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CONSTRUCTION DISPUTES IN ENGLAND: THE OPTION FOR MEDIATION

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FACULTY OF SCIENCE AND TECHNOLOGY

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THE USE OF MEDIATION IN CONSTRUCTION DISPUTES

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Purpose

English construction, a particularly litigious industry, saw adjudication introduced in 1996 to improve cash flow and provide time-efficient, cost-effective dispute resolution. The industry perception is that adjudication no longer provides this. Mediation is a successful dispute resolution method used in many areas. It could be beneficial in construction disputes; however, there is limited evidence of significant implementation in England. The purpose of this research is to establish the current use of mediation in English construction, whether it is appropriate, and the requirements to encourage greater use.

Method

A mixed-method approach through case studies (20) followed by interviews (10) with key stakeholders, obtained qualitative data to develop a conceptual model. This informed the design of a cross-industry questionnaire, providing quantitative data to triangulate the findings.

Findings

The results demonstrated that the majority of disputes are adjudicated at a significant cost often with unpredictable outcomes. Little use was made of mediation. However, when used mediation is successful in resolving construction disputes, enabling negotiated outcomes. In addition, most users of adjudication and mediation would prefer to use mediation, where appropriate. The research also identified significant barriers, including a lack of understanding of mediation and the contractual requirement to use adjudication. The resistance to mediation was highest from sub-contract organisations rather than larger contractors. Sub-contractors are generally suspicious of an offer of mediation from the main contractor. There was strong support for mediators being experts in the field of the dispute.

Conclusion

The identified barriers need to be removed to enable greater use of mediation. Parties to the projects (stakeholders) need to receive training in mediation, contacts need to encourage its use and mediators need to be easily accessible. Work is now ongoing, following this study, to develop this training, influence the bodies that draft standard contacts and make mediators accessible.

Key words: Construction, Mediation, Disputes, Adjudication, Factors influencing dispute resolution process model.

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1 Introduction

1.1 Background to the research

This thesis draws upon my own 30 years' experiences to identify a gap in knowledge in the use of mediation within the construction industry in England. This experience is underpinned with a rigorous examination of the literature on the performance of the construction industry in relation to the resolution of construction disputes. The focus of this research is the role of mediation as an alternative or supplement to adjudication.

In his seminal work, Latham (1994) established that the construction industry is adversarial in nature. Richbell (2008) supported this claim, and found that a significant amount of time and money is spent on resolving disputes. My personal experience in the resolution of construction disputes has shown that there has been little improvement in recent years. Following a government report (Latham, 1994) on various issues within the construction industry (including cash flow and supply chain payment, dispute resolution processes, relationships and lack of teamwork, and security of payment), the *Housing Grants (Construction and Regeneration) Act* (*HGCR Act*) *1996* was introduced. This act included a provision for all construction contracts to contain a payment mechanism and to include the right to adjudicate a dispute. The *HGCR Act* was subsequently amended by the *Local Democracy, Economic Development and Construction Act 2009* (known as the *LCEDC* or *Construction Act*), but the principles with regards to dispute resolution remain fundamentally unchanged by the removal of loopholes such as pay-when-paid provisions in construction contacts and the extension of the definition of a construction contract to those implied, rather than only those mentioned in writing.

As a result of the *HGCR Act* and the subsequent introduction of the Scheme for Construction Contracts, adjudication was adopted as the primary formal dispute resolution mechanism for the construction industry (Kennedy and Milligan, 2008). The introduction of adjudication is regarded as a significant benefit to the construction industry and generally successful (Kennedy et al., 2010); however, because the percentage of costs spent on construction disputes is still a significant proportion of the total margin earned by a construction company each year, as identified by Richbell (2008), there would appear to be further scope to reduce these costs.

Having spent 30 years in the commercial side of the construction industry, with the latter 20 years predominately in the dispute and management area, I appreciate that much time and money is being spent on disputes. Many of these disputes appeared to be resolvable through facilitated negotiation, rather than utilising the industry default

standard of involving solicitors and instigating adjudication. Claims that made use of adjudication resulted in significant sums of money being spent relative to the amount in dispute, as well as the indirect costs of preparing all the documentation required, legal meetings, and management time. The results rarely seemed to produce the expected outcome, often only recovering part of the monies claimed (as supported by Bingham, 2009). Given that it is not possible, under the standard rules of adjudication, to reclaim the cost of the process, the resultant award was not significantly higher than the amount secured. Adjudication also appeared to destroy relationships – a dangerous situation, given the relatively small world in which construction operates. These issues were also supported by the members of a focus group supporting this research, who had various experiences with these points.

In 2006, I received an introduction to mediation that appeared to provide a formal process to cover facilitated negotiation. Further investigation showed it could be a useful tool in resolving construction disputes. Stitt (2004, p.1) strongly supports this, saying:

> "*A mediator attempts to help people more effectively and efficiently than they could on their own… to find solutions to their conflict… and find creative yet realistic ways to resolve their issues".*

Following the belief that mediation could be used in the resolution of construction disputes, I qualified as a mediator in 2008 and joined the Royal Institution of Chartered Surveyors (RICS) president's panel of mediators. The RICS is one of the top three appointing bodies for adjudication in the UK (Trushell et al., 2012; Milligan and Cattanach, 2014), but it became clear that the lack of appointments as a mediator indicated an extremely low use of mediation compared to adjudication. In addition, a study of the existing literature (as discussed in this chapter and Chapters 2 and 3) indicated that there was no clear understanding of why the construction industry in England makes little use of mediation compared to adjudication.

The literature generally accepts that mediation could be considered an alternative or even a precursor to adjudication (Stipanowich, 1996; Gould, 2009). Mediation has the advantage of being a quick, cost-effective process that enables the parties to agree a settlement between themselves (Liebmann, 2000). It saves considerable costs and often maintains relationships between parties, which is something adjudication has been shown not to do (Gould 2010, Mason and Sharratt 2013). Mediation has been demonstrated to be successful for construction cases in England that have reached the

Technology and Construction Courts (TCC), saving both time and money (Gould, 2009) and has also proved to be successful in resolving construction disputes in the USA (Stipanowich, 1996).

In 2010, the UK government commissioned Jackson to investigate the cost of civil litigation in England and Wales. Jackson's report (2010) was heralded as the most significant review of the litigation process since the Woolf Reforms in 1996 by Patterson and Leckie (2010). The report recommended that steps be taken to reduce the significant costs involved in dispute resolution. It also recommended the inclusion of alternative dispute resolution (ADR) as key to reducing the costs of disputes, stating:

> "*For cases which do not settle early through bilateral negotiation, the most important form of ADR (and the form upon which most respondents have concentrated during Phase 2) is mediation… First, properly conducted mediation enables many (but certainly not all) civil disputes to be resolved at less cost and greater satisfaction to the parties than litigation. Secondly, many disputing parties are not aware of the full benefits to be gained from mediation and may, therefore, dismiss this option too readily."* (p.355)

Despite government interventions (including Latham's recommendation in 1994 and the introduction of the *HGCR Act* in 1996) and the introduction of adjudication, as well as the apparent support for the mediation process and the perceived dissatisfaction with the adjudication process in the construction industry, there has not been a widespread uptake of construction mediation, as found by Gould (2009). No clear reason exists for this, leading to a gap in knowledge. Consequently, this research explores the awareness of, attitudes about, barriers in front of, and use of mediation, the development of disputes and contributory factors, and the selection of the dispute resolution process.

1.2 Importance of this thesis

A significant percentage of the annual margin of a construction company is spent on disputes; a construction company can typically spend 2% of annual turnover managing disputes, whilst only achieving a total profit margin of 3% (Richbell, 2008, p.3). If mediation is identified as a suitable alternative or supplementary dispute resolution process for the construction industry and any barriers to the implementation of greater use of the process are identified, it could have a significant financial impact and contribute to maintaining relationships, which would be of significant benefit to the construction industry.

1.3 Why this research is an appropriate subject for a Professional Doctorate

Latham (1994), Egan (1998), and the *Modernising Construction Report* (2001) identified the need to reduce the adversarial nature of the construction industry and the effects that this has on the industry itself. In particular, there is an awareness of the significant level of costs involved in the claims sector of the construction industry, the amount of time these claims can consume, and the damage to relationships that the referral of a case to adjudication or court can cause. This has been found to still be a contemporary issue, with no evidence of significant change found by the focus group in Appendix C. However, there has been no cross-industry systematic research and analysis of whether the use of mediation could be a contributory solution in significantly reducing costs and maintaining relationships.

Professional doctoral research is based on the principle that a researcher's career experiences can identify a gap or need for knowledge in that researcher's industry. Research into the use of mediation in resolving construction industry disputes draws upon my involvement in the dispute and claims sector of the construction industry for over 20 years, including frequent participation in the adjudication processes and in disputes resolution as a qualified mediator.

This research into the use of mediation incorporates the key features that comprise a Professional Doctorate and seeks to apply the work of others in creative and original ways by identifying and reducing the existing gap in knowledge in the construction industry on the use and suitability of mediation; to demonstrate through the thesis that mediation can offer a cost-effective solution to construction industry disputes; to combine disparate concepts in new ways by bringing together hitherto unconnected research; to create a new understanding of existing or emerging issues, in particular to throw into sharp relief that the level of cost currently being incurred is not sustainable and should not be acceptable; to demonstrate rigour in research design and its conduct; to design and apply new field instruments by considering the structure of construction ADR; drawing upon wide disciplinary bases for conceptualising; to generate knowledge through rigorous intellectual application; and to identify new or emerging issues worthy of investigation and using traditional research methods in these new fields of investigation (Anglia Ruskin University, Research Degree Regulations, 2015).

This research is not intended to consider methods to reduce the number of disputes arising but rather provide significant information to enable either the implementation of greater use of mediation or to provide bases for further research on reducing the number of disputes or their cost in the construction industry.

In summary, the majority of construction disputes continue to be referred for adjudication or even litigation for resolution where normal negotiation has not succeeded and, as identified above, mediation is a cost-effective, less adversarial method of dispute resolution, yet continues to be little-used in the construction industry, with no clear reason for this lack of use.

1.4 Primary research question

The primary question of this research is:

"Can mediation improve the process of dispute resolution for the English construction industry?"

To answer this question, a number of sub-questions are defined as follows:

1. What are the factors influencing construction disputes, dispute resolution processes, and the selection of the dispute resolution process?
2. What are the issues with the current process for resolving disputes?
3. Is mediation suitable for resolving construction disputes in England?
4. What are the barriers preventing greater use of mediation in construction dispute resolution?
5. How can these barriers be removed?

1.5 Originality and significant contribution to knowledge

Despite the introduction of adjudication, the construction industry continues to spend significant amounts of money and time on disputes. This research should contribute to knowledge in four key areas:

- Following on from the work completed to date, this research should provide empirical evidence on the use of mediation in construction.
- It should identify new and original knowledge about critical barriers to greater use of mediation.
- It should deliver a model detailing the key factors that influence the selection of dispute resolution method and the factors that link them together.

- It should form the basis to develop a solution for the removal of the critical barriers

This will be a significant benefit to the construction industry, and the Department for Business, Innovation and Skills has requested a copy of this research once it has been completed.

1.6 Common terms

The term “construction dispute” has a number of definitions. It has a legal meaning under the Scheme for Construction Contracts as a dispute including “any difference.” A point must have emerged from the process of discussion such that there is something that needs to be decided after the parties have themselves attempted but failed to resolve their differences by an open exchange of views (Russell, 2003). In addition, adjudication can also take place if one party fails to respond to the other – thereby implying that there is a dispute.

For the purpose of this research, the term “construction dispute” is defined as a construction dispute that cannot be resolved by the parties to that dispute through negotiation and requires external intervention to resolve the dispute by agreement, decision, award, or judgement.

Further definitions of construction dispute terms used in this thesis are included within the glossary.

1.7 Key theoretical influences on the research

Evidence and comment presented by Redmond (2005), Bingham (2009), Redmond (2009), and Minogue (2010) suggest that within the construction industry, the cost and complexity of adjudication has increased since its introduction in 1996, and that this also contributes to the high percentage of costs incurred in resolving construction disputes. The advantages of mediation as a dispute resolution process for the construction industry have also been supported by construction professionals (Redmond, 2005; Redmond (2009; Bingham, 2009; Richbell, 2008) but it would appear, as supported by anecdotal industry comment (Bingham 2009; Minogue 2010) and from discussion in the focus group, that there continues to be a low use of mediation in comparison with adjudication.

There has been previous research into the success of mediation in construction disputes in the USA (Stipanowich, 1996), the use of mediation in those cases reaching the Technology and Construction Courts (Gould, 2009), and the use of mediation in

Scotland (Agapiou and Clark, 2012; Agapiou, 2011). None of this research examined in depth all sectors of the construction industry in England, nor specifically tried to identify what the barriers are to greater use of mediation in England, making this research both significant and original.

From anecdotal comment (Bingham 2009, Minogue 2010), the case studies and interviews in this research, and as supported by comments from the focus group, the construction industry would appear to be synonymous with arguments and disagreement. It would, therefore, be possible for this research to concentrate on the cause of these disputes, rather than review the methods of resolving them. However, much has already been written about what is wrong with the construction industry and the issues that lead to the numerous disputes, including government-commissioned reports (for example Latham, 1994; Egan, 1998). Despite these publications and the introduction of legislation (*HGCR Act 1996* and others) in an attempt to reduce the number of disputes, they continue to arise as part of the structure and culture of the industry, and this research focuses on the resolution of these disputes and in particular the use of mediation.

Consequently, this research will start from the acceptance that disputes exist and will continue to occur, and will focus on the need for cost-effective and time-efficient methods of resolving these disputes. This will be done by regarding the issues affecting the existing adjudication process, and the possible implementation of mediation as a first option for most construction disputes.

1.8 Adjudication research in the UK

Industry comment, supported by the focus group's remarks, would suggest that adjudication is the most commonly used form of dispute resolution in the construction industry. Unfortunately, due to the confidential nature of adjudication, there is no conclusive record of the total number of adjudications undertaken in England annually, although those that are appointed through an appointing body are recorded by the Adjudication Reporting Centre (ARC) (Trushell et al., 2012; Milligan and Cattanach, 2014). The *HGCR Act* introduced the obligation for a party to refer a dispute under a construction contract (as defined under the act) to adjudication, and for the adjudication process to follow a specified time scale (variable only by agreement of the parties). It is the hypothesis of this research that the dominance of adjudication could be one of the reasons why mediation has not experienced similar growth as a dispute-resolution process.

Adjudication process

Adjudication was implemented through the Scheme for Construction Contracts (more commonly referred to as "the Scheme"). The Scheme allows for a default process for parties to a construction contract (as defined under the *HGCR Act*) for payment and timing of payments, payment notices, and the right to refer disputes to adjudication. The adjudication process is a set procedure and to commence adjudication, at least one party needs to identify that a dispute (as defined under the *HGCR Act*) has arisen. A notice of adjudication is then issued to the other party (or parties, if there are more than two under the specific contract that the dispute has arisen), which should include: the nature and a brief description of the dispute and the parties involved; the time and location of the dispute arising; the nature of the redress being sought; and the names and addresses of the parties to the contract. The notice of adjudication then defines what matters the adjudicator has to decide and thereby defines the scope of the adjudication.

Following the issue of a notice, an adjudicator is appointed. This may be done by agreement of the parties or through an adjudicator nominating body. This appointment takes place within seven days of the submission of the notice of adjudication to the other party. Once the adjudicator has been appointed, the referral notice is sent to the adjudicator and the other parties. The 28-day decision period starts on the date the adjudicator receives the referral notice. The other parties will usually be required to respond within 14 days. The referring party can extend the 28 days by an additional 14 days and in addition, the adjudicator can extend the decision period by agreement of both parties.

This adjudication process was introduced to ensure prompt resolution to single or simple issue that arise during a construction contract dispute. Following the introduction of the process, it would appear (from extensive discussions with experts in the industry, general industry comment, and other evidence discussed below) to have quickly become the most common form of dispute resolution in the construction industry.

Adjudication reporting

Adjudication activity in the UK is recorded by the ARC. The latest research by the ARC (Milligan and Cattanach, 2014) shows that there has been a small decline in the number of cases referred to adjudication through the Adjudication Nominating Bodies (ANB) in the past year, following an increase of 24% in the previous year. Milligan and

Cattanach (2014, p.9) show (Figure 1-1 below) that the largest primary discipline of adjudicators is still quantity surveyors (35.1%), with lawyers a close second (30.5%). The claimants' success rate has dropped to 50% in adjudicators' decisions, with split decisions now accounting for 37% of all awards. For the April 2008 report (Trushell et al., 2012), the majority of claims were valued between £10,001 and £50,000, with the second-largest value being between £100,001 and £250,000; however, by 2013/2014 (Milligan and Cattanach, 2014), whilst this range remained the highest, there was an increase in the value range of £250,000 to £5 million. With regard to the makeup of the parties in dispute, it is still the main contractor and the sub-contractor who have the highest number of disputes adjudicated, followed by the client and the main contractor (Milligan and Cattanach, 2014). The rate charged by adjudicators has increased, with the largest group being over £200 per hour (48%) in April 2013. These increasing costs are at odds with the original intentions of the introduction of adjudication by the *HGCR Act* (Bingham, 2009; Minogue, 2010), which was to provide a quick, low-cost process for resolving disputes, primarily to assist in cash flow.

Discipline	Year 13 April 2011	Year 14 April 2012	Year 15 April 2013	Year 16 April 2014
Quantity Surveyors	37.00%	34.80%	35.50%	35.10%
Lawyers	27.40%	34.50%	29.80%	30.50%
Civil Engineers	14.20%	11.30%	11.00%	11.10%
Architects	6.80%	6.50%	7.00%	6.30%
CIOB/ Builders	6.10%	4.30%	4.90%	4.40%
Construction Consultants	2.00%	2.20%	2.30%	2.30%
Structural Engineers	1.40%	1.10%	1.40%	1.30%
Building Surveyors	1.20%	1.80%	1.80%	1.70%
Project Managers	0.60%	80.00%	1.30%	70.00%
Mechanical Engineers	40.00%	90.00%	50.00%	4.20%
Electrical Engineers	10.00%	20.00%	70.00%	20.00%
Other	2.80%	1.60%	3.80%	2.20%

Figure 1-1 - Primary discipline of adjudicators, Milligan and Cattanach (2014)

Perceived issues with adjudication

In recent years, concerns have been raised that adjudication is being used as a "mini trial" (Minogue, 2010) rather than the cost-effective quick fix for simple disputes arising during a construction contract, which it was originally intended to be. In *Macob Civil Engineering Ltd v Morrison Construction Ltd* (1999, p.97) All ER (D) 143 the

Honourable Mr Justice Dyson confirmed that the intention of parliament in introducing adjudication was to:

> *"…introduce a speedy mechanism for settling disputes in construction contracts on a provisional interim basis, and requiring the decisions of adjudicators to be enforced pending the final determination of disputes by arbitration, litigation or agreement."*

It was not intended to be a full trial or to replace arbitration or litigation. In addition, in *William Verry (Glazing Systems) Ltd v Furlong Homes Ltd* (2005), comment was made with regard to the inappropriate use of adjudication to determine composite and complex cases. Others, including those in the focus group for this research, have mentioned the perceived increased costs and complexity of adjudication. Redmond (2009) highlighted his concerns with the adjudication process, stating that:

> *"…disputes are taking much more than the basic 28 days. Some adjudications last for months, limping in a haphazard way from extension to extension and costing well over £100,000 on each side"*

Kennedy et al. (2010) commented that:

> *"…many disputes are concerned with large sums of money and complex legal questions."*

Cost of adjudication

There would appear to be substantial anecdotal comment with regard to the increasing cost and complexity of cases referred to adjudication but no empirical data to support these views, excepting the data (Kennedy et al., 2010; Trushell et al., 2012; Milligan and Cattanach, 2014) on the increase in the hourly cost for the adjudicator. Given the confidential nature of the adjudication process, collecting actual cost data from completed adjudications from the parties is almost impossible. In conjunction with Hammonds Solicitors, Building magazine undertook a survey in 2005 to analyse the level of adjudicator fees. Their research identified that although the average adjudicator fees had risen by 10% since 2000, the average fee was now some 5% of the sum claimed, which is a 50% increase from the figure identified in previous research by the ARC in 2000. In addition, in 46% of cases reviewed, the fees were split between the parties. This would imply that there is a requirement for an alternative or supplementary dispute resolution method that incurs significantly less costs as a process to resolve these disputes.

1.9 Construction mediation research in the UK

The main empirical data currently available is drawn from four sets of research: Gould (1999), Gould (2009), Agapiou and Clark (2011), and Agapiou and Clark (2012). The two pieces of research by Gould demonstrate that there has been a reduction in the number of disputes referred to courts for matters such as scope of work, project delays, and site conditions. In addition, Gould (2009) confirmed that of the cases that were examined in the research, those that used mediation demonstrated significant cost savings. The survey also showed that in the cases where mediation did not settle the issue, it was nevertheless often regarded as beneficial, allowing an element of the dispute to be settled, or developing a greater understanding of the other party's case. Gould's 2009 research is limited in that it only discusses cases that come to the Technology and Construction Courts, which represent a small proportion of construction disputes.

The research by Agapiou and Clark (2011) looked into the attitudes of Scottish lawyers towards the use of mediation. It acknowledged the limits of the research, finding that although there is an awareness of the benefits of mediation, there is still low usage. The research by Agapiou and Clark (2012) was based on questionnaires returned from 63 medium-sized Scottish construction firms and interviews with nine of the participating companies, and it will be shown that the results from this restricted research generally correlate with the information obtained from the similar group of companies within the research forming part of this thesis. This existing research, although identifying some issues with the use of mediation in the UK, does not appear to have shown an increase in the use of mediation in the construction industry in England.

1.10 Implications for this research

It is hoped that this research will bring about a change in professional behaviour over a period of time, assisting in a change in culture and the development of smart objectives that could lead to the use of a more cost effecting solution to the resolution of construction disputes. The construction industry does not adapt quickly to change:

> *"…change and reform in the construction sector continue to fall short of the aspirations…"* (Fernie et al., 2006, p.91)

The industry will need to see and understand the benefits of any change before adopting new ideas.

1.11 Outline Methodology

The methodological paradigm of phenomenology is the description of a body of knowledge which relates to empirical observations of phenomena in relation to one another. Phenomenological research therefore often utilises quantitative research interview procedure as the main data gathering method (Creswell, 2014). It is different from the survey interview in its epistemological assumptions. In the quantitative research paradigm, the survey interview is regarded as a behaviour rather than a discussion event. (Mishler, 1986). A phenomenological approach was adopted for this research to answer the questions identified in section 1.4. To comply with the requirements of a phenomenological research (Creswell, 2014), 6 stages were considered. The first stage was a critical review of the existing literature to understand the way disputes arise (Chapter 2) and the factors that influenced both the disputes and the dispute resolution processes, what dispute processes were availble and the guidance that exists (Chapter 3) - which would appear to support mediation and the use and suitability of mediation in construction dispute (Chapter 4). The second stage was to validate this information. Initially a questionnaire was considered but it became apparent that further information and research was required, from practice, to refine the central questions. Working in practice, the researcher had access to a number of dispute cases that had been resolved through either mediation or adjudication. Unfortunately, the depth of information available, the confidentiality of both processes, and possible biases made case study research unsuitable as the sole research process. Consequently the information gathered through the analysis of case studies (the third stage) was used to inform the basis of the fourth stage - the interviews. These four stages lead to the fifth stage of the development of the conceptual model, as discussed in Chapter 6. As the conceptual model was developed from the limited review of existing literature and primarily qualitative data from the case study analyses and the interviews it was validated by using a questionnaire and primarily quantitative data (Chapter 7) as the final stage.

1.12 Research paradigm

Because the paradigm for this research is phenomenological (Hoshmand, 1989), there were potential issues with validating the qualitative data from this research (Kvale, 1983). The information collected is based in a real-world context, so to reduce the

subjectivity of the data gathered, three stages of information gathering were undertaken. The first stage is to review 20 case studies of construction disputes, which then informs the second stage by providing questions for the ten interviews; the results of these interviews are used to structure the questionnaires, which is the third stage.

1.13 Scope of this research

This research touches on many subjects relating to disputes within the construction industry, including the structure of the construction industry; stakeholders; the contractual relationships that exist between stakeholders; why disputes arise; the types of dispute; how disputes develop; and the forms of dispute resolution. In addition, the adversarial nature of the construction industry appears to be a worldwide phenomenon, with research on the matter coming from many countries. The scope is intended to cover the widest possible extent of the English construction market, including sectors such as the sub-contractor and small-builder elements, as well as the building professionals involved in the industry, all predominantly excluded from previous research of this nature. The construction industry consists of many different elements, as discussed in Chapter 2, and it is important that all sectors are represented in this research to ensure the validity and transferability of the data collected. All of these sectors are part of the complex structure and unusual contractual relationships that make the construction industry unique and may contribute to its adversarial nature.

The thesis and research starts from the understanding that the construction industry is adversarial (Redmond, 2009; Richbell, 2008) and that disputes arise through various events (see Chapter 2). It is not intended to consider solutions preventing the occurrence of these disputes.

Boundaries

Given the depth of the research into the English construction industry and the scale of the data this will produce, the research is limited to England. There is extensive empirical data (Stipanowich, 1996) on the use and success of mediation in the construction industry in the USA, which is referenced and reviewed in this thesis (see Chapter 4), but this is solely for reference purposes to assist in understanding the issues that face the use of mediation in the UK construction industry.

1.14 Ethical considerations

Careful consideration has been given to the collection of the data required and reporting the information gathered because the meditation process is generally

confidential. This also applies to the adjudication process, also considered under this research. A system whereby useful data can be collected while maintaining the full anonymity of the source has been developed and is described further in Chapter 5. Following the design of this process, a request for ethical approval for the research was submitted to the Anglia Ruskin University Ethics Committee in 2011, and approval was granted.

1.15 Thesis structure

Chapter 1 is the introduction to the thesis, with the theoretical underpinning in Chapters 2, 3, and 4. Chapter 2 looks into the way construction disputes arise, the possible causes, and the attitudes towards them. Chapter 3 reviews the dispute resolution processes available and key government reports on the construction industry that encourage the use of selected methods. Chapter 4 examines commercial mediation and the current use and application of mediation in the construction industry, both in the UK and abroad. Chapter 5 explores the methodology and research design for this research. Through the case studies and interviews, a conceptual model is designed in Chapter 6. The results from the questionnaires are in Chapter 7, with an analysis of these results and a test of the model in Chapter 8; the final chapter, Chapter 9, contains the conclusion.

2 The nature of construction disputes

2.1 Introduction

To better understand how dispute resolution processes are selected in the construction industry it is important to exam how the disputes arise, what key factors are involved and what dispute resolution processes are available. Consequently, this chapter addresses what are the factors influencing construction disputes, dispute resolution processes, and the selection of the dispute resolution process. This is done by examining five main areas commencing with the adversarial nature of the industry and identifying the key factors, which it then analyses; the structure that appears to contribute to disputes along with the unique nature of most construction projects; the attitudes and strategies of stakeholders; the contractual relationships; the actual contracts. This is undertaken through the existing theoretical perspectives and published empirical studies related to this subject. The effects these factors have on the conceptual model for this research are then addressed in the development of the model in Chapter 6.

2.2 Background on construction

The UK construction industry contributed some 6.1% of the UK gross domestic product in 2013, with a value of £92.4 billion (Rhodes, 2014), and 2.1 million people were employed in the industry, representing 6.3% of the UK total in Q3 of 2014. The industry therefore is a significant sector in the UK economy. However, it is also recognised as a particularly litigious one (Richbell, 2008), typically spending 2% of annual turnover managing disputes, whilst only achieving a profit margin of 3% (Richbell, 2008). Whitfield (2012, p.2) identified that:

> *"There have been many changes in the Built Asset industry over the last 40 years. Perhaps the most dramatic of these changes has been the sharp increase in the incidence of serious conflict between parties to construction contracts. In 1960, some 250 writs were issued relating to construction disputes, yet within 30 years, this number increased five-fold."*

This confirms that not only do dispute exists, but that they are significant and still on the increase. Construction is the only industry to have legislation introduced to enhance payment and cash flow by way of *The Housing Grants (Construction and Regeneration) Act 1996* (*HGCR*) and later in the *Local Democracy, Economic Development and Construction (LCEDC) Act 2010*. In addition, the government, recognising the issues within construction, has commissioned a number of reports in recent years, three of which are reviewed later in this chapter with regard to disputes

and cost: *Rethinking Construction* in 1994, *Constructing the Team* in 1998 and *Modernising Construction* in 2001. The government has published no further reports on this subject, even though the issues they identified still appear to be current, as will also be discussed later in this chapter.

2.3 Defining construction disputes

To answer the question regarding the selection of the dispute resolution process, it is necessary to understand the definition of a dispute. The *Oxford English Dictionary's* (third edition) definition of a dispute is a "disagreement or an argument." However, in the construction industry the definition of dispute is much debated (Fenn et al., 1996; Brown and Marriot, 1993; Schelling, 1960, cited in Fenn et al., 1996; Gulliver, 1979). It even remains undefined in legislation with regard to the *HGCR Act* and the LDEDC Act (2009), where there is a requirement for a dispute to have arisen before one party can refer an issue to adjudication. For example, Gulliver (1979, p.5) stated that a disagreement becomes a dispute:

> *"…only when the two parties are unable and/or unwilling to resolve their disagreement; that is, when one or both are not prepared to accept the status quo (should that any longer be possible) or to accede to the demand or denial of demand by the other. A dispute is precipitated by a crisis in the relationship"*.

However, Moore (2003, p.7) developed a conflict continuum basing the development of the dispute on a timeline (see Figure 2-1). Moore did not offer a definition of the difference between conflict and dispute and in fact described them as interchangeable terms in the opening line of the publication.

Moore's Continuum of Conflict management and Resolution Approaches

Private decision making by parties	Private third-party decision-making	Legal (public) authoritative third-party decision-making	Extra-legal coerced decision-making

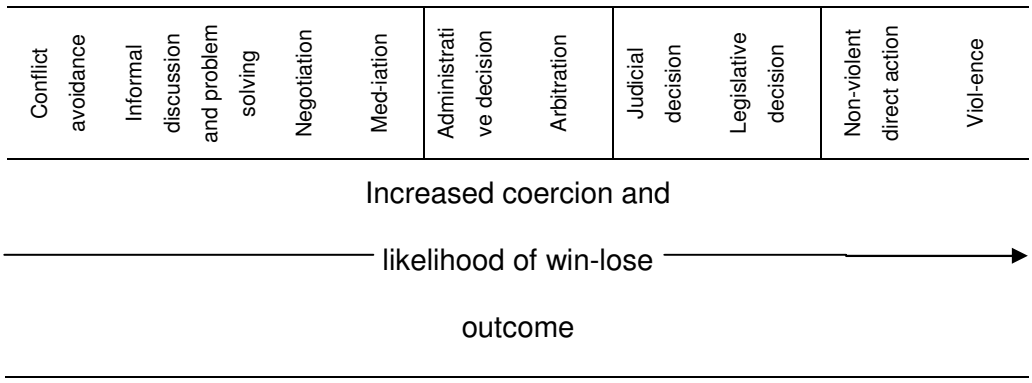

Figure 2-1 - Continuum of Conflict Management

Fenn et al. (1997) attempted to clarify the difference between conflict and dispute. The main objective of their 1997 research was to compare the construction industry with the chemical industry, since they are similar in, involving contractors, professionals and standard forms of contract. The results of their research are reviewed in section 2.4 below. Whilst there is no formal definition of a dispute under the HGCR Act (1996) or the LDEDC Act (2009), a dispute (singular) has to have arisen before a party can refer a disagreement to adjudication. Alway Associates (2005) referenced two court cases that attempted to define a construction dispute to assist with the HGCR Act definition.

The first of these, *Amec Civil Engineering v the Secretary of State for Transport [2004] EWHC 2339 (TCC) (11 October 2004),* was heard in the Technology and Construction Court. In his judgment, Mr Justice Jackson reviewed seven possible meanings of dispute and these are summarised by Alway Associates (2005) as follows:

"1. The word 'dispute' should be given its normal meaning. There is no special or unusual meaning conferred upon it by lawyers.

2. The case law has not generated any hard-edged legal rules as to what constitutes a dispute. It does, however, serve as guidance as to whether a dispute exists in a particular situation.

3. The mere notification of a claim does not automatically and immediately give rise to a dispute; a dispute does not arise unless and until it emerges that the claim is not admitted by the receiving party ('the respondent').

4. There are numerous circumstances from which it may emerge that a claim is not admitted – examples are:

a) an express rejection of the claim,

b) discussions between the parties from which objectively it is to be inferred that the claim is not admitted.

c) silence or prevarication by the respondent giving rise to an inference that the claim is not admitted.

