

## CONSTRUCTION DEFECTS AND MONETARY RETENTIONS IN CONSTRUCTION PROJECT: A REVIEW OF CASE LAW

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**ABSTRACT:** Retentions are generally considered to be intended to act as a powerful tool to incentivize contractors/subcontractors to remedy defective work in cases of non-performance. This study attempts to establish the extent to which retentions can be used for this purpose by investigating case law connected with insurance and defective work. One of the significant questions is whether retentions are sufficient to deal with construction defects or value of retentions in the rectification of defects is illusory. The cost to repair a defect may vary depending on a number of components including type, cause, magnitude and the construction stage at which the defect occurs. It is expected that a review of existing cases on defective workmanship will provide an insight on the issues and whether retentions are effective in their intended function. In order to establish their functionality, the study described in this paper investigated 6 construction insurance cases to identify the critical issues and the causes of dispute. It was found that the nature and the cause of defects were different in each case. It was also established that certain defect types not covered by insurance may be covered by retentions – potentially one of the key uses of a retention strategy. It is expected that the findings will assist in forming a view on the quantum of money that may be required paving the way for a first time understanding on a rational basis for setting up retention regime.

*Keywords: Retention, Defects liability, Defects, Construction industry, Case law*

### 1. INTRODUCTION

The retention mechanism is a phenomenon peculiar to the building industry. It is a mechanism whereby a percentage (commonly between 5%-10%) of all payments made to the contractor is retained by the client or employer until the completion stage of the contract. Half of this pool of money is paid out at the end of practical completion while the other half is retained till the end of the maintenance or the defects liability period [1]. During the defects liability period the contractor must rectify any defects or faults that are identified by the client.

There is a commonly held notion behind the retention of this pool of money. One of the principal purposes of retentions associated with defects is in order to provide leverage to compel a contractor or subcontractor to remedy defective work in instances of poor quality or poor performance. It also provides the client/owner with a fund to remedy any defective work in case the contractor abandons the work or becomes insolvent [2]. The need in the first case would lie in knowing the quantum of money which should be withheld as a motivation for the contractor/subcontractor to return and remedy those defects. Similarly in the second case there is a need to find out the sum of money which would be sufficient to

repair the defects in case the contractor defaults.

To know this amount there is a fundamental need to understand those elements principally associated with defects, i.e. workmanship, materials etc. There is also a requirement to correlate the value of likely defect rectification costs with the level of retentions normally held by the client. Ultimately it is essential to establish whether retentions actually serve the purpose they are intended for. Indeed whether the ‘need’ for retentions within the standard construction contract is more a function of ‘professional prejudice’ of contract administrators against contractors, as much as it is custom and practice – i.e. ‘we always do it this way’.

The construction industry has a range of risk mechanisms and securities to ensure delivery of the construction product. These include performance or retention bonds, insurance policies, warranties and guarantees, statutory provisions and other contractual provisions. Given this multitude of risk transference mechanisms, it would seem sensible to establish if indeed retentions are now either outmoded or superseded by other mechanisms or if in fact they are the most effective mechanisms that exist to ensure completion of works. This will ascertain whether there is any value in the continuation of the practice of retentions. Consequently the objective of this paper is to explore the significance of defects in relation to

retentions. This paper specifically looks at case law related to workmanship, defects and insurance in order to gain a better understanding of what types of defects are not covered by insurance and thus reliant on retentions.

## **2. RETENTION, DEFECTS AND INSURANCE**

### **2.1 Defects related contractual Obligations**

The common element associated with retentions and defects, stated in the conditions of contract is the release of the remaining portion of retentions at the end of the defects liability period. The defects liability period varies in length between 3 and 12 months depending on value and scope of the project. Thereafter a certificate of substantial or practical completion is issued to the contractor by the architect/engineer. During the defects liability period the contractor has an obligation and entitlement to complete outstanding works and to remedy any defective work.

