

# LEGAL RISK IDENTIFICATION FOR SMES IN THE CONSTRUCTION INDUSTRY

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This research contributes to a European Union (EU) funded project "*Risk Management Software System for SMEs in the Construction Industry (RiMaCon)*." The aim was to identify relevant legal risks with a view to manage them. A critical literature review was undertaken and the themes that emerged included procurement, building information modelling, building regulation and construction contract issues including delay, claims and dispute resolution. A case study approach was adopted as the researcher benefitted from a secondment to an SME contractor in Italy where pilot interviews were undertaken. The paper concludes that the literature review seems to have identified legal risks relevant to construction SMEs which will be investigated further.

Keywords: building regulation, contract law, dispute resolution, procurement, risk.

## INTRODUCTION

Kwawu and Hughes (2005) explain that the UK construction industry includes a very large number of small and medium-sized specialist firms with many strategies for the client to procure design or construction work.

"*Risk Management Software System for SMEs in the Construction Industry (RiMaCon)*" is an EU FP7 Industry-Academia Partnerships and Pathways Programme. The project aims to develop a risk management system which evaluates, monitors and reviews risks for SMEs in the construction sector. It is led by the University of Wolverhampton and one of the participants is an SME contractor ("*SME*") based in Padua, Italy. A case study approach was adopted as the researcher benefitted from a secondment to the SME where an engineer and its lawyer were interviewed.

### Legal Risk Identification

The first stage of risk management and focus of this paper is the identification of legal risks (Forbes *et al.* 2008). The subsequent stages are analysis followed by response and monitoring. Edwards and Bowen (1999) advocate their preferred definition of risk "*the probability that an adverse event occurs during a stated period of time*". They identify human risks as including legal risk.

A critical literature review of construction legal risks identified the following topics: procurement, building information modelling, building regulation and construction contract issues including delay, claims and dispute resolution. As this is an EU funded

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project, EU relevant papers were particularly sought and those reviewed included Dutch, Italian, French, Belgian, Portuguese and Swedish perspectives. Although relevant, environmental and health and safety law and insolvency are not considered further in this paper.

## **PROCUREMENT**

The first legal challenge faced by an SME in the construction industry is procurement. Marique (2013) explains that "*Procurement relates to the diffuse relationships between market players in their race towards a contract*". Clients have their choice of many different procurement routes (Charlson and Chinyio, 2013).

The European Court of Justice has emphasised that public procurement primarily aims to ensure undistorted competition (Marique, 2013).

Procurement policies change for example in the Netherlands, the exposure of collusion influenced procurement policy and cooperation between client and contractor for a number of years (Boes and Doree, 2013).

As a response to corruption, the Italian building sector operates under new regulations for awarding of contracts for public works. The basic objectives of the legislative reform included transparency and competition. ANCE (Associazione Nazionale Costruttori Edili), the long-established association of building firms primarily composed of medium and small firms sees the transparency as a positive factor for an increase in their work (Bologna and Nord, 2000).

Kwawu and Hughes (2005) suggest relational contracting to facilitate collaborative working relationships. However, Warra (2008) warns that for most public sector purchasers, open competitive tendering is legally mandatory.

Campagnac (2000) explains that although French legal system is derived from Roman law which has distinct principles from the English common law system, the French contracting system includes both traditional "*professional model*" and design and build "*industrial model*" procurement methods.

Despite the potential of e-procurement to save the construction industry time and cost, Wong and Sloan (2006) found scant interest from the surveyed construction SMEs for implementation of e-procurement.

## **BUILDING MODELLING AND REGULATIONS**

### **Building Information Modelling**

McAdam (2010) explains that Building information Modelling (BIM) has been defined as "*a digital representation of physical and functional characteristics of a facility*". The aspiration is that the model would provide reliable costing and fabrication drawings. However, this requires collaboration by key stakeholders: contractors, engineers, architects and employers. The legal challenges include design liability and ownership/protection. For the moment, it seems unlikely that SMEs in the construction industry will be mandated to comply with BIM.

### **Building Regulation**

The characteristics of building control systems in EU Countries are similar. Public bodies set the regulatory framework, check planning applications, issue building permits, conduct final inspections, grant completion certificates and supervise the

operation of the system (Pedro *et al*, 2010). Ang *et al* (2005) advocate the Dutch initiative to formulate National (instead of Municipal) technical building regulations.