5. The length of time a respondent may remain silent before a dispute can be inferred is heavily dependent upon the facts of the case and the contractual structure. Accordingly where:

a) the gist of the claim is both well-known and obviously controversial, a very short period of silence may be adequate.

b) a claim is notified to an agent of the respondent who is under legal duty to consider the claim independently and provide a considered response (i.e. a contract administrator), the required period of time to remain silent might need to be longer before it can be inferred that mere silence gives rise to a dispute.

6. Where a deadline is set for the respondent to reply to a claim, the deadline will not automatically curtail the reasonable time for responding. However the reasons for the imposition of a deadline may be relevant factors taken into account by the court when it considers what constitutes a reasonable period of time for responding.

7. In circumstances where a claim is so nebulous and ill-defined that the other party cannot sensibly respond to it, neither silence nor an express non-admission will constitute a dispute."

By this statement the judiciary attempt to define a dispute, clarifying that a claim in itself is not a dispute, but only so becomes if one party does not accept the claim. It also identifies that remaining silent on a claim can, by a suitable passage of time, elevate the claim to a dispute. The second case, *Collins (Contractors) Ltd v Baltic Quay Management (1994) – CA (7.12.04),* was heard at the Court of Appeal by Lord Justice Clarke. Alway Associates (2005) continues

"…Lord Justice Clarke's observations…being made with reference to Mr Justice Jackson's propositions, were as follows:

1. The propositions were broadly correct.

2. He entirely accepted that it all depended on the particular circumstances of the case itself.

3. He agreed with the general approach that whilst the mere making of a claim does not constitute a dispute, a dispute would be held to exist in circumstances where it could be reasonably inferred that a claim was not admitted.

4. Mr Justice Jackson was correct not to endorse within his propositions some of the suggestions made in earlier cases on this matter, namely:

a) a dispute might not arise until negation or discussion had been concluded; or

b) a dispute was not to be inferred lightly.

5. Negotiations and discussions were likely to be more consistent with a dispute (i.e. an unresolved dispute) rather than giving rise to the absence of a dispute.

6. The court was likely to be willing readily to infer the non-admission of a claim and the existence of a dispute in order that it could be referred to arbitration or adjudication."

In both of these cases it is reinforced that a dispute has not arisen until negotiation or discussion has been concluded, indicating that these are precedent actions to the crystallisation of a formal construction dispute.

Consequently, throughout this research a construction dispute will be defined as an unresolved disagreement resulting from an event between parties to the construction contract, whether the contract is implied or written, where negotiation has failed to resolve the disagreement.

Considering Moore's model by Moore and with the above guidance, this suggests a timeline in the development of a dispute as shown in Figure 2-2.

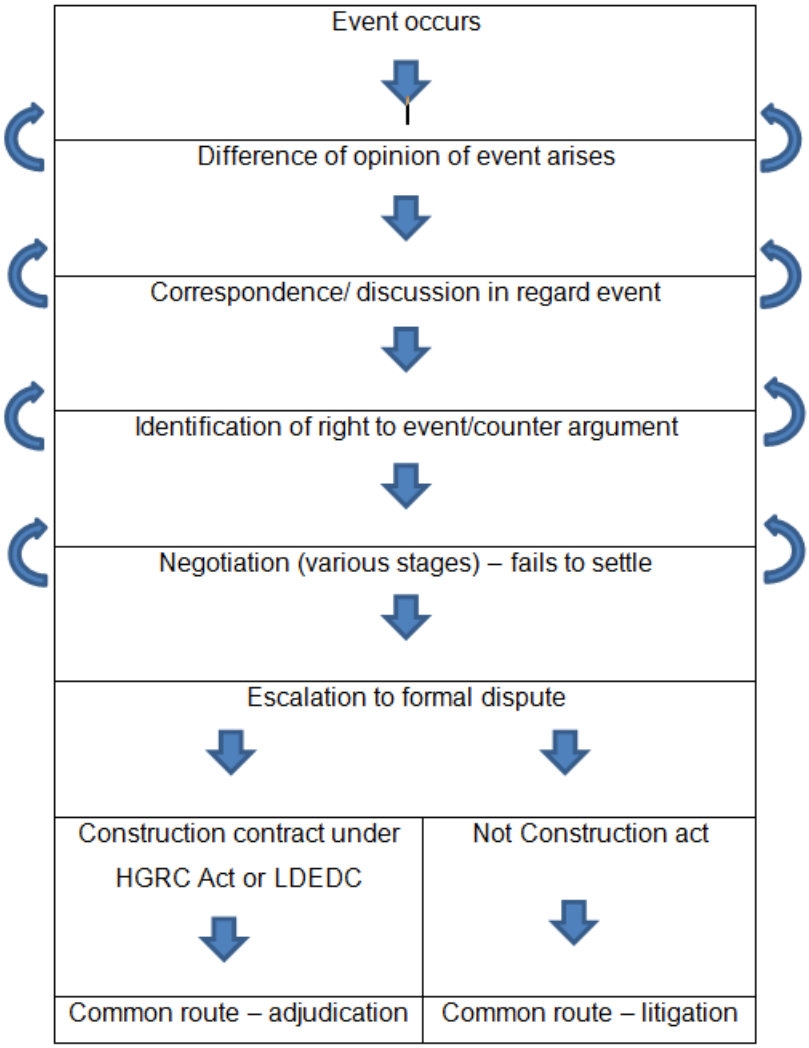

Figure 2-2 - Timeline of a construction dispute

This timeline and related chain of events are reviewed further in Chapter 2, as the conceptual model is developed.

2.4 Sources of construction disputes

Gould (1999, p.30) stated

> *"The construction industry is generally considered adversarial in nature. Several studies have considered the reasons for and the causes of disputes in the construction industry and many have developed comprehensive lists of factors."*

Gould cited Watts and Shrivener (1994) in regard to their study of the sources of construction disputes in the Australian and UK courts, and Howell and Mitropoulos (1994) who stated that disputes arise in construction projects due to complex contractual relationships, uncertainty and a lack of communication. They indicated that

these factors coupled with the individual nature of each project, unknown events, forms of contract/imperfect contracts and the opportunist behaviour of many parties to take a commercial advantage lead to the development of disputes. Whitfield (2012, p.1) reiterated that the complex nature of the construction industry with multiple interested parties

> *"…provides the catalyst for conflict in the industry, and we know that disputes in construction are common."*

Whitfield (2012) identified that key factors included proto-type (the fact that most construction contracts are unique)~~;~~ change (to the original project scope/design for various reasons); delay (before or during project delivery); quality; time and money. Whitfield (2012, p.135) also suggested that the dominance of men in the construction industry may have also contributed to the level of disputes, stating the:

> *"There is little doubt that women are less aggressive than men, generally".*

This intimates that the amount of testosterone involved in a construction project is also influential on the number of dispute that arise. To understand the impact each of the key factors of stakeholders, project, contract/project structure and contract have on the selection of dispute resolution process; they are reviews in further detail below.

Cheung and Pang (2013, p.17, fig. 2) propose an anatomy of a construction dispute and identify the key factors contributing to the occurrence of a dispute. Their methodology employs a fault tree structure to represent the dispute anatomy of a dispute (Figure 2-3). This framework is useful in demonstrating the factors that can lead to a dispute, but does not consider the events and decisions between each branch of the tree. The model in Chapter 6 of this research attempts to address this issue.

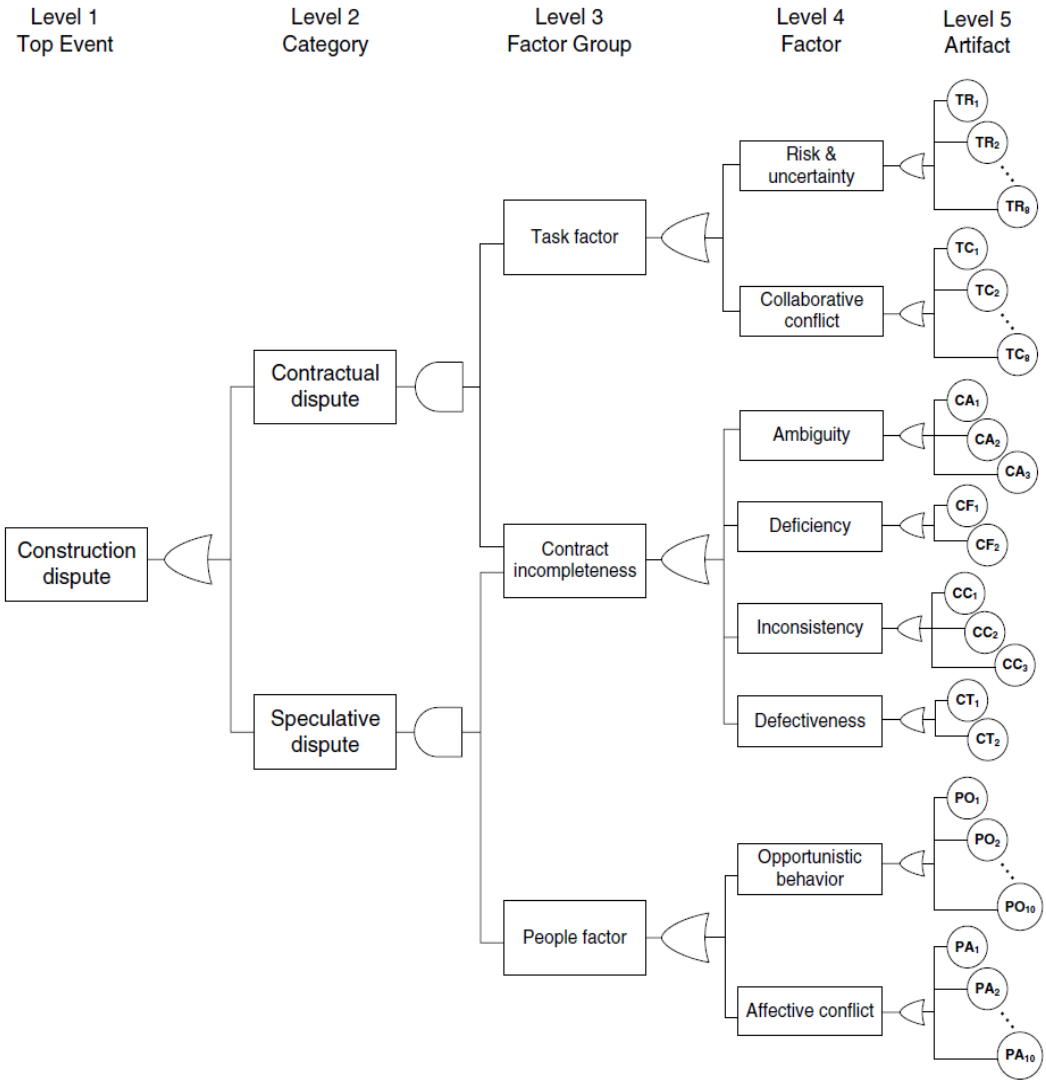

Fig. 2. FT model for a construction dispute

Figure 2-3 – Cheung and Pang's Anatomy of a construction industry dispute

Analysis of the work of Cheng and Pang (2013) and that of Whitfield (2012) is indicative of a complex interrelations among project-based factors, human factors and industry specific factors which can be categorised into four groups: stakeholders (parties involved), structure of the industry, project characteristics and contractual; which are further examined hereunder.

2.4.1 Stakeholders

Many construction projects (both building and civil engineering) are exceptionally complex, both in conception and delivery. There are a number of parties to each project, often with a similar number of separate contracts and contractual relationships. These contractual relationships are often cited as being contributory to the adversarial

nature of the construction industry (Murdoch and Hughes, 2007) and can take a number of forms. Lowsley and Linnet (2006) stated:

> *"Even under partnering conditions, if the contract is complex, the possibility of disputes arising is likely".*

It is also important to note that it is not just large projects that are prone to disputes; simple projects also frequently give rise to them. This section looks initially at the parties (stakeholders) to the project and then at the most common types of contractual relationships between these parties. As Cheung and Pang (2013, p.18) stated in their research:

> *"Conflict can also stem from cognitions, behaviours, and emotions of the people involved (Garcia-Prieto et al., 2003; Jehn 1997). Cognitive conflict refers to the collaboration problems encountered during the construction stage. The bottlenecks that result negatively influence project implementation and thus project success. Behavioural conflict describes the opportunistic strategies in construction claims. The contractors may bid opportunistically in competitive tenders (Ho and Liu, 2004). The clients may reject contractors' claims sinuously. Williamson (1975) described such behaviour as opportunism defined as behaviours of "self-interest seeking with guile" or "calculated efforts to mislead, distort, disguise, obfuscate or otherwise confuse." Contracting parties behave opportunistically by seeking their own interests and benefits under the conditions of asymmetrical information and uncertainty. Emotional conflict delineates the personal and interpersonal affective conflict among project team members. It often fuels arguments and impedes efforts to seek optimal solutions for conflicts and claims."*

Therefore, as this identifies that the parties to a construction contract can be influential in the development or escalation of a dispute; the key stakeholders are identified as follows:

Client

The client**,** or the employer, can be an individual, an organisation, a funding body, a government body, end user or developer or a combination of interested parties. The type of client and the contracts that exist at the commencement of the project often influence the contractual structure of the overall project. The research by Henjewele et

al. (2013) showed that 52% of the PFI projects reviewed experienced client-driven change in scope. These changes also accounted for up to 75% of project time overruns – both of which factors are key causes of disputes.

Professional Team

The professional team may include, but is not limited to, the design and management team consisting of a number of different consultants – architects, employer's agent, building surveyors, quantity surveyors, structural engineer, mechanical and electrical design engineers, geotechnical designers, sustainability consultants, environmentalists - and their sub-consultants. Some of these parties will be part of multi-disciplinary professional practices, while others will sub-contract some of the roles to external parties. This leads to complex contractual arrangements even at an early stage of a project design. Therefore responsibilities for design liability and co-ordination must be clearly defined at the earliest stage, or the potential for disputes later in the contract will be greatly heightened. Depending on the type of contract there may be no contractual relationship between the design team, other professionals and those constructing the project. The RICS Conflict Avoidance and Dispute Resolution in Construction guidance note issued in 2012 stated (pp.3-4):

> ***"Good design team management:*** *The provision of information within the design team and from the design team to the constructor is also crucial. Good forward planning and the management of conflict that could arise among the design team or between the design team and the constructor are also crucial for the avoidance of dispute. See RICS guidance note on Managing the design delivery (1st edition, 2010)."*

Trushell et al. (2012) report identified that only 6% of adjudicated disputes were between the client and consultant. These consultants could also include the next two categories of stakeholder – the contract administrator/project manager and employer's agent - as well as the design team.

Contract administrator / project manager

This can be a person or an organisation with the responsibility to deliver the project on behalf of the client. Traditionally an architect, engineer or a quantity or building surveyor engaged directly by the client fulfils the role. There is often no direct contractual relationship between the contract administrator and the main contractor.

Employer's agent

As with the contract administrator and project manager, the employer's agent (EA) is engaged by the client and has no direct contractual relationship with the contractor. Generally appointed on design and build contracts the role is as lead consultant and

can be undertaken by the architect or the quantity surveyor, but can also be independent. The EA can be involved early on in the project, including during the tendering process, novation of consultants, through to contract delivery, dealing with contract changes and the issue of the final certification on completion.

Main contractor

The main contractor has the contract with the owner of a project and has the full responsibility for its completion. The main contractor undertakes to perform a complete contract, and may employ (and manage) one or more sub-contractors to carry out specific parts of the contract.

There are a considerable number of contractual structures used for the delivery of a construction project. In the section below the most common of these structures are reviewed. They influence the contractual status of the main contractor for the project. As identified by Trushell et al. (2012) the greatest number of disputes arise between the main contractor and sub-contractor (47%), and the main contractor and the client (40%).

Sub-contractors and sub-sub-contractors

The standard practice in the UK construction industry for many years has been to sub-contract elements of the work within a project (Uff, 2005). These packages of work are let out to contractors who specialise in that particular field of work. Depending on the size and complexity of the project these packages may be combined or split into sub-packages. For example on a project with a complex mechanical and electrical package, such as a hospital, these two sections of work could be let as a combined package to one contractor or sub-contractor. It is possible for this one sub-contractor to sub-let a section of these works – for example the fire protection system – and create a sub-sub-contract. If the fire protection company were to sub-contract the installation, creating a labour-only contract, this would be a sub-sub-sub-contract. There is also a decision to be taken on the sub-contracting of the domestic plumbing contract (hot and cold water, sanitary ware, drainage, etc.). It would be simpler to combine this section of works with the mechanical and electrical package, but it will often be more cost effective to let this to a separate plumbing sub-contractor. The mechanical and electrical contractor will have no contractual relationship with the plumbing contractor but their work will be interlinked and will require careful co-ordination by the main contractor and clear, accurate information from the design team. This complex contractual relationship would appear to provide prime material for errors, misunderstandings and therefore disputes.

Kennedy et al. (2010) support this, confirming that the most common form of dispute to be referred to adjudication is between contractor and sub-contractor.

Nominated sub-contractors

Under a number of the traditional forms of construction contract (as discussed below), and in addition to the options reviewed above there is an option for a system of nominated sub-contractors. Under this system the employer chooses the selected sub-contractor (often following a separate tendering process), who will carry out a particular part of the project. The main contractor is instructed to enter into a nominated sub-contract with this sub-contractor. There is a limited right to objection but this relationship places an additional and unusual contractual relationship within the contractual network, which was highlighted by Wong and Cheah (2004) and is discussed later in the chapter.

2.4.2 `Construction project structure (the Structure)

There are a number of contractual relationships available under a construction project and these can be dependent on a number of factors, which can include the preference of the client, the type of project and even the project funding (Murdoch and Hughes, 2007). The complexity of these relationships can lead to issues arising during a project.

Bennett (1991), as cited by Baccarini (1996, p.201), stated that

> "*In fact the construction process may be considered the most complex undertaking in any industry. However, the construction industry has displayed great difficulty in coping with the increasing complexity of major construction projects."*

The traditional structure

The traditional structure of a construction contract is shown in Figure 2-4. The primary contract between the client and the main contractors is, in the simplest terms, an agreement to construct and complete a project to the specification agreed and for the client to pay the agreed sum for these works. This process clearly shows the lack of contractual relationships between the design teams, consultants, main contractor, project manager and sub-contractors.

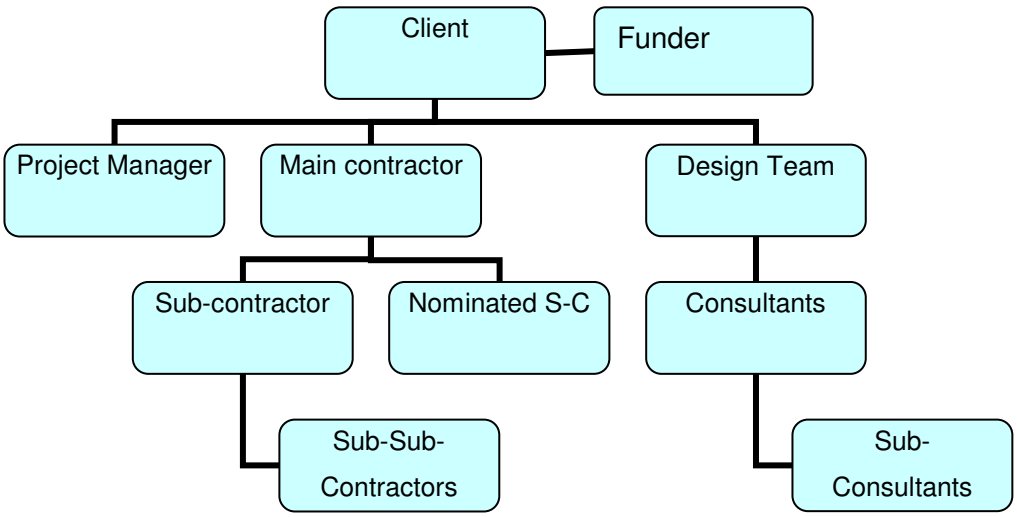

Figure 2-4 - Traditional construction contract relationships (after Murdoch and Hughes, 2008, figure 1)

As previously noted, there are a number of elements in these relationships that can lead to issues and, consequently, disputes. The complexity of the contractual links can cause confusion, errors and opportunities to create change within individual projects. As Wong and Cheah (2004, p.672) confirmed in their report, the flow of contractual obligations throughout the structure of the contract can create conflict:

> *"In domestic sub-contracts, the main contractor remains fully liable to the employer for the works particularly in respect of the workmanship and delay caused by the sub-contractors. In practice, the rights and duties of the sub-contractor are not governed by the terms of the main contract because such terms are not incorporated into the sub-contract."*

They also identified additional potential issues with nominated sub-contractors in that, although the client has selected the sub-contractor there is no direct contract between the nominated sub-contractor and the client:

> *"The basic position in law is that the main contract and the sub-contract are regarded as links that forms a contractual chain. The doctrine of privity of contract means that the rights and obligations contained in each contract apply only to those who are parties to it (Lee 2001). Thus the main contract affects only the employer and the main contractor and the sub-contract affects only the main contractor and the sub-contractor.*

For both nominated and domestic sub-contract, there is no privity of contract between the employer and sub-contractor (Lee 2001). Therefore the sub-contractor is not liable in contract to the employer for any default or breach of contract on his part. The employer likewise cannot make any contractual claims against the sub-contractor. The sub-contractor's claim must be against the main contractor, who may then in turn have a contractual remedy against the sub-contractor."

With the introduction of collateral warrantees there can be a contractual relationship between the sub-contractor and the client with regard to design responsibility for the finished project but this does not assist the sub-contractor during the construction project delivery, and leads to the opportunity for disputes to arise.

Design and build contracts

The 1980s saw a greater increase in the use of design and build contracts, supported by the introduction of standard forms of contract for this method of construction procurement (Murdoch and Hughes, 2007). The intention of this procurement route was to allow the main contractor to have control of the design process with the client specifying the functionality requirements to be achieved by the project. Typically these would be issued as employer's requirements.

Although the principle of the design and build contract was to allow the contractor to drive the specification and design (whilst still delivering the client's requirements) it was not uncommon for clients to novate their design team to the contractor, along with the preliminary design, thereby removing one strand of potential risk of dispute for the client. Whilst this was not the intention of the design and build contract it does highlight the acknowledgement by the client that an isolated contract with the design team can be contributory to the disputes that arise on a construction project - see Figure 2-5.

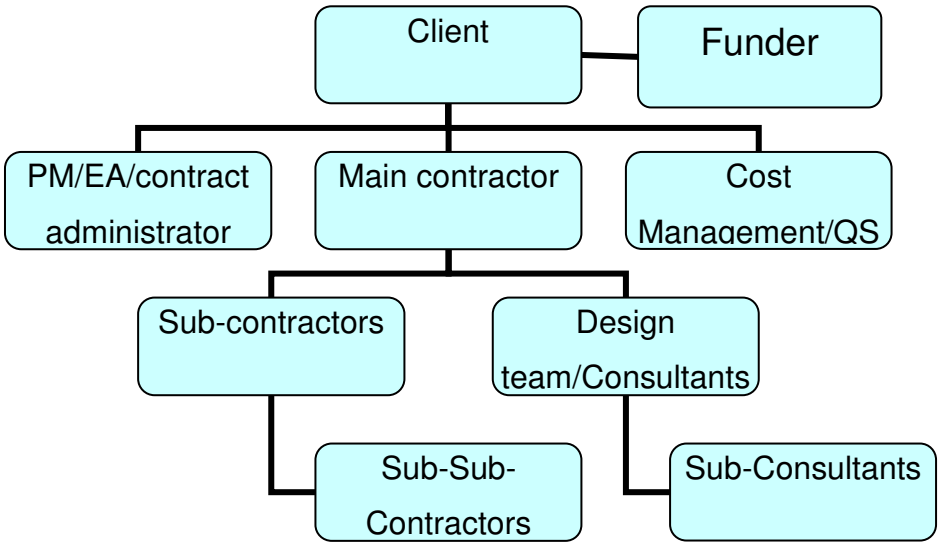

Figure 2-5 - Typical relationships under a design and build contract

The design and build contract transfers the design risk to the contractor from the client, which was thought to lead to a reduction in possible disputes. However Birkby (2012) identified that this was not necessarily the case. She stated:

> "*According to some, design and build is the right procurement method for all occasions. It started life as a quick and easy way of building industrial sheds where the design was minimal. Giving the contractor the design risk on more complex projects soon became attractive to those employers looking for a one-stop shop approach. But does the imposition of design risk on the contractor always work?*
>
> *Judging by the number of claims on design-and-build contracts, the answer must be, not entirely. The employer may have avoided the design development risk, but still retains the risk of delay for other reasons, so the potential for a dispute remains."*

Birkby cited the Midland Expressway vs Carillion Construction case where the construction of the M6 toll road had been carried out under a design-and-build contract. Several disputes arose resulting in adjudication and then litigation over a number of items, demonstrating that transferring risk does not remove the potential for dispute.

Management contracts

By the end of the 1980s the construction industry acknowledged that, in practice, the main contractor acted as no more than the managing contractor of a series of complex

sub-contracts. This led to the introduction of standard forms for management contracts in the late 1980s (Murdoch and Hughes, 2007). The new structure made the management contract low risk and introduced works contractors (see Figure 2.6 below). While the structure places greater risk on the client, it is perceived as being able to deliver schemes at a lower cost.

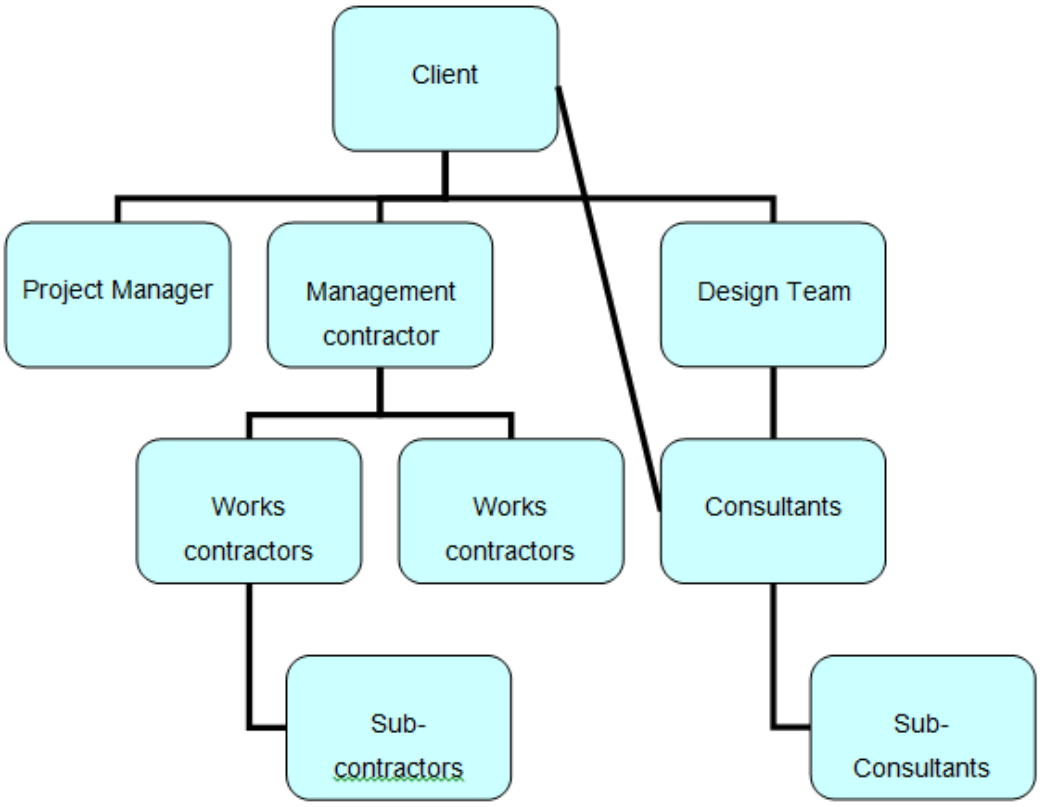

Figure 2-6 - Management contract relationships (after Murdoch and Hughes, 2007, Figure 3)

Construction management contracts originated in the USA and differ from management contracting, primarily by the structure whereby the client/employer enters into the contract directly with the sub-contractors and specialist contractors, whilst also employing a construction manager, who acts as a consultant for the employer (Murdoch and Hughes, 2007). The additional number of contractual relationships increases the risk of a dispute arising – through error, unknowns and from opportunist stakeholders. If all the contracts are not reflective of each other, with common clauses, programmes and defined deliverables then disputes can arise between the parties. The scope of work packages has to be skilfully compiled to ensure all activities are covered.

Missing areas of works will lead to variations to the original contract and therefore the potential for dispute.

Other project contract structures

Many variations of the above contractual structures exist including partnering and funding derivatives: with every separate contractual link having the potential to cause issues and disputes. Lonsdale (2005) identified that, in a scenario where the government is the client:

> *"…the existence of contractual uncertainty is not necessarily a problem in itself. Problems only arise if the ensuing post-contractual renegotiations are undertaken by a public body from a position of weakness."*

This would apply to all clients and the converse is true for all contractors. The management of the contractual relationships between the stakeholders is governed by the project contract. This in itself can also become a source of dispute.

2.4.3 Construction contracts (the Contract)

Given the complexity and the adversarial nature of the construction industry the need for standard forms of contract was identified over 80 years ago, as recorded in the Banwell Report (1964, cited in Murdoch and Hughes, 2007). *The Joint Contracts Tribunal* (JCT) was established in 1931 and has published numerous standard forms of contract, guidance notes and other standard documentation. It was originally recognised as being the major supplier of contracts to the construction industry (jctltd.co.uk/jct-history), but in recent years other suppliers of these have also become significant. For example, the New Engineering Contract – Engineering and Construction Contract (NEC), launched in 1993 by the Institute of Civil Engineers, is widely used on civil engineering contracts in the UK and the ACA Project Partnering Contract (PPC 2000) introduced in 2000 by the Construction Task Force. In addition some major clients and government departments continue to issue bespoke contracts for specific construction projects as detailed below.

Existing research shows (Fenn et al., 1997) that these contracts are often one of the causes for events and issues escalating to disputes. Their research compared the most commonly used forms of construction contracts at that time (JCT forms, ICE forms, GC works 1, NEC) against the standard form for the chemical industry (IChemE Green and Red Books). The results showed that:

"…*when the same three forms were tested against the IChemE Red Book form, the results revealed, again, that the respondents' perception of expected dispute was significantly greater with all three traditional forms of contract."* (Fenn et al. 1997, p.517)

Adriaanse (2007) further supports this by arguing that the construction of the contract documentation can cause conflict and then dispute between the parties. He continued by identifying typical issues including the importance of the inclusion of the correct documentation within the contract itself; the construction of the contract; expressed intention; the inclusion of *"nil"* or an item is left blank in a priced schedule; deletion from standard printed documents/contract forms; and the intention of the parties. Amendments to standard forms of contracts by stakeholders also contribute to the number of disputes, with the amendments sometimes contradicting standard clauses.

Cheung and Pang (2013) attempt to present a functional analysis of a construction contract by way of concentric circles (Figure 2-7). Although this is useful for an overview of the relationship between the project and the contract, it does not show other influencing factors, such as the structural relationship between the stakeholders, the effect of the contract itself and the effect of time on the outer rings.

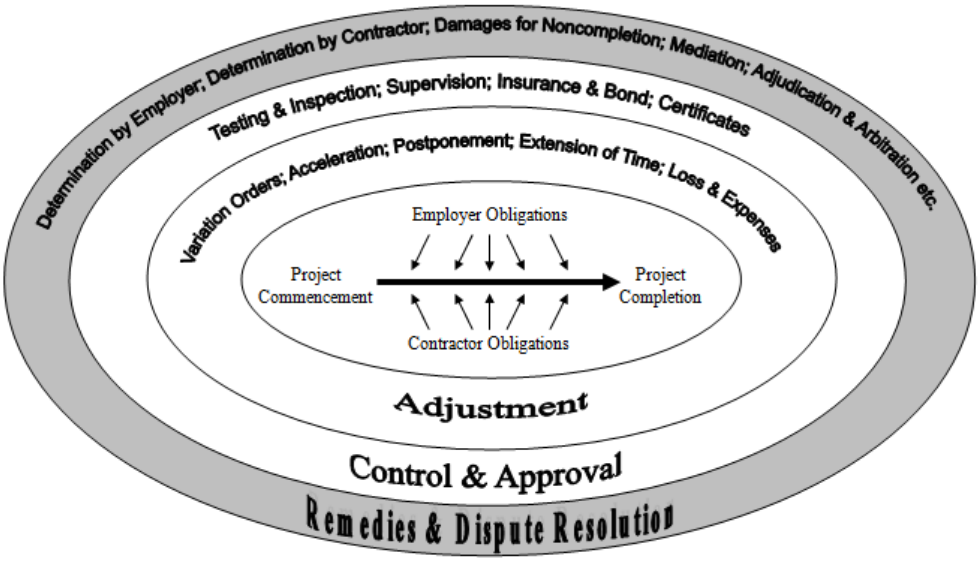

Fig 1: Functional analysis of construction contract

Figure 2-7 - Functional analysis of construction contract (Cheung and Pang (2013, p.16, fig1))

These key standard documents are detailed below:

Joint Contracts Tribunal (JCT) Standard Forms

The JCT contract has its roots in an 1870 document drafted by the Builders' Society and the Royal Institute of British Architects. The JCT today consists of member bodies that represent a broad spectrum of the construction industry. In launching the latest suite of contracts the JCT website claims to be the industry's foremost contract provider. The standard forms number in excess of 30, including the standard form of building contract (and various options), the design and build contract, the intermediate form, the managing contractor contract, minor works, sub-contract forms and a home owner contract.