Most of the standard forms of contract have retention provisions and retention clauses; however, none of these standard forms of contract precisely defines the purpose of retentions or their usage [3]. This is a significant observation in the establishment of the role of retentions. Given that there is no precise definition within the contract of their usage for the client, it could be inferred that they are held because they can be rather than they are essential for contract completion. This is in accordance with the observations laid out by Hughes et al [2] who stated that even with the existence of other forms of financial protection (i.e. performance bonds etc) retentions are conventionally preferred. The reasons for this being simplicity (they are in the contract already), acceptance as the norm and requiring no further documentation. Champion [4] similarly notes that the principal value of retentions is in their administrative convenience.

Most forms of contracts have provisions for defects liability or a defects correction period. Indeed it has been observed that defects are part of the culture of the construction industry [5], represented by a “defects liability” period in the standard forms of contract. This construction delivery and subsequent defects liability period is supported by specially defined retention percentages and periods over which the money is to be released.

A typical definition of a defect is provided in the New Engineering Contract (NEC) as being ‘a part of the works which is not in accordance with the works information or the contract’ [6]. In these circumstances it is the obligation of the contractor to remedy any defects in the contract works whether or not he has been instructed to do so by the supervisor/engineer [7].

This is a somewhat perverse position from an industry standpoint. It could be contended that construction is the few, if not only, industries in which it is up to the client (i.e. customer) to ‘inspect in’ quality on the basis of arbitrary standards and limited knowledge. This would be analogous to buying a car from the showroom and having to undertake a full mechanical, electrical and finishes inspection on the day of purchase.

### **2.2 Release of retentions – key issues**

Under a main contract the first half of the retention is released at the point of practical completion and the remaining half on the certificate of completion of making good defects. This transaction occurs between the client/owner and the main contractor and is simple and straightforward. There should be no significant problems connected with the release of retentions from a contractual perspective. However under many common forms of Sub-Contract the position is that half the retention may be retained by the main contractor from the sub-contractor until practical completion is achieved. Thereafter the remaining half is retained until all defects have been certified as having been ‘made good’ under the main contract.

The main contractor has a substantial degree of control over the making good of defective work as funds are only released when all defect rectification works are completed. However a sub-contractor often has substantially less control of this process, since a certificate of completion of ‘making good’ defects (and thus a release of funds) may rely upon works by various other sub-contractors. This can lead to frustration on the part a sub-contractor whose works are free from defects but who is prevented from being paid the final half of retention monies as a result of outstanding works by others under the main contract. This practice can create significant cash flow problems for subcontractors - a problem particularly detrimental to smaller firms increasing both their debt burden and operational risk. This ultimately impacts negatively on construction costs for owners [8].

### **2.3 Insurance and the contract**

Certain insurances are required by law, for example, motor insurances and employer’s liability. In addition construction contracts invariably impose insurance requirements on one or both parties to ensure that funds are available to meet damage claims and to facilitate completion of the works [9]. Under most standard forms of contract the contractor holds an obligation to obtain insurance cover [6]; however most insurance policies contain a long list of express exclusions that warrant close scrutiny by Insured’s [10]. Some of the exceptions stated in NZS 3915:2005 include:

- “Excepted risks” including fault, defect, error or omission in design.
- Direct cost of remedying loss or damage caused by defective materials or workmanship or contractor’s design. However the exclusion to be limited to the defective items in the Contract Works or Materials but the insurance shall extend to other insured items which are consequently loss or damaged.
- Loss or damage for which the contractor is not liable.
- Liability of the contractor for liquidated damages [11].

The exclusions, McInnis [6] notes are often the subject of litigation especially the ones related to the cost of replacing defective works. This is reflected in the study of case law undertaken further on.

