



# The BERA Bulletin

## Introduction

In this Spring edition of the BERA Bulletin we have invited Peter Turner, the first, in what we hope will be a series, of guest writers to contribute an article. Peter Turner is a solicitor practicing in Hong Kong who should be familiar to many of our readers. He considers the very topical subject of construction management and the liability of the construction manager following the introduction of such contracting arrangements for some large scale projects in Macau.

Other articles in this edition consider impossibility and the Government's CPF formula.

### Contents:

|  |          |
|--|----------|
| <b>Introduction</b>  | <b>1</b> |
| <b>Mission Impossible</b>  | <b>1</b> |
| <b>Just How "Risk Free" is Construction Management for the Construction Manager?</b>                 | <b>4</b> |
| <b>A Comparison Between Contract Price Fluctuations and the Real Increases in Construction Costs</b> | <b>6</b> |
| <b>New Staff</b>   | <b>8</b> |
| <b>Professional Development</b>  | <b>8</b> |

## Mission Impossible

By **James Longbottom** LLB(Hons) BSc(Hons) PgD(Law) MRICS FHKIS FCI Arb RPS, Managing Director



### Introduction

Cutting edge and novel engineering designs have helped advance the frontiers of construction. What might have been undreamed of 100 years ago may now be routine as employers strive for ever more technologically advanced designs to be built to tighter timetables within rigid cost parameters. However, this may lead to instances where the design is not always buildable or becomes impracticable to build.

In such instances GCC Clause 15 of the Hong Kong Government Standard Form of Civil Engineering Contract, 1993 excuses the Contractor of performance where the Works are "**legally or physically impossible**", i.e.:-

*"Save insofar as it is legally or physically impossible the Contractor shall execute the Works in strict accordance with the Contract to the satisfaction of the Engineer and shall comply with and adhere strictly to the Engineer's instructions on any matter related to the Contract whether mentioned in the Contract or not."*

The words find their origin in GCC Clause 13 of the English ICE Conditions of Contract where their meaning has been considered in a number of cases. However, whilst physical impossibility has been considered in a number of large Hong Kong arbitrations (and, hence, behind closed doors) it has not been considered, as far as BERA is aware, in the Hong Kong courts.

### Legal Impossibility

Legal impossibility is the less ambiguous of the two terms. A contractor will be excused from carrying out and completing the works if they contravene a statute (e.g. if they breach the health and safety regulations) or expose the contractor to the possibility of prosecution (e.g. the works have not been properly gazetted or there was an injunction served which restricts a specified method of working). Clearly, legal impossibility can only ever occur in an "**absolute**" sense, i.e. something is either legally impossible or it is not.

### Physical Impossibility

Physical impossibility occurs where the execution of the works is rendered impossible (e.g. due to a specified method of working or design not working or the non-availability of specified materials). The leading English case is *Turriff Limited and Welsh National Water Development Authority and Others (1973)* which concerned pre-cast concrete boxed culvert sections with flexible joints, laid on granular bedding. Initial tests were carried out by the manufacturer, Trocoll, in late 1969 and, on the basis of these results, a scheme was devised by the City of Chester by which the culvert units would be placed one on top of the other. This configuration of the units had never been previously manufactured or tested.

Turriff entered into a contract with the City of Chester to manufacture, lay and joint the units in accordance with the

drawings and specification. The units were to be manufactured by Trocoll such that the joint between the units would not exceed plus or minus 1/16 of an inch.

Turriff subsequently found it impossible to lay the precast units so that they only had joints of less than 1/16 of an inch between them as required by the specification.

### Absolute or Commercial Impossibility?

The foremost question upon which Judge Sir William Stabb QC was required to decide was the meaning of the word "impossible".

**'...it may be possible to comply with a contract requirement but not within a practical or commercial context.'**

The City of Chester submitted that the word should be construed as "absolutely impossible" without any qualification, in a similar manner to that of legal impossibility and that Turriff was obliged to allow for all the risks of unexpected difficulties in achieving what it had contracted to do.

Judge Stabb rejected the absolute meaning of "impossibility" and found that it was impossible for Turriff to manufacture and joint the culvert units to Chester's specification on "an ordinary commercial competitive basis as the parties intended."

This decision recognises that it may be possible to comply with a specific contract requirement but not within a practical or commercial context. The concept of commercial impossibility can be traced back to Justice Maule's comments in the shipping case of *Moss and Smith (1850)*:-

*"... in matters of business, a thing is said to be impossible when it is not practicable; and a thing is impracticable when it can only be done at an excessive or unreasonable cost. A man may be said to have lost a shilling, when he has dropped it into deep water; though it might be possible by some very expensive contrivance to recover it."*

In arriving at his decision, Judge Stabb considered the individual merits of the case and the matrix of facts within which the impossibility had occurred:-

1. The pre-cast units were of a novel design;
2. Chester had spent many years on that design and tested earlier prototypes;
3. Trocoll were one of only two manufacturers named in the specification "as having the necessary equipment, skill and experience to carry out these works" (the second named manufacturer in fact declined to tender);
4. Turriff had not had any opportunity of investigating the integrity of the design or the capability of Trocoll;

5. Turriff was under no contractual obligation to redesign the units in order to overcome the impossibility, i.e. if the end result could not be achieved then, insofar as a physical impossibility of performance supervened, Turriff was excused.

