

**THE ENGINEERING COUNCIL OF SOUTH AFRICA**

**CASE STUDIES ARISING FROM CONTRAVENTION OF ECSA'S RULES OF CONDUCT FOR REGISTERED PERSONS.**

**PUBLISHED BY ECSA TO MINIMISE THE RISK OF RECURRENCE**

**Case Study No. 2012/5 : Extreme implications, from contravention of ECSA's Rules of Conduct on a small project**

**THE PROJECT**

A residential dwelling unit constructed with numerous faults and defects, arising in part from unprofessional performance by the Engineer.

**BACKGROUND TO THE CASE**

The dwelling was one of a number of similar units in a cluster development situated in a suburban area. The development was undertaken by a contractor. The unit in question was constructed under a direct contract between the purchaser (i.e. Employer) and the Contractor. The Contractor retained the services of the Engineer to provide the necessary professional engineering services.

The quality of materials and workmanship produced by the Contractor left much to be desired. The level of substandard building work gave rise to numerous defects and justified a complaint to the Architectural Council. This was aggravated by other faults and defects, apparently of an engineering nature.

On receipt of a complaint from the Employer after the dwelling unit was ostensibly completed, ECSA commissioned an expert to investigate the matter. This revealed that the dominant fault involving the Engineer concerned a reduction in the floor to floor height between ground and first floors. When this action was queried by the Employer the Engineer made a written misrepresentation to the Employer (now the Owner) to cover up for his client the Contractor. It was considered this transgressed Rule of Conduct 3(2)(h) of ECSA in that the Engineer had failed to give any decision, recommendation or opinion that was objective and based upon prevailing facts. The Engineer pleaded guilty to the charges by ECSA and in a settlement agreement agreed to pay a fine of R5000.

## DETAILS OF THE PROBLEM

The units in the cluster development were designed to an architectural style from the Northern hemisphere, in the belief this gave the units a unique appeal and marketability. However this style was not suited to South African climatic conditions. The design was modified considerably, which resulted in a standard of finishes which was spartan and “cheap” compared with “normal” standards to which buyers were accustomed. This was aggravated by the Contractor’s cost-cutting approach which included inferior materials and poor workmanship from employing unskilled artisans. This culminated in a dispute between Employer and Contractor over the extent of defects not remedied and failure to complete the contract. A detailed investigation report by an expert independent architect, which substantiated the Employer’s allegations, was made available to ECSA.

Besides the very numerous architectural defects and alleged Contractor’s defaults, the report noted various acts by the Contractor’s Engineer, which were considered unprofessional and unacceptable. Chief among these was the Contractor’s decision to reduce the vertical distance between ground and first floors of the unit by at least 300mm, thus saving a depth of brickwork not constructed of 360mm. (This saved not only brickwork, but also plaster, rhinolite and paint, in all the walls over the plan area of the unit) The reduction was queried by the Employer. The Contractor prevailed upon the unit’s architectural designer and the Engineer to explain this was unavoidable – it was necessary to avoid a staircase that would be too steep if it were not to protrude into the ground floor area. The door to a walk-in pantry below the stairs, intended to be of standard height with a 2.10m door frame, now became 1.91m high instead of 2.03m - and this was an unavoidable consequence. The Engineer concurred with the designer. The independent architectural investigation determined that the reasons for reducing the floor height were not valid. The reduction was not necessary from a design viewpoint – it was a blatant cost-cutting exercise, taken without correctly informing the Employer.

It is relevant to note that the reduction could not be rectified as the unit was nearly complete. The effects of this would thus be permanent and have a lasting negative value:

- The hazard of a door height too low
- The value of the utility of the volume lost
- The aesthetic value of the volume lost
- The consequent loss in the market value of the unit.

It was clear these effects would have far-reaching implications, and that the Engineer had acted unprofessionally in his statements supporting the reduction decision. It was considered by ECSA’s expert in his investigation that the Engineer contravened ECSA’s Rules of Conduct 3(2)(a), whereby his actions did not constitute a discharge of his duty to his employer and the public with integrity, viability and honesty. The Engineer was charged accordingly.

## ENGINEERING COUNCIL OF SOUTH AFRICA

The Engineer pleaded guilty to transgressing Rule 3(2)(h) of the Rules of Conduct of ECSA (Registered Persons must give engineering decisions, recommendations or opinions that are honest, objective and based on facts that are used in reaching recommendations or opinions given to clients or employers). In a settlement agreement he agreed to a fine of R5000, suspended for two years on condition he was not found guilty of transgressing the same rule during this period.

### WHAT LESSONS CAN BE LEARNED ?

Some pertinent lessons can be learned :

1. In building or construction contracts such as the one above, where the Engineer is employed by his client (in this case the Contractor), his duties include administering the contract, not only in the interests of his employer, but also in a manner which is fair and impartial. As a professional therefore the Engineer may well give a decision which appears against the interests of his employer – here the Contractor – but if the Contractor is at fault the need to decide impartially becomes paramount and the Engineer cannot side with his employer.
2. Where claims for compensation could arise when work is omitted from a contract, the claimant would not only be entitled to a credit in respect of the labour and materials not utilised, but also for the downstream effects of the omission where these could harm the interests of the claimant – illustrated by the reduction in floor height in the case above.

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