Because the JCT suite of contracts covers most standard forms of contractual arrangements the type of dispute experienced under them is extensive and varied. Knowles (2012) lists 200 common contractual issues that often lead to construction disputes, the majority of which could occur under a JCT contract. Amendments to these standard forms can lead to disputes where the full implication of the amendment is not understood or there has not been full flow-down through the contractual sub-contract claim. With regard to the NEC contracts (reviewed below) the introduction of time bars has also lead to disputes (Knowles, 2012).

New Engineering Contract (NEC) Standard Forms

The ethos behind the NEC contracts was to create a suite of contracts linked together from designer appointment through to sub-contractor. In addition it was designed to be in simple, 'plain' language, with a flexible structure, to inspire collaborative working or partnering between the contractor and the client and to prevent disputes. Lathan (1994, cited in Murdoch and Hughes, 2007), recommends that this form should be the universal standard for the whole construction industry. The contract encourages partnering: NEC Core Clause 1: Actions 10, 10.1 states:

> *"The Employer, the Contractor, the Project Manager and the Supervisor shall act as stated in this contract and in a spirit of mutual trust and co-operation."*

The dispute resolution clauses (option W1 and W2) offer the following two options:

> *W1: W1.1 A dispute arising under or in connection with this contract is referred to and decided by the Adjudicator.*

W2: W2.1 (1) A dispute arising under or in connection with this contract is referred to and decided by the Adjudicator. A Party may refer a dispute to the Adjudicator at any time".

It also includes the programme as a key element of the contract (Core Clause 31) and allows for clear definition of responsibility of risk. However, in my experience in industry, in the experience of the focus group and according to anecdotal comments by construction lawyers, the introduction of the NEC does not appear to have reduced the number of construction disputes still arising.

PPC 2000 ACA Project Partnering Contract

The PPC 2000 form of contract attempts to integrate the design, supply and construction process, from inception to completion, in one set of contracts and to one agreed central timetable, from early design through to project handover. The project partnering agreement is the initial document, with the commercial agreement being completed when the project is ready to proceed to site. The form allows for sub-contractors to have back-to-back contracts with the main, or core contract. They are then combined to form a single multi-party contract. Uff (2005, p.362) stated that the:

"PPC 2000 represents a bold amalgam of partnering principles…" but *"In many ways the document is an alternative means of achieving the same objective as the NEC contract".*

Other standard forms of construction contract

In recent years additional forms of standard construction contracts have been issued, such as the Contract for Complex Projects launched by the Chartered Institute of Building (CIOB) in 2014, but the complex relationships between the various parties remain, offering opportunities for disputes to arise.

Bespoke forms of contract

Despite the availability of the three main forms of contract, as detailed above, and other standard contract, bespoke forms of contract are still regularly used in the construction industry. Often they are based on the structure and principles of the standard forms but they can also be drawn from first principles. They can be created for one off projects, for example for the new Hong Kong airport, or for repeat government contracts, such as the Managing Agent Contractor (MAC) contracts used by the Highways Agency (currently being replaced with the Asset Support Contracts) and the Next Generation Estate Contracts for the Defence Infrastructure Organisation.

Partnering and framework contracts, such as the Hong Kong Airport one, are designed to be less adversarial, often containing the options of a dispute resolution board (Murdoch and Hughes, 2007), appointment of a dispute resolution agent (Whifield, 2012) or a dispute escalation process where a number of stages can be engaged before the dispute escalates to formal determination (Gould, 2012).

2.4.4 Project characteristics (the Project)

The Royal Institute of British Architects (RIBA) identifies five key phases of the construction project timeline. These are Preparation (RIBA stages A and B), Design (RIBA stages C to E), Pre-Construction (RIBA stages F to H), Construction (RIBA stages J and K) and Use (RIBA stage L). Hughes and Barber (1992) identify four main phases to the construction stage of a project: pre-tender; contract formulation; construction; and post-completion. Each phase has specific issues that can lead to disputes within the project.

Preparation and pre-tender

This is the phase leading up to the invitation to tender and can be protracted. Issues, such as defining or establishing property boundaries and negotiating easements, obtaining planning approvals and financial constraints, may add complexity to the programme. The employer's requirements will need to be agreed and all contract documentation, which may include surveys, reports, drawings, specifications and bills of quantities, will need to be prepared. It is also at this stage that the tenderers are asked to register an interest in bidding for the project and this can include a pre-qualification process. As this stage can take longer than the employer has allowed, there is often pressure to shorten the time taken to prepare all of the documentation. This can result in incomplete or poorly drafted tender documentation (Cheung and Pang, 2013) being issued to the bidders, creating the potential for disputes in the subsequent phases.

Pre-construction, tendering and contract formulation

Once the tendering documentation is completed it is forwarded to the tendering contractors. If the project is to be single sourced then the same documentation will be forwarded to the selected contractor. The selected contractor(s) will then be given a stated timescale in which to prepare their bid for the project. This often involves considerable investment in cost and time by each contractor. It does not follow

however that the contractor who has prepared the most accurate bid will secure the work (Hughes and Barber, 1992). The contract for the project will usually be awarded to the lowest tender, which could be the contractor who has taken the most optimistic view of progress and other risks, or has made a mistake (Cheung and Pang, 2013) that is not correctable under the rules of tendering engaged or that he does not identify until after the contract is signed.

Much debate exists as to whether this competitive tendering process leads to inadequate prices and claims driven contractors. A tendering contractor's aim is to submit the bid for the project at the current market rate to secure the project, ideally just below all other tenderers:

> *"…subject to an assessment that it is feasible to carry out the work at that price and make an acceptable profit."* (Hughes and Barber, 1992 p.46).

In a depressed market this assessment may be waived in an attempt to secure work and cash flow for the business. When selecting the winning contractor for the project using this process, it can be difficult for the employer not to accept the lowest tender. The contractor will be looking to recover any shortfall through opportunities that arise during the construction period. These may include buying gains on the supply chain or claims through disputes against the employer. An experienced employer, or his advisors, will look to limit the opportunity for a contractor to recover additional funds through claims by comprehensive conditions of contract.

Research by Rooke et al. (2004) confirms that contractors, at tender stage, will seek to identify any opportunities within the tender documents to plan a claim once the project is secured, including tactical pricing of quantities that are known to be incorrect, to be increased or decreased accordingly post-contract and tactical planning of operations around possible delay of items where the risk remains with the client – for example the installation of new supply services by a Statutory Authority (SA). SAs often have a monopoly on these new connections and will provide estimated costs which may increase, with no redress to the SA once the works are completed. The SA also controls the programme of installation, often with no regard to the required timing of works to the project.

Where items are unclear a bidding contractor will often submit qualifications with the tender to confirm what has been included within the tender figure. If, prior to the award of a contract, these qualifications are not clarified and agreed, they can give rise to opportunities for the contractor to prepare a claim.

Construction delivery

The construction phase of the project will generally be a fixed period defined under the contract. There are a number of areas that can lead to disputes through the programme of the project. For example, if the employer fails to give the contractor possession of the site by the date agreed in the contract this can have consequential effects on the overall duration of the project. A contract can also give part (often referred to as partial) possession of the site, with different areas being released and completed in phases through sectional completion (Murdoch and Hughes, 2007) and the right for the employer to instruct the cessation of works or not to start a section of work. Failure to complete phases by the contractually due dates can disrupt the construction programme or cause issues for the employer, leading to disputes. A delayed completion of the project can have financial implications for all parties involved in the scheme and will often lead to a dispute (Uff, 2005; Murdoch and Hughes, 2007). These can be multi-party disputes with a large number of interested parties.

In addition to programme, possession and completion issues other events often occur that can give rise to potential disputes as detailed by Cheung and Pang (2013). These can include works being necessary that were not part of the original scope of work; a change in the work required by the employer; phasing and interface between the various trades on site; the employer not providing information or materials by agreed dates; and defective work (including testing and additional inspection of the works). Weather can be very influential in construction projects affecting delivery, phasing of work and cost effective working. Another significant unknown with new build projects is ground conditions. Although ground condition surveys are often undertaken prior to tendering projects, these will not identify everything that is contained within the ground, and often this risk remains with the client, resulting in a claim, should additional costs and/or time become involved (Rooke et al., 2004). Fluctuations in the market for materials, both in terms of cost and availability during the life of a project, can have important consequences, as can the transient nature of the construction workforce. Another source of dispute relates to the payment for work completed: there can be disagreement over the extent or quality of works completed; the method of measurement for the works; the rates with which works should be valued; or if the works were covered within other priced items of the project. Good contract conditions should clarify what is required to rectify these issues but, where there is room for

different interpretation of the requirements, unforeseen events or a misunderstanding of the conditions of contract, then a dispute can or will occur.

Research by Kennedy et al. (2010) showed that the main cause of the disputes that lead to adjudication in the construction industry occur during this stage of the process, although they may not become apparent as disputes to be resolved until the final phase of the project. Trushell et al. (2012, table 6) identify the nine most common subjects of disputes that are adjudicated (see Figure 2-8 below). Unfortunately the top three of these items - value of work, final account value and interim payment - are likely to incorporate other items such as variations and extension of time/delays to the programme, as well as the value of works completed. Consequently this research does not clearly identify the true value of dispute in relation to variation, time delays etc.

Subject: Source of dispute	Data collected to April 2012
Value of work	18%
Final account value	17%
Interim payment	26%
Extension of time	7%
Variations	9%
Defective work	7%
Payment of professional fees	3%
Withholding monies	2%
Contract terms	3%
Other	8%

Figure 2-8 - Primary subjects of dispute, adapted from Trushell et al. (2012)

Variations

The heading of variations covers a number of potential dispute items within a construction contract. Most construction contracts have the facility for the client to vary the works. This can be in the form of additional works or the omission of some items. A variation (or compensation event or change order depending on the form of contract) can arise from many issues: for example from simply the client changing the specification agreed under the contract or adding additional works, through to the contractor exposing unknown or unexpected conditions either in the ground or as part of an existing structure, and extending even to design issues. A common area of disagreement is whether an item is a variation, or whether it was included within the original scope of the contract. The majority of these variations will both attract a monetary value and potentially have an impact on the delivery programme. The subject of variations, their impact on construction projects and the potential for disputes to arise is covered in great detail by Sergeant and Wieliczko (2014), including the client

changing the works/scope, the discovery of unknown works, risk, changes in site access etc, and also, but to a lesser extent, by Hibberd (1987).

Extension of time

As with the general description of variations, the term extension of time can cover various issues and dispute potentials. The majority of construction contracts contain a fixed duration for the project. Should the actual progress of the project become delayed, which occurs in at least 40% of projects (Lowsely and Linnet, 2006), this can have an impact on all parties to the contract. Much literature exists about construction delay and disruption and the calculation of extensions of time (Cooke and Williams, 2013; Keane and Caletka, 2008; Lowsely and Linnet, 2006; Pickavance et al., 2010). The Society for Construction Law Delay and Disruption Protocol (2002, p.3) gives guidance on dealing with this complex issue. The protocol clearly states that the purpose for the document is to:

> *"…provide a means by which parties can resolve these matters and avoid unnecessary disputes."*

The document covers key items that can cause disputes to arise including:

- extensions of time
- programme float
- concurrency of delay
- mitigation of delay
- financial consequence
- Interim valuations
- valuation of variations in regards delay
- compensation for prolongation
- acceleration
- overhead and profit recovery

However, as discussed above, most construction projects are unique and can experience a combination of issues that the guidance will not address. In addition methods of assessment of events can be subjective, so disagreements, and eventually disputes, can arise.

Use/ Post completion

The scheme is complete when a specific stage, as defined in the contract, has been reached. The definition and agreement of the detailed meaning can in themselves lead to disputes. The financial impact on all parties can be significant if a project is not completed by the date set in the contract. The employer can look to claim damages

from the contractor for the costs incurred by late completion and other contributory parties with whom he is in contract. The contractor may look to recover costs from those under sub-contracts on the scheme. These can include the sub-contract contractors, suppliers and even design teams under certain contracts.

Once completion of the project is agreed it is normal under many of the standard forms of construction contracts (see above) for the retention fund to be reduced by 50%, releasing these monies to the contractor. (The retention fund is a sum of money, usually between 3% and 5% of the contract value, held by the employer during the construction phase to ensure there are funds to cover the cost of any remedial works required after completion of the project.) Many sub-contracts include the same provision, although the main contractor may often delay the release of this stage of the retention monies. Agreement of the date on which the project was completed also starts the defects liability period. This is a period of time defined under the contract (often six, 12 or 24 months, depending on the type of project and the form of contract used) for which the contractor remains responsible for any defective workmanship, at the expiry of which a final inspection is undertaken. Upon the completion of all works identified during this inspection a certificate is issued (for example the Certificate of Making Good Defects under the JCT suite of contracts), the balance of the retention fund is released, the contractual powers of the project's building professionals (architect, engineer, quantity surveyor etc.) terminate and most standard forms state that the final account should take place within a few months of the issue of this certificate (Hughes and Barber, 1992). If disputes on the project proceed to arbitration or court proceedings, the agreement of the final account can be delayed for years.

It is also at this stage that contractors may review the profit level, or lack of it, recovered on a project and seek to address this. Rooke et al. (2004, p.659) state:

> *"…one contractor's engineer observed, 'If you get to the end of a job and you've made a loss, you look at bloody everything, to see if there are any commercial opportunities you've missed'."*

2.5 Links between factors

In addition, from the literature review, the links between these four factors start to become defined. By considering the interaction of the factors, six key links evolve: timeline; characteristics; relationships; terms; influence; and attitudes. These are considered further below.

Timeline

Moore (2003) developed a conflict continuum basing the development of the dispute on a timeline. By developing this model Figure 2-2 shows how the timeline of the dispute may affect the selection of dispute resolution method. Alway Associates (2005) confirm that the mere passage of time does not necessarily escalate an issue to a dispute.

Characteristics

As discussed in this chapter, characteristics of the project link the key factors. These characteristic include risk, finance and funding (Whitfield, 2012; Trushell et al., 2012; Cheung and Pang, 2013). The apportionment of these items, such as risk, can change the characteristics of the delivery of the project (Cheung and Pang, 2013).

Relationships

As identified previously the construction industry relies on commercial relationships (Murdoch and Hughes, 2008). As the focus group confirmed, maintaining these relationships are important, with frameworks are partnering used to support these (Uff, 2005: Adriaanse, 2007). Mason & Sharratt (2013) suggest that relationships often are damaged when using adjudication as the dispute resolution process.

Terms

As identified above the actual contract construct can lead to disputes arising. This disparity between the head contract and sub-contracts actual contract terms/clauses used can lead to disputes (Murdoch and Hughes, 2007 and Lowsley and Linnet, 2006). Latham (1994) recommended the removal of a number of unreasonable, standard construction contract terms (which were enacted under the HGCR Act, 1996). Further such terms, such as “Tolent” clauses, were removed under the LDEDC Act (2015).

Influence

The selection of contract and procurement route is influenced by a number of variables (Murdoch and Hughes, 2007). These can include site location and use, timescales and design. Murdoch and Hughes (2007) identify that each project is unique and the amount outside factors can influences a project vary from project to project.

Attitudes

The attitudes of those involved in a construction contract can influence the likelihood of a dispute arising. As discussed previously, opportunistic behaviours exist in the construction industry (Cheung and Pang, 2013) and this attitude and policy will

substantially increase the escalation of a dispute. In addition the industry is predominately male, with male attitudes, which also increases the likelihood of disputes (Whitfield, 2012).

2.6 Chapter Summary

To understand how dispute resolution methods are selected in the construction industry it was necessary to understand how disputes arise and the key factors that influence them. The above exposition indicates that the construction industry is adversarial in its very nature due to the complex and contractual relationships that exist between the numerous parties that are required to execute a construction project. The client relies on his professional team to deliver the scheme to fulfil his brief within the agreed budget. The professional team has to provide the information and manage the contractor to construct the project to the client's requirements, mitigating all the unforeseen issues that arise during construction. The contractor in turn has to manage and coordinate the sub-contractors, labour, plant and materials required to produce the finished scheme on time, on budget and to the level of the quality specified. It is also apparent that a significant proportion of the margin generated from the construction industry is used on construction disputes.

The chapter identifies the four key factors that appear to influence a dispute and the links between them. To answer this research it is necessary to understand the influence each of the factors has on the dispute resolution process. It is therefore required to examine what dispute resolution processes are available to the disputing parties and what guidance existing on their selection. Given the significance of the construction industry's contribution to the UK's GDP this level of cost has caused the government to commission a number of reports reviewing the industry's structure and proposing solutions. The details, recommendations and impact on the industry of these reports are considered further in Chapter 3. Existing research has shown that adjudication is the most commonly used form of dispute resolution in the UK construction industry. It has also shows that there has been an increase in the cost of this process in recent years. Consequently the primary alternative dispute resolution processes are also reviewed in the next chapter in addition to dispute resolution guidance issued by a number of key construction professional bodies and organisations.

3 Options and guidance for dispute resolution

3.1 Introduction

Having identified the adversarial nature of the construction industry and the factors that are influential in a dispute arising (and the further research required in these areas) in the previous chapter it is important to also understand what dispute resolution options are available and what guidance exists in selecting those processes. As discussed previously, the high number of disputes within the construction industry continues to cause concern. This chapter considers the options of dispute resolution available to the industry and their suitability to construction. Having considered the options available, this chapter also reviews government reports and interventions to address the issues and the dispute resolution processes they support.

3.2 Resolution options available

There are a number of processes available to enable the resolution of construction disputes. The Ministry of Justice Dispute Resolution Commitment Guidance (DRCG) issued in May 2011 states there are seven primary processes; Negotiation; mediation; conciliation; neutral evaluation; expert determination; adjudication; and litigation and arbitration.

Negotiation

The industry perception is that negotiation is the most common form of dispute resolution. This is supported by the research by Gould in 1999, in which over 90% of those who responded to the questionnaire confirmed that their perception was that negotiation was effective in reducing costs, the time taken, achieving a satisfactory outcome, minimising further disputes, opening channels of communication, and preserving relationships.

The DRCG (2011, pp.8-9) states that:

> *"The objective of sensible dispute management should be to negotiate a settlement as soon as possible. Negotiation can be, and usually is, the most efficient for of dispute resolution in terms of management time, costs and the preservation of relationships."*

The guidance also suggests that it should be the preferred route, listing advantages such as speed, cost-saving, preservation of relationships, confidentiality, the range of possible solutions, control of the process, and outcome. With regard to construction disputes, these are all key requirements; the speed of resolving a dispute is important because it may relate to an issue critical to the building programme or to a payment; cost savings are extremely important – by negotiating, the preparation of extensive documentation for evidence for third parties can often be avoided or greatly reduced, saving internal costs and the need for obtaining professional advice, such as from claims consultants or solicitors; construction stakeholders often work together on many projects and the desire to maintain these relationships is strong; and the solution can be confidential between the parties, which can be important between a main contractor and a sub-contractor, especially if other sub-contractors have similar disputes. There are occasions when a client may not wish the settlement of a dispute with a main contractor to become public knowledge; the flexibility of solutions – often relating to the phasing of payment – is important to the construction industry, where cash flow is often an issue. Negotiation can also be flexible on timing, with the parties agreeing timescales, meeting dates, and so on between themselves. In the reports discussed later in this chapter, negotiation is supported as the primary dispute resolution process.

Mediation

If straight negotiation between the parties is not successful in resolving the dispute, then mediation is recommended as the next process (Jackson, 2010 – discussed in Chapter 4) and by the DRCG (2011), taking advantage of the negotiation process but with the assistance of a neutral third party in the form of a mediator. The DRCG (2011, p.9) states:

> *"It should be seen as the preferred dispute resolution route in most disputes when conventional negotiation has failed or is making slow progress. Mediation is now being used extensively for civil and commercial cases including cases involving government departments), frequently for multi-party and high value disputes. Some 75% of commercial mediations result in a settlement either at the time of the mediation or within a short time thereafter.*
>
> *The use of mediation has increased significantly since the introduction of the Civil Procedure Rules (CPR) in 1999. The CPR state that 'active case management includes encouraging the parties to use ADR procedure if the court considers that appropriate' Part 26 of the CPR included the specific details for using ADR."*

The DRCG (2011) says that mediation has all the advantages of negotiation (which, as identified above, are important benefits for construction dispute resolutions) but with an independent facilitator. It also states that the additional benefits of mediation include the flexibility of the format and the timing of the mediation, as well as reinforcing the ability to make a mediation agreement an enforceable contract, which is often not understood by those with a limited knowledge of mediation. Mediation is discussed in greater depth in Chapter 4.

Conciliation

Conciliation is a similar process to mediation, but the conciliator can propose a solution to the parties, although it is still for the parties to decide if they agree to the settlement proposal. Conciliators must be completely neutral. They do not make decisions or judgements but will suggest solutions and options. To be able to suggest appropriate solutions, they must have a considerable knowledge of the subject under dispute. The most common use of conciliation concerns employment disputes, especially through the Advisory, Conciliation and Arbitration Service (ACAS), which is a public body. There is little evidence of the use of conciliation within the construction industry as a distinct process. For example, the process used to be contained within the Institute of Civil Engineers' (ICE) standard dispute procedure for standard construction contracts; however, this has now been withdrawn, as have the ICE standard forms of construction contracts, and have been replaced with the New Engineering Contracts (NEC). These are reviewed later, but do not contain any reference to conciliation or mediation. Commercial mediation can be conducted in a similar manner to conciliation, with a subject matter expert mediator helping to guide the parties to a solution.

Neutral evaluation

Neutral evaluation (sometimes referred to as early neutral evaluation) is the process designed to test the legal and other strengths of the case; it is particularly useful where a point of law will significantly influence the outcome of the dispute. The parties submit an outline of their case to a neutral third party (often a lawyer or retired judge), along with a summary of the evidence that could be produced at trial. This opinion is confidential to the parties and can aid a settlement or be used in further negotiations. This process can also be used when parties have completely opposite views on a point of law or weight of evidence. Because the majority of construction disputes proceed to adjudication rather than court in the construction industry, there is little evidence of this process being used for construction disputes. It also relies on the detailed preparation

of full claims, which involves extensive costs and time – something that an alternative to adjudication, such as mediation, would look to avoid.

Expert determination

Expert determination is an alternative dispute resolution process in which the parties agree to be bound by the decision of a third party, but without the set timescales that adjudication has. Because this process involves the appointment of an expert, it is useful in disputes of a technical nature. The expert will often have powers to investigate the facts over and above the information and evidence submitted to him or her by the parties. This process is similar to adjudication but with a binding decision by the expert. As with neutral evaluation, it also necessitates both parties producing a full claim and therefore does not remove these costs in the way that mediation can.

Adjudication

As discussed in Chapter 1, adjudication became an important form of dispute resolution in the construction industry following the introduction of the *Housing Grants (Construction and Regeneration) Act 1996*. Where the act applies, Section 108 sets out minimum requirements for the procedure that will apply.

Preliminary research and industry comment indicates that there is concern over a perceived increase in costs in the adjudication process (legal representation, adjudicator fees, expert fees, and the cost of referral and response documentation) and the expectations of the parties.

Litigation and arbitration

The construction industry is unique in the UK, being the only industry that has legislation to ensure that the supply chain receives payment and that disputes can be handled in a prompt manner, so as not to detract from the construction of the project. Prior to the introduction of the *Housing Grants (Construction and Regeneration) Act 1996*, the options available to the industry for the resolution of formal disputes were arbitration or the courts. The courts were clogged with all types of litigation, and a construction dispute could take years to be resolved – long past the project completion – and not uncommonly after one of the parties had gone into receivership due to the withholding of monies by the other party. The current *Arbitration Act* was introduced in 1996 and gives wide discretion to the parties to decide between themselves how their dispute should be resolved, but provides a fall-back position if agreement cannot be reached. The DRCG acknowledges that:

"Like litigation and arbitration, adjudication is an adversarial process".

An arbitration clause within a construction sub-contract would typically preclude a sub-contractor from commencing arbitration until the contract was complete, again causing a significant effect on the cash flow of a sub-contractor.

The Technology and Construction Court (TCC) is a part of the Judiciary of England and Wales, and known until October, 1998 as the Official Referees' Court. The TCC is one of the specialist courts of the Queen's Bench Division of the High Court. The TCC deals primarily with the litigation of disputes arising in the field of technology and construction. It includes building, engineering, and technology disputes, professional negligence disputes, and IT disputes, as well as the enforcement of adjudication decisions and challenges to arbitrators' decisions. Jackson (2010), (reviewed in Chapter 3) states that mediation should be attempted before commencing litigation.

3.3 Construction professional organisations

There are a number of professional organisations in the construction industry in England that represent construction industry professionals and industry organisations. These include the Royal Institution of Chartered Surveyors; the Royal Institute of British Architects; the Institute of Civil Engineers; the National Specialist Contractors Council; the British Property Federation; the Local Government Association; the National Federation of Builders; the Civil Engineering Contractors Association; the UK Contractors Group; the Federation of Master Builders; and the National Federation of Builders. Most of these offer guidance to their members on dispute resolution, with a number of formal guidance and practice notes being issued. In addition, Constructing Excellence is an umbrella organisation driving construction change. The organisation became part of the Building Research Establishment Trust (the UK's largest charity dedicated specifically to research and education in the built environment) in August 2016. It has a cross-sector membership, including stakeholders from all the groups identified within the research as well as good representation from those involved in the legal and dispute side of the industry. The development of dispute resolution guidance by Constructing Excellence is discussed later in this thesis because this research will influence the group's practice.

3.4 Relevant government reports

The government had acknowledged for many years that the construction industry had issues that affected productivity and profitability. Table 3-1 (Gale, 2013; p.14, Table 1.1) below details the main reports and the issues they attempted to address.

Table 3-1 Government reports on construction industry

Report	Objective	Emphasis
Placing of Public contracts (1994)	Standardisation of public sector contract management	Less onerous tendering processes and emphasis on lowest price
Working Party Report (1950)	Standardisation and efficiency of the industry from a supply perspective	Higher performance from contractors and labour productivity
Problems before the Construction Industries (1962)	Closer links between designers and constructors	Higher standards of design information, even supply of workload, less emphasis on lowest price
Placing and Management of Contracts (1964)	Improvement of the design and management of construction projects	Standardisation of management processes, use of negotiated tenders
Public Client and Construction Industries (1975)	Aggregation of projects to provide regular work load	Continuous work load and less competitive tendering
Faster Building (1983)	Increase in productivity for large warehouses and industrial projects	Use of 'off site' manufacturing techniques, construction management and elemental package processes
Faster Building (1988)	Increase in productivity for offices and commercial projects	Similar emphasis from the 1983 report
Constructing the Team (1994)	Looks at relationships between parties to a construction contract	Recognises a larger role for Clients and the importance of financial liquidity
Efficiency Scrutiny (1995)	Improving communication, training and a single contract for disputes	Recognises government as a change catalyst to create the improvements required
Rethinking Construction (1998)	Improvement in performance and productivity of construction	Compares construction with manufacturing, identified five drivers for change
Achieving Excellence (1999)	Awarding contracts by the use of value for money rather than lowest price bid	Recognises the weaknesses of government procurement rules
Modernising Construction (2001)	Strong partnering approach to projects, long terms relationships	Selection of parties by best value rather than lowest price, less adversarial approach
Improving Public Services (2005)	Places construction as a key driver for delivery of public services	Looks towards creation of long term relationships for improvements in performance
Construction Matters (2008)	Requests demonstration of the construction industry's strengths and areas for need for improvement	Outlined the need for government leadership at strategic and operational levels
Government Construction Strategy (2011)	Deliver a competitive industry for the future, cost savings through efficient procurement	Cost benchmarking, standardisation and justification of value for money

Of these government reports, three are particularly relevant to dispute resolution and reducing the adversarial nature of construction, and therefore are relevant to this research: *Constructing the Team* (Latham, 1994), *Rethinking Construction* (Egan, 1998), and *Modernising Construction* (National Audit Office, 2001). Each of these reports is reviewed in further detail below.

Constructing the Team

Latham (1994) addressed the issues that cause construction disputes – as discussed in Chapter 2 – to arise and recommended the introduction of an Alternative Resolution Dispute (ADR) process as part of every standard construction contract. Latham (1994, p.91) stated:

> *"I…recommended that a system of adjudication should be introduced within all the Standard Forms of Contract",*

He concluded that this would require the introduction of a *Construction Contracts Bill*. This would give statutory backing to new, amended contract Standard Forms and outlaw some of the specific, unfair contact clauses that Latham felt had the most significant impact on the industry. These unfair clauses included the Tolent clause (see glossary), where the sub-contractor had to bear all the costs of an adjudication – both his or her own and the other parties' – if he or she commenced the adjudication; and paid when paid clauses – a process by which a main contractor could withhold a payment for works correctly completed by a sub-contractor if he or she had not been paid, through no fault of the sub-contractor. Latham's report contained no empirical evidence to support his conclusions that adjudication should be the primary dispute process within the construction industry; however, his recommendations, as detailed below, were introduced by legislation through the *Housing Grants Construction and Regeneration Act 1996* and the *Statutory Instrument 1998* no. 649 – the Scheme for Construction Contracts.

Latham (1994) did identify examples of areas likely to cause conflict – for example, report item 3.10 on the lack of coordination between design and construction; report item 4.18 on a mismatch between reasonable care and skill and fitness for purpose; report item 4.20 on the nomination of specialist contractors; report item 8.2 on unfair practices and lack of teamwork on site; and report item 8.9, on the use of unfair terms in contracts; in addition, dissatisfaction with current methods of dispute resolution.

Latham (1994, p.87) reviewed the proposed adjudication process and suggested that:

"If a dispute cannot be resolved first by the parties themselves in good faith, it is referred to the adjudicator for decision. Such a system must become the key to settling disputes in the construction industry."

Latham did not detail any proposed structure to this pre-adjudication resolution; however, he did state that in addition to the contractual right to adjudication:

"There should be no restrictions on the issues capable of being referred to the adjudicator, conciliator or mediator, either in the main contract or sub-contract documentation." (p.91)

Latham's proposed use of adjudication is without any empirical evidence of the success of adjudication over the other ADR processes, although he did acknowledge the success of mediation/conciliation (p.89). Having

"…recommended that a system of adjudication should be introduced within all the Standard Forms of Contracts" (p.91)

Latham (1994, p.89) also reviewed the alternative ADR methods available stating that:

"Mediation/conciliation is another route of Alternative Dispute Resolution. It is a voluntary, non-binding process, intended to bring the parties to agreement. A mediator has no powers of enforcement or of making a binding recommendation."

However, he did acknowledge that:

"Some contracts which contain a conciliation procedure seem to work well – the ICE Minor Works Contract is its best-selling document with many satisfied customers",

and yet concluded:

"…disputes on site are, I believe, better resolved by speedy decision – i.e. adjudication – rather than by a mediation procedure in which the parties reach their own settlement."

with no justification for this statement. Despite this dismissal of mediation, he did consider that if included in a contract:

"Mediation/conciliation should contain two crucial provisions – 1. The scope of the conciliation must cover all potential aspects of dispute, and that scope must be fully stepped down into sub-contracts. 2. It must also be a condition of contract

that such provisions are fully available to both main contractor and sub-contractors without deletion, amendment or restriction." (Latham, 1994, p.89)

Latham (1994, p.89) also reviewed the use of a multi-tiered ADR and examined the one used on the HM Government section of the Hong Kong Airport Core Programme, which contained a four-tier level of dispute resolution: the engineer's decision, mandatory mediation/conciliation, adjudication, and arbitration. He concluded that:

"It is to be hoped that such complex procedures would only be required to be used rarely. But it is proper that they should be available in such massive contracts, and special conditions attached to the form of contract could accommodate them."

He offered no reasoning concerning why this process should only be available to extremely large projects and not for other, smaller contracts. He did not offer an explanation of why only

"…very large projects may require more than one form of dispute resolution." (p.89)

Latham (1994, p.91) concluded his report with the statement:

"I have already recommended that a system of adjudication should be introduced within all the Standard Forms of Contract (except where comparable arrangements already exist for mediation or conciliation) and that this should be underpinned by legislation.".

Latham's recommendation that adjudication was the preferable solution resulted in the HGCR Act 1996, introducing adjudication as the primary dispute resolution method for the construction industry. Although the introduction of adjudication was a great benefit to the construction industry, this adoption came at the detriment of other forms of ADR and in particular to the use of mediation in construction disputes.