### Obligation to Re-design

The *Turriff* case recognised that there is a difference between unexpected difficulties in a contractor's method of working and designs which do not work for which the employer is responsible. GCC Clause 60(2) of the Hong Kong Government Standard Form of Civil Engineering Contract prohibits the contractor from varying the engineer's design of the works without a written variation order. This is coupled with the obligation of the engineer to issue variation orders necessary for the completion of the works. The contractor is also under no obligation to overcome the impossible by revising the engineer's design to make it work, i.e. by submitting alternative proposals. Accordingly, it follows that the engineer should issue a variation order which overcomes or removes the impossibility and the contractor is entitled to have the variation order valued and paid together with any associated additional costs all in accordance with the contract.

**'...there is a difference between unexpected difficulties in a contractor's method of working and designs which do not work for which the employer is responsible'**

By implication any such variation order should be issued in a timely manner so as to enable the contractor to achieve completion by the dates specified in the contract and by adopting normal working arrangements.

### Specified Method of Working

In *Havant BC and South Coast Shipping Ltd (1996)*, Judge Fox-Andrews held that if a method statement is bound into a contract then for the purpose of the contract, it becomes a "specified" method of working. The judge confirmed that in terms of impossibility, the method statement is to be considered and the temporary works referred to in the method statement come within the consideration of impossibility. Where a method statement has to be changed due to impossibility a variation order should be issued by the engineer to remove the impossibility.

### Establishing the Impossible

One inevitable question is how far should the contractor have to go in proving the impossible? A situation of impossibility will likely give rise to uncertainty as to whether there is some means of getting around the problem. In *Turriff*, Judge Stabb recognised the "absolute" meaning of impossibility would give rise to greater uncertainty than that of a "commercial" meaning as:-

*"It must be very rare to find some instances in which human ingenuity, coupled with wholesale deviation from the specified contract works, cannot achieve completion."*

In BERA's view, a practical view should be taken of the impossibility based on the facts in hand. This might involve specialist opinion by the person responsible for the work or expert advice. This opinion, or advice, is unlikely to be conclusive or definitive. Possible factors to consider may include the reasonableness of the expenditure and time needed to achieve the specification **within the constraints and specific terms of the contract to which the contractor is working** (e.g. the tightness or other constraints of the contract programme).

A situation where the work turns out to be more difficult than the contractor expected, or it costs more to carry out, or different techniques are needed, will usually not qualify as impossibility.

### Who Pays for Constructing the Impossible?

In *Turriff*, Judge Stabb accepted the general principle that *"in normal circumstances"* an employer does not guarantee that the works can be completed in accordance with the contract.

The principle originates from the English case of *Alexander Thorn and the Mayor and Commonalty of London (1876)* which concerned the demolition of Blackfriars Bridge and erection of a new one in its place.

The ordinary method of working in the 1800's for the laying of foundations and building piers in tidal waters was to construct a temporary timber cofferdam which excluded the tidal water. For Blackfriars Bridge, the cofferdam, was to be built in a novel manner by sinking a lower and upper iron caisson into the river to exclude the tidal waters and then building the foundations and piers inside the caisson. The casings of the lower parts of the caissons were to be left permanently in place and the upper parts removed after the works were complete. The caissons were a specified method of working detailed in the contract documents.

However, the upper casing could not resist the external pressure of the water and had to be abandoned. Accordingly, the piers could only be built as the tide permitted the work to go on. The contractor sought compensation in damages for his loss of time and labour on the basis that the employer had warranted that the bridge could be inexpensively built using the specified caissons. The House of Lords formed a different view and found there was no express warranty to that effect in the contract and that none could be implied.

Based upon this case, an employer will, generally, not be liable for the contractor trying to do the impossible.

Exceptions to this principle may be:-

1. if the contractor can show that the employer misrepresented that construction of the works was possible in the first place; and/or
2. there are express terms in the contract which enable such a claim to be advanced (e.g. an *"adverse conditions"* clause); and/or

3. the employer refuses to issue an instruction to remove the impossibility and insists that the contractor continue with the work even though there is no practical or commercially viable way of getting around the problem.

Max Abrahamson, an authoritative commenter on the ICE Conditions of Contract, opines that the result of this general principle is that *"the contractor should avoid fruitless efforts to do work which is impossible, and instead require a properly ordered variation to avoid the impossibility."*

### Who Pays for Proving the Impossible?

The situation will also be different if the contractor carries out extra works not forming part of the original contract works in order to establish the impossible, e.g. additional trials, tests, research or development. Where these are required by the engineer they should be treated as variations and instructed and valued accordingly.

### Conclusions

If the *Turriff* case is to be followed by the Hong Kong courts then impossibility should be considered in a practical and commercial context. That being the case, employers and their agents should beware and act quickly to instruct practical solutions which remove any impossibility and maintain the progress of the works.

**'In BERA's view a practical view should be taken of the impossibility based on the facts in hand.'**