Legislative reform in Italy introduced a substantial body of regulations to ensure compliance with environmental and town-planning regulations (Bologna and Nord, 2000)

## **CONSTRUCTION CONTRACT**

### **Claims and Delay**

Hughes and Shinoda (1999) emphasise the importance of getting contractual and legal issues resolved at the beginning of the project. Nevertheless, claims are widespread and Love *et al* (2010) endeavour to classify their causes. However, on-site staff often do not have the proficiency to identify claims (Moura H. and Teixeira, 2007). Their research on Portuguese public construction projects identified the leading cause of claims was change followed by delay.

Champion (2011) contends that delays to the completion of construction projects are prevalent with customary claims by the contractor to recover their prolongation costs. Furthermore, Gorse (2004) advocates that all project managers should understand the disparate methods used in delay and disruption claims.

Brawn (2012) argues that knowledge of the effect delaying events have on a contractor's right to an extension of time and employer's entitlement to liquidated damages is vital for successful project completion.

### **Sub-contracts**

Wong and Cheah (2004) explain that the frequent use of sub-contracting in the construction industry results in the following typical issues: undesirable payment terms for sub-contract work, incompatibility with the main contract and deficient terms and conditions of sub-contracts. Kwawu and Hughes (2005) identify onerous one-sided conditions at the sub-contract level.

## **DISPUTE RESOLUTION**

The UK construction industry has suffered high levels of disputes which expend significant money, time and resources in their resolution (Bowes, 2007). These traditionally have been resolved through arbitration or litigation but they have been criticised for their costs, delay, procedural complexity and adversarial approach (Brooker, 1999).

Brooker (2009) explains that alternative dispute resolution (ADR) was given a central role in the UK Civil Procedure Rules to encourage the settlement of cases and reduce costs for the parties. She concluded that mediation has been shown to be beneficial and many Technology and Construction Court judges believe it should be normal practice for construction disputing parties to discuss and use the process.

The Housing Grants, Construction and Regeneration Act 1996 provided a statutory entitlement for parties to a construction contract to appoint an adjudicator to reach a binding decision (Brooker, 2009). Adjudication is now an established and successful construction dispute resolution process (Bowes, 2007). She concluded that respondents agreed with the cost effective advantage of adjudication.

## CASE STUDY

### Research methodology

A case study approach (Denscombe, 2010) was adopted as the researcher benefitted from a secondment to an SME contractor in Padova, Italy. The case study method enabled investigation of "*the richness of the phenomenon and the extensiveness of the real-life context*" (Yin, 2009, p.2).

Projects were reviewed (Cresswell, 2013) and pilot (Cresswell, 2009) interviews semi-structured (Jankowicz, 2007) around the themes identified from the literature review (procurement, building information and modelling, construction contract and dispute resolution) were undertaken.

### Secondment to construction SME in Padova, Italy

The construction SME based in Padua, Italy was founded in 1955. The business constructs and renovates residential and commercial premises. The researcher was seconded to the SME from 31 March to 4 April 2014. During this visit, projects reviewed comprised:

- 1) The repair and replacement of the roofs of houses;
- 2) A new build 4 terraced house development where concrete/wood blocks with polystyrene insulation had been used;
- 3) A pre-start site meeting for an extension to provide a product sample store for a pharmaceutical factory; and
- 4) The refurbishment of an elegant Palazzo Bovio apartment, near St Antonio's Church in the centre of Padua.

The SME has previous experience of EU research projects. On 31 March 2014, the A+ House project completion presentation was attended at the Fenice Green Energy Park (FENICE). The project compared construction with sustainable and traditional materials. The sustainable building included earth bricks, hemp and wood contrasted with a traditional concrete structure. The project has now moved to the market phase.

### Interviews with the SME's Lawyer and Engineer

Semi-structured pilot interviews (Creswell, 2013) were undertaken separately with the SME's lawyer and engineer. The SME's lawyer (avvocato) graduated in 2001 and then worked for a Padua law firm which supported businesses. In 2009, she set up on her own. She is a civil lawyer and employment law specialist. The SME's engineer has worked for the company for 7 years.

### Results

#### *Procurement*

The engineer emphasised that the relationship with the client is important. The first job is special because it can lead to another project. The best investment is with existing clients.