#### **2.4 Do retentions work in rectifying defects?**

Klein states that the occurrence and causes of defects have nothing to do with retentions supported by a research carried out by BSRIA (Building Research and Information Association, UK) revealing that retention monies were not used for the purpose of rectifying defects [12]. This was also acknowledged by the House of Commons’ trade and industry committee. Conversely a key finding of the report [13] of the same committee which motivated against banning retentions was that clients do not currently have confidence that defects will be remedied by contractors. It was contended that there was an ongoing requirement to have a specific contractual remedy in place to ensure defect rectification. Conversely opponents of retentions hold diametrically opposed views and consider it as an outdated practice in the modern construction industry. They contend that the existence of the retention mechanism codifies the existence of defects in construction and precludes the possibility that the industry can achieve modern, professional, defect free culture [14]. Quality, in the context of retentions, is that product performance level which can be ‘gotten away with’ by the contractor.

The secondary purpose, as previously noted, of retentions is to motivate the contractor to complete any minor outstanding items and repair defects after the work is finished [1]. It may be argued here that if retentions are held for repairing defective work after the practical completion, then the purpose of holding retentions during the construction period is not justified. During the construction period the contractor is available on site to repair any defects that may appear in the works carried out. Consequently any defect claims can be settled with the ongoing payment claims, and the retentions per se are redundant. In other words if the contractor calculates that it can earn more money

on new contracts, rather than expediting old defects claims, the contractor may abandon the work at any stage - delaying completion of the project [15]. Retentions will therefore be only useful in the event that the contractor is either off-site or otherwise defaults, as the pool of money withheld will tend to act as a security for the client to employ another contractor to finish the work or to remedy any defects. However if this pool of money is not sufficient to remedy those defects then the purpose of withholding retentions is defeated.

### **3. DEFECTS AND INSURANCE - A REVIEW OF CASE LAW**

Insurance in the construction industry is a mechanism for risk management very much similar to other industries. The cases reviewed for this research are mainly related to insurance, defects and workmanship. A point worthy of note here would be that none of these cases studied revealed retention related issues. However these cases assist in demonstrating that even with the existence of risk mechanism i.e. in this case insurance, retentions may or may not play a significant role to help cover for defective work, though it may depend on a case to case basis. Most of the construction liability policies often provide that the indemnity does not cover the insured’s liability in respect of loss or damage caused by “faulty or improper [or defective] workmanship, material or design”. Retention could be useful to cater for such defects.

#### **3.1 Review of cases**

##### **Case 1 – Holmes Construction v Vero Insurance NZ (District Court Masterton CIV 2005-035-000315 Harrop DCJ)**

In *Holmes Construction v Vero Insurance NZ* Holmes engaged Surface works as subcontractor to undertake exterior plastering and painting, who in turn was negligent in failing adequately to protect or mask the recently installed windows which resulted in overspray and spillage of plaster onto the windows. In an attempt to remove the plaster from the windows the damage was revealed and the only option left with Holmes was to replace all the windows at a considerable cost. Holmes claimed under the policy for the cost of replacing windows. Vero declined the claim due to the exclusion clause which stated that “the company will not indemnify the insured against the cost of repairing, replacing or rectifying any part of the contract works which is defective in material or workmanship. The judgement was held good for Vero and Vero was not responsible and was relieved of the obligation that it would otherwise have to indemnify Holmes. The judge

was satisfied that the windows became, as a result of Surface works' conduct, "defective workmanship" within the meaning of that phrase in the contract.

**Case 2 – Manufacturers Mutual Insurance Ltd v Queensland Government Railways & Anor [1968] 118 CLR 314**

In *Manufacturers Mutual Insurance Ltd v Queensland Government Railways & Anor* the insured sustained loss when in an unprecedented flood certain piers collapsed due to the inadequacy of their design to withstand the forces then experienced. The designing engineers were not negligent as they had complied with the standards prevalent at that time. The policy in question in this case covered loss or damage arising out of or in connection with a contract for the supply and erection of a railway bridge, but excluded liability for "loss or damage arising from faulty design". The high court held that the loss had arisen from faulty design. "To design something that won't work simply because at the time of its designing insufficient is known about the problems involved and their solutions to achieve a successful outcome is a common enough instance of faulty design". The distinction which is relevant is between 'faulty' i.e. defective design and design free from defect. It was stated in the judgement that the piers fell because their design was defective although, according to the finding not negligently so. It said that the exclusion was not against loss from 'negligent designing'; it was against loss from 'faulty design'