Rethinking Construction

The report *Rethinking Construction* by Egan (1998) was commissioned by the deputy prime minister in the hope of improving the quality and efficiency of the UK construction industry. The conclusion of the review, similar to that of Latham, was that through the application of best practices, the industry and its clients could act collectively to improve their performance. Five main drivers of change are identified. These are: committed

leadership, a focus on the customer, integrated teams, a quality-driven agenda, and commitment to people. The report proposed a target for reducing the total costs and time of construction projects of 10% per annum. The latest statistics produced by the Construction Index (2016) shows that only two of the top 20 UK contractors made over 3.6% margin in the previous financial year, showing little improvement.

The report also said that in order to achieve these targets, there would need to be radical changes to the way in which the construction industry delivers projects. This would take the form of transparency and partnering – a significant cultural change for such an adversarial industry. The report also found that the structure of the industry caused fragmentation and identified this as both a strength and weakness. It highlighted that in 1998, 163,000 construction companies – the majority with less than eight employees – were listed with on the Department of the Environment, Transport and the Regions' (DETR) statistical register. The report acknowledged that the extensive use of sub-contracting that this demonstrates

> *"…has brought contractual relations to the fore...*" (Egan, 1998, p.8).

Egan identifies the scope for sustained improvement with seven key indicators: capital cost; construction time; predictability (bringing in projects on time and on budget); reducing the number of defects at project handover; reduction in the number of reportable accidents; productivity (increase in value added per head); and increased turnover and profit. It is disappointing, in view of the significant impact protracted disputes' resolution procedures have on construction industry profitability that Egan did not take this opportunity to review the ADR used within the industry.

In May 2008, at the ten-year anniversary of the report, Egan delivered a speech to the House of Commons, stating that:

> *"…we have to say we've got pretty patchy results. And certainly nowhere near the improvement we could have achieved, or that I expected to achieve… In summary, I guess if I were giving marks out of 10 after 10 years I'd probably only give the industry about four out of 10."*

The key success factors were seen as being a significant reduction in health and safety issues, with 78% of projects being delivered without injuring anyone, and improved productivity. However, the large number of disputes continued. In fact, in the preface to Knowles (2012, xxiii), Tony Bingham states that:

"In the first edition of this book, published in 2000, Roger Knowles discussed 100 contractual problems; then 150 and now 200. Wouldn't you have thought that by now the numbers would be going the other way?"

Therefore, despite the Egan (1998) report, disputes are continuing. The industry still struggles to generally make more than a 4% margin.

Modernising Construction

Although not as significant to this research as the previous two reports discussed above (because it concentrated on better delivery of government contracts through training, innovation, and performance outcomes, as well as relationships), *Modernising Construction* (National Audit Office, 2001) also considered relationships within the industry. The report reiterates the conflict that exists in the construction industry, which it attributed to poor performance.

The report identifies the following key issues, relating to this research:

"A succession of major studies… have highlighted the inefficiencies of traditional methods of procuring and managing major projects – in particular the fallacy of awarding contracts solely on the basis of the lowest bid, only to see the final price for the work increase significantly through contract variations with building completed late" (National Audit Office, 2001, p.3)

As identified in the previous chapter, variations and programme delays are often causes of disputes; hence, the report continues:

"Relations between the construction industry and government departments have also been typically characterised by conflict and distrust which have contributed to poor performance." (National Audit Office, 2001, p.3)

In this report, it is again acknowledged that disputes are common in construction projects and although this report was aimed at reducing disputes, it did nothing to address the issue of resolving them.

"Estimates of the cost of these inefficient practices are inevitably broad brush. But studies have identified the potential for major savings – 30 percent in the cost of construction… but all the recent reviews agree that a significant contributory factor is the tendency for an adversarial relationship to exist between construction firms, consultants and their clients and between contractors, sub-contractors and suppliers…leading to disputes and litigation." (National Audit Office, 2001, p.4)

The inefficient practices identified above with regards to this report relate to traditional methods of procuring and managing major projects. Typically, this relates to the practice of awarding the contract to the lowest bidder. The report discovered that 73% of government construction projects were completed over budget (the original contract sum) and 70% were delivered late.

The report identified nine key areas of construction management that required improvement. These were: better integration of all stages of the process through design, planning, and construction to remove waste and inefficiency; better management of the construction supply chain; develop a learning culture on projects and within organisations; better health and safety record; longer-term relationships between all stakeholders to encourage continuous improvements (time, cost, and quality); partnering; move away from the letting of lowest price contracts; more consideration of the building with regards to the end user; and moving away from adversarial approaches between industry stakeholders. The report recommends that the way to move from such an adversarial nature is to embrace partnering as the primary method for of construction project delivery. Much research has been undertaken on partnering in the construction industry; however, construction disputes continue to occur, even with the advent of partnering. A detailed review of this method of construction delivery is outside the scope of this research.

In summary, this report concentrated on a solution based around partnering, thereby theoretically removing the cause of the dispute, rather than making recommendations to resolve them. It identified and confirmed the adversarial nature of the construction industry, recommending changes in construction delivery to reduce this. It did not address the underlying claim culture of the industry, or how this would be addressed. Neither did it offer any recommendations about making dispute resolution less adversarial; for example, by the introduction of mediation.

3.5 Chapter summary

Of the seven primary dispute resolution options identified by DRCG (2011), four require detailed case preparation to allow a third party to determine the outcome of the dispute (neutral evaluation; expert determination; adjudication; and litigation and arbitration), thereby incurring significant increases in costs and time. Negotiation is viewed as the most preferential, because it allows the parties to reach a mutually acceptable agreement while minimising the cost of preparing case documentation and often avoiding the appointment of legal advisors. When negotiation fails, mediation is supported as the next step by the DRCG (2011) and Jackson (2010). It has the same

advantages of negotiation but is also supported by an independent facilitator. Commercial mediation is often conducted in a similar manner to conciliation. This would indicate that mediation is a useful option for dispute resolution in construction disputes.

Although the government has commissioned a number of reports of the adversarial nature of the construction industry and introduced adjudication through the *HGCR Act 1996*, as supported by the *Construction Act 2010*, there is evidence that considerable time and cost is spent on disputes and the industry is still viewed as adversarial. None of the three Government construction reports reviewed in this chapter support mediation as a key process in reducing in reducing the time and costs spent on construction disputes, despite the support as a process from other Government departments including the judiciary. It is therefore important to understand mediation as a process and review its use and suitability for construction dispute resolution. This is done in Chapter 4.

4 Construction mediation

4.1 Introduction

The previous chapters (chapter 2 and 3) have demonstrated the adversarial nature of the construction industry and, despite government attempts to reduce the dispute-driven culture, a significant proportion of profit margin is still spent on disputes. They also demonstrated that a number of dispute resolution processes are available to the industry, yet even with the increasing costs of adjudication; it still remains the most common form of dispute resolution for construction disputes (as reviewed in Chapter 1). Consequently this Chapter builds from the established facts, reviews the background of mediation, the advantages and disadvantages, seeks to explore why mediation (which is available) doesn't have greater use, current successful use of mediation on other sectors and key Government reports on ADR including Jackson (2010 The existing use of mediation in construction disputes in the UK and abroad is then also investigated to establish current levels of use in the UK and if it is a suitable process.

4.2 Background and use of mediation

The use of mediation can be traced back to biblical times and beyond. There are clear references to the existence of mediators in the bible (Timothy, 2:5) and throughout medieval history. Lind (1992) refers to Johann Wolfgang Textor's work in 1680s Germany, in which Textor:

> *"…systematically and comprehensively analysed the practice of mediation in the context of resolving international disputes."*

Textor identified several mediation principles, including authority, acceptance, and an unbiased approach, and reviewed the practice of compulsory mediation. In the UK, there is reference to mediation by Chaucer in The Wife of Bath in *The Canterbury Tales*, and the use of mediation in the court of King Henry VIII.

Despite the obvious history of mediation in the UK, it is now regarded as a modern method of dispute resolution. There were several initiatives to introduce modern mediation as early as the 1970s and mediation progressed at different levels and within structures throughout various sectors, due to a number of factors including funding, government policy, and law. Mediation has advantages and disadvantages and these

are examined below. In addition, the use of mediation in other industry sectors is explored to examine the success of the process outside the construction industry.

Advantages of mediation

As with all systems, there are advantages and disadvantages to mediation (Stitt, 2004; Liebmann, 2000). For the purposes of this thesis, the mediation process reviewed is that of the structure most commonly used for commercial mediation. According to Stitt (2004) and Liebmann (2000), the main advantages of mediation are:

- The relevant business/social relationships can be preserved or resumed.
- Control of the outcome – the parties agree to the structure of the settlement.
- No imposed decisions.
- Where each party has some merit, this may be reflected in a fairer outcome than a court would be able to provide.
- The absence of trials leads to reduced costs because full trial preparation is not required, the litigation is less protracted, and the absence of findings of fact may be of use to one or both parties, depending on the circumstances.
- Generally, a very quick resolution.
- Those interests that are of real importance to either or both parties will not be obscured by technical or legal issues advanced by lawyers within the framework of the litigation.
- Avoidance of setting an adverse precedent – a consideration that may affect either or both parties.
- The avoidance of publicity that would be attached to litigation, including the actual dispute itself or actions that led to the dispute.
- Confidentiality of outcome, for either commercial or other reasons.
- The desire of one or both parties to limit the disclosure it would have to provide should the dispute proceed to court.
- Confidentiality of trade or business secrets that might become public if the case were to proceed to trial.
- Cases settled by mediation, despite the parties believing the process will be unsuccessful at the outset.

- Neither party actually wishes to litigate.
- A mediator will help diffuse the emotion or hostility that may otherwise bar any settlement.
- The uncertain outcome of a trial is avoided.

For the construction industry, a number of these benefits are particularity relevant. For example, as discussed previously, the retention of relationships is important – relationships that can be destroyed through adjudication (Mason and Sharratt, 2013). The flexibility of being in control of the solution is also important for construction projects, where payment terms can be key in reaching a resolution, as well as the speed in reaching these agreements. Reducing costs in construction disputes (Richbell, 2008) is an important benefit that mediation offers to the construction industry, along with parties not being required to disclose evidence that would be required if the case proceeded to court (often sensitive, commercial information). Mediation is a confidential process, as is adjudication, which can be beneficial in the construction industry where a party, such as a main contractor, may not which to set a precedent for others (for example, sub-contractors) to issue similar claims.

Disadvantages of mediation

Not all disputes are suitable for mediation and the assessment of those which are and those which are not can be subjective (Stitt, 2004; Liebmann, 2000). They identify other disadvantages, including:

- The organisation of a mediation can be, or can be perceived to be, a delay to resolving the dispute, which may be advantageous to one of the parties.
- Sometimes, a party to a dispute requires a full open court hearing to achieve personal vindication.
- Voluntary process – there is no compulsion to settle.
- One party may use the process to assess the strength of the other party's case. However, it should be noted that the process is confidential and that information exchanged or obtained in the course of mediation may not be used elsewhere afterwards, including litigation, as reinforced by the decision in *Venture Investments Placement Ltd v Hall* (2005).
- The understanding of the parties with regard the enforceability of a settlement.

- Once a settlement has been reached, it can become enforceable as a matter of contract. If the contract is workable, the courts will enforce it (Foskett, 2005).
- The need for an authorised representative with full authority to settle to attend from each party. This can be difficult to achieve if, for example, one of the parties is a local authority, a government body, or a large commercial operation.
- If one party is much stronger than the other, then the dispute will require a skilled mediator to ensure an equal balance of power and that neither party is intimidated or forced into an incorrect settlement. This is a fundamental facet of jurisprudence.
- The mediator does not offer advice to the parties. Should the parties require advice, they will need to appoint their own expert or legal representative.
- Unscrupulous parties can withhold important information or declare untruthful facts.

The construction industry currently uses adjudication as the primary form of dispute resolution. One benefit of adjudication is the 28-day scheme timeline. Mediation could be used to delay the commencement of adjudication, buying one party more time. The authority to settle can also be an issue with construction disputes – particularly when local or other government authorities are involved and an imposed decision by an adjudicator or court means that no individual official has to make a decision on a settlement (Richbell, 2008). This can also be an issue when large construction organisations are involved – often, senior management will not be party to the mediation and an authority to settle may not be contactable. Access to authority to approve by telephone is essential in these situations.

Areas of mediation outside the construction industry

Mediation has experienced various levels of success in a number of sectors outside the construction industry. As reviewed below, it has been successful in industrial relation and employment disputes, family disputes, school conflict resolution, victim offender mediation, community/neighbour disputes, and other commercial areas, suggesting that it could also be employed in construction disputes. Although the structure of the mediation process utilised in these sectors varies, the principle of mediation remains the same.

Industrial relations and employment mediation

The introduction of new employment laws in the 1960s (the *Contracts of Employment Act 1963*, amended in 1972; the *Redundancy Payments Act 1965*; the *Industrial Relations Act 1971*; and the *Trade Union and Labour Relations Act 1974*) led to the provision of five services: collective conciliation, individual conciliation, individual conciliation, arbitration, and advisory work and longer term inquiries. Liebmann (2000) commented that by the early 1970s, all of these services were in use. However, the trade unions expressed concerns:

> *"…that these services may be affected by government incomes policy"* (ACSA, undated, cited in Liebmann, 2000, p.19)

and doubts also arose concerning the independence of the services from government influence or even control (ACSA, undated, cited in Liebmann, 2000). The Trade Union and Labour Relations Act was introduced in 1974 and on the 2nd September that year, an independent conciliation and arbitration service was also launched. By January 1975, the title had been changed to the Advisory, Conciliation and Arbitration Service (ACAS) and on 1st January 1976, ACAS became a statutory body (Liebmann, 2000).

Liebmann (2000) clarifies that ACAS uses the terms "conciliation" and "mediation" differently to the general definition. "Conciliation" is used to describe the process known usually as mediation – a voluntary process in which the conciliator/mediator attempts to facilitate the disputing parties to reach their own agreement. "Mediation" is used to describe a process akin to arbitration, where the mediator/arbitrator makes the decision. Unlike arbitration, ACAS mediation is non-binding.

Later employment acts (the *Employment Rights (Dispute Resolution) Act 1999*, and so on) changed the processes, including the introduction of employment tribunals and binding arbitration procedures, but the process of mediation had become part of the dispute resolution process, to a greater or lesser extent, in employment disputes. Recent research by Clark (2013) shows that in Scotland, this was a favourable process with high success rate of around 70%, which saved time and money, but with an uptake slower than anticipated at its introduction in 2009.

Family mediation

The beginnings of the use of modern mediation in family disputes again emanate from the 1970s. The Finer Committee in 1973 reviewed the increasing number of one-parent families and recommended a conciliation service attached to a family court to tackle the problems that followed separation and divorce, concentrating on the key issues of

children, property, and finance. The government, however, did not implement these recommendations and:

> *"…professionals dealing with these problems became increasingly frustrated"* (Fisher, 1993, cited in Liebmann, 2000, p.21).

In an attempt to address these problems, two voluntary organisations emerged. In Surrey and South East London, senior court welfare officers formed an organisation of volunteer conciliators to produce agreements in lieu of the courts' instruction welfare reports and in Bristol, the first independent family conciliation service was launched as a pilot scheme to assist divorcing parents to reach agreement over arrangements for their children. These schemes were followed by those of further organisations and in 1981, they formed the National Family Conciliation Council (NFCC). Again, the processes used were closer to mediation than conciliation and in 1992, the NFCC changed its name, to become National Family Mediation (NFM).

The government's *Report of the Conciliation Project Unit on the Cost and Effectiveness of Conciliation in England and Wales* in 1989 recommended that family mediation should not be restricted to issues directly related to children but that issues such as finance and property should also be dealt with. NFM instigated five pilot projects and in 1994, a report was published, showing:

> *"…that users of all issue mediation gained greater benefit by sorting out all the issues, and saw mediation as a cost effective alternative to the traditional legal process"* (Joseph Rowntree Foundation, 1996, cited in Liebmann, 2000, p.22).

In 1996, the introduction of the *Family Law Act* encouraged couples to utilise mediation, where appropriate, as part of the divorce process. The family mediation process also includes screening for domestic violence, following research on the subject by Hester et al. (1997, cited in Liebmann, 2000).

School conflict resolution and meditation

The Kingston Friends Workshop Group developed teaching methods for children to enable the peaceful resolution of conflicts. The system spread and developed until the methods of the programme were formed into a manual called *Ways and Means* in 1986. This system continued to be successful and has seen the inclusion of dispute resolution processes in many schools, colleges, and universities (Liebmann, 2000).

Victim-offender mediation

The first recorded modern use of mediation in the victim and offender sector was the scheme pioneered by the Bristol Association for Care and Resettlement of Offenders in 1972, where mediation was used to help offenders understand the consequences of their actions. This eventually led to the formation of the Victim Support organisation and research studies recorded positive responses from victims, offenders, and the courts with a tendency towards a reduction in reoffending (Braithwaite and Liebmann, 1997, cited in Liebmann, 2000).

Community mediation

Modern community, or neighbourhood, mediation was introduced to the UK in the early 1980s following visits by eminent Australian and American mediators. By 1985, there were seven community mediation service providers (Marshall and Walpole, 1985, cited in Liebmann, 2000) and by 1999, this had increased to 124 community mediation service providers (Liebmann, 2000).

Community mediation is used by many local authorities, especially with regard to their housing tenants, encouraging the parties, through mediation, to reach agreements to live more harmoniously in their community, often with housing stock that is not suitable or ideal for the people who inhabit the properties. Neighbour disputes commonly arise over issues such as noise, shared gardens, access, and parking. For privately owned properties, one of the most common forms of neighbourhood mediation is over boundary disputes. In recognition of these issues, the RICS instigated a boundary dispute helpline in conjunction with the RICS neighbour dispute service.

Research has shown that community and neighbourhood mediation is successful in achieving positive results (OPUS, 1989; Quine et al., 1990, cited in Liebmann, 2000) and lower incidences of neighbourhood violence (Faulkes, 1991, cited in Liebmann, 2000). Liebmann (2000, p.28) concluded that:

> *"The National Society for Clean Air National (NSCA) Noise Survey 1999 found that mediation was believed to be more effective than legislation in the long-term resolution of disputes, because it resolves the underlying issues (NSCA 1999)"*

Although mediation in such community disputes is not generally compulsory, tenants are encouraged by landlords to participate in the process, with penalties for not engaging in mediation. Given that mediation is therefore almost compulsory by default, it is interesting that the success rate is still high, with typically 95% showing a positive

outcome (Bristol Mediation: http://bristol-mediation.org/mediation-explained/, accessed 5 July, 2016).

Commercial mediation

Mediation has been used successfully in the USA for many years to resolve commercial disputes (Stipanowich, 1996) and the principles used were introduced to the UK in the late 1980s, with the launch of the Centre for Dispute Resolution (CEDR) coming in November 1990. The formation of CEDR was backed by the Confederation of British Industry (CBI) and several leading London law firms, and was shortly followed by formation of the ADR group in 1991. Both these organisations offered mediation training and mediators for commercial mediation and were followed by a number of further organisations. Although there was a low uptake in the use of mediation, the benefits were such that pilot court schemes to allow the mediation of civil disputes between £3,000 and £10,000 were instigated. Research was then completed to assess the success of the schemes (Genn, 1998, cited in Liebmann, 2000), showing that although there was a low uptake of the schemes – 5% – of the 160 disputes that proceeded to mediation, 80% were settled during the mediation or soon after, and 85% of participants said they would use the process again.

This success of commercial mediation is still not reflected in the numbers of disputes using the process. The government has attempted to address this by commissioning reports and guidance notes to reduce litigation costs (*Access to Justice*, 1996; *Review of Litigation Costs: Final Report*, Jackson, 2010, and *The Dispute Resolution Guidance*, 2011). These reports and guidance are reviewed below.

Other areas of mediation

There are records of successful mediation activities in the health sector, environmental organisations, and insurance companies. There has been an increasing use of mediation in the agreement of insurance disputes, where historically there has been a negotiation process between the client and insurance companies for the settlement of claims. The CEDR website http://www.cedr.com/solve/expertise/ (accessed 19 July, 2016) lists the following sectors of expertise: aviation; arts; banking and finance; charities; construction and engineering; education; energy and natural resources; healthcare and pharmaceutical; information, communication and technology; insurance, medical and entertainment; property; public sector; shipping; sport; transportation; and utilities.

4.3 Published empirical studies, government reports, and judicial positions

The cost of litigation in the UK has been the subject of a number of reports and studies in recent years, including several commissioned by the government (*Access to Justice*, 1996; *Review of Litigation Costs: Final Report*, Jackson, 2010; and *The Dispute Resolution Guidance*, 2011). Concern has been raised at the costs incurred in resolving disputes in litigation and about the need to consider options reducing said costs. The courts have also supported this concern and have imposed cost penalties for those ignoring the advice to attempt ADR or refusing to meditate prior to attending court, with key cases highlighting this (for example, *Dunnett v Railtrack, 2002, and Halsey v Milton Keynes General NHS Trust*, *2004).* Other publications include a number from the USA, where mediation is used successfully in construction disputes (Burger, 1982; Stipanowich, 1996; Hensler, 2003); Stitt (2004) and Palmer and Roberts (1998) report on mediation in the UK.

Government reports

There are three recent and significant reports commissioned by the government in regard to the cost of litigation and the opportunity to utilise alternative methods of dispute resolution.

Access to Justice

In *Access to Justice* (1996), Lord Woolf made recommendations for a new civil code of procedure. More commonly referred to as the Woolf Reforms, the report led to the *Civil Procedure Rules 1998* (CPR). The intent of the CPR was to improve access to justice and reduce the cost of litigation, to reduce the complexity of the existing procedure rules for litigation, to modernise terminology in the judicial system, and to remove unnecessary distinctions of practice and procedure.

One of the principal tools introduced by the reforms is the Pre-Action Protocols. Woolf (1996, p.102) described pre-action protocols as being:

> *"intended to build on and increase the benefits of early but well informed settlements which genuinely satisfy both parties to disputes".*

The purposes of the protocols are:

- to focus the attention of litigants on the desirability of resolving disputes without litigation.

- to enable and then obtain information they reasonably need in order to enter an appropriate settlement.
- to make an appropriate offer (of a kind that can have cost consequences if litigation ensues).

In October 2000, a specific Pre-Action Protocol for Construction and Engineering Disputes was issued (Section C5 of the CPR). These rules require that:

- the claimant and the defendant have provided sufficient information for each party to know the nature of the other's case.
- each party has had an opportunity to consider the other's case and to accept or reject all or any part of the case made against him or her at the earliest possible stage.
- there is more pre-action contact between the parties.
- better and earlier exchange of information occurs.
- there is better pre-action investigation by the parties.
- the parties have met formally on at least one occasion, with a view to defining and agreeing the issues between them and exploring ways by which the claim can be resolved.
- the parties are in a position where they may be able to settle cases early and fairly, without recourse to litigation.
- proceedings will be conducted efficiently if litigation does become necessary.

This report was intended to encourage pre-litigation negotiation to resolve disputes prior to court. It introduced the concept that the first step should not be a court and all other routes including facilitated negotiation (mediation) should be explored. It also recognised that ADR had the ability to offer savings compared to proceeding to court with a dispute.

Review of Litigation Costs: Final Report

The most recent government report on the cost of litigation, ADR, and the use of mediation, Jackson (2010), is a review of the civil litigation costs in England and Wales and was heralded as the most significant review of the litigation process since the Woolf Reforms (Patterson and Leckie, 2010).

It concludes that it is essential that steps are taken to reduce the significant costs involved in dispute resolution. Jackson (2010, p.355) considers the inclusion of ADR to be key to the reduction in the costs of disputes, stating:

> *"For cases which do not settle early through bilateral negotiation, the most important form of ADR (and the form upon which most respondents have concentrated during Phase 2) is mediation."*

Jackson also highlights the obvious advantages (detailed in research by Gould, 2009 and supported by Redmond, 2005, and Richbell, 2008) that this process can offer:

> *"First, properly conducted mediation enables many (but certainly not all) civil disputes to be resolved at less cost and greater satisfaction to the parties than litigation. Secondly, many disputing parties are not aware of the full benefits to be gained from mediation and may, therefore, dismiss this option too readily."*

Jackson (2010, 36.3.1) continues to clearly support mediation, saying that the:

> *"…benefits of ADR not fully appreciated. Having considered the feedback and evidence received during Phase 2, I accept the following propositions: (i) Both mediation and joint settlement meetings are highly efficacious means of achieving a satisfactory resolution of many disputes... (ii) The benefits of mediation are not appreciated by many smaller businesses. Nor are they appreciated by the general public."*

This highlights the lack of awareness of the mediation process in general and in the construction industry in particular.

The need to raise awareness of mediation in the business sector is reaffirmed by Jackson (2010, 36.3.6), summarising:

> *"The pre-action protocols draw attention appropriately to ADR. The rules enable judges to build mediation windows into case management timetables and some court guides draw attention to this facility. Many practitioners and judges make full use of these provisions. What is now needed is a serious campaign (a) to ensure that all litigation lawyers and judges (not just some litigation lawyers and judges) are properly informed about the benefits which ADR can bring and (b) to alert the public and small businesses to the benefits of ADR."* He concluded *"Public education, so far as the general public and small businesses are concerned, the problem is of a different order. It is very difficult to raise public awareness of what mediation has to offer. I fear that no television company would*

be persuaded to include a mediation scene in any courtroom drama or soap opera (helpful though that would be). The best and most realistic approach would be to devise a simple, clear brochure outlining what ADR has to offer and for that brochure to be supplied as a matter of course by every court to every litigant in every case."

Jackson (2010) was clear that mediation has significant benefits as a dispute resolution process, especially with regards to saving costs and maintaining relationships. These are key issues that construction industry disputes also need, again supporting the idea that mediation should be suitable for dispute resolution for construction disputes. Jackson (2010) also highlighted that parties are not always aware of the benefits of mediation – something that would appear to be evident within the construction industry as well.

The Dispute Resolution Guidance

Published in May 2011, *The Dispute Resolution Guidance for Government Departments and Agencies* (DRG) is a document issued by the Ministry of Justice and the Attorney General's Office as a guide to using alternative dispute processes wherever possible as an alternative to litigation. The guidance identifies the issues with contractual disputes that proceed to court, highlighting that they can become time-consuming, expensive, and unpleasant, often destroying client/supplier relationships that have been built up over a period of time (DRG, 2011). These issues are the same as those experienced in the construction industry, even with the introduction of adjudication.

The DRG states that all dispute-handling and complaints procedures should include resolution mechanisms, adopt appropriate dispute resolution in contracts with other parties, include appropriate clauses in standard procurement contracts, and improve flexibility in reaching financial agreement (DRG, 2011). It does acknowledge that not all cases are suitable for mediation. It identifies these as:

"…for example, cases involving intentional wrongdoing, abuse of power, Public Law, Human Rights and vexatious litigants. There will also be disputes where, for example, a legal precedent is needed to clarify the law, or where it would be contrary to the public interest to settle." (DRG, 2011, p.4-5).

The guidance also clarifies that the use of meditation does not affect any rights that exist under Article 6 of the European Convention for Human Rights. Given that the

issues this process was introduced to address are the same issues as those experienced in the construction industry, this seems to support mediation as a suitable process for the resolution of construction disputes.

Although the DRG reviews the various options of dispute resolution available, it states that mediation "…should be seen as the preferred dispute resolution route in most disputes…*"* (DRG, 2011, p.9) and confirms that some 75% of commercial mediations result in a settlement. Therefore, mediation is demonstrated to be a successful ADR process, with no obvious limitation on its use in construction disputes.

Adjudication is considered a form of dispute resolution under the DRG, specifically referring to its use under the *Housing Grants Construction Regeneration Act 1996*. The DRG concluded that due to the nature of the process:

> *"adjudication is different in kind from other forms of ADR, which are optional and less tied to a single subject area. Like litigation and arbitration, adjudication is an adversarial process."* (DRG, 2011, p.12).

In conclusion, the DRG recommends mediation as the primary form of dispute resolution for all government departments and agencies in all cases, where appropriate. Model agreements and contract clauses are included within Annex A of the document. The government undertakes a significant number of construction projects per annum; the latest statistics from Rhode (2015) state that public sector orders in Q2 of 2015 stood at £5.8 billion. This guidance proposes that disputes in these government construction projects should be referred to mediation and not adversarial adjudication. However, it would appear that this is not the case and the majority of disputes are still referred to adjudication.

Judicial support for mediation

Clear judicial support was provided for these objectives as far back as 2002, in the case of *Dunnett v Railtrack* (2002)*,* which is often cited as an example of the perils of ignoring mediation, if deemed appropriate to a case. While Railtrack was successful and won the case (although perhaps only on a technicality), the Court of Appeal refused to order costs against Mrs Dunnett because Railtrack had earlier refused to countenance mediation.

Although this precedent with regard penalising parties who do not attempt mediation has been supported through subsequent court cases, the courts have also been careful

to acknowledge that not all disputes are suitable for mediation. This is highlighted in *Halsey v Milton Keynes General NHS Trust* (2004), where Lord Justice Dyson said:

> *"It seems to us that to oblige truly unwilling parties to refer their disputes to mediation would be to impose an unacceptable obstruction on their right of access to the court."*

He quoted Article 6 of the European Convention on Human Rights in support of this, and distinguished between a voluntary agreement to waive access to a court (such as an arbitration clause) and compulsion by the court itself. Disputes that would not be suitable for mediation include those that contain an important point of law that would be tested through the courts or those where one of the parties is physically afraid of the other, or there is potential for violence (Stitt, 2004). Other cases may include a major power imbalance between the parties which a mediator is unable to address, or if there is history of one party not taking part in good faith.

Other published works on mediation

There is a considerable amount of research and many publications on the principles and practice of mediation. Much of the research is based on practice in the USA (Burger, 1982; Stipanowich, 1996; Hensler, 2003) but increasingly, there is research on UK mediation. The principle of modern mediation in the UK is based on models currently in use from the USA, so many of these publications are relevant to the UK. Two publications – Stitt (2004) and Palmer and Roberts (1998) – have been identified as particularly relevant to this research. These will be discussed in the following section.

Mediation: a practical guide

Stitt (2004) is a practical guide to mediation. Although based on the author's previous publication in Canada, it has been re-written specifically for the UK market. Stitt reviews the most common form of mediation, described as "Facilitative Mediation," illustrating the emotional stages the parties will travel through during the mediation and examining the psychology behind the drivers to reach a settlement. (These are often defined as Best Alternatives to a Negotiated Agreement, or BATNAs). Whilst working through the principles of mediation, Stitt illustrates the arguments with case studies, many of which could arise in a construction dispute.

Stitt (2004) defines mediation as a facilitated negotiation process that enables parties to a dispute to arrive at a mutually acceptable settlement, and demonstrated the

opportunity for a creative solution with a case study, the principles of which could easily be applied to a construction dispute.

The advantages of mediation, as described by Stitt, are that it provides an opportunity for creative solutions to disputes, significant cost-savings, and confidentiality. Because there is no formal judgement, the outcome of the dispute is solely in the hands of those who are party to it. This is fundamentally different from current construction industry dispute processes. By agreeing to a settlement, with the possibility for creative solutions that would never have arisen from an adjudication or court judgement, existing relationships can remain intact – an extremely important consideration in an industry where ongoing relationships are commercially necessary (Murdoch and Hughes, 2008) and partnering and framework agreements are regularly utilised (Uff, 2005: Adriaanse, 2007).

Costs are incurred in business not only through direct financial expenditure but also through lost "opportunity costs" – the time taken to process a claim that could more profitably have been used for core business. Furthermore, if expertise has to be bought in, there is an additional financial penalty.

Confidentiality is also important to avoid commercial agreements being released into the public domain, which could damage relationships between contractors or adversely affect future competitiveness, or to avoid setting a precedent in disputes that involve multiple projects or sub-contractors where such a precedent might open the floodgates to similar claims.

Stitt (2004) used case studies to illustrate these advantages, which may provide lessons for the construction industry. Stitt acknowledged that there are also disadvantages to mediation and occasions when it may not be suitable. He suggests that these include situations where one party feels a legal precedent is required to be set by a court ruling, or there is a constitutional or other legal issue, or even potential for violence. Parties could also settle without the aid of a mediator. Stitt includes a useful list of “tips for lawyers” but fails to address all the disadvantages – for example, the risk that one party may use mediation to test the strength of the other party’s case and assess at what level they would be likely to settle. Although mediation is confidential and without prejudice, use of the mediation process as a fishing expedition is always a risk and should have been described.

Although Stitt (2004) identifies that the balance of power during mediation is important and covers this in detail, he only provides passing guidance on who should attend the

mediation. He confirms that it is important to have full agreement from the parties on who will attend and says that solicitors and experts can be useful, but does not address the issue of cost. Stitt also considers other potential causes of imbalance between the parties, and identifies the skill of the mediator as necessary to ensure that these do not influence the process or the agreement. He also examines the psychological journey that is mediation, from the determining of the interests and the issues, which is aimed at clearly identifying all the interests and issues, rather than just the headline points that are fundamental to the success of meditation, through brainstorming and reviewing durable options and overcoming obstacles, to positional bargaining and closure. He does not, however, address the important issue that when acting on behalf of an organisation, the representative may have restrictions imposed on him or her with regard to a settlement figure. The representative should also advise if any other members of the organisation can be contacted by the representative, should this figure be exceeded.