He continued that finding new clients is a different challenge. The SME checks an internet site for public tenders and also Padua details planning permissions awarded so potential clients identified can be approached. This amounts to 10% of the SME's work. However, networking with existing contacts is the most successful strategy.

The SME's lawyer explained that the Italian Civil Code is supplemented by many specific laws for construction. Under the Civil Code, if a contract's objective is a building then a written contract is required. The SME has a draft house building contract primarily for use with home owner clients. Real estate/ developer clients have their own forms of contract.

The engineer expounded that 60% of the SME's projects are on their conditions but these are the smaller ones with 40% of the larger ones on the clients' conditions. 70-80% of the SME's turnover comes from the larger projects. Projects on client's conditions are more risky. For example, the SME's conditions do not include penalties for late completion and they can stop the job if they are not being paid.

He continued that the SME has two draft contracts: Measurement which includes a price for each step and Fixed Cost which is higher risk as measure and cost need to be calculated. If work is forgotten then its cost cannot be recovered.

#### *Building information modelling*

The engineer outlined that the SME produces 2D information including architectural and structural drawings but not 3D details.

#### *Building regulation*

The lawyer confirmed that there are national building regulations but every town has its own additional ones. Such issues are normally solved before procurement and on site construction. The public administration must firstly give permission to build and only then does procurement proceed.

The engineer elaborated that the SME's core business is residential. Development follows inception, design, construction and sale stages. The SME is usually only involved in the construction phase. Building regulation requirements are addressed at the earlier design stage leading to planning permission. The regulations include National, Regional, Town and specialist ones. The regulations are not clear as (sometimes) they conflict with each other.

He continued that last year a new law entitled clients to increase house volume by 20% to 45% (with renewable sources). This was intended to improve business for the construction sector. Unfortunately, this instead led to clients postponing projects due to start on site while they increased the size of the house resulting in a 3-5 month delay for building regulation approval.

He complained that building regulations for the construction sector keep changing. For example, crane and machine regulations can change 10 to 15 times per year.

#### *Construction contract*

The lawyer explained that the client and contractor can agree an amount payable by the contractor for each day a project is delayed. This amount can either be deducted from the amount payable to the contractor by the client otherwise the contractor may have to pay back money to the client. Other damages may be payable in addition.

The engineer argued that the most important issue is the contract. "*You can make more money with the pen than with construction projects.*" Money can be lost on a good project due to a bad contract.

He has advised not to take on a supermarket project due to the penalty charges for late completion. Penalty charges are acceptable provided that there is an achievable Gantt chart. Overall there is a balance between time, cost and quality.

He explained that variations are a benefit to the SME as they are not in a competitive environment. They are, however, difficult to manage and the client should be asked to pay at the time and not at the end of the project.

He disclosed that it is difficult to recover money if the project is on site too long. For example, the SME had to wait for 2 months for the client to choose the roof and during this period the scaffolding remained on rent for an additional cost of about 1,000 Euros.

He concluded that a project is better without claims as they are risky.

#### *Dispute resolution*

The lawyer complained that it can take 5 years to reach judgment at the first level in the Italian courts. In Italy there are many disputes but not enough judges. Moreover, Italy does not have enough money to pay for more.

She expounded that arbitration is very expensive. This makes it uneconomic to pursue smaller sums of money. In addition to paying the Arbitrator, the State requires payment of 16 Euros for every 4 pages.

She continued that there was no mediation in Italy. However, there was an EU law about mediation in 2008/9 which was brought into Italian law in 2010. Mediation on certain issues for example, car crashes, medical negligence and inheritance is required before the courts. However, this does not apply to construction.

The engineer described that there is a choice between a judge or arbitration (3 arbitrators). Obtaining a judge's decision takes a long time. Arbitration is quicker but more expensive. Arbitration is better for the client because he can oppose payment even if there are no defects. A contractor would therefore prefer to choose to have a payment dispute to be decided by a judge.

#### *Payment*

The lawyer explained that there is no credit protection so payment by the employer is not guaranteed. Clients tend to stop paying at the end of a project.

The engineer complained that clients can be slow to pay. The SME agreed with one client that they would only be paid when the units were sold. Another client explained that he was unable to pay until he had sold the apartments. "*No money, you can do nothing.*" The biggest problem is payment by clients.