**Case 3 – Seele Austria GmbH & Co v Tokio Marine Europe Insurance Ltd**

In *Seele Austria GmbH & Co v Tokio Marine Europe Insurance Ltd* Seele entered into a trade contract with BLS St Martin's Ltd under which it was to design, procure, install, execute and complete the Atrium roof glazing, Atrium wall glazing, shop fronts and external curtain walling for the Paternoster project. Also Seele was obliged to remedy any defective work of which they were given notice and if they failed to take such steps, the client was entitled to employ and pay others to carry out the remedial work. Included in the work was the installation of "punched" windows. These windows were assembled and tested offsite in the laboratory and passed the test. As per the contract 10% of the windows were to be tested once installed on site and that was the responsibility of the project manager Bovis. Ideally the testing should have been carried out before the brick cladding work on the wall in case access had to be gained to the windows to remedy defects. The cladding work however was completed before Bovis carried out the window tests.

Bovis left the testing of the windows until late in order to speed up the project and secure an early completion bonus. He was confident that after having

passed the laboratory tests, the windows would pass the on-site tests as well. They were however mistaken regarding that, for when a number of installed windows were tested against water penetration they all failed the test. The windows leaked due to a number of reasons. Seele incurred the costs for remedying the defects in the windows. There were additional costs borne by Seele as part of the rectification work which included the cost of breaking the internal finishes and cladding to be removed. Also the employer charged Seele by way of set off for the delay to the completion of the project caused by the remedial works. In respect of all these costs and charges, which were a total of £1,237,709.48 that Seele wished to be indemnified, the first question that arises here is that whether any of the loss and expense incurred by Seele in respect of the defective windows is covered under the policy? Second question is what type of loss and expense is Seele entitled to be indemnified?

Seele was not entitled to be indemnified under the policy for any of the loss or damage and expense claimed in these proceedings. Seele's claim was dismissed. The root cause behind the occurrence of the defect was to secure an early completion bonus. In order to secure the bonus Bovis ended up paying more rather than earning bonus.

**Case 4 – Graham Evans & Co. (Qld) Pty. Ltd. v Vanguard Insurance Co. Ltd [1986] 4ANZIC 60-689**

In *Graham Evans & Co. (Qld) Pty. Ltd. v Vanguard Insurance Co. Ltd* the plaintiff company was involved in building a 26 storey block of units. One of its obligations was to arrange the painting of the exterior surfaces of the building. The painting work was subcontracted to Amalgamated Painting Services Ltd which used the Blue Circle system to paint the building. The system involved the application of three distinct coats of paint. The manufacturers of the paint also supplied a specification as to the manner in which the ingredients for the different coats should be mixed and applied. The subcontractors commenced work in Feb/Mar 1983 and by Nov 1983 a substantial part of the exterior painting work was over. At this time, however, the paint work began to flake off in many areas of the building and the plaintiff, as the responsible building company, had to strip a considerable amount of paintwork with a view to large areas being repainted.

The evidence showed that the primary cause of the problem was that the primer coat had been applied in too dilute a form and it had therefore failed to achieve adequate adhesion to the concrete surface of the walls and adequate cohesion within itself. The plaintiff claimed under a policy issued by the defendants in respect of the losses occasioned by the failure of the

paintwork. The defendants however denied that the loss suffered by the plaintiff fell within the cover provided by the policy. They were relying on an exclusion clause which stated that the policy excluded "loss or damage directly caused by defective workmanship, construction or design", although it was provided that the exclusion "shall be limited to the part which is defective and shall not apply to any other part or parts lost or damaged in consequence thereof".