Dispute processes: ADR and the Primary Forms of Decision Making

In this publication, Palmer and Roberts (1998) analyse the psychology of a dispute and the dispute resolution options available to those involved, and the effects that different factors could have on the selected dispute resolution process. This was done by reviewing a number of recognised publications and attempts to balance arguments with these references. There is no mention within Palmer and Roberts (1998) of the adjudication scheme introduced by the *HGCR Act* in 1996, although they do consider arbitration. Felsiner et al. (1980, cited in Palmer and Roberts, 1998) discuss the three states of a dispute, moving from the perceived injurious state (PIE), or naming, to grievance (blaming), where there is an awareness of fault by others, to the remedy required (claiming). This analysis considers the two extremes of dispute remedy: avoidance at the start of the scale, and self-help (Palmer and Roberts, 1998) at the end. An example (if extreme) of self-help, or more accurately self-remedy, is that of a duel. Although construction disputes do not become a physical dual, the animosity that can exist between the parties, once a dispute has reach this stage, can be extreme (Mason and Sharratt, 2013). Between the two states of avoidance and self-help, Palmer and Roberts (1998) identify three main options to achieving resolution: negotiation, mediation (facilitated negotiation), and an umpire (the use of a decision-maker).

Palmer and Roberts (1998, p.25) made a poignant comment on the involvement of the legal profession within a dispute:

> *"Lawyers have through [their] practice achieved over generations a near monopoly over dispute management. The nature of this monopoly is only fully revealed when it is remembered the judicial appointment represents the ultimate career stage for the successful lawyer."*

Palmer and Roberts (1998) also consider the two states of power that may exist – that of the establishment (for example, the judiciary), and that of society (for example, peer pressure). They cite de Sousa Santos (1982):

> *"Bourgeois society is based on a dualistic power conception – two basic modes or forms of power that, though complementary, have been kept separate and even treated as mutually exclusive."*

Fiss (1984, cited in Palmer and Roberts, 1998) argues against the process of settlement, highlighting three perceived disadvantages. Firstly, one party may not have the resources to fully establish the probable or possible outcomes at litigation. Secondly, there may be a financial need for one party to settle promptly to accelerate payment. Thirdly, one party may have a lack of resources to proceed to trial. These considerations demonstrate that Fiss has missed the purpose of ADR.

The intended purpose of mediation (Liebmann, 2000) is to reach a settlement that meets the requirements of both parties. Whether a greater amount of compensation could have been achieved through litigation is not the point. Litigation carries uncertainty and further (not inconsequential) cost, whereas settlement through mediation offers certainty, finality, and a sum that both parties consider acceptable – or they will not settle. Fiss (1984) offered no empirical evidence to substantiate any of the three issues.

However, Fiss (1984, cited in Palmer and Roberts, 1998) stated that his primary objection to settlement, and therefore ADR, is that moving away from litigation and courts would compromise key political and legal values and undermine the principle of case law. However, commentators who support ADR and mediation also acknowledge that disputes that represent significant points of law should proceed to court, if appropriate, rather than be subject to the confidentiality of mediation (Richbell, 2008; Stitt, 2008). With the primary process for resolving construction dispute being

adjudication, also a confidential process, this remains an industry issue, whether adjudication or mediation is selected.

Another potential disadvantage of mediation, raised by Palmer and Roberts (1998), is the lack of formal qualifications required to practise as a mediator. The Civil Mediation Council has addressed this concern by issuing strict requirements for training, qualification, and continuing professional development for accredited mediators, incorporating the guidance under the European Code of Conduct for Mediators. In addition, both parties must agree on the selection of the mediator.

Palmer and Roberts (1998) examined negotiation, mediation, and umpiring in further detail. They cite McEwen and Maiman (1981), who carried out empirical research in the compliance of judgements from the small-claims courts in the state of Maine in the USA, compared with the compliance of settlements under mediation. The research showed that concerning monitory settlement under mediation, 70.6% paid in full and 16.5% paid in part, compared with only 33.8% full payment and 21.1% part-payment under court-imposed sums. In addition, cases tried in court after mediation had a significantly higher payment rate than those that did not. This led McEwen and Maiman to observe that their data strongly supported that mediation was more likely than an imposed decision to lead to compliance with the resolution.

Palmer and Roberts (1998) did not consider the use of co-mediators and the practice of co-mediation in their review of the process. This is an important omission because co-mediation is an extremely useful tool in a large or complex mediation where there are considerable numbers of representatives for both parties, or in multi-party mediation (Stitt, 2004).

Although Palmer and Roberts (1998) provide an overview of the decision-making process of a dispute, they achieve this through large extracts from other publications, rather than new research. There are a number of issues raised within the publication on the use of ADR that have no apparent basis or empirical evidence to support the concerns raised.

As demonstrated above through the reports by Woolf (1996), Jackson (2010), and the DRG (2011), the government clearly supports mediation as the primary dispute resolution process. Through court cases, the judiciary also shows clear support for the process, financially penalising those who proceed to court without undertaking mediation. This, supported by the other published works reviewed above,

demonstrates that mediation should be the first step in most disputes once internal negotiation between the parties has failed.

4.4 Construction mediation

In Chapter 1, the adversarial nature of the construction industry and the existing processes of dispute resolution were concluded. In this chapter, the advantages of the dispute resolution process of mediation and the use of mediation in various sectors have been considered. The conclusions appear to be that the construction industry is adversarial and spends an unreasonably high percentage of turnover on managing disputes. Legislation exists to help simplify the dispute process in the construction industry, but there are issues with the adjudication scheme that this legislation introduced; a more cost-effective and less adversarial process may be beneficial for construction disputes, and mediation is a successful form of dispute resolution, shown to reduce costs and maintain relationships. The conclusion from this could be the hypothesis that mediation could be a solution for the majority of construction disputes, with the option of adjudication should mediation fail to settle the case or if the case is not suitable for mediation; however, there is a fixed mind-set within the construction industry against this change, and there appear to be only low levels of mediation being undertaken in the construction industry.

There is a considerable body of research on mediation as a dispute-resolution process, but there is little research on its use in the construction industry in England. This could be due to a number of reasons, including the confidentiality of the mediation process and the ambivalent industry attitude towards mediation. Consequently, this section reviews the existing theoretical perspectives and empirical knowledge that exists on the subject of mediation in the English construction industry.

The Royal Institution of Chartered Surveyors (RICS) President's Panel of Adjudicators is the most active adjudication nominating body in the UK (Kennedy and Milligan, 2008). RICS Dispute Resolution Services have confirmed that the president made 1,115 appointments in 2008-2009 from the Adjudication Panel, and 827 in 2009-2010. In contrast, the RICS President's Mediation Panel made only 15 appointments in 2008-2009 and seven in 2009-2010. The RICS set up a working party to develop mediation in property and construction and, as part of its remit, the working group was to review these statistics in an attempt gain an understanding of why mediation is so seldom used. Brooker and Wilkinson (2010) confirm that an accurate assessment of the

number of construction mediations being undertaken each year in the UK is difficult to make. However, Brooker and Wilkinson indicate that:

> *"CEDR's Mediation Audit (2007) calculated that 3,400–3,700 mediations take place annually but the data does not demarcate between different sectors. Previously, CEDR reported construction to be 5-8% of their market (CEDR 2003). If this has remained static, it would point towards between 170 and 300 construction mediations taking place annually."*

Other nominating bodies do not publish statistical data on appointments of mediators. Given the relatively low numbers reported for appointment of mediators by the RICS and the CEDR data, this may indicate that the other nominating bodies have a similarly low level of appointments.

4.5 Construction mediation activity in the USA

Empirical research from the USA indicates that mediation could make a useful contribution to construction industry disputes in the UK. Mediation has been promoted actively in the USA as a cost-effective dispute method since the early 1980s (Burger, 1982), and has experienced continued significant growth. This growth is reflected in the American construction industry, which has become one of the main users of mediation. Hensler (2003) reported that following the implementation of court ADR schemes in the USA, it is estimated that nearly all federal courts and over half of state courts have provided access to mediation. As the use of mediation has grown, so have lawyers become more exposed to the process, raising awareness of its benefits. This raised awareness has consequently assisted in greatly reducing the perception in the legal profession that proposing mediation could be interpreted as a sign of weakness (Stipanowich, 1996). Wissler (2004) confirmed that the resistance to mediation by lawyers was primarily due to a lack of understanding and knowledge. From this evidence, it appears that mediation is suitable for construction-dispute resolution. If there is a similar lack of understanding and knowledge in England, then this could be a factor contributing to its low use in the construction industry.

The growth in mediation throughout the USA in general was reflected in increased usage in the USA construction industry. Stipanowich (1996) reiterates that the increased use of mediation by attorneys is demonstrated in a decrease in the negative concerns voiced previously. The research shows that 60% of attorneys had participated in mediation for the first time within the previous two years. The research also stated that 54% of those with an opinion agreed that:

"Standardised construction contracts should require mediation prior to arbitration or litigation of disputes involving large sums of money." Stipanowich (1996, p.91).

In such cases, the majority view is that the potential costs of protracted arbitration or litigation generally outweigh the additional procedural costs and risks associated with mediation.

Thomson (2001) reported that the American Bar Association survey of the US Construction Forum shows members have participated in between 10,000 and 15,000 mediations, and Fullerton (2005, cited in Brooker, 2007) states that a national survey by Deloitte & Touche shows that over 66% of contractors in the USA have used mediation. Mediation is also used in construction disputes in other countries including Honk Kong and China, as reviewed by Brooker and Wilkinson (2010).

4.6 Existing research into the use of mediation in the construction industry in England

In 1999, Nicholas Gould's *Dispute Resolution in the Construction Industry* report reviewed the types of dispute resolution used in the Industry. The report concluded that a "new breed of 'statutory adjudicator' is on the horizon." (Gould, 1999, p.19). The survey was conducted by the University of Westminster, with industry support from solicitors Masons and Nabarro Nathanson. 7,500 questionnaires were sent out and the respondents included both lawyers and non-lawyers. The survey does not give details of the criteria for selecting participants. With regard to mediation, the relevant findings consider the perceptions of dispute resolution, rather than actual mediation statistics. The types of dispute resolution were split into the following headings: negotiation, mediation, expert determination, adjudication, arbitration, and litigation (Gould, 1999). Overall, negotiation was viewed as the most effective method, followed by mediation. Litigation was ranked at the bottom. However, over a quarter of respondents (26%) did not comment on mediation. This suggests that a significant proportion of the industry had no awareness of mediation. Of those who had experience of mediation, 70% reported it as a positive technique. (Gould, 1999).

The research also offered a prediction of the future of construction dispute resolution based on the views of the clients, contractors, and consultants (Gould, 1999). This predicted that at the time of the research, there was likely to be both a significant expected increase in adjudication over the five years following the report and a steady growth in mediation (Gould, 1999). As predicted by Gould, adjudication did grow (Trushell et al., 2012; Milligan and Cattanach, 2014), but mediation did not.

The use of meditation in construction disputes in England

No further research on mediation in construction was published for ten years after Gould's 1999 report. Richbell (2008) details in his publication his own experiences of mediation currently being undertaken in the industry, along with the industry's view of mediation. He utilises the CIF survey of the Irish construction industry (which is not dissimilar in structure to the UK construction industry) carried out in 2006, that suggests that 2% of turnover is spent on managing disputes, with an industry profit margin of only 3%. This demonstrates the importance of a cost-effective dispute resolution methods to the industry. The case studies used by Richbell (2008) include disputes where the parties have spent sums many times the original disputed amount in legal fees, and months, if not years, in the dispute. These are a clear demonstration of cases when mediation (if suitable) would have provided a solution, saving significant amounts of costs and time.

In 2006, the Centre of Construction Law and Dispute Resolution at King's College, London commissioned Gould to report on the current status of mediation in the industry (building on his 1999 report described above). The Gould (2009) report was the conclusion of this research. It also dealt with the effectiveness and cost-savings associated with mediation. The research was divided into two sets of questions: first, a review of the parties who settled their disputes after commencement of proceedings, but before judgement; and second, those parties who progressed all the way to trial (who may or may not have been involved in a mediation). Two survey forms, one for each set of questions, were sent to the three participating Technology and Construction Courts, who issued them to respondents. Approximately 17% of replies were received to Form 1 (Gould, 2009).

Gould's report also includes information on the type of professional qualification held by the mediator. From the first survey – Form 1 – the legal profession (solicitors and barristers) represented 78% of respondents, with only 16% being construction professionals. This is significantly different to the adjudicator statistics, where the predominant profession is quantity surveyors. Form 2 – cases that did not settle at mediation – found that 73% of mediators were from the legal profession, and only 9% were construction professionals. Gould's report is based on those cases that had been referred to the TCC and predominately had legal representatives. The criterion for the selection of participants by Gould in the 1999 report is unstated. It is possible, however, that since two firms of prominent construction industry solicitors are specifically

mentioned in the compilation of the research, the cases reviewed were those that had escalated to the stage of having legal representation. 90% of cases during the period of the survey settled before they reached court (Gould, 2009). Interestingly, even though the dispute was mature and had reached legal representation, this showed that there was still a significant success rate in obtaining settlements without continuing with court proceedings.

In the period between 1999 and 2009, the reports showed that the courts dealt with fewer disputes that relate to changes in the scope of works, project delays, and site conditions than those arising previously. Gould (2009) confirmed that significant cost savings can be made by using mediation through the reduction in legal fees for proceeding to court. The survey also showed that in the cases where mediation did not settle the dispute, it was nevertheless often regarded as beneficial, allowing an element of the dispute to be settled, or developing a greater understanding of the other party's case.

The research by Gould (2009) is restricted to disputes that reached the Technology and Construction Courts. These represent a small number of the disputes that are dealt with in the industry because adjudication has become the primary dispute resolution method for the construction industry since its introduction in 1996. Consequently, Gould's (2009) research offers only limited information about mediation in the industry and does not address the all the issues that are the subject of this new research.

In addition to Gould (2009), a further report was issued, expanding research into the use of mediation in construction. Gould et al. (2010) incorporated Gould (2009) and considered issues such as the timing of instigating mediation. Gould et al. referred to work by Richbell (2009), who stated that the right time is:

> *"when parties and their advisors feel they know sufficient for the risks to be minimal yet have avoided excessive legal costs and management time."*

Gould et al. (2010) referred to Gould (2009), which demonstrated that the majority of successful mediations took place in the early stages of litigation, even though there was a high settlement rate, as demonstrated by the 2009 research, of those that mediated even when they had reached the TCC.

All three of Gould's reports demonstrated that mediation is successful if used on construction disputes in England. It supported early intervention as being the most appropriate for mediation, but also demonstrated that mature disputes (those having

reached the TCC) can also be successfully mediated. The research also showed that there was a high number of legally qualified mediators, with significantly less construction professionals, which was a different pattern to adjudication. It also showed that construction professional mediators had a higher success rate of settling mediation than legal professionals.

Scottish construction lawyers and mediation

Agapiou and Clark (2011) conducted research into the attitudes of Scottish lawyers towards the use of mediation. It acknowledges the limits of the research, in that many disputes proceed without legal involvement, but does identify significant facts concerning the use of mediation. 165 questionnaires were issued, with 50 being returned. The questionnaire was detailed in the questions asked but no explanation is offered about the method used in selecting the questions posed.

Of the lawyers who responded to the questionnaires, 58% had used mediation, with a relatively high level of repeat usage from that group, indicating that "…once exposed to mediation on one occasion they may be likely to return to the process." (Agapiou and Clark, 2011). The rate of settlement was identified as 74%, increasing to 83% for partially settled cases, which is in line with other empirical evidence on mediation settlement (Gould, 2009; Liebmann, 2000).

The research concludes that although some lawyers may recommend mediation to their clients, there is reluctance from the client to engage in the process, and that further research is required.

Construction clients and mediation

The Agapiou and Clark (2012) research followed the 2011 research reviewed above. It was based on questionnaires sent to medium-sized construction companies selected from the Scottish Building Federation, and returns were received from 63 firms. The format and contents of the questionnaire were based on the questionnaires used for the Scottish lawyers' attitude to commercial mediation. In addition to the survey, nine companies unrelated to those who participated in the questionnaire were selected to participate in interviews. These were selected through personal contacts and networking. The report identified that this:

> *"…was a modest study and a first foray... in the area. Further research is required…"* (Agapiou and Clark, 2012, p.6).

Although the research identified that around 80% of the participants had an awareness of mediation, only one-third had direct experience of the process. The majority of those that had used mediation recorded satisfaction with mediation, the mediation process, the cost, and the outcome.

The research identified that there was a strong view by those who had experienced mediation that:

> *"…judge should refer more cases to mediation."* (Agapiou and Clark, 2012, p.19).

As identified previously, in England, the Civil Procedure Rules clearly identify that cases should attempt meditation prior to litigation (Jackson, 2010). In addition, 71% of the survey respondents, supported by the interviewees, stated that there should be a greater inclusion of robust mediation clauses in standard construction contracts, acknowledging that some contracts offer the option of mediation, but few make it compulsory.

With regards to the profession of the mediator, 88% stated that the mediator should be a construction professional, with only 4% considering that lawyers were the best mediators. Kennedy et al. (2010) found that the majority of adjudicators are construction professionals. Gould (2009) showed that the majority of mediators involved with TTC disputes were of a legal background, but also that construction professionals enjoyed a high settlement success rate. This seems to indicate that the profession of the mediator is important.

The survey respondents identified key items that they considered to be barriers to greater use of mediation in construction in Scotland. These included a lack of awareness of mediation, combined with a negative perception of the process (a view that the process constituted an admission of a weak position or an unwillingness to fight a position) both within the industry and with construction lawyers. There was also an incorrect perception that the settlement agreement could not be a legally enforceable agreement.

The factors influencing mediation referral practices and barriers to its adoption

Following on from his Scottish research (2011), Agapiou (2015) looked at construction lawyers in England and Wales and the factors influencing their selection of mediation in a construction dispute. The research reconfirmed that there appear to be barriers preventing the greater use of mediation in construction disputes. It also found that there has been little research into identifying what those barriers are, and referred to

research in the USA by Wissler (2003, cited by Agapiou, 2015) that identified barriers to mediation as including a lack of knowledge and understanding of the mediation process, perception and attitudes, and negative experiences with mediation.

To attempt to understand if these were barriers to lawyers referring disputes to mediation in England and Wales, a survey was undertaken. The survey reaffirmed the low use of mediation.

> *"Nevertheless, less positive is the relatively low proportion of respondents who reported their willingness to mediate a case in more than five cases over the previous two-year period. The results of the survey indicate that only 44 per cent of the respondents mediated in three or more cases and 5 per cent in 11 or more cases."* (Agapiou, 2015, p.237).

The survey showed that construction lawyers did not initiate discussions with their clients either regularly or on a voluntary basis. Of the lawyers who discussed mediation with clients, only 15% said they did this "often" (excluding court direction). Conversely, 48% responded that they "never" or "rarely" discussed mediation with their clients. The survey did find that lawyers with experience of mediation were more likely to recommend its use. In addition to the low use of proposals to use mediation by lawyers, 32% of clients refused to mediate.

With regards to the inclusion of a mediation clause when drafting a contract, the survey discovered that 80% of construction lawyers were reluctant to include a mediation clause in a contract. In addition, 49% stated they would "never" include such a clause, with only 20% confirming they would do so. Interestingly, of those lawyers with greater experience, 32% would "sometimes" include a mediation clause in a construction contract compared to 19% generally, indicating that knowledge increases the support of mediation.

The final significant finding from the research was that 17% of respondents believed that parties would need to spend more time to resolve a dispute through mediation than adjudication. The survey does not indicate what factors influenced this response, but if this information was relayed to their client, then it could have an influence on their decision to mediate. It is unclear from the survey if lawyers believed they would spend more time (and more fees) on mediation than adjudication.

Summary of existing research

Gould's research demonstrates that mediation is successful if used in construction disputes in England. It also confirms that a reduction in costs is obtained by using mediation, a point also supported by Agapiou's research. Agapiou also demonstrated that once exposed to mediation, lawyers in Scotland were likely to reuse the process, as were Scottish contractors. This demonstrates that lack of use in Scotland is partially due to a lack of a real understanding of mediation, with misconceptions such as beliefs that mediation agreements cannot be legally binding, mediation indicates a weak position, or a lack of willingness to fight. Both Gould and Agapiou found that the profession of the mediator is key. Consequently, there is clear evidence that mediation should be used more for construction disputes in England, but that there are barriers preventing its greater use.

4.7 Support for construction mediation in England

As well as direct support from Jackson (2010), mediation has been championed for several years by leading construction professionals as a solution, or a supplementary process, to the cost and time issue of disputes. In his article Transcendental Mediation, Bingham (2009) – both a construction lawyer and a construction professional – describes mediation as a process to be considered. He states:

> *"The mediation tool sits in the toolbox beside the litigation tool, the arbitration tool, the Adjudication tool, the negotiation tool and the poke-your-eyes-out-with-a-bradawl tool"*.

A less colourful view, reflective of a number of construction solicitors, is that of Redmond (2005), who concluded his article with the statement:

> *"But if in 79% of cases it avoids months of lawyering and uncertainty followed by days or weeks of monstrously expensive hearing it must be worth a try. The Department for Constitutional Affairs (DCA) certainly thinks so."*

As an introduction to his article, Redmond quoted statistics available from the DCA:

> "*During the past 12 months, Government Departments and the like have used mediation in 229 cases, achieving settlement in 79% of them, with estimated savings of £14.6m".*

Unfortunately, these statistics are no longer published by the DCA.

4.8 Construction contracts

As identified previously, construction contract clauses appear to be influential concerning the selection of the dispute-resolution process and the selection of adjudication. The construction industry utilises both standard and bespoke forms of construction contracts. The key standard forms – JCT, NEC, FIDIC, and so on – are reviewed below, as concerns their use and inclusion of mediation clauses. Mediation clauses have been introduced into both types of contract with varying degrees of success and intent.

Standard forms of contract

Recent editions of some of the standard forms of contract include an acknowledgement of the mediation process, but none actively encourage the use of mediation as an alternative to adjudication. Adjudication is identified as the primary dispute-resolution process in all the standard forms of contract.

The JCT Standard Forms

The Joint Contracts Tribunal (JCT) offer a suite of standard construction contracts. The Standard Building Contract and the JCT Design and Build Contract (2005) both saw the introduction of a standard Clause 9.1 that suggests that parties consider mediation of disputes, but there is no obligation on the parties so to do. The low amount of mediation currently being undertaken suggests that this clause is not sufficient to persuade stakeholders to move from adjudication to mediation. The JCT Intermediate Building Contract 2005 also contains provisions for the parties to mediate, but again this is without any obligation on the parties to consider mediation as a dispute resolution option. The 2011 revised suite of JCT contracts retains Clause 9.1, but it is amended as:

> *"Subject to Article 7 if a dispute or difference arises under this Contract which cannot be resolved by direct negotiations each party shall give serious consideration to any request by the other to refer the matter to mediation."*

Article 7 states:

> *"If any dispute or difference arises under this contract either party may refer it to adjudication in accordance with Clause 9.2"*

Again, the low current use of mediation indicates that this clause does not persuade the majority of those in a dispute to opt for mediation; the default process still remains adjudication. In addition, the JCT Homebuilders Contract 2005 does not include any

provision for mediation or adjudication and directs disputing parties to go straight to a court. Consequently, the parties are then referred to mediation by the courts, usually after having spent time and money preparing a claim for court.

The NEC Standard Forms

The New Engineering Contract **(**NEC) contract contains detailed provisions for disputes to be referred to adjudication (Clause 9 of the core clauses) and contains a requirement that "the Employer, the Contractor, the Project Manager and the Supervisor shall act as stated in this contract and in a spirit of mutual trust and co-operation" (Clause 10.1 of the core clauses). There is no provision for mediation within the suite of contracts and when I, as part of this thesis, approached the NEC drafting committee concerning the potential for the inclusion of such a clause, the committee stated that:

> *"NEC contracts deliberately do not include the requirement for mediation. The reason is that mediation is an entirely voluntary process; if either party does not want it to reach a conclusion it will not reach one. It is therefore a waste of time and money unless there is willingness on both sides to give it a chance and if they do not a contractual requirement to mediate will be of no use to them. And if they are willing to mediate then they can at any time agree to do so if they wish, without having a contractual provision to do so."* Peter Cousins, NEC Consultant 6th July 2011.

There is clear support in the industry for a more robust contractual clause for mediation. This makes the process more visible and makes the parties aware that mediation is an option. By not including a mediation clause, the NEC is restricting its less informed users (i.e., those with little or no real understanding of mediation, which would appear to be a significant number of people) to adjudication.

International Federation of Consulting Engineers

The International Federation of Consulting Engineers (FIDIC) published their updated FIDIC standard forms of contract in 1999. FIDIC has historically encouraged ADR within their standard forms of contract and the FIDIC White Book contract still refers to mediation. Under previous versions of the FIDIC contracts, a dispute was determined by the engineer within 84 days of a dispute being referred, and then by arbitration rules (Sub-clauses 67.1, 67.3, FIDIC, 4th edition, 1987). Arbitration had to be sought within 70 days of the engineer's decision or after the period for such a decision had expired

(Sub-clause 67.1). The Orange Book contract introduced Dispute Adjudication in the 1995 edition, and the 1999 series of contracts followed a similar dispute resolution system, making use of Dispute Adjudication Boards (Sub-clauses 20.2 and 20.4). There is no provision for mediation in these new standard FIDIC forms of contract. As with the NEC contracts, from existing research and to be verified by this research, the inclusion of a robust mediation clause is important to raise awareness of the process and to encourage dispute resolution away from adjudication as the default process.

Other standard forms of construction contracts

There are a number of other standard forms of construction contract in use, including Procure 21, the CIOB Complex Projects Contract 2013, and the Federation of Master Builders (FBM) home builder contract. This FBM is issued free of charge for use by the FMB and contains a provision for mediation (it is referred to as "conciliation," but the process described is mediation) as an option for dispute resolution (Clause 28.1). Contact with the FMB has confirmed, however, that use of mediation/conciliation is low because most disputes not resolvable by the FMB office (which act as a negotiator on behalf of the builder) are referred to adjudication. The FMB provides their members with an insurance scheme to cover the costs of adjudication. In addition, there are other forms of contract, including:

Bespoke forms of contract

A number of high-profile, bespoke forms of contract have included the use of mediation as the primary dispute resolution mechanism as a standard clause. These have included construction contracts in the construction of the new Hong Kong Airport and the Jubilee Line Rail contract. The Hong Kong Airport core project contained mediation as the primary form of dispute resolution, once direct negotiation had failed. 40% of all disputes were settled by negation with a further 45% were settled during or after mediation (Fung, 2014). This success resulted in the adoption of mediation into the Hong Kong legal system.

4.9 Case law

Earlier in this chapter, the important case of *Dunnett v Railtrack* was referenced with regard to the refusal of one party to countenance mediation and thereby substantially reduce the cost of litigation. A number of cases have recently been through the courts, highlighting the substantial costs that can be incurred by pursuing cases that could

have been settled much more cost-effectively by alternative dispute resolution. The following cases are particularly relevant to this research, demonstrating the high level of costs involved in pursuing cases through litigation, rather than opting for mediation.

Costain Ltd v Charles Haswell & Partners Ltd (2009)

Haswell were engaged by Costain to provide specialist civil engineering advice in relation to a water-treatment works. Haswell advised Costain at the pre-tender stage that standard foundations could be utilised on one section of the site, provided the ground under them was pre-loaded in order to minimise any settlement. Post-tender, Haswell revised their design and stated that piled foundations should be used instead. By that time, Costain had placed the soil on the appropriate area of the site for the pre-loading. Costain claimed for the additional costs and delays arising from this design change.

Costain's initial claim was just over £3.5m. By the time the case reached court, this had been reduced to £1.8m by Costain, but Haswell made no Part 36 counter offer. Both parties agreed to mediation but this was, in the eyes of the judge, unreasonably delayed. In addition, the court found insufficient evidence that particular losses had been incurred or were caused by Haswell's negligent acts. Some of the costs claimed by Costain were reimbursed to Costain by the employer, and the losses were overstated and had been valued incorrectly. As a result, the judge only awarded £168,478.51 to Costain. The court awarded interest on the damages, but Costain was penalised for unreasonable delays in pursuing the claim. Interest was computed over a four-year period, of which the amount recoverable was reduced by 50% for twelve of those months to reflect the delays. Those percentages were then reduced by 10% against Costain and 20% against Haswell, so that they were each entitled to, respectively, 55% and 15% of their costs. The court then netted these off, with the result that Costain was entitled to about £620,000, which represented 38.75% of its estimated total costs. Costain therefore suffered a net loss of about £800,000 by bringing the claim.

Rolf v De Guerin (2011)

This case concerned a contract between the parties to construct a garage at Rolf's property and a loft conversion. The original contract was for £52,000, with 25% paid in advance and the remainder in weekly instalments. The project suffered a number of issues and eventually the contract was repudiated by Rolf in August 2007. Rolf engaged others to complete the works for a claimed cost of £20,000. By the time of

trial, the total claimed by Rolf was £70,000. Prior to trial, Rolf's solicitor made a Part 36 offer to settle of £14,000 plus costs. The offer was open for 21 days, but no response was received. The solicitor chased again and also offered mediation. Just prior to the trial, De Guerin offered to settle on the Part 36 value, but with payment spread over 36 months. Rolf's solicitors replied, increasing the Part 36 to £21,000. This De Guerin rejected, but also stated he was prepared to agree to mediation. The judge awarded in favour of Rolf, but only for £2,500 and no costs. Rolf appealed, but the original award of the judge was upheld. The Court of Appeal decided that the court must, as part of "all the circumstances," consider the conduct of the parties. This included the reasonableness of the parties' response to the call for mediation. In this case, Rolf's offer of round-table discussions was spurned. The reasons advanced by De Guerin at the appeal were, in the opinion of the Court of Appeal, unreasonable, especially because they included his desire to have his "day in court." As such, they ought to bear materially on the outcome of the court's discretion.

The costs involved in this case were extremely disproportionate to the amounts in dispute and the award illustrates the courts' desire to encourage parties to mediate, especially where the costs of resolving the dispute are likely to be disproportionate to the amounts at stake.

PGF II SA v OMFS Company 1 Ltd (2013)

This case was heard in the Technology and Construction Courts. The defendant had made a Part 36 offer some 12 months previously, which the claimant finally accepted one day prior to the start of the trail. Between the Part 36 initially being offered and the start of the trial, both parties had incurred additional costs in the region of £250,000. The judge did not award the additional costs because after the Part 36 offer had been issued, the claimant proposed mediation, which the defendant ignored. The judge ruled that ignoring the offer to mediate equated to a refusal and that relying on a Part 36 offer was not sufficient to demonstrate a willingness to participate in ADR.

As discussed previously, courts strongly support the use of ADR – mediation – as an alternative to litigation, and this includes construction contracts. The substantial costs involved with the above cases indicate the level of the sums of money spent of construction disputes. These cases demonstrate that by using mediation early in a dispute, significant savings can be achieved. They also reaffirm that if mediation is refused prior to court, financial penalties are likely to be imposed.

4.10 Chapter conclusion

The above review of both the theoretical perspectives and published empirical studies related to mediation and the English construction industry indicate that further research is required, both to substantiate views on the adjudication process and the opportunity for an increase in mediation. It is clear from the government reports (Latham, 1994; Egan, 1998; Jackson, 2010) that there is a desire to reduce the cost of disputes generally and in construction in particular. Whitfield (2012, p.16) found that:

> *"It has been estimated that the cost of conflict could represent as much as 20% of the contract value on a contentious project."*

Both Palmer and Roberts (1998) and Stitt (2004) showed that mediation can be beneficial and cost-effective in dispute resolution, and Fullerton (2005, cited in Brooker, 2007) demonstrated that mediation can be a successful solution to reducing costs in construction dispute resolutions in the USA. The judiciary support the use of mediation, as demonstrated by the court cases reviewed. These cases also identify the scale of expenditure in a litigated construction dispute. Gould (2009) confirmed that the limited mediation undertaken in the construction industry in the UK has a significant rate of success, while the limited Agapiou and Clark (2012) research reaffirmed that where there was an awareness of mediation though use, it was supported as a valuable dispute resolution process. The research by Gould (2009, 2010) indicates that the timing of the mediation in the dispute does not have an effect on the rate of successful outcome; however, it does not reveal what would have persuaded the parties to have entered into mediation earlier, rather being directed into mediation by the court.

All these studies and reviews show that mediation has the basic requirements to meet the needs of the first step of formal construction dispute resolution (i.e., where negotiation between the parties has failed to reach resolution), although there is an acknowledgement that mediation is not always appropriate (Brooker, 2009). There is strong support for robust mediation clauses within standard construction contracts in Scotland. The evidence suggests that the current situation with regard to construction contract clauses is not encouraging a significant increase in construction mediation; however, there is evidence that when used in bespoke contracts, it is successful.