The engineer described that it is difficult to secure advance payment. There has been a big drop in work from 2010. Before 2005, advance payment was available but recently clients would choose a contractor that did not demand advance payment. However, about 40% of construction companies have become bankrupt. Advance payments are returning due to the credit crunch.

#### *Other risks*

The lawyer advised that safety is seen by the State as a very important risk area for construction. An employer is required to eliminate risks for the workers on site. This documentation must be kept on site and is liable to inspection.

She expounded that under public law, the workers are given payment protection. A general contractor is jointly and severally liable with a subcontractor to pay the subcontractor's workers. This obligation applies even if the general contractor has already paid the subcontractor who has not subsequently paid their workers. A general

contractor can ask for the subcontractor's documentation but, in the past, false papers have been provided resulting in a criminal trial of the subcontractor.

#### *Future Research*

The lawyer suggested that ANCE (Associazione Nazionale Costruttori Edili) has a lawyer who may agree to be interviewed.

#### **Analysis**

The limitations of this research are recognised as according to Stake (2003, p.156) "*The purpose of a case report is not to represent the world, but to represent the case*". Nevertheless, whether these findings can be generalized will be tested in the future research outlined below (Denscombe, 2010).

### **FUTURE RESEARCH**

A further secondment to the SME is scheduled. The plan is to gather data on the broader SME experience of legal risk. A probable sample is members of ANCE (Associazione Nazionale Costruttori Edili).

A workshop at FENICE disseminating the research is proposed. The intention is to follow this with data collection by interview or a focus group (Litoselliti, 2003). One significant challenge is that the researcher does not speak Italian.

An EU-wide survey of legal risk is contemplated. Research on evaluation, monitoring and review of legal risks will also be required.

### **CONCLUSIONS**

The SME identified and distinguished between public and private sector procurement and traditional and design and build contracting. It also introduced the concept of procurement by networking.

As anticipated, the SME was not required to contribute to 3D building information models but made some insightful comments about the challenges of complying with building regulations.

The SME understood variation and delay claims and late completion penalties. Sophisticated delay and disruption methodology seems too complex for an SME.

The SME demonstrated commendable knowledge of the distinctions between litigation and arbitration together with an appetite for ADR including mediation.

Although not asked about payment by clients, this is a high priority for the SME. Interestingly, health and safety and subcontracting risks were also mentioned.

The pilot interviews confirm that the literature review seems to have identified relevant legal risks for construction SMEs. This is particularly encouraging because the literature reviewed was in English whereas the SME operates in Italy.

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### **REFERENCES**

Ang, G, Groosman M. and Scholten N (2005) Dutch performance-based approach to building regulations and public procurement. "*Building Research & Information*", **33**(2), 107-19