The judgement was held for the plaintiff. Considering the type of work undertaken by the plaintiff involving, as it did, many aspects of building the units, the words "property of every kind and description for which the insured may be responsible" were apt to include coats of paint of considerable magnitude separately applied and composed of different ingredients; and the rendering useless of the second and third coats of paint, and their necessary physical stripping from the building, constituted physical loss or damage. The plaintiff's loss was therefore covered by the policy. In so far as there was damage directly caused by defective workmanship it was caused to the primer coat and not to the second or third coats. Since the loss or damage occurred to the second and third coats, the exclusion clause does not apply.

#### **Case 5 – Walker Civil Engineering Pty Ltd v Sun Alliance & London Insurance Plc & Ors (1999) 10 ANZ Insurance Cases**

In *Walker Civil Engineering Pty Ltd v Sun Alliance & London Insurance Plc & Ors (1999) 10 ANZ Insurance Cases* Walker Civil Engineering Pvt Ltd had a contract with a third party to build three sewerage pumping stations. The contract between Walker and the third party required Walker to repair, at its own cost, any loss or damage to the tanks, if such repair was necessary to complete them satisfactorily. Once construction of the sewerage stations was almost complete, the tanks began to leak. Walker then decided to demolish the fibre glass walls and reconstruct them with concrete. During the reconstruction of the tanks, some of the machinery and components contained inside the tanks were damaged. They therefore had to be removed and replaced.

Walker had taken out an insurance policy with Sun Alliance & London Insurance PIC. The policy promised to indemnify Walker for physical loss of or damage to property that Walker owned, used or was responsible for in its operations under the contract. However the policy did not cover loss or damage directly caused by defective workmanship, construction or design. The exclusion was limited to the part which was defective and did not apply to any other part lost or damaged in consequence thereof. Walker was unable to recover the claim under the insurance policy and appealed. According to Walker the items were covered

by the policy. Walker argued that the exclusion clause was narrow and did not excuse the insurer from indemnifying Walker for the machinery housed within the tanks. Walker contended that only the tanks were defective, and that the machinery inside was not defective in any way. Consequently because the exclusion clause only applied to defective parts, it did not apply to the machinery inside.

The judgement was passed and Walker's appeal for indemnity was dismissed. According to the Judge the meaning of the word "part" in the exclusion clause did not refer to a part such as a tank; it referred to the part of the work being carried out by Walker. The word "direct" within the phrase "directly caused" meant "without the intervention of any intervening cause (i.e. by a direct process or mode)." The tanks were defective. The loss or damage suffered by Walker was all "directly caused" by the need to replace the defective tanks. The need to replace the tanks was, in turn, "directly caused" by Walker's defective workmanship. On that view, the loss or damage suffered by Walker was all within the exclusion clause, unless the limitation to the exclusion clause applied.

The defect in the tanks led to the need, not only to replace the tanks, but also to remove the equipment housed within the tanks. The part of the work that was defective involved the construction of three sewerage tanks. While the truth was that the equipment inside the tanks was in working order, however all of the construction of the tanks was useless once found to be leaking. That made all of the construction of the tanks defective which included the machinery within the tank. The equipment inside the tanks was defective because it was of no use unless housed in tanks free of defects. Therefore to construe the exclusion clause as being limited only to the tanks themselves would be narrow and artificial construction. The exclusion clause hence operated to exclude the claim because the relevant part of the works was defective.

#### **Case 6 – Chemetics International Ltd v Commercial Union Assurance Co. Of Canada**

In *Chemetics International Ltd v Commercial Union Assurance Co. of Canada* the insured Chemetics International was held liable for damage to a customer for which the insured had supplied equipment and material for a plant. Liability was imposed by a jury, giving no reasons, but the insurer sought to show that the verdict must have been based on the failure of the insured to give proper operating instructions to its customer either in a manual or orally. The manual had been drawn by an employee of the insured who had qualified as a professional engineer in two jurisdictions, though not in the jurisdiction where the plant was built. The insurer, having been held liable on the policy at trial, appealed to the British Columbia Court of Appeal.