Mediation has worked successfully in other areas of disputes and widely in construction in the USA. When used in English construction disputes, it enjoys success. This demonstrates that there is clearly a gap in knowledge as to why it is not more widely used in England and what is needed to ensure greater use. To gather the information

to answer these questions and to substantiate the views on the adjudication process, the various research methods and methodologies available will be considered in the following chapter, along with details and a justification of the selected options.

5 Research methodology

5.1 Introduction

this research seek to address the question as to why is there not greater use of the mediation by the construction industry in England, and what is required to increase this usage? The question is premised on the understanding of the demonstrable advantages mediation has over the other forms of dispute resolution (such as adjudication, arbitration, and litigation) and its success when used in construction disputes.

The following chapter sets out the framework of this research into construction mediation in England through the exploration of paradigms, and reviews the effectiveness of the research methodology applied through the evaluation of the logic of progression. Because it is also important for the research to cover the whole spectrum of the English construction industry, the research requires the collation of data from all parties in the construction industry, including the client, contractors, specialist and sub-contractors, adjudicators, solicitors, and mediators.

5.2 Consideration of research methodologies

As identified previously, this research was driven by my practical experience of the high number of construction disputes, which incurred considerable cost (Richbell, 2008) and time penalties, as well as damaging relationships between parties (Mason and Sharratt, 2013), particularly when they progressed to primarily adjudication and occasionally litigation. Additional experience of mediation, a process that addresses a number of these issues, led to the question of why there is not greater use of mediation in English construction disputes.

The original concept for this research was to issue questionnaires to construction industry stakeholders to ascertain use and attitudes to mediation, but it was recognised that the questions were unclear and required defining. Case studies were selected as a base point, but the limited amount and subjective nature of these data demonstrated that additional research would be required (Creswell, 2015). Interviews were utilised to assist in validating the information collected, but it was recognised that these also produce data that can be subjective (Creswell, 2015). For example, most of the major contractors wish to be regarded as non-adversarial, and the interviews confirmed this (Stitt, 2004; Liebmann, 2000). However, it was important to be able to test claims made about mediation being a preferred solution as fact, rather than as contractors' theoretical position. Consequently, the questionnaires, being completely anonymous, are more likely to contain the true data.

In summary, because the primary data available for this research was from case studies and interviews, supported by theoretical perspectives and the focus groups, the initial data were to be qualitative. However, given the potential for subjectivity from qualitative data, the findings were to be verified by a questionnaire producing mainly quantitative data. This resulted in the research utilising the mixed methods approach (Creswell, 2015).

5.3 Qualitative, quantitative, and mixed methods research

Qualitative research

This qualitative research paradigm for this research is phenomenological (Hoshmand, 1989) because the main focus is on understanding the meaning of the human experience in relation to context. Quantitative research is based on objectivity; no objectivity exists in our everyday reality (Neimeyer and Rensnioff, 1982), especially when this reality is influenced by perceptions of individuals affected by a variety of situations. Neimeyer and Rensnioff (1982, p.76) state that:

> *"…objective study of observable variables is adequate to produce knowledge about the structure of reality*",

whereas qualitative methods relate to an understanding of subjectivity and assume

> *"an appreciation of the subjective reality"* which *"enables a comprehension of human behaviour in greater depth than is possible from the study of objective and quantifiable variables alone".*

This was particularly relevant to this research, which required an analysis of attitudes towards mediation and adjudication including elements of human behaviour that may influence the selection of the dispute resolution process.

Qualitative paradigms are based on the assumption that people create individual meaning structures that determine and explain their behaviour, and the main focus of research should be on understanding or highlighting those meanings (Neimeyer and Rensnioff, 1982). By analysing those meanings, it is intended to be able to reach the essence of the research question, which is that of why mediation is or is not used in the construction industry.

Quantitative research

Quantitative research is more reliable and objective than qualitative research because there is less potential for subjectivity in the data. Creswell (2014) identified two key quantitative designs – those based on experimental research, and those based on survey research. This research required the use of questionnaires to enable verification of the qualitative data by testing a sample of the population (Fowler, 2008, cited in Creswell, 2014).

Quantitative research using a questionnaire has been selected because it provides a quantitative description of the trends, attitudes, or opinions of the respondent group. The respondent group should be a representative sample of a population. The survey should be structured to enable a statistical analysis of the data, while providing information for testing assumptions (Creswell, 2014).

The questionnaire design (as reviewed in further detail below) should clearly identify the purpose of the survey and inform the respondents of the timeline for the survey; for example, the data for this research is cross-sectional (collected at one point in time) – although the survey was open for six months, respondents could only leave one set of data each. The data was collected via an online survey tool (Fowler, 2009, cited in Creswell, 2014). The use of the Internet is accepted as a valid research tool and it made it possible to provide a wide access to a range of stakeholder groups throughout the construction industry (Fink, 2012; Krueger and Casey, 2009, cited in Creswell, 2014).

By circulating the questionnaire through trade organisations and construction professional bodies, a wide distribution was expected. It was important for this research to reach all sections of stakeholders in the construction industry because this is where the gap in knowledge is located. Calculating the population of the study was based on the number of organisations within the construction industry contacted, and is shown in Appendix D of this research.

The most common form of research method in the built environment is quantitative research (Dainty, 2008, cited in Knight and Ruddock, 2008). They found that this represented 71% of the research papers they analysed, with the second-most being the mixed methods approach, at 11%. However, they did challenge pure quantitative research in the built environment, suggesting that no single methodology could provide a complete picture given the diversity of the construction industry, and that the use of a

multi-method (mixed methods) could provide a more holistic result (Dainty, 2008, cited in Knight and Ruddock, 2008).

Mixed-methods research

Creswell (2014, p.14) defined mixed methods as the:

> *"…combining or integration of qualitative and quantitative research and data in a research study."*

He confirmed that qualitative data is generally open-ended, while quantitative data has closed-ended responses, and that mixed method research is the systematic convergence of the two methods, with one set of data used to check the accuracy of the other. Creswell (2014) also defined three primary models of mixed methods research: convergent parallel mixed methods, explanatory sequential mixed method, and exploratory mixed methods. The exploratory mixed methods approach begins with qualitative data, which is then tested by quantitative data, which is the method used in this research, with the qualitative data analysed and used to inform the second, quantitative, phase. Creswell (2014) wrote that the researchers' own personal knowledge, experiences, and skills will influence the choice of approach.

Bryman and Bell (2003) identified three main approaches to multi-strategy research: facilitation, where one research strategy is used to assist research using another approach; complementarity, where two different strategies are employed to join different aspects of a research; and triangulation, where quantitative data is validated with qualitative data. This research is a combination of triangulation and facilitation, which, as defined above, is an exploratory mixed methods approach (Creswell, 2014).

5.4 Justification for mixed methods research

As identified previously, the qualitative case study and interview findings of this research required triangulation through the quantitative findings of the questionnaire, making it a mixed methods research. The literature review undertaken identified a gap in knowledge with regards to the low use of mediation in construction disputes. The source of data available to fill this gap of knowledge was available through existing case studies and interviews. The data from the case studies and interviews was qualitative (Creswell, 2015; Proverbs and Gameson, 2008, cited in Knight and Ruddock, 2008: Dainty, 2008, cited in Knight and Ruddock, 2008). Qualitative data has a propensity to be regarded as subjective and by triangulation through quantitative data – for this research, a questionnaire testing the findings of both the interviews and the

case studies – then the findings can be considered more robust (Creswell, 2015; Dainty, 2008, cited in Knight and Ruddock, 2008; Hoxley, 2008, cited in Knight and Ruddock, 2008). The combination of these two methods is defined as mixed method research, and is recognised as a valid method of research (Lamnek, 2005; Creswell, 2015). Dainty (2008), cited in Knight and Ruddock (2008, pp.10-11), who discuss mixed methods research as multi-strategy research, support it as a method of research into the built environment, stating:

> *"…those engaged in social science research in construction management could usefully embrace multi-strategy… research design in order to better understand the complex network which shape industry practice… Adopting a diversity of approaches would move the construction management research community towards a more balanced methodological outlook…"*

Raelin's model of work-based learning considers the ability to *"…uncover and make explicit to oneself what one has planned, observed, or achieved in practice."* (Raelin, 1997, p.567).

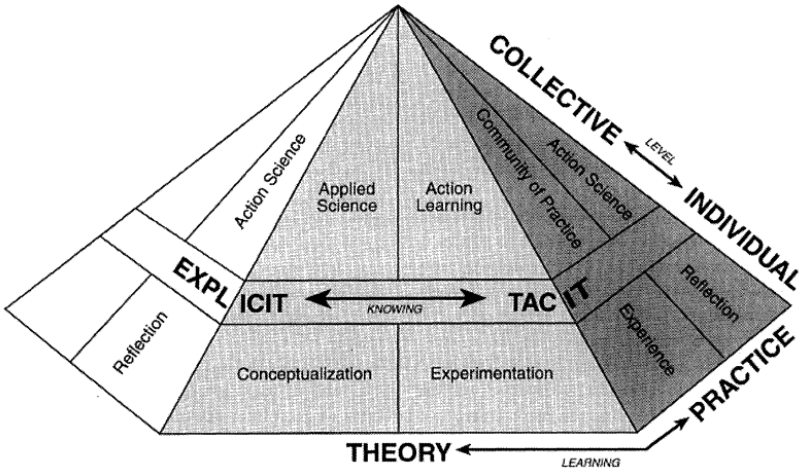

Figure 5-1 Work-based learning model (Raelin, 1997, p.567)

In his model, Raelin (Figure 5-1) shows reflection moving through to conceptualisation and experimentation, and the development of theory to practice. This research uses this structure, taking the assumptions from the analysis of the case studies to inform the interview structure and questions. These results are then used to develop the conceptual model and questionnaire, and finally influencing practice by implementation of the findings.

Research by Agapiou and Clark (2012) utilised both questionnaires and interviews. By combining these two methods and changing the base research group (the Scottish

Building Federation), the results gave a broader range of information. 63 firms responded to the questionnaire (18%), followed by interviews with nine industry experts (Agapiou and Clark, 2012). This, therefore, supports the mixed methods approach as a suitable methodology for this research.

5.5 Research design

The research design is defined as the way in which data is collected and then analysed to answer the research question (Bryman and Bell, 2003). The basis of this research design is based on the following diagram as shown in Figure 5.2. It shows, in chronological order, the relationship between the stages of the whole research and the initial drivers for it from practice.

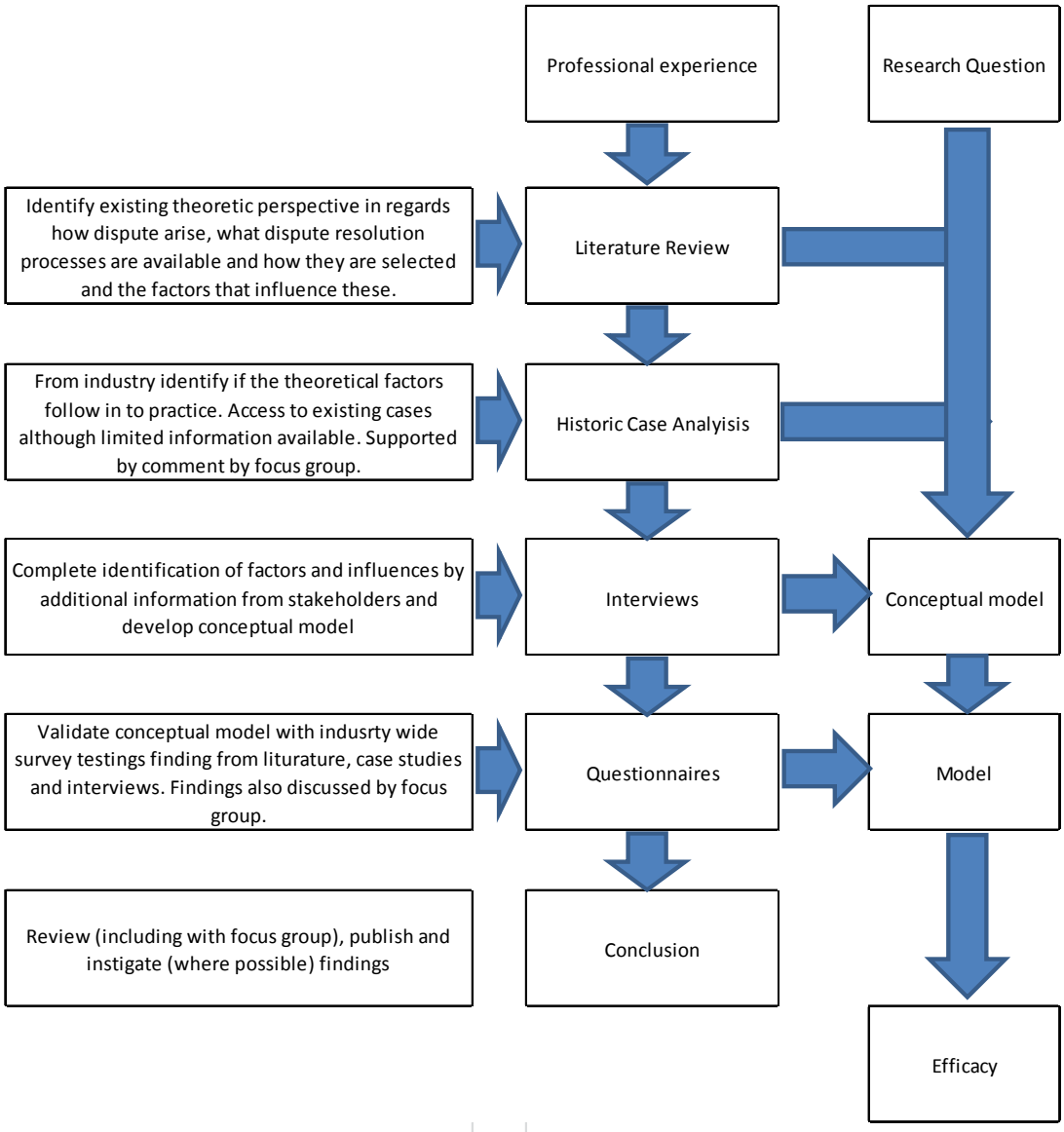

Figure 5-2 Research framework

The literature review identified key factors that influenced the development of a dispute and consequently appeared to influence the selection of dispute resolution process. The test the factors identified from the literature review, an analysis of recent cases was undertaken to provide a base point. As discussed previous the information availble from these cases was limited. To supplement and validate this data (Creswell, 2015), interviews were undertaken. This data was then used to develop a conceptual model as detailed in Chapter 6. Due to the subjective nature of the qualitative data collected from the cases and the interviews (Creswell, 2015) and to validate the conceptual model a cross-industry questionnaire was issued.

Moon (1999, p.5) stated that:

> "*Practitioners need to reflect on an event and on the knowledge-in-action that has contributed to the outcome of their action, but they probably also need to draw on material from elsewhere, which may be a theory, experience, lessons or advice from others."*

Drawing on Moon's ideas and the framework above, this research was based on experience, while a review of the theory has been undertaken. Consequently, the framework was developed further to identify the required research structure. The following diagram (Figure 5.3) shows the basic structure of the research framework, explaining the logic and content of the data collection process:

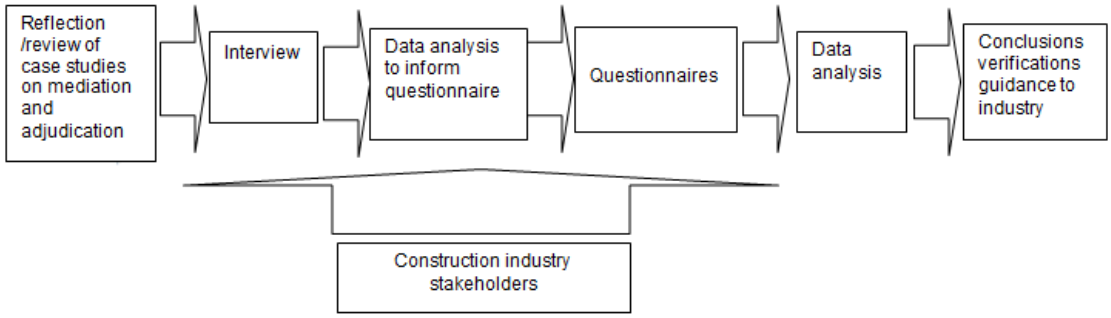

Figure 5-3 – Research approach

Obtaining the correct participants (experience of mediation and/or adjudication and a wide spread of stakeholders by organisation type and size for interviews and the questionnaire) was key to the collection of meaningful data. Different stakeholder groups were approached as detailed below. To access the industry for the case

studies, interviews, and questionnaires, a number of separate approaches are required to cover each of the sectors described above. The subsections below summarise the planned methods.

Major and main contractors

For major and main contractors, commercial directors, or people of similar standing within organisations with an understanding of the disputes experienced by the company were contacted. Given the confidentiality issue, prior notification of the subject and details of the information required were given before the interview to ensure the interviewee had full authority to discuss and disclose the required information. Two of the top five UK contractors participated in the interviews and were sent the questionnaire directly. In addition, professional membership organisations were asked to circulate the questionnaire throughout their membership.

Specialist and sub-contractors

Many specialist and sub-contractors are members of trade organisations. Through these organisations, contact was made with the contractors. These organisations hold conferences and by attending these, it was possible to access a greater number of specialist and sub-contractor companies directly. In addition, the trade organisations were requested to circulate the questionnaire to their members.

Dispute professionals

Experienced adjudicators, mediators, and construction solicitors were approached on an individual basis. Again, there is an issue of confidentiality while discussing both mediation and adjudication. A method for collecting the information required for this research was used while compiling the initial case studies, and this process has been utilised for the main research. This involves neither the disclosure of the names of the parties involved nor details of any scheme or project involved. It is also planned that any amounts of costs and sums awarded would change, but remain proportional. This enables case studies to be compiled and accurate data obtained, while maintaining the confidentiality of the parties and any specific cases. In addition to approaching participants directly, construction professional bodies were asked to circulate the questionnaire throughout their membership.

By approaching the industry through each stakeholder group, the potential for maximum response was optimised. The spread of data gathered by stakeholder group and by method is detailed below in Table 5-1.

Table 5-1 - Questions and methods

Questions on:	**Stakeholders**			**Dispute team**
Construction dispute experience in:	**Major and main contractors**	**Specialist and sub-contractors**	**Clients and professionals**	**Claims professionals**
Adjudication	I, CS, Q	I, CS, Q	I, CS, Q	I, CS, Q
Arbitration and court	Q	Q	Q	Q
Mediation	I, CS, Q	I, CS, Q	I, CS, Q	I, Q
Other	As required	As required	As required	As required
Key: I = Interview, CS = Case studies – both predominately qualitative data Q = Questionnaires to gather quantitative and further qualitative data				

5.6 Validity and reliability of mixed methods research

Qualitative data

The reliability and validity of phenomenological data were consistent with the epistemological viewpoint, which informs the qualitative paradigm. Kvale (1983) observed that what appears to be a methodological weakness when viewed from a quantitative, objective stance can be considered to be a strength from the qualitative, subjective point of view. He stated:

> "*The solution here is not to work towards a technical objectivity in questioning but reflect subjectivity with respect to the question-answer-interaction"* (Kvale, 1983, p.190).

Kvale also observed that arbitrary subjectivity is more of an issue in the analysis of interview data than the interview situation itself. The coding and allocating of data can be independently checked, but the concept of content validity is generally more difficult to apply to phenomenological data. Content validity is often held to mean the extent to which the information gathered accurately represents the subject being investigated. Conversely, in a phenomenological approach, the understanding of the meaning of the variables being investigated actually becomes clear during the analysis and depends

on the meanings that emerge from the data to the interviewer (as detailed above). The validity of such determination of meaning will thus depend on the context. Interviewees may change their opinions while recounting and explaining their experiences (Kvale, 1983). Therefore, an interview with a specific interviewee can never be repeated because the meaning of the subject for the interviewee has changed.

As discussed previously, the validity of the data from case studies can also be viewed as subjective. Creswell (2009) identified validity as a means of checking the accuracy of data by employing other processes to triangulate the findings. Creswell (2009) stated that triangulation of different data sources and different research methods enables the researcher to validate the findings. This research employed interviews and a questionnaire to complete this triangulation.

Quantitative data

The validity of quantitative data is covered by three key items (Creswell, 2014): content validity; predictive or concurrent validity; and construction validity. The latter has become the most important (Humbley and Zumbo, 1996, cited in Creswell, 2014). It is necessary to establish the validity of the scores from surveys and thereby confirm that the instrument – in this research the questionnaire – is suitable. By conducting a pilot test with the survey, I was able to test the results and improve questions' wording, format, and scales (Creswell, 2014).

Mixed methods data

This method relies on valid data from both quantitative and qualitative research, and also on the correct development of the research instrument for the quantitative research, based on the analysis of the qualitative data. In addition, the sample group used for the qualitative research should not be used in the quantitative research because it will result in a duplication of responses (Creswell, 2014).

5.7 Ethical considerations and selection of participants

As identified previously, the data required for the completion of this research has predominately come from completed construction disputes that have utilised either the adjudication or mediation process to reach a resolution. Because both of these processes are predominately confidential, careful consideration is given to the collection and storage of the data gathered. Prior to the commencement of the data collection, ethics approval was sought and obtained from the University Ethical Committee. Copy of the approval is contained in Appendix E. There were separate

ethical considerations pertaining to the qualitative and quantitative research, as well as separation consideration for the participants.

Qualitative research

Case studies and interviews

Data collected from the case studies and the interviews was recorded in a method that ensured it was not traceable to the interviewee or their organisation through the use of a coding system for both the case studies and interviews. Due to the confidential nature of the subject of this research, the written notes made during the interview are also stored using an unidentifiable code. In addition, no organisations or individual participants are identified in the published research. Although the information gathered was not about individuals (Punch, 2005, cited in Creswell, 2014), the same level of care and confidentiality was required (Creswell, 2014).

Focus group

Members of the focus group were referred to only by their initials. Specific projects were not discussed, the primary focus being on the group's opinions on certain elements of the research. All participants received the same introduction form and information as the interviewees. As with all research, it is important to cause no harm to those participating (Cook and Fonow, 1986, cited in Knight and Ruddock, 2008), so anonymity was critical.

Quantitative research

Questionnaires

Because the questionnaires were circulated through professional organisations and trade bodies to companies, organisations, and individuals, there is no record of the potential respondents. The questionnaires were anonymous, but they contained information with regard to the type of company, organisation, or individual because this forms part of the data analysis. Such prior consideration of ethical issues before conducting the survey was critical in the design of the questionnaire (Creswell, 2014).

In addition, the invitation to participate in the questionnaire was circulated to my existing network of contacts. Because this includes a disproportionate level of those involved or potentially involved with construction mediation, certain results from the questionnaire cannot be considered unbiased, as will be discussed later.

Participants

Participants were selected based on their experience and involvement in construction disputes. They were typically mature construction management staff and professionals, owners or directors of construction and construction-related companies, mediators, adjudicators, and solicitors. All participants were informed that participation was voluntary, and that they could withdraw at any time. The purpose of the research and a copy of the subjects to be covered was provided to each participant (and their organisation) prior to the interview. Given their standing in the construction profession and their position within their organisations, they would be aware of the relevant industry terminology and the existing adjudication procedures. It was anticipated that it would be unlikely that there would be any conflict of interest between the opinions of the interviewees and those of their organisations, but they were informed that should this occur, they may withdraw from the interview. Participants were told about the confidentiality of the information provided and that the data source was not traceable.

5.8 Case study research

Following on from the review of the existing theory used to inform this research, a study of construction disputes in which I had recently participated was undertaken. These all resulted in either adjudication or mediation for resolution. This was undertaken by a case study methodology. Case study research was selected for this investigation because, as Robson (1993) argues, it can focus on an empirical investigation around a specific instance to gain an in-depth insight into the dynamics present within a particular setting. This instance can be a person, system, or organisation. The information can be gathered from a number of sources such as mediation and adjudication documentation, where the emphasis is on investigating an event within a particular setting (Fellows and Lui, 2003). They are acknowledged to be useful as exploratory research and to identify issues that merit further investigation (Cohen et al., 2000), and case study research is regarded as particularly suited to construction (Proverbs and Gameson, 2008, cited in Knight and Ruddock, 2008), given the nature of the industry, which consists of many types of organisations and companies. Even Yin (2009), an advocate of case studies, observes that they can be viewed as subjective and lacking in rigour. Consequently, the results from these case studies will be validated by quantitative data from the questionnaire (Mangen, 1999).

The most recent ten mediation and ten adjudication cases that I had been involved in were selected. Choosing the most recent cases ensured objectivity of selection, while

personal involvement ensured a comprehensive knowledge of all details involved. The documents available were case notes for both mediation and adjudication, award notifications for adjudication, and written agreements for mediation. For the purpose of the research, owing to the confidentiality of both the mediation and adjudication processes, an approximation of the facts gathered concerning the values, time, and issues of the dispute was sufficient to inform the interview questions and the questionnaire, and not breach the confidentiality of the parties. When designing a case study, time should be considered, and if the information is a completed event or an evolving action, "determining [whether to perform] a longitudinal or cross-sectional study" (Proverbs and Gameson, 2008, cited in Knight and Ruddock, 2008, p.100) would be applicable. The case study data for this research were collected and analysed over a twelve-month period, but are based on historical, completed events.

In order to ensure relevance, the most recent ten case studies available to me were selected from both mediation and adjudication, with the intention that if no patterns or reoccurring themes became apparent in this number, then they would be increased by an additional five of both until patterns and themes became clear (Yin, 2003). As discussed previously, the confidential nature of both these processes restricts the selection list to those in which I have participated as a mediator or those in which I was involved with one party in the adjudication. The process of analysis of these case studies was undertaken by coding themes in the documents using a strategy based around theoretical propositions and pattern matching logic (Yin, 2014).

5.9 Interview research

The use of interviews in this research is to verify the assumptions arising from the case studies. Phenomenological interview data is normally data gathered from past events, and the interviewee recalls the data in response to the researcher's questions. Unlike traditional experimental methods of research, based on theory testing and verification, issues relating to personal experience are more important in alternative research paradigms (Hoshmand, 1989). Phenomenology views the main characteristic of an interview as a meaningful conversation between interviewee and researcher, enabling disclosure of the data required (Mishler, 1986). This is the case in this research, with the interviewees' existing experiences being key to confirming and expanding the findings from the case studies.

The design of the interview followed the information obtained from the case studies that have been experienced at first hand; therefore, it is predominately a structured

interview, with mainly closed questions specifically targeting the issue of mediation use. It was designed to take less than one hour to ensure the interviewee remained fully engaged with the process during the interview. Open questions were included to obtain feedback on the opinions of the interviewees on the items discussed. The questions included in the interview, detailed in Chapter 7, follow the main type of question structure, as identified by Kvale (1996).

Given the nature of phenomenological interview data, suspicions may arise about the integrity of those data, and it is important that a planned format is followed to analyse the information collected. This research followed the process identified by Hycner (1985) by transcribing the interview, followed by bracketing and phenomenological reduction. To ensure the key points identified following the analyses are valid, a summary was sent to the interviewees for review (Hycner, 1985).

The interviews address a wide variety of individuals involved in a construction project, including the client, major contractors, main contractors, specialists, contractors, sub-contractors, architects, engineers, surveyors, and others. Where possible, face-to-face interviews were chosen, as opposed to telephone interviews. This was to achieve a more holistic understanding of the various responses, including noting visual clues. However, the tone of address and the overall setting and appearance of each interview were kept consistent and neutral to maximise data quality. The success of the interview, measured by the quality of the data collected, is greatly dependant on the abilities of the interviewer (Patton, 1990, cited in Knight and Ruddock, 2008).

The intention was to interview a number of companies and individuals from a broad cross-section of the industry. Given the confidentiality of the information to be gathered, careful selection of the interviewees representing large companies was required. Concerning major and main contractors, the commercial, legacy or legal directors, and company solicitors were approached. This was to ensure they had as much knowledge as possible about the organisations' involvement with mediation and adjudication, the attitudes of the organisations towards dispute resolution, and specific company policies. Key construction adjudicators, solicitors, and mediators were also approached on an individual basis. For specialist and sub-contractors, the interviewee was the business owner or manager – again to ensure they had sufficient knowledge about mediation and adjudication. Interviewees were given prior notification to ensure they had the full authority to discuss and disclose the required information.

Initially, a group of ten interviewees was selected, consisting of two from the client/employer side of the industry, including one government authority; two from the top five major contractors; one adjudicator; one construction solicitor; two regional contractors; and two specialist sub-contractors. The selection of different-sized organisations was considered important because attitudes to money, costs, relationships, and so on may vary, depending on the size and structure of an organisation. The sample group size was determined by information redundancy – when new interviewees no longer add new categories of information of importance to the research, and are following the trends of existing data (Haigh, 2008, cited in Knight and Ruddock, 2008) – which was achieved within the ten initial interviews.

The interview questions for the interviews were structured around the findings from both the literature review and the case studies. The questions focused on the quantity of construction disputes the interviewee and their company have been involved in, the balance between the numbers adjudicated or mediated, and the outcome. Discussions concerning the satisfactory nature of the results and perception of the processes involved were also included.

With a qualitative research interview, it is important to understand the process of organising and completing the interview. King (2004, cited in Knight and Ruddock, 2008) identified these as consisting of four stages: defining the question, including the ways interviewees react and describe the events they are discussing; forming an interview guide, including the authority to discuss these confidential case studies and process experiences in detail; recruiting the correct participants; and finally, the housekeeping of the interview itself and the analysis of the collected data. Kvale (1996, p.45) defines qualitative research interviews as:

> "*attempts to understand the world from the subjects' point of view, to unfold the meaning of peoples experiences".*

For this research the questions were defined from literature and case studies; the questions were issued prior to the interview; the participants were selected as identified previously; and the data was collected and anonymised as detailed in the ethics process. Data analysis is discussed later.

5.10 Questionnaire research

Hoxley, 2008, cited in Knight and Ruddock (2008) consider a questionnaire to be a research tool intended to measure a phenomenon that is the objective of the research.

The phenomenon to be measured will often dictate if the survey is descriptive or analytical (Oppenheim, 1992). The use of questionnaires in this research was to gather data to test and validate the conceptual model developed from the literature review, the case studies, and the interviews.

The information and data for this research came from a cross-section of stakeholders in the English construction industry, and is related primarily to experiences, perception, and the use of adjudication and mediation in the resolution of construction disputes. Because these processes are predominately confidential, careful consideration was given to both the type of methodologies available for gathering the data, and maintaining the confidentiality of the information provided by the participants. In order to achieve this, all questions and clarifications were aimed at tackling the problem of mediation as a conceptual framework of investigation, with no weight on the specifics of each case. This was achieved simply by not asking for any specific information that could give away the identity of the project or the persons and organisations involved. The questions only dealt with the reasons why mediation was used or not, views on adjudication, the degree of its effectiveness, the possibility for further use in future disputes, and testing existing knowledge of the mediation process.

The researcher aimed to obtain as wide a cross-section of construction stakeholder participant as possible. The questionnaire was circulated to main and major contractors, specialist and sub-contractors, consultants, and those involved with the resolution of construction disputes through construction professional organisations and construction trade bodies, and through my network of contacts in the industry.

Because the questionnaire was designed to test existing data and theory, the majority of questions were closed, testing the industry on the facts discovered through the interviews and case studies. Given the nature of the construction industry, the questionnaires were designed to be simple, quick, and easy to complete. The questions needed to be in plain English, well-structured and concise. To achieve unbiased responses, the questions also needed to be objective. A pilot study was performed by ten stakeholders to test the design of the questionnaire, given that as Hoxley, 2008, cited in Knight and Ruddock (2008) state, the key to successful use of a questionnaire is the design. As discussed earlier, concerning the ethical factor, no specific information was asked that would give away the identity of the project or the individuals involved in order to ensure confidentiality.

Because a number of the questions used in the questionnaire for this research were closed and were intended to measure attitude, an attitude scale was used (Likert, 1932). This scale utilises declarative statements and offers a range of responses, ranging from “strongly agree” to “strongly disagree.” Given the nature and relationship between the questions posed, the data generated from these scales will be ordinal.

5.11 Focus groups

Focus groups were introduced to validate anecdotal comment and gain feedback of key issues. The primary group consisted of six members, which Morgan (1998a, cited in Bryman and Bell, 2011) and Blackburn and Stokes (2000, cited in Bryman and Bell, 2011) consider being a sufficient number. The participants were selected by their professional standing within the construction disputes sector, most being expert witnesses in their discipline. The meetings were held over the telephone as a conference call to ensure full attendance – attendance often being an issue with focus groups (Bryman and Bell, 2011). Discussion points were introduced to each meeting, with notes being taken of the key points to arise from each discussion. Copies of these transcripts are in Appendix C.