- Brawn, D. (2012) Extensions of time and liquidated damages in construction contracts in England and Wales. *"International Journal of Law in the Built Environment"*, **4**(1), 75-90
- Boes, H. and Doree, A. (2013) Public procurement at local level in the Netherlands: towards a better client-contractor cooperation in a competitive environment. In: Smith, S.D. and Ahiaga-Dagbui, D.D. (Eds) *"Procs 29th Annual ARCOM Conference"*, 2-4 September 2013, Reading, UK, Association of Researchers in Construction Management, 717-727
- Bologna, R. and Del Nord R. (2000) Effects of the law reforming public works contracts on the Italian building process. *"Building Research & Information"*, **28**(2), 109 - 118
- Bowes D. (2007) Practitioners' Perception of Adjudication in UK Construction. In: Boyd, D. (Ed) *"Procs 23rd Annual ARCOM Conference"*, 3-5 September 2007, Belfast, UK. Association of Researchers in Construction Management, **1**, 117-25
- Brooker P. (1999) Survey of construction lawyers' attitudes and practice in the use of ADR in contractors' disputes. *"Construction Management and Economics"*, **26**(11), 50
- Brooker, P. (2009) Criteria for the appropriate use of mediation in construction disputes: Judicial statements in the English Technology and Construction Court. *"International Journal of Law in the Built Environment"*, **17**(6), 757-65
- Campagnac, E. (2000) The contracting system in the French construction industry: actors and institutions. *"Building Research and Information"*, **28**(2), 131-40
- Champion, R. (2011) A consideration of recovery of prolongation costs in a construction context. *"International Journal of Law in the Built Environment"*, **3**(3), 237-51
- Charlson, J. and Chinyio, E. (2013) A case study of the joint procurement and provision of legal services to a group of universities in the Midlands. In: Smith, S.D. and Ahiaga-Dagbui, D.D. (Eds) *"Procs 29th Annual ARCOM Conference"*, 2-4 September 2013, Reading, UK. Association of Researchers in Construction Management, 493-502
- Cresswell, J. (2009) *"Research Design: Qualitative, Quantitative, and Mixed Methods Approaches"* (3rd ed.). London: Sage
- Creswell, J. (2013) *"Qualitative Inquiry & Research Design: Choosing among five approaches"* (3rd ed.). London: Sage
- Denscombe, M. (2010) *"The Good Research Guide for small-scale social research projects"* (4th ed.). Maidenhead: Open University Press.
- Edwards, P. and Bowen, P. (1999) Risk and risk management in construction projects: concepts, terms and risk categories re-defined. *"Journal of Construction Procurement"*, **5**(1), 47-57
- Forbes, D., Smith, S. and Horner, M. (2008) Tools for selecting appropriate risk management techniques in the built environment. *"Construction Management and Economics"*, **26**(11), 50
- Gorse C. (2005) Monitoring, planning and tracking: delay, disruption and legal risk management. In: Khosrowshahi, F. (Ed) *"Procs 21st Annual ARCOM Conference"*, 7-9 September 2005, SOAS, University of London. Association of Researchers in Construction Management, Vol.2, 1247-57
- Hughes W. and Shinoda H. (1999) Achieving satisfactory contractual terms for the engineer's role. In: Hughes, W. (Ed) *"Procs 15th Annual ARCOM Conference"*, 15-17 September 1999, Liverpool John Moores University. Association of Researchers in Construction Management, Vol.2, 597-606
- Jankowicz, A. (2005) *"Business Research Projects"* (4th ed.). Andover: Thomson Learning

- Kwawu, W. and Hughes, W. (2005) The impact of relational contracting on the construction industry. In: Khosrowshahi, F. (Ed) *"Procs 21st Annual ARCOM Conference"*, 7-9 September 2005, SOAS, University of London. Association of Researchers in Construction Management, Vol.2, 1195-204
- Litoselliti, L. (2003) *"Using Focus Groups in Research"*. London: Continuum
- Love, P., Davis, P., Ellis, J. and Cheung S. (2010) Dispute causation: identification of pathogenic influences in construction. *"Engineering, Construction and Architectural Management"*, **17**(4), 404- 23
- Marique, Y. (2013) Cooperation and competition in complex construction projects: implementation of EU procurement rules in England and Belgium. *"International Journal of Law in the Built Environment"*, **5**(1), 53-70
- McAdam, B. (2010) Building information modelling: the UK legal context. *"International Journal of Law in the Built Environment"*, **2**(3), 246-59
- Moura H. and Teixeira J. (2007) Types of construction claims: a Portuguese survey. In: Boyd, D. (Ed) *"Procs 23rd Annual ARCOM Conference"*, 3-5 September 2007, Belfast, UK. Association of Researchers in Construction Management, Vol.1, 129-35
- Pedro, J., Meijer F. and Visscher H. (2010) Building control systems of the European countries: a comparison of tasks and responsibilities. *"International Journal of Law in the Built Environment"*, **2**(1), 45-59
- Stake, R. (2003) Case Studies. In Denzin, N. and Lincoln Y. (eds) *"Strategies of Qualitative Inquiry"* (2nd ed.) London: Sage
- Warra, F. (2008) Mitigating contractual hazards in public procurement: a study of Swedish local authorities. *"Construction Management and Economics"*, **26**(2), 137-45
- Wong, C. and Sloan, B. (2006) An empirical survey of the UK construction SME's e-procurement readiness from the e-legal aspects. *"Journal of Construction Research"*, **7**(1), 81-97
- Wong W. and Cheah C. (2004) Issues of contractual chain and sub-contracting in the construction industry. In: Khosrowshahi F. (Ed) *"Procs 20th Annual ARCOM Conference"*, 1-3 September 2004, Heriot Watt University. Association of Researchers in Construction Management, Vol.1, 671-80
- Yin R. (2009) *"Case Study Research Design and Methods"* (4th ed). Sage: London