The insurer concedes that the loss is within the insuring agreement. The issue is whether coverage is excluded by the terms of the clauses. The appeal of the insurer was dismissed. The failure to give proper instructions was not an error or omission in the rendering of professional services within the meaning of the policy. The fact that the particular employee who drew up the insured's manual happened to have some professional qualifications was irrelevant.

### 3.2 Analysis of the cases

The cases reviewed for the purpose of this study have two elements in common i.e. defects and insurance. None of the cases have any retention related issues. However retention related insights have been gained after reviewing the cases. Defects are directly related to retentions in the sense that retentions exist for the purpose of rectifying defects. However it may depend on the type of the defect.

The following insights have been drawn after reviewing the cases:

- Construction insurance does not cover for defects due to defective material or workmanship. Therefore are retentions for dealing with such defects? E.g. *Homes Construction v Vero Insurance NZ* and *Walker Civil Engineering Pty Ltd v Sun alliance & London Insurance Plc & Ors*.
- Defects due to errors in design are not covered by insurance too. Are retentions for the purpose of rectifying such defects? In that case how fair would it be to make deductions from the contractors and subcontracts payments to cater for defects arising due to a consultants fault? E.g. *Manufacturers Mutual Insurance Ltd v Queensland Government Railways & Anor*.
- One of the purposes of retentions is to act as an incentive for early completion. In *Seele Austria GmbH & Co v Tokio Marine Europe Insurance Ltd* the root cause behind the occurrence of the defect was to secure an early completion bonus. It can therefore be hypothesised here that retentions may be responsible or may lead to defective work.
- Insurance covers for any damages caused as a consequence of a defect; but does not cover for damage caused directly by defective workmanship or design as demonstrated in *Graham Evans & Co. (Qld) Pty. Ltd. V. Vanguard Insurance Co. Ltd*. Therefore are retentions for the immediate defects and not the consequential ones? It may depend on the type and the cause of the defect to determine whether or not it will be covered by insurance

otherwise retentions could be used to cover for such defects.

- Insurance does not cover the liability caused by errors or omissions in the rendering of professional services. Therefore could retentions be used to cover for any defects or errors caused as a consequence of negligence in delivering professional services e.g. in *Chemetics International Ltd v Commercial Union Assurance Co. of Canada*.

### 3.3 Conclusion and Comments

A range of different conclusions can be drawn having reviewed case law. The first being that even after being customarily used in construction contracts world over the function of retentions is still unclear. Different publications identify several purposes of retentions, out of which defect rectification is the most common. Therefore it is known that retentions are to cater for defective work; however what is not clear is the type of defective work it caters for. Based on the reviewed cases it is evident that defects in construction projects can arise due to various reasons and also defects may be in varied forms. However it is assumed that retentions exist to cater for minor quality defects e.g. defects due to workmanship and material. The other types of defects e.g. defects due to design errors may be covered by professional indemnity insurance however not necessarily so.

The other conclusion or rather an underlying hypothesis behind the use of retentions seems to be that retentions are adequate to remedy defects in the event contractor defaults. The cost to repair a defect however may vary depending upon the type and the magnitude of the defect. Establishing the cause of the defect would be essential in order to remedy defective work; in the sense that whether the retention fund is to be utilised to remedy defective work or whether it will be taken care of by other mechanisms e.g. insurance.

There is a need to establish through further research whether retentions are actually meant for the purpose of resolving defects or it is just a belief or practice. The answer to the question would help in establishing a rational basis for setting up a retention regime. Having found out the quantum of money required for defect rectification or for the purpose for which retentions exist we could be a step closer in determining the suitable retention rate. Construction projects as is known are unique in nature and hence for every project there could possibly be a unique retention regime based on different parameters depending upon the type, size, and nature of the project.

Finally having found out whether retentions exist for defective work or not the need for retentions could be verified. In case retentions are not enough to cater for defective work then their existence is pointless and

there would be a need to explore better options in place of retentions.

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