of the site, the information made available to the contractor by the employer prior to award (such as borehole date and records of utilities) and the measurers taken or which ought reasonably to have been taken by the contractor to investigate the site and the subsurface conditions, to verify the information received[11]. It will usually be insufficient for the contractor to simply have placed reliance on borehole data provided by the employer.

One final point of note, although perhaps not of such significance in practice, is that the condition or obstruction need not have been foreseeable to the particular contractor who encounters it, so long as it was foreseeable to an experienced contractor. The engineer would be correct to question whether, notwithstanding that the present contractor did not foresee the condition or obstruction, an experienced contractor might reasonably have done so. If the answer is in the affirmative, the contractor's claim must fail. But would it be equally open be for a contractor to contend that although he did foresee a particular condition or obstruction, an experienced contractor would not have done so and therefore claim entitlement under

9. Page 991
10. Max Abrahamson's book is frequently cited and relied upon in construction litigation cases, and his opinions are held in high regard in the construction legal fraternity (refer to Henry Boot Construction Ltd v Alstom Combined Cycles Ltd 123 BLR 1999 for one example).
11. CJ Pearce v Hereford Corporation (1968) 66 L.G.R. 647.

the contract? The editors of *Keating*[12] would appear to suggest not:

> "...the assessment of what could or could not have been foreseen must take into account all available sources of information. This must include the actual knowledge of the real Contractor, even if this goes beyond what an experienced contractor would know, otherwise there would be recovery for conditions which the real Contractor should have foreseen or even did foresee."

Both the MTRC and KCRC forms of contract are unarguably the most equitable of the forms currently in use in Hong Kong in terms of risk allocation for ground conditions and obstructions. This is perhaps appropriate when one considers the nature of works usually undertaken under these forms. However, if provisions such as MTRC clause 38.1 and KCRC clause 15.4 (considered above) are to serve their purpose in the industry, contractors and engineers alike must approach matters arising under these clauses objectively. All too often will a contractor advance a claim under this type of provision for matters which clearly were, or ought to have been, allowed for in his tender. Likewise, it is not uncommon for engineers to reject such claims simply because there was always a chance, no matter how small, of the risk of the condition or obstruction occurring. Both approaches are wrong and lead unnecessarily to dispute.

About the Author

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12. Keating on Building Contract, Seventh Edition, Page 991