5.12 Data analysis

There are three sets of data collected from this research: two quantitative (gathered from interviews and case studies), and one qualitative (from the questionnaires). This means that there were several types of data to be analysed and then compared.

With regards to the qualitative interview data, the first necessary action is to convert the notes taken in the interview to a standard format. It is important that the method of data analysis is considered prior to the collection of information from the interview; the method selected has a significant impact on how the raw data should be collected. Due to the nature of the information gathered from this questionnaire, the factor analysis used in this research is confirmatory. The following diagram (Figure 5-4) shows the data collected under this research and the related analysis methods.

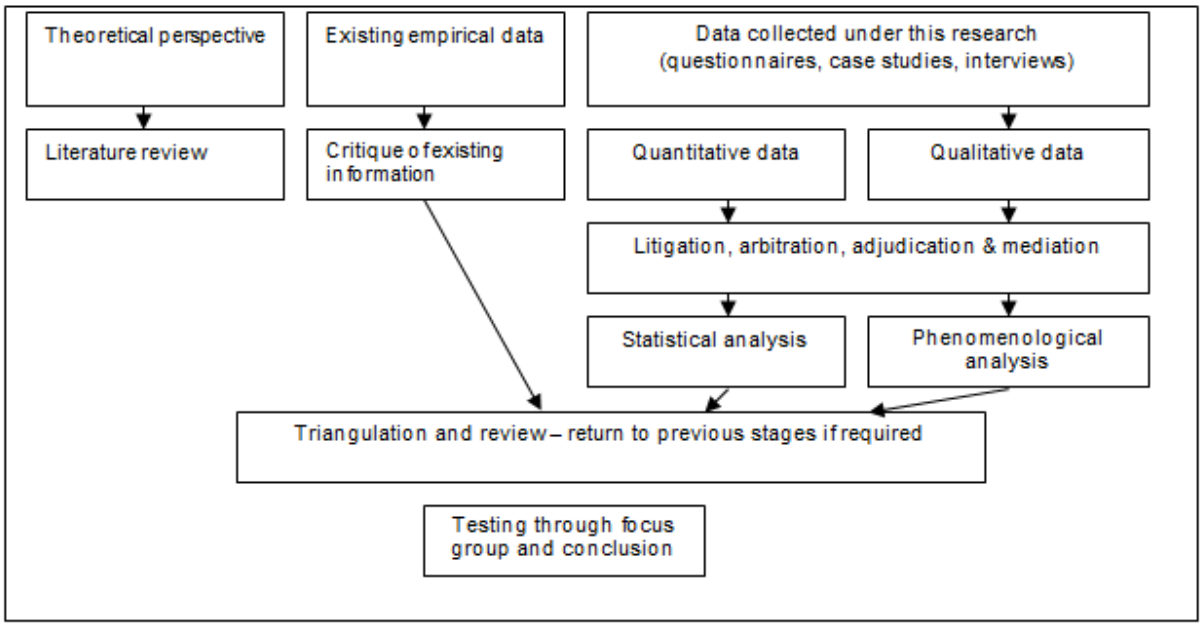

Figure 5-4 Data collection and analysis

Case study analytical strategy

Yin (2003, cited in Knight and Ruddock, 2008) observed that it is important to develop an analytical strategy towards preparing and conducting the analysis of case study data before any data is collected, and to concentrate on the original objective of the research to formulate the questions to be answered, which then helps guide and structure the case study analysis. This strategy was adopted for this research, with key questions identified prior to commencement. The key areas to be identified were: the parties to the dispute; the main item of dispute; issues that contributed to the escalation of the dispute; an overview of cost and time (where available); outcome/award/agreement; ongoing relationships between the parties; reason for selection of dispute resolution method; suitability for mediation/adjudication and factors; timing of mediation; had either party mediated previously (a question posed at the start of each mediation to gain each party's understanding of the process); and, an opportunity to discuss any other key issues identified.

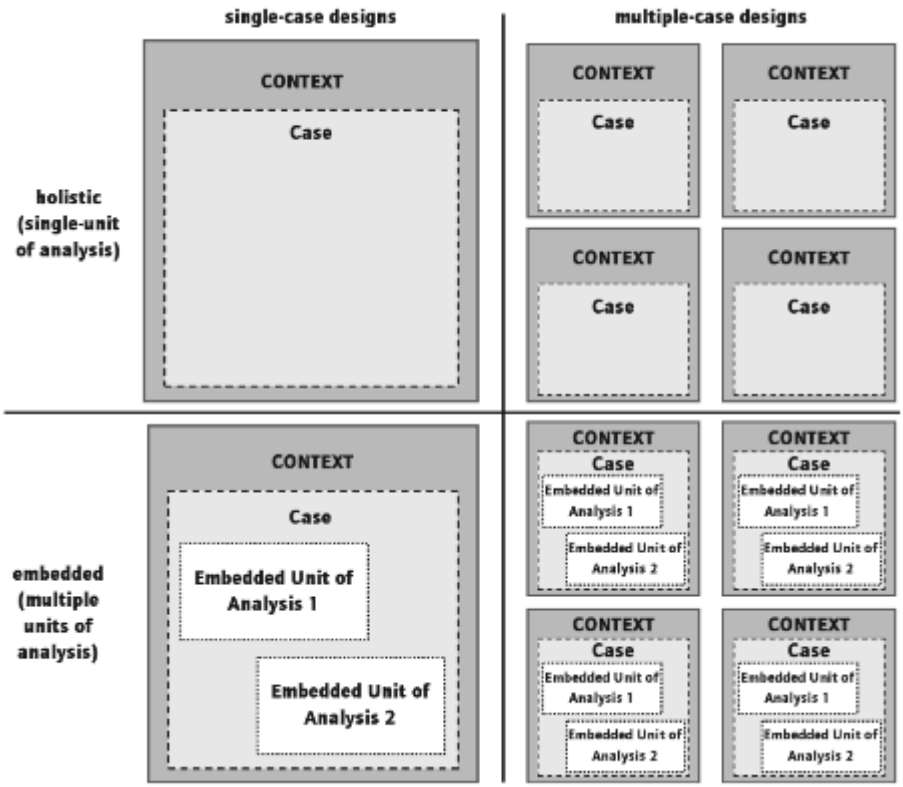

Figure 5-5: Basic types of design for case studies (Yin, 2009, Figure 2.4, p.46)

The documents were therefore coded using a strategy based around a theoretical proposition and pattern matching logic (Yin, 2014) and by using embedded units of analysis, as detailed in Figure 5.5 (Yin, 2009). The findings are reviewed in Chapter 6.

Interview data

Jensen and Jankowski (1991) consider that interviews are a useful tool in the process of gathering data on a subject that can then lead to further research, and, according to Hoshmand (1989), enable issues relating to personal experience to be analysed. Part of this research into construction mediation relies on interviews to gather the key data on the experiences of stakeholders in the construction industry with the most common forms of dispute resolution; adjudication, mediation, courts, and other forms of dispute settlement. Once the interviews were completed, bracketing and phenomenological reduction was required to identify the prominent issues raised. The further research, or verification, into the information collected was be completed by questionnaires.

The interview questions were predominately closed, addressing the following issues; type of organisation and the role of the interviewee; is the construction industry

adversarial?; extent of use of mediation and adjudication, if records available; most used – mediation or adjudication; opinion and any perceived issues with adjudication; opinion of mediation, success rate, and barriers to greater use; courts impose penalties for not using ADR prior to court – should this apply to adjudication; opinion on mediation panels; and open discussion on mediation in construction generally. The results are reviewed in Chapter 6.

Questionnaire data

The analysis of the quantitative data collected from the questionnaire was based on descriptive statistics due to the exploratory nature of the research. The data have been processed and analysed using SPSS software (Coates, 2012), and are detailed in Chapter 7.

5.13 Chapter summary

This chapter has identified the methodology for collecting information to answer the research question on the use of mediation in construction disputes in the UK. It considers the research paradigms that exist and concludes that the characteristics of this research are set in a phenomenological paradigm of the real-life contemporary context of dispute resolution.

The information gathered concentrated on industry experience of adjudication and mediation. Because the initial data collected through case studies and interviews was quantitative, additional data was required to triangulate the findings, leading to the research following a mixed methods paradigm. The chapter has considered the advantages and disadvantages of this research method and its use in similar research. Ethical aspects have been discussed, along with issues of the validity and reliability of such a methodological approach. The next chapter analysis the quantitative data from the qualitative research and develops a conceptual model around the factors that affect the selection of dispute resolution process for the construction industry in England.

6 Case studies, interviews and the development of the conceptual model

6.1 Introduction

This chapter develops from both the case for alternative dispute resolution discussed in Chapter 1, the causes of disputes identified in Chapter 2, and the practical implications of mediation to the construction industry analysed in Chapters 3 and 4. It looks at the elements that contribute to a dispute and how they interact, and also collates with the findings from the case studies and interviews to develop a conceptual model that establishes the relevant interrelationships, the effect this has on a potential dispute, and the resultant course of action to resolve the dispute. In the first part of the chapter, a comprehensive review of the literature is conducted to identify the various factors that lead to disputes. Although this was, to an extent, affected by a limited body of knowledge for England-specific cases, studies that have discussed disputes from a global perspective were used to accomplish the task. The second part of the chapter uses evidence from case study research to evaluate the factors.

6.2 Identification of the factors

Following on from the theoretical review in Chapter 2 and 3, there are key factors that influence that development of a dispute. Through a critical review of the existing literature, these have been identified as stakeholders, project structure, construction project, and the project itself. Each of these is examined further below, including the consideration of the limits of knowledge available through the existing literature.

Construction stakeholders and their contribution to disputes

As identified in Chapter 2, it is widely recognised that a disparity of knowledge of the dispute processes available between the disputing parties (stakeholders) plays a major role in in the extent of the dispute and the direction taken to resolve it (Cheung and Pang, 2013; Murdoch and Hughes, 2007; Lowsley and Linnet, 2006). Stakeholders consist of a number of keys groups (Murdoch and Hughes, 2007); clients; construction professionals (including designers, surveyors, claims surveyors, and construction solicitors); main contractors (including major contractors); and sub-contractors (including sub-sub-contractors, specialists, suppliers, and others), with each group having a varying influence on a dispute. The existing studies by Murdoch and Hughes (2007), Lowsley and Linnet (2006), Cheung and Pang (2013), Trushell et al. (2012), Kennedy et al. (2010) and so on do not explore the relationship between these groups or why any of the groups have a lesser or greater influence on the escalation of a

dispute or on the selection of the dispute resolution process. The different stakeholder groups, with their varied understanding and preferences, may be influential on the dispute resolution process selected, and this will be examined in this research. It is important to understand this disparity between the stakeholder groups because certain groups represent the majority of those involved in disputes (main contractors, sub-contractors, and clients). Another of the stakeholder groups – construction professionals/consultants – encompasses varied roles (including supporting claims and disputes) and as such, their interest could be influenced by a number of factors, including their professional background, their position in a dispute, which stakeholder group they are working for, and their own interest.

There appears to be no published data available on how different professionals within the industry influence the development of a dispute, but from my experience and from the focus group, it is evident that the different roles can affect both the escalation of the dispute and the dispute resolution selected. For example, the focus group commented that a project manager is more likely to be focused on the completion of the project on time with good quality, avoiding conflict to ensure working relationships are maintained. However, the quantity surveyor is focused on the financial side of the project and can be in conflict with his or her own project manager, refusing to consider additional costs put by sub-contractors, which can then lead to disputes. Again from the focus group, industry experience indicates that the architect is generally also keen to maintain relationships, particularity with the client. A construction claims professional is typically a quantity surveyor, with project management support for programme analysis, and construction lawyers.

Within a main contractor, the quantity survey is responsible for the financial delivery of the project. As identified previously, the construction industry operates on very low profit margins and cash flow is critical. It is therefore the quantity surveyors' role to ensure that the maximum profit is obtained on the project and that cash flow is positive. This can lead to disputes because the quantity surveyor will try and reduce the amount paid to the sub-contractor and maximise the amount claimed from the client. Within a smaller organisation – a small contractor or a sub-contractor – cash flow and profitability become even more critical and may even be fundamental to the survival of a small business. Adjudication offers a 28-day dispute resolution process, making it appealing where cash flow is important, and will be detailed in the construction contract. With regards to the client, the quantity surveyor (either directly employed by the client or through an external consultant) will be responsible for ensuring the project

is delivered within the client's budget. This can result in disputes arising if the main contractor claims for works that exceed the original budget that the quantity surveyor believes should have been included.

Consultants/construction professionals may have their own agenda and interest in a dispute and its development. Construction lawyers, claims surveyors, and so on exist because of the possibility of the escalation of a dispute. Professional organisations such as the RICS, the CIOB, and the RIBA all have dispute resolution panels which, for a fee, will select an arbitrator, adjudicator, mediator, and so on. Currently, there appears to be no published data on the fee income generated for these parties but in my own personal experience, it can be a profitable sector in which to be engaged.

Construction contracts

Construction contracts are identified as one of the factors that have a major influence in dispute formation and although studies by Murdoch and Hughes (2007), Fenn et al. (1997), Adriaanse (2007), Cheung and Pang (2013), (Knowles, 2012), Uff (2005), Whifield (2012), and Gould (2012) confirm that contacts can lead to disputes, they do not identify if the contracts influence the selection of the dispute resolution method. The construction industry in England uses a number of standard forms of construction contracts – developed by respective professional bodies in accordance with the then-*HGCR Act 1996* (more recently, the *LDEDC Act 2015*). In addition to contributing to the development of a dispute, they also appear to influence the selection of the dispute resolution process. This selection is also influenced by statute (*HGCR Act*) and judicial support.

As evidenced in Chapter 4, the guidance from English courts is for parties to attempt to resolve disputes with mediation prior to attending court (Jackson, 2010). This includes courts imposing financial penalties for not attempting mediation prior to litigation. There is no such guidance with regards to adjudication, which is the primary dispute resolution process for construction disputes.

Project structure

As discussed previously, there are a number of structures that can exist in a project, along with the variety of contractual relationships that can exist between parties. However, the existing literature, including studies by Wong and Cheah (2004), Bennett (1991), Murdoch and Hughes (2007), Birkby (2012), and Lonsdale (2005), has found that the complex nature of the contractual structure between the stakeholders leads to

disputes. What they do not identify is whether these structures influence the selection of the dispute resolution process. The relationships between the parties forming the structure can be key to dispute resolution, when the use of adjudication is seen to be detrimental to these relationships. If the project has a partnering structure, often with a long-term framework agreement in place, the parties will not want to damage those relationships, but the value of the dispute may challenge that ethos.

The project

The nature of project may give rise to disputes, particularly where the project is on a difficult site, because a challenging building programme has a multitude of clients and is subject to a restrictive budget. If construction works commence prior to full design (as a requirement of the project), then this also creates the potential for disputes. Unknowns and the allocation of risk can also influence their development. Studies by Hughes and Barber (1992), Cheung and Pang (2013), Rooke et al. (2004), Murdoch and Hughes (2007), Uff (2005), Kennedy et al. (2010), Sergeant and Wieliczko (2014), Hibberd (1987), Cooke and Williams (2013), Keane and Caletka (2008), Lowsely and Linnet (2006), and Pickavance et al. (2010) confirm that the nature of the project can lead to disputes but none of these (with the exception of Murdoch and Hughes) identifies what influences the selection of dispute resolution process. Murdoch and Hughes (2007) identify that the introduction of a project dispute resolution board can be an effective method of processing disputes. This process often involves senior management negotiation, mediation, and then adjudication.

Links between key elements

The analysis of the literature review not only identified that there are key elements to a dispute, but that there are various links between these elements which can also influence the development of a dispute and the form of dispute resolution method selected.

From Chapter 2, six prominent links appear to be influential in both the dispute escalation and selection of dispute method. These are: timeline; characteristics; relationships; terms; influence; and attitudes.

Timeline of a dispute

In Chapter 2, a simple overview of the timeline of a dispute was discussed (Fenn et al., 1997), but many factors may influence the development of a dispute. Figure 6-2 below

attempts to summarise the factors and choices that may influence the growth and life of a dispute.

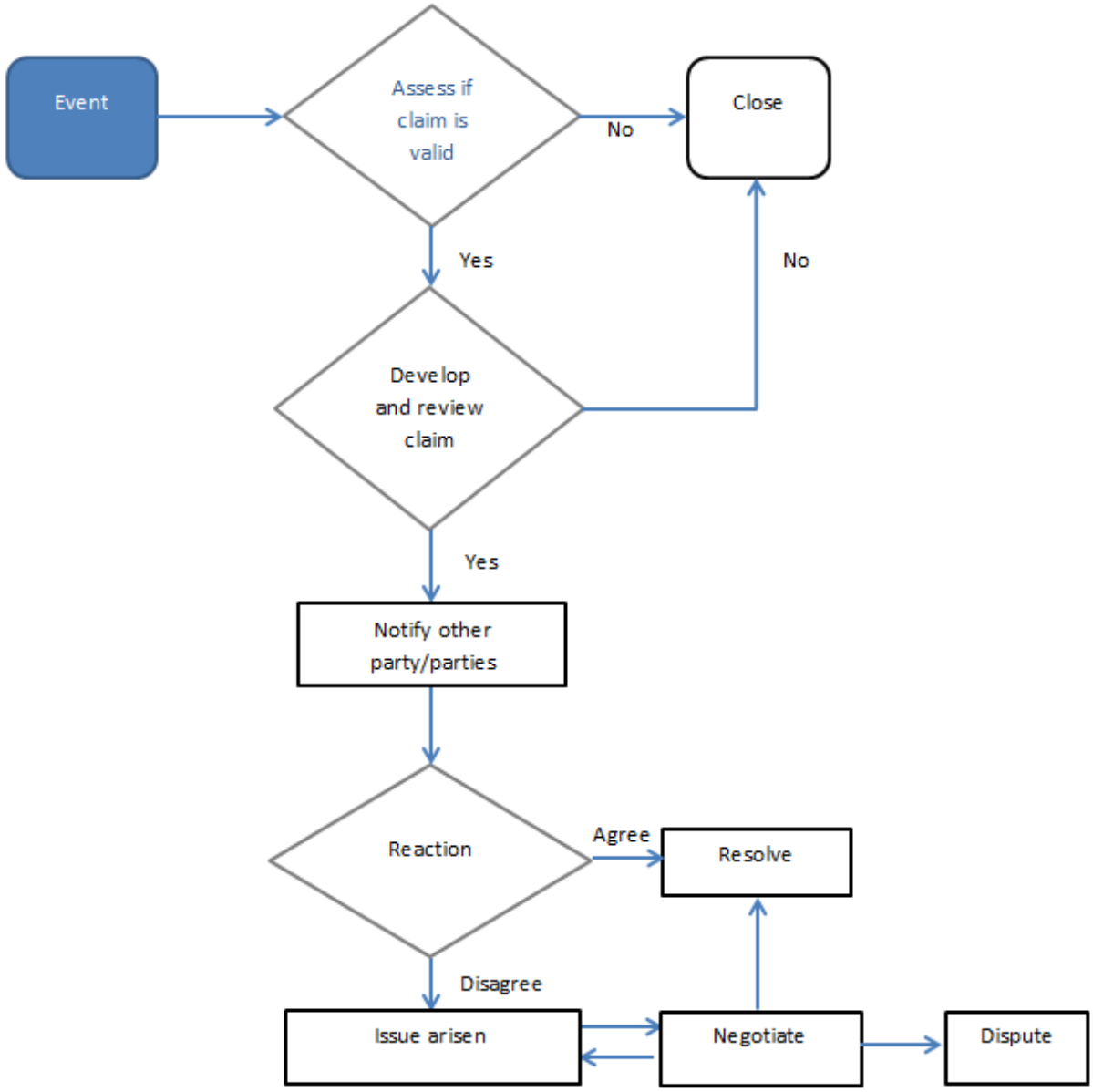

Figure 6-1 - The development of a dispute

This development of a dispute will be influenced by the various factors discussed in Chapter 2. Because each event is dependent on many factors, the outcome and the journey to that outcome can also vary. This dispute development can be constructed into a more concise timeline, as shown below in Figure 6.3.

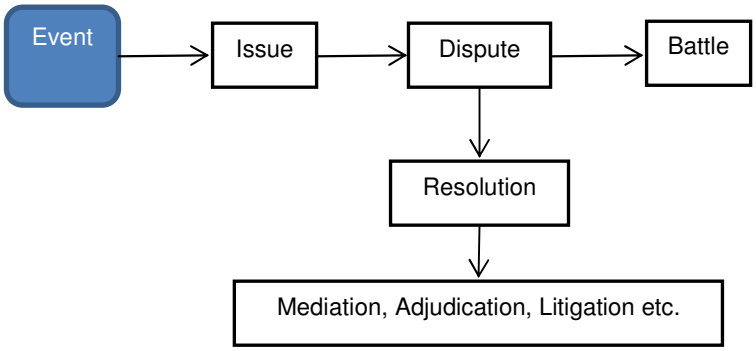

Figure 6-2 - Concise dispute timeline

From existing research (Gould, 2009) and the case studies in the research, it can be seen that mediation is successful at reaching an agreement, no matter what stage the dispute has developed to – with the mediation of cases in Gould's research being commenced with court dates set. As the case studies and interviews show, the benefit of earlier mediation reduces the costs incurred and time wasted in preparing the claim.

Characteristics

The key factors are also linked by a number of characteristics including the type and allocation of risk, the type of project finance, and the cost of funding (Whitfield, 2012; Trushell et al., 2012; Cheung and Pang, 2013). As identified, the allocation of ownership of a risk may cause or give opportunity for a dispute to arise. The type of financing may influence the payment procedure, introducing issues that can arise around the agreement of completion of milestones for payment, extent of works completed, and other factors, all of which can also lead to disputes (Trushell et al., 2012).

Relationships

As discussed in Chapter 2, the type of contract can be influenced by existing relationships, which can include partnering (either formal or informal), historical, and financial arrangements. These relationships can affect the form of contract the project is engaged under, as well as repeat project work where a framework agreement exists. It has been identified through existing research, in conjunction with case studies of this research, that adjudication can be detrimental to relationships. However, although these relationships are important, the lack of true knowledge of mediation (which has been demonstrated to maintain relationships) results in most disputes still being referred to adjudication.

Terms

The specific terms contained within the contract may influence the dispute resolution method selected. For example, both the case studies and interviews highlighted that adjudication was often the first route for a construction dispute because the process is clearly defined in the standard forms of construction contracts such as the JCT11, the NEC3, FIDIC, PPC2000 and so on, and is a right of dispute resolution for a construction contract by statute, as identified in Chapter 1. In addition, as discussed previously, the actual terms of the construction contract may cause or give opportunity for a dispute to arise.

Influence

The specifics of a project can and often do influence the form of contract and construction procurement route selected for a project. These can include the physical location, the existing use of the site, the maturity of the design, and the phasing of programme delivery. Murdoch and Hughes (2007) found that the selection of contract and procurement route are influenced by many different variables. They also wrote that because each contract and project is different, each procurement route tends to differ, even if only slightly. Murdoch and Hughes (2007) confirmed that the financing arrangements for projects cause issues.

Attitudes

The attitudes of the stakeholders can heavily influence the structure and affect the development for a dispute and the selection of the dispute resolution process adopted. As discussed in Chapter 2, examples of this include the opportunist approach to bidding projects, where claims are identified at the tender stage and used to submit lower bids in an attempt to secure the work and recover the addition costs and/or time through a claim on the contract, through to those projects that are partnered and all stakeholder are proactive in reducing the number of claims, resolving them through negotiation within the contract team.

6.3 Analysis of key factors

To understand the relationship between these key factors, develop them further, and understand the effect this has on the selection of the dispute resolution process, initial research was undertaken using case studies and interviews. The case studies were from both adjudication and mediation and across a range of stakeholders. The interviewees were selected to ensure a diverse group of stakeholders that would have

knowledge of a range of construction project types to ensure comprehensive data was collected.

6.4 Case study research

Given the limited data available from the cases, the case study research developed towards a case analysis rather than traditional case study research (Proverbs and Gameson, 2008, cited in Knight and Ruddock, 2008). The case studies were first split into two groups: those that had been adjudicated, and those that had been mediated. The key elements were then identified and grouped together, leading to ten primary themes. These were:

- The parties to the dispute
- The main item of the dispute
- Issues that contributed to the escalation of the dispute
- Overview of cost and time (where available)
- Outcome/award/agreement
- Ongoing relationships between the parties
- Reason for selection of dispute resolution method
- Suitability for mediation/adjudication and factors
- Timing of mediation
- Had either party mediated previously (a question posed at the start of each mediation to gain each party's understanding of the process)

In addition, "any other key issues" were identified.

Case studies: adjudication

The ten most recent adjudication cases were selected for analysis. Table 6-1 shows these cases, along with the main item of the dispute and the key issues that led to its escalation. As the table shows, of the ten cases, eight were between a main contractor and a sub-contractor and two were between a client and a main contractor, which would appear to be fairly representative of adjudication in the construction industry generally (Trushell et al., 2012; Milligan and Cattanach, 2014). Previous studies, including Trushell et al. (2012) and Milligan and Cattanach (2014), have not explained the reasons for the dominance of the contractor-sub-contract dispute. However, by the very nature of the construction project structure, the greatest number of individual contracts generally lies between these two groups. For example, a project will generally have one client, who may have one contract with the main contractor and several

contracts with other construction professionals (such as designers). However, the main contractor could have hundreds of sub-contracts with trade sub-contractors. This suggests that these contractual relationships (and the opportunistic behaviours evident from experience that these relationships allow) do influence the number of disputes in a project. This is an important aspect of the conceptual model and will be investigated to establish how behaviours and attitudes inform the decision to use mediation.

Table 6-1: Adjudication case studies - 1: Parties to the dispute; the main item of the dispute; issues that contributed to the dispute/cost of the dispute; timing of mediation.

Case number	Parties to the dispute	The main item of the dispute	Issues that contributed to the escalation/cost of the dispute
1	Main contractor and sub-contractor	Contract sum analysis letter	Quantity of documentation submitted irrelevant to case by both parties
2	Main contractor and sub-contractor	Additional excavation: disagreement over start point for RLD calculations	Quantity of documentation submitted irrelevant to case by both parties
3	Main contractor and sub-contractor	Commissioning works and termination of previous contractor	Quantity of documentation submitted irrelevant to case by both parties
4	Main contractor and sub-contractor	Additional partitioning measurement	Substantial cost/effort expended by both parties justifying/defending claim
5	Main contractor and sub-contractor	Third adjudication over same issue – potential of additional two – contract interpretation	Repeated adjudication over same issue, five separate claims
6	Main contractor and sub-contractor	Valuation and verification of additional works/extension of time	Use of Adj time scale to deliver documents, contra documentation, etc.
7	Main contractor and sub-contractor	Valuation and verification of additional works/extension of time	Substantial cost/effort expended by both parties justifying/defending claim
8	Main contractor and sub-contractor	Verification of additional works/extension of time	Reasonable documentation on both sides – required resolution
9	Main contractor and client	Verification of additional works/extension of time	Reasonable documentation on both sides – required resolution
10	Main contractor and client	Valuation and verification of additional works/extension of time	Substantial cost/effort expended by both parties justifying/defending claim

Using Yin's (2009) analysis, Table 6-2 shows the summary of the grouped elements. The parties to the dispute are consistent with the existing research in that the contractor and sub-contractors are the most likely to be involved in an adjudication (Trushell et al., 2012; Milligan and Cattanach, 2014). The subject matter of the dispute is also consistent with Trushell et al. (2012), giving validity to the findings.

Table 6-2: Analysis of parties to the dispute, main item of the dispute, and issues contributing to escalation

	Parties to the dispute		The main item of the dispute		Issues that contributed to the escalation/cost of the dispute		
	Main contractor and sub-contractor	Main contractor and client	Valuation of variations/ quantities	Contractual issues	Substantial investment in claim	Misuse of adjudication	Resolution required
1	✓			✓	✓		
2	✓		✓		✓		
3	✓			✓	✓		
4	✓		✓		✓		
5	✓			✓		✓	
6	✓		✓			✓	
7	✓		✓		✓		
8	✓		✓				✓
9		✓	✓				✓
10		✓	✓		✓		
Total	**8**	**2**	**7**	**3**	**6**	**2**	**2**

In addition to demonstrating the validity of the selected case studies, Table 6.2 also shows that the escalation of 60% of the cases was in part due to the time and money expended on the dispute preparation. As indicated previously, actual construction contracts can lead to disputes and in these case studies, three (30%) related to contractual issues and the interpretation and intent of the contract. In addition, 70% related to the valuation of variations and/or quantities (including quantum and scope), which is also consistent with the findings of Trushell et al. (2012). Where the escalation was deemed to be due to the time and cost invested in the dispute, an analysis was undertaken into the documentation produced; this is shown in Table 6-3 below.

Table 6-3: Escalation of dispute – investment in claim.

	Parties to the dispute		Documentation preparation		External support	
	Main contractor and sub-contractor	Main contractor and client	In house	In house with external support	Legal	Claim specialist
1	✓		✓			✓
2	✓		✓			✓
3	✓		✓			✓
4	✓			✓		✓
5	✓		✓			✓
6	✓		✓			✓
7	✓		✓		✓	✓
8	✓		✓		✓	✓
9		✓	✓		✓	✓
10		✓	✓			✓
Total	**8**	**2**	**9**	**1**	**3**	**10**

Whilst Table 6-3 illustrates that the production of the documentation was predominantly in-house by the claimant's or defendant's staff (although one claimant had employed a claims professional to prepare all the documentation at a cost of several thousand pounds), this still amounted to a considerable amount (and therefore cost) of those staff members' time. Typically, these documents (from experience) take several weeks to compile.

All parties had taken advice from a professional claims consultant. In addition, three had also taken advice from a legal professional before submitting their documentation, incurring costs ranging from a few hundred to several thousand pounds. In addition to these costs, there were the adjudicator's fees, as well as the time spent answering queries, providing additional documentation, and so on. The time spent supporting the preparation of the claim is difficult to quantify because this is an internal cost to an organisation, but from experience, it is not inconsequential. Under adjudication, these

costs are generally not recoverable and therefore an expense that has a direct impact on the organisation preparing or defending a claim at adjudication.

Table 6-4: Adjudication case studies - 2: Parties to the dispute; suitability for mediation/adjudication; reason for selection of dispute method

Case Number	Parties to the dispute	Suitability for mediation/ adjudication	Reason for selection of dispute method
1	Main contractor and sub-contractor	Yes	Contractual clause/ construction contract
2	Main contractor and sub-contractor	Yes	Contractual clause/ construction contract
3	Main contractor and sub-contractor	Yes	Contractual clause/ construction contract
4	Main Contractor and sub-contractor	Yes	Contractual clause/ construction contract
5	Main contractor and sub-contractor	Yes	Contractual clause/ construction contract
6	Main contractor and sub-contractor	Yes	Contractual clause/ construction contract
7	Main contractor and sub-contractor	Yes, but adjudication worked fine as well	Contractual clause/ construction contract
8	Main contractor and sub-contractor	Yes, but adjudication worked fine as well - although one party must have had significant costs	Contractual clause/ construction contract
9	Main contractor and client	No - client (LA) will not mediate due to a responsibility to come to an agreement	Contractual clause/ construction contract
10	Main contractor and client	Yes	Contractual clause/ construction contract

The above table (6-4) shows the reason for selecting the dispute resolution process. It also summarises the suitability of the adjudication for mediation. This is based on the knowledge of both mediation and adjudication by myself and, separately, by an independent assessment by an RICS adjudicator and mediator. The results fully concurred.

Table 6-5: Suitability for mediation and reason for selecting adjudication

	Parties to the dispute		Suitability for mediation			Selection of dispute resolution process
	Main contractor and sub-contractor	Main contractor and client	Yes	No	Yes, but adjudication also suitable	Clause within a construction contract
1	✓		✓			✓
2	✓		✓			✓
3	✓		✓			✓
4	✓		✓			✓
5	✓		✓			✓
6	✓		✓			✓
7	✓			✓		✓
8	✓			✓		✓
9		✓			✓	✓
10		✓	✓			✓
Total	**8**	**2**	**7**	**2**	**1**	**10**

Of these ten case studies, seven would have been suitable for mediation because neither one nor both parties to the adjudication had a watertight case based in fact or a true understanding of the contractual issues they were pursuing (Table 6-5). This was also supported by the adjudicator in each of these cases (the adjudicator was also a qualified mediator). In addition, two additional cases could have been mediated; one was not suitable because the client (the respondent) was a local authority with an active aversion to mediation. The reason for the selection of adjudication in all ten case studies was because adjudication was named in the construction contract as the form of dispute resolution to follow.

Table 6-6: Adjudication case studies - 3: Parties to the dispute; overview of cost and time; outcome/award/agreement

Case number	Parties to the dispute	Overview of cost and time	Outcome/ award/ agreement
1	Main contractor and sub-contractor	Significant (in excess of 20% of claimed amount on external fees). Internal time spent not quantifiable, but not inconsequential	No award to sub-contractor
2	Main contractor and sub-contractor	Significant (in excess of 20% of claimed amount on external fees). Internal time spent not quantifiable, but not inconsequential	No award to sub-contractor
3	Main contractor and sub-contractor	Significant (in excess of 30% of claimed amount on external fees). Internal time spent not quantifiable, but not inconsequential	No award to sub-contractor
4	Main contractor and sub-contractor	Both parties spend in excess of the amount finally awarded to one party	Partial awarded to sub-contractor
5	Main contractor and sub-contractor	Cost of commencing fifth adjudication expensive; fourth and fifth settled by negation/quasi mediation by adjudicator	Partial awarded to sub-contractor
6	Main contractor and sub-contractor	Both parties cited the experience as very traumatic and both became very bitter about the whole process. “Large” sum expended	Full award to sub-contractor
7	Main contractor and sub-contractor	Sensible amount of documentation submitted by both parties, one with solicitor one with claim	Partial awarded to sub-contractor

Case number	Parties to the dispute	Overview of cost and time	Outcome/ award/ agreement
		surveyor	
8	Main contractor and sub-contractor	Extensive documentation by one party (solicitor and expert), reasonable by defending party	Partial awarded to sub-contractor
9	Main contractor and client	Sensible amount of documentation submitted by both parties, both with solicitors and one claim surveyor	Full award to contractor
10	Main contractor and client	Extensive on both parties	Partial awarded to contractor

As Table 6-6 shows, all parties expended a significant amount of money on preparing for the adjudication. The amount expended also appeared to have no effect on the success of the claim (as identified below, in Table 6-7). The first three case studies were actions brought against the main contractor by a sub-contractor. In all three cases, both parties spent considerable money on external consultants, legal fees, and adjudicator fees, in addition to the in-house staff time and disruption preparing and defending the cases involved. In all three cases, the sub-contractor did not have a valid claim, but would not listen to the argument put forward by the main contractor. A third party, seen to be neural to the dispute, such as a mediator with expert knowledge, could have saved the sub-contractors considerable time and money. In addition, as seen below, the act of commencing adjudication can have an effect on the relationship between the two parties and the ability to work together on future projects.

The following five cases resulted in a partial or full award to the sub-contractor (the claimant in all five cases). In one of the cases, where a partial award was made to the sub-contractor, both parties admitted spending more than the amount finally awarded in fees (including those of the adjudicator).

One of these cases was part of a series of claims by a sub-contractor and a main contractor. The claim relied on a specific clause in the contract across several projects. After issuing a partial award on the third claim, the adjudicator (also a qualified mediator) persuaded the parties to undertake what he described as a quasi-mediation, over the final two claims, reducing costs and time wasted for both parties.

Table 6-7: Overview of money spent on adjudication

Case number	Parties to the dispute		Cost/documentation – claimant				Outcome		
	Main contractor and sub-contractor	Main contractor and sub-contractor	Between 20% – 30% of claim	Value undeclared but in excess of final award	Value unknown, but stated as "large" or "excessive"	Documents submitted, and cost spent proportional to claim	No award to sub-contractor	Partial awarded to sub-contractor	Full award to sub-contractor
1	✓		✓				✓		
2	✓		✓				✓		
3	✓		✓				✓		
4	✓			✓				✓	
5	✓				✓			✓	
6	✓				✓				✓
7	✓					✓		✓	
8	✓			✓				✓	
9		✓				✓		✓	✓
10		✓			✓			✓	
Total	**8**	**2**	**3**	**2**	**3**	**2**	**3**	**5**	**2**

In the above Table 6-7, the amount spent on preparing for the adjudication had little or no impact on the award given. In fact, only 20% received the full award of the amount claimed. One of the two submitted a reasonable amount of documentation to support the claim, minimising wasted time and costs.

Table 6-8: Adjudication case studies - 4: Parties to the dispute; ongoing relationships between the parties; had either party mediated previously.

Case number	Parties to the dispute	Ongoing relationships between the parties	Had either party mediated previously
1	Main contractor and sub-contractor	No longer working together	Neither
2	Main contractor and sub-contractor	No longer working together	Neither
3	Main contractor and sub-contractor	S/C contract terminated	Neither
4	Main contractor and sub-contractor	No longer working together	Neither
5	Main contractor and sub-contractor	Have worked together since	The main contractor had, the sub-contractor had not
6	Main contractor and sub-contractor	No longer working together	Neither
7	Main contractor and sub-contractor	Unknown	The main contractor had, the sub-contractor had not
8	Main contractor and sub-contractor	Unknown	Neither
9	Main contractor and client	No – excluded under client's requirements	No – client (Local Authority) would not mediate due to a responsibility to come to an agreement
10	Main contractor and client	No longer working together – excluded under client's requirements	Neither

It is claimed that adjudication adversely affects relationships between parties (Gould, 2010; Mason and Sharratt, 2013) and the information from these ten case studies would appear to support this. In seven of the cases studies (70%), the parties are no longer working together. In one case, the sub-contract was terminated soon after the adjudication because the main contractor believed that they now had an unworkable relationship with the sub-contractor, as shown in Tables 6-8 and 6-9. In both the main contractor and client cases, both of the contractors who brought the claims were excluded from working for the respective clients again due to the clients' quality and performance pre-qualification procedure.

Table 6-9: Adjudication case studies - 4: Parties to the dispute; ongoing relationships between the parties.

	Parties to the dispute		Ongoing relationships between the parties		
	Main contractor and sub-contractor	Main contractor and sub-contractor	No longer working together	Not known	Have worked together
1	✓		✓		
2	✓		✓		
3	✓		✓		
4	✓		✓		
5	✓				✓
6	✓		✓		
7	✓			✓	
8	✓			✓	
9		✓	✓		
10		✓	✓		
Total	**8**	**2**	**7**	**2**	**1**

As shown below in Table 6-10, of the 20 parties in the case studies, only two had previously mediated. Both would have mediated again, but were also the defendants in their cases, with a sub-contractor bringing about the adjudication. Neither of the claimants would consider mediation when suggested by the defendants.

Table 6-10: Adjudication case studies - 4: Parties to the dispute; had either party mediated previously.

	Parties to the dispute		Previous mediation			
	Main contractor and sub-contractor	Main contractor and sub-contractor	Both parties		One party	
			Yes	No	Yes	No
1	✓			✓		
2	✓			✓		
3	✓			✓		
4	✓			✓		
5	✓				✓	✓
6	✓			✓		
7	✓				✓	✓
8	✓			✓		
9		✓		✓		
10		✓		✓		
Total	**8**	**2**	**0**	**8**	**2**	**2**

Case studies: mediation

The ten mediation cases were selected as the ten most recent cases I had been involved in. Of them, five were between a client and main contractor, four between main contractor and a sub-contractor, and one was between a developer and purchaser, as shown in Table 6-11.

Table 6-11: Mediation case studies - 1: Parties to the dispute; the main item of the dispute; issues that contributed to the dispute; timing of mediation

Case number	Parties to the dispute	The main item of the dispute	Issues that contributed to the dispute	Timing of mediation
1	Contractor and client	Scope of work/ quality issues	Multiple issues over house extension	Had not prepared court documents but had started talking to solicitors, who advised mediation prior to court
2	Contractor and client	Value of variation/ agreement to payments/ VAT issues	Multiple issues over house extension	Had not prepared court documents but had started talking to solicitors, who advised mediation prior to court
3	Contractor and client	Scope of work/ variations	Multiple issues over new build house	Had not prepared court documents but had started talking to solicitors, who advised mediation prior to court
4	Main contractor and sub-contractor	Variations/ scope	Extent of variations, scope, final account	Had started to prepare documents for adjudication, but not complete. Took advice from solicitor
5	Developer and purchaser	House values had changed	Purchase of delayed flat in development	Had started to prepare documents for court, which were almost complete. The exercise demonstrated to both parties that both had weak documentation and their solicitors recommended mediation
6	Sub-contractor and sub-sub-contractor	Main contractor's instruction direct to sub-sub-contractor	Extent of variation/ re-measurement	Substantial documents prepared, court date set within weeks.
7	Contractor and client	Scope of work/quality issues	Multiple issues over house extension	Had not prepared court documents but had started talking to solicitors, who advised mediation prior to court
8	Contractor and client	Scope of work/quality issues/delays /design	Complex development for LA	Substantial documents prepared, court date set within weeks.

Case number	Parties to the dispute	The main item of the dispute	Issues that contributed to the dispute	Timing of mediation
		issues		
9	Main contractor and sub-contractor	Additional works/scope changes	Extent of variations, scope, final account	Had started to prepare documents for adjudication, but not complete. Took advice from claims surveyor
10	Main contractor and sub-contractor	Issues on site	Delays on site/suspension of the works	Had started to prepare documents for adjudication, but not complete. Took advice from claims surveyor

The issues relating to the source of the dispute in all ten cases were similar to those in the ten case studies of adjudication, and again were typical of construction disputes (Trushell et al., 2012). As Table 6-12 shows, 70% of the main item of dispute concerned agreement over the scope of the works (what was or was not included in the original agreement), and therefore what constituted a variation or not. Coupled with this was the valuation of the variation (once agreed as additional works) and the quality of the works undertaken. Other issues include one related to access to the site, one concerning contractual relationships, and one related to the changing valuation of a property.

Table 6-12: Mediation case studies - 1: Parties to the dispute; main item of the dispute

	Parties to the dispute			The main item of the dispute			
	Contractor and client	Sub-contractor and sub-sub-contractor	Main contractor and sub-contractor	Scope of work/variations/ quality issues	Contractual issues	Access to site	Property valuation
1	✓			✓			
2	✓			✓			
3	✓			✓			
4			✓	✓			
5	✓						✓
6		✓			✓		
7	✓			✓			
8	✓			✓			
9			✓	✓			
10			✓			✓	
Total	**6**	**1**	**3**	**7**	**1**	**1**	**1**

Five of the above case studies were not construction contracts as defined under the *HGCR Act* and did not contain a contractual provision, or a right to refer disputes to adjudication. In fact, all five cases were destined for litigation. All parties were advised by their solicitors that under the Civil Procedures Rules (CPR), they should attempt mediation prior to proceeding to court. (Table 6-13).

A further two case studies were also set for court, although both could have been adjudicated. Again, the decision by the parties to mediate followed advice by their respective solicitors. A date for court had already been set in both cases.

Table 6-13: Mediation case studies - 1: Parties to the dispute; timing of mediation

	Parties to the dispute			Timing of mediation		
	Contractor and client	Sub-contractor and sub-sub-contractor	Main contractor and sub-contractor	Had not started to prepare documents	Had started to prepare documents	Court date set
1	✓			✓		
2	✓				✓	
3	✓			✓		
4			✓		✓	
5	✓				✓	
6		✓				✓
7	✓			✓		
8	✓					✓
9			✓		✓	
10			✓		✓	
Total	**6**	**1**	**3**	**3**	**5**	**2**

Three of the cases could have been, and were set to be, adjudicated. However, the parties were persuaded to meditate by their respective claims consultant. In two of the cases, the decision to meditate was taken early in the process, before any party had spent extensively on preparing detailed documentation. In the third case, both the parties' solicitors realised that neither party had a robust case and that proceeding to court could be a risk for them. A settlement that both parties could accept was seen as the most favourable option. Although mediating early in the dispute process reduces costs and the time spent on the claim, there was a requirement to produce evidence of the basis of the dispute to enable each party to understand the issues involved and the risk of further escalation.

Table 6-14: Mediation case studies - 2: Parties to the dispute; suitability for mediation/adjudication; reason for selection of dispute method

Case number	Parties to the dispute	Suitability for adjudication	Reason for selection of dispute method
1	Contractor and client	Adjudication not option because not construction contract	Mediation prior to court
2	Contractor and client	Would have required extensive involvement by third parties, so cost-prohibitive	Mediation prior to court
3	Contractor and client	Adjudication or court would have ruined family relationships	Mediation prior to court
4	Main contractor and sub-contractor	Had right to adjudicated, but mediation worked	Parties persuaded to mediate prior to adjudication
5	Developer and purchaser	Weak contract on both parties – judge or adjudicator would have had little facts to go on	Mediation prior to court
6	Sub-contractor and sub-sub-contractor	Sub-contractor offered stage payment of part of value due to severe cash flow issues; sub-sub-contractor refused. Case went to court; sub-sub-contractor was awarded most of claim and most of costs. Sub-contractor went into receivership	Mediation prior to court
7	Contractor and client	Could have adjudicated but both parties would have to had additional costs preparing the case/claim	Mediation prior to court
8	Contractor and client	Could have adjudicated, but opted for court due to complexity of case	Mediation prior to court
9	Main contractor and sub-contractor	Had right to adjudication, but mediation worked	Parties persuaded to mediate prior to adjudication
10	Main contractor and sub-contractor	Adjudication would not have been able to produce the same results	Parties persuaded to mediate prior to adjudication

Where adjudication is not a contractual or statutory right, as has been mentioned previously, – for example, where the contract is between a contractor and a homeowner, as with a number of these case studies – it is not selected as a dispute resolution method by the parties. However, mediation was selected in lieu of

adjudication in three of these case studies. As shown in Table 6-15, there were a number of benefits to mediation, including reducing costs, maintaining relationships, creative settlements, and weak cases being confirmed.

Table 6-15: Mediation case studies - 2: Parties to the dispute; suitability for adjudication

	Parties to the dispute			**Suitability of adjudication**						
	Contractor and client	Sub-contractor and sub-sub-contractor	Main contractor and sub-contractor	Not option because not construction contract	To save costs	Relationships	Mediation benefits	Weakness of case	Need for creative settlement	Court due to complexity
1	✓			✓						
2	✓				✓					
3	✓					✓				
4			✓				✓			
5	✓							✓		
6		✓							✓	
7	✓				✓					
8	✓									✓
9			✓				✓			
10			✓				✓			
Total	**6**	**1**	**3**	**1**	**2**	**1**	**3**	**1**	**1**	**1**

Notwithstanding the benefits above, the reasons for selecting mediation were also examined. As shown in Table 6-16, 70% used mediation as a precursor to going to court, following the CPR. Only 30% opted for mediation rather than adjudication.

Table 6-16: Mediation case studies - 2: Parties to the dispute; reason for selection of dispute method

	Parties to the dispute			Reason for selecting mediation	
	Contractor and client	Sub-contractor and sub-sub-contractor	Main contractor and sub-contractor	Mediation prior to court	Persuaded to mediate, rather than adjudicate
1	✓			✓	
2	✓			✓	
3	✓			✓	
4			✓		✓
5	✓			✓	
6		✓		✓	
7	✓			✓	
8	✓			✓	
9			✓		✓
10			✓		✓
Total	**6**	**1**	**3**	**7**	**3**

Table 6-17 shows the amount of time and costs incurred by the parties and the resultant outcome of the mediation. The two cases that did not reach a settlement on the day of the mediation were the two with the highest incursion of costs, and also the most mature disputes. When the mediation occurred early in the dispute, it would appear that a settlement was more likely. However, of the two that were not settled, one managed to reach agreement prior to attending court.

Table 6-17: Mediation case studies - 3: Parties to the dispute; overview of cost and time; outcome/award/agreement

Case number	Parties to the dispute	Overview of cost and time	Outcome/award/agreement
1	Contractor and client	Minimal – contractor brought accounts, clients photos, and bank statements	Agreed which works were addition, and contractor to complete outstanding issues
2	Contractor and client	Minimal	Helped parties agree mechanism for valuing additional works, balance accounts
3	Contractor and client	Contractor produced detailed account, client had spoken to solicitor, but only to a limited extent	Agreed a settlement that worked for both parties
4	Main contractor and sub-contractor	Both parties had started to incur costs	Agreed a settlement that worked for both parties
5	Developer and purchaser	Minimal – because very little documentation available – contract was weak for both parties, although both parties had solicitors involved	Agreed a settlement that worked for both parties
6	Sub-contractor and sub-sub-contractor (SSC)	SSC had expended significant costs on expert, solicitor and barrister	SSC would not settle because wanted “day in court”
7	Contractor and client	Minimal, although both parties had consulted with solicitors	Agreed a settlement that worked for both parties
8	Contractor and client	Extensive on both sides in preparation for court	Did not settle but both parties came to an agreement prior to the court date
9	Main contractor and sub-contractor	Both parties had started to incur costs	Agreed a settlement that worked for both parties
10	Main contractor and sub-contractor	Both parties had started to incur costs	Creative settlement around phasing of the works

The three cases that opted for mediation in lieu of adjudication all settled on the day of mediation. In several cases, the solution was not just financial, and this additional

dimension assisted in reaching the settlement and an outcome that the parties desired; something a court or adjudication would not have been able to provide.

In the case that did not settle and went to court, the defendant offered a substantial proportion of the amount claimed (excluding the extensive legal fees) during the mediation, but with a proposed structured repayment agreement. This was rejected by the claimant, against the advice of his solicitor. The case proceeded to court and the client was awarded the full amount plus legal fees. Unfortunately, the defendant, already in an unsecure financial situation, was forced into receivership by the judgement and the claimant received no payment.

Table 6-18 quantifies these results. The two cases that had invested the most time and costs in the claim were also those that did not settle on the day of the mediation. 80% did settle, with 40% having only spent minimal time and costs on the dispute. The 40% that had started to incur costs also settled at the mediation. The 80% settlement rate reaffirms that mediation is suitable for resolving English construction disputes.

Table 6-18: Mediation case studies - 3: Parties to the dispute; overview of cost and time; outcome/award/agreement

	Parties to the dispute			Cost and time			Outcome		
	Contractor and client	Sub-contractor and sub-sub-contractor	Main contractor and sub-contractor	Minimal	Started to incur costs	Extensive	Agreed settlement	Agreed prior to court	Did not settle
1	✓			✓			✓		
2	✓			✓			✓		
3	✓				✓		✓		
4			✓		✓		✓		
5	✓			✓			✓		
6		✓				✓			✓
7	✓			✓			✓		
8	✓					✓		✓	
9			✓		✓		✓		
10			✓		✓		✓		
Total	**6**	**1**	**3**	**4**	**4**	**2**	**8**	**1**	**1**

As previously discussed, adjudication is detrimental to relationships between parties; however, as shown in the table below (6-19), it is clear this is significantly different for mediation. From the ten case studies of mediation, only two parties would definitely not work together in the future, one of which was involved in the case that did not settle and proceeded to court.

Only one party in one of the case studies had mediated previously. They did not propose mediation initially because they thought the other party would refuse, given that it was their suggestion. Although they did not settle on the day of the mediation, they were able to agree a settlement agreement prior to attending court – something the client was keen to do to avoid adverse publicity.

Table 6-19: Mediation case studies - 4: Parties to the dispute; ongoing relationships between the parties; had either party mediated or adjudicated previously

Case number	Parties to the dispute	Ongoing relationships between the parties	Had either party mediated or adjudicated previously?
1	Contractor and client	Not required, but would not	No
2	Contractor and client	Not required	No
3	Contractor and client	The parties were brothers – and now talking again	No
4	Main contractor and sub-contractor	Would work together again	One party had adjudicated previously
5	Developer and purchaser	Both parties left amicably	No
6	Sub-contractor and sub-sub-contractor	No longer working together	No
7	Contractor and client	Both parties left amicably	No
8	Contractor and client	Are working together on another project	Yes - one party meditated previously
9	Main contractor and sub-contractor	Would work together again	One party had adjudicated previously
10	Main contractor and sub-contractor	Working together	One party had adjudicated previously

Table 6-29 confirms that 70% of the parties would work together again, or are already working together. 10% did not specify if they would or would not work together again, because the situation was unlikely to reoccur.

Table 6-20: Mediation case studies – 4: Parties to the dispute; ongoing relationships between the parties.

	Parties to the dispute	Relationships between the parties

	Contractor and client	Sub-contractor and sub-sub-contractor	Main contractor and sub-contractor	Not required	Will do	Will not
1	✓					✓
2	✓			✓		
3	✓				✓	
4			✓		✓	
5	✓				✓	
6		✓				✓
7	✓				✓	
8	✓				✓	
9			✓		✓	
10			✓		✓	
Total	**6**	**1**	**3**	**1**	**7**	**2**

Of the two case studies where one party had adjudicated previously, both were pursued to attempt mediation and both settled. One party did comment that it was their previous experience with adjudication that persuaded them to try mediation. Table 6-21 shows that in 30% of the cases, one party had adjudicated previously and only one party had mediated previously.

Table 6-21: Mediation case studies – 4: Parties to the dispute; had either party mediated or adjudicated previously

	Parties to the dispute			**Had either party adjudicated previously**		**Had either party mediated previously**	
	Contractor and client	Sub-contractor and sub-sub-contractor	Main contractor and sub-contractor	One party	Neither	One party	Neither party
1	✓				✓		✓
2	✓				✓		✓
3	✓				✓		✓
4			✓	✓			✓

5	✓				✓		✓
6		✓			✓		✓
7	✓				✓		✓
8	✓				✓	✓	
9			✓	✓			✓
10			✓	✓			✓
Total	**6**	**1**	**3**	**3**	**7**	**1**	**9**

Key findings from case studies

The subject of the disputes for the adjudication case studies is in line with common construction disputes. The parties to the dispute generally spent excessive amounts preparing their cases, often disproportionate to the amount claimed and often unnecessarily. The majority of the cases would have been suitable for mediation but adjudication was selected because it was the dispute method identified in the construction contract. The outcome/award of the adjudication was often not the full amount claimed, with only two of the claimants receiving the full amount claimed under the adjudication. Given the amount of time and costs invested in these claims, this is a concern. The relationship between the parties also suffered, with the parties to only one of the case studies still working together.

The items under dispute from the mediation case studies were similar to those for the adjudication case studies, showing that mediation is generally suitable for resolving common construction disputes. The timing of the mediation did not appear to affect the outcome, but if mediation took place early in the dispute, the costs and time spent preparing the case were reduced. The most common reason to opt for mediation was because the dispute was not based on a construction contract and therefore did not contain an adjudication clause, again indicating that the adjudication clause within construction contracts greatly influences the selection of the dispute resolution process selected. All bar one of the case studies resulted in a positive outcome, with the majority of stakeholders later saying that relationships were maintained, reaffirming the suitability of mediation for resolving construction disputes.

These case studies appear to support the views from practice and theory that adjudication does provide a necessary function within construction dispute resolution.

However, they also indicate that there are issues with the adjudication process as concerns the amount of time and costs involved in a case, with other issues such as relationships also causing concern. Mediation addresses most of these issues, and these case studies demonstrate that it can be used successfully in English construction disputes. Therefore, to understand the reason why mediation is not more widely used in construction, the following interviews were undertaken.

6.5 Interviews

Following on from the case studies, ten interviews were scheduled to test the key findings, themes, and data arising from the case studies. As previously discussed, the interviewees have been kept completely anonymous, apart from identifying the type of organisation they represent and their position within their organisation. The ethics relating to these interviews were covered in the methodology chapter of this thesis.

Selection of interviewees

Careful consideration to the selection of interviewees was given. To obtain a true reflection of activity and attitudes throughout the construction industry, it was necessary to try and involve participants from as full a cross section of the construction industry as possible, within the restrains of this research. Consequently, the following participants were selected:

The profile of the interviewees (as far as can be given, to ensure anonymity) was as follows:

- Client: The interviewee was in a senior position within the organisation, involved with letting and managing contractors for building projects, managing significant budgets (£100 million on construction), commissioning projects, etc, with knowledge of the organisations involvement with mediation and/or adjudication.
- Top five contractors. The two interviewees were at director-level, one dealing with construction projects nationally, and one being the divisional head- of the legal department involved with construction projects, both with access to the company's involvement with adjudication and/or mediation.
- Regional contractors: One was the managing director, and one was the commercial director, both, again, with access to the company's involvement with adjudication and/or mediation.

- Specialist sub-contractor: All four interviewees were managing directors of their organisation and had knowledge of all disputes within their company.
- The adjudicator had adjudicated over 170 cases

Prior to interview, all participants were sent the introduction information, as approved by the Anglia Ruskin University Ethics Committee, together with a copy of the list of questions. During the interview, notes were taken and later transcribed.

Analysis of the interview transcripts

Having received confirmation that the transcripts were accurate representations of the interviews, the information was then analysed by coding themes in the documents using a strategy based around theoretical proposition and pattern matching logic (Yin, 2014), as undertaken for the case studies and discussed in Chapter 5. Again, as with the case studies, it was the intention that if no patterns or reoccurring themes became apparent, then it would be increased by an additional five interviews, until patterns emerged. To ensure confidentiality and in line with the procedures of the ethical approval, the transcripts are not included in this thesis.

The key questions posed during the interviews were as follows:

- Type of organisation and the role of the interviewee
- Is the construction industry adversarial?
- Extent of use of mediation and adjudication, if records available
- Most used mediation or adjudication
- Opinion of and any perceived issues with adjudication
- Opinion of mediation, success rate, and barriers to greater use
- Courts impose penalties for not using ADR prior to court – should this apply to adjudication
- Opinion on mediation panels

The interviews concluded with an open discussion on mediation in construction generally.

The initial questions were closed to give clear answers, but the remainder were open to enable expansion on the findings from the case studies and to reduce the chance of bias. The results are shown in Table 6.22:

Table 6-22: Is the construction industry adversarial?

Organisation type	Is the construction industry adversarial?
Major contractor	Yes
Sub-contractor	Yes
Large national sub-contractor	Yes
Professional	Yes – both because of the unique nature of each project and testosterone
Regional contractor	Yes
Small sub-contractor	Yes
Major contractor	Yes
Regional contractor	Yes
Sub-contractor	Yes – for many men
Client	We have more disputes in our construction industry supply chain than we have with any of our other suppliers

Given the ability for disputes to arise in construction projects, as identified in Chapter 2, the nature of those operating within the industry, the stakeholders and their relationships may also be influential on the level of escalation of a dispute. To test this perception, the closed question “Is the construction industry adversarial” was posed. As seen in the table above, all those questioned believed this to be the case. This adversarial nature consequently leads to a large number of disputes and the need for an efficient, cost-effective dispute resolution process.

Table 6-23 - Use of dispute resolution processes; does your company keep records of the number of adjudications, arbitrations or court cases; which is most common?

Organisation type	Does your company keep records of the number of adjudications, arbitrations or court cases?	Which is the most common?
Major contractor	Not as well as it could	Mainly adjudication
Sub-contractor	Not official, but have a rough idea	Adjudication
Large national sub-contractor	Not really	Mainly adjudication
Professional	Yes	Adjudication
Regional contractor	Yes	Over 90% would be adjudication
Small sub-contractor	Not official ones, but knows all those he has been in	Adjudication
Major contractor	Yes, but not for publication	Mainly adjudication
Regional contractor	Yes	Mainly adjudication
Sub-contractor	No, but knows how many	2 adjudications, 1 mediation
Client	No, but suppliers are scored against "easy to use"	Court, mediation, but adjudication for construction generally

Of the ten people interviewed, all identified adjudication as the primary dispute method used for the resolution of construction disputes. Table 6-23 shows that although the exact numbers were not available, one interviewee confirmed that over 90% of his company's disputes were resolved through adjudication. The client interviewed confirmed that contractors who worked for his organisation were scored on an "easy to use" scale, which included heavy, negative scoring for those who pursued a dispute through court or adjudication. They did not yet have a scoring mechanism for mediation.

Table 6-24 - The use, and extent of use, of mediation

Organisation type	Have you used mediation?	To what extent have you used mediation?
Major contractor	Proactively	Low – 3-4 per year
Sub-contractor	Yes	Once
Large national sub-contractor	Yes	5
Professional	Yes	Yes – over 100 adjudications, 1 mediation
Regional contractor	Yes	Twice
Small subcontractor	No – never heard of it	The process sounds much better than adjudication – I have never won financially at adjudication, even though I have won the case. Not having to submit really big documents and replies seems very sensible and the idea of agreeing the settlement figure would be great. The company is fortunate and has a healthy bank account so when we are going to be paid is not always an issue – we need to know how much.
Major contractor	Yes	Not a great amount
Regional contractor	Yes	Only four times, unfortunately
Sub-contractor	Yes	Once
Client	Yes	Proactively – not just construction supply chain

Of those interviewed, only one had not used mediation; however, even those who had used mediation had only used it infrequently. As Table 6-24 shows, the larger organisations made greater use of mediation. Two of the sub-contractors had used it once, and the smallest company had never used mediation.

Table 6-25: Opinions on adjudication

Organisation type	What is your opinion on adjudication?
Major contractor	The cost has increased, it is not as speedy as it was, and has become very "final" in regard relationships (see list)
Sub-contractor	Can be costly, effects ability to work for main contractors
Large national sub-contractor	Included in subsequent tables below
Professional	It was the best thing that ever happened to the construction industry, giving a quick fix that was desperately needed. However, there are some really stupid cases that come to adjudication because there is no real case. The party has been ill advised on the strength and logic of their case, often by a solicitor without sound construction knowledge – see the case studies. Other adjudications would have been better served by using mediation because neither side had strong cases, but spent considerable costs preparing documentation – again, see the case studies.
Regional contractor	Rough justice – but quick and dynamic. It is subjective and has to be used with a pragmatic view. It enables the cash to flow.
Small sub-contractor	It was quite good when it first came in, but in recent years it has become more expensive having to employer a QS and solicitor to put it together. Adjudication fees have also gone up and they take longer.
Major contractor	A necessary evil! We are reluctant to use it with our clients because of the damage it does to relationships; sub-contractors can be a bit quick to use it when they have a dispute, rather than try to negotiate.
Regional contractor	Keeps cash flow going if we have an issue with a client, but “subbies” can be a bit "keen" in using it. We do try to persuade them to negotiate, but once they have a claim surveyor or solicitor on board, then we know we are off to adjudication… this does influence whether or not we use subbies again.
Sub-contractor	It was a bit full-on, intense, and expensive.
Client	More cost-effective than court, but more costly than mediation.

Previous chapters have discussed that there appears to be an industry perception that adjudication is no longer a quick fix, nor provides the rough justice that it once offered (Table 6-25). The interviewees confirmed that this was also generally their feeling. The findings were that having adjudication was better than not having adjudication; however, it no longer generally functioned in the way that it was intended.

The interviewees were asked to expand on these views, and the results are collated in the following tables.

Table 6-26: Adjudication: increased costs and more complex issues

Organisation type	Costs increasing/expensive	More complex/multiple issues
Major contractor	Yes; more like a mini trail	Yes
Sub-contractor	Usually	Yes
Large national sub-contractor	Yes, but still cheaper than going to court	Yes
Professional	Yes – because of solicitors' costs	Yes
Regional contractor	It has become quasi legal, and the lawyers have hijacked it. It has become more complex because of the detail now required. Consequently, it has become more expensive.	There is more argument about the contractual detail and the use of historical cases – again more like court. There is sometimes a feeling that the adjudicator divides up the award between the parties. Happy (ish) parties are less likely to complain…
Small sub-contractor	Yes	No
Major contractor	The costs have certainly risen since it was introduced	Yes – it was designed to sort out small issues to keep contracts flowing – but now it is used to sort out everything
Regional contractor	Yes	Yes
Sub-contractor	Yes	Don't know
Client	Costs have gone up	Yes

As Table 6-26 shows, all of those interviewed confirmed that in their experience, adjudication appeared to be more expensive than when it was initially introduced. However, it is still considered cheaper than taking a dispute through litigation and court. The increases in costs appear to be due to the increase in professional fees (as supported by Trushell et al., 2012) and the extent of documentation expected to be presented.

Eight of those interviewed believed that the complexity of the cases being referred to adjudication had also increased. As explained by one interviewee, adjudication had been intended to resolve single disputes quickly to maintain cash flow and enable projects to continue. Now, the process was being used like a mini trail – a comment also identified previously in this thesis (Minogue, 2010) The interviews also highlight

that contractual issues are also being referred to adjudication, supporting the suggestion that the contract themselves lead to some disputes.

Table 6-27: Issues with adjudication; quick and dirty; large teams; favour the underdog

Organisation type	No longer quick, rough and dirty	Large teams	Favours the underdog
Major contractor	Yes	Yes	Yes
Sub-contractor	Yes	Yes	Don't think so
Large national sub-contractor	Can be	Yes	Can do sometimes
Professional	Can be	Often	No
Regional contractor	Correct	Yes	Sometimes
Small sub-contractor	Correct	Yes	Not really
Major contractor	Correct	Yes	Subbies do seem to do better than us; however, the costs must sometime outweigh what they are awarded
Regional contractor	Occasionally it still can be, but not often	Not always	It has done on some occasions – but it has also worked in our favour against large clients…
Sub-contractor	not sure	Yes	Don't think so
Client	Occasionally it still can be, but not often	Yes	Don't think so

There was a perception that adjudication was a “quick and dirty” dispute resolution process, and those interviewed supported this view. However, there is comment from two that this seems to be less of the case recently. The majority of those interviewed (80% - see Table 6-27) confirmed that the adjudications they now participate in have large teams on both sides, including experts and legal support.

Another perception was that adjudication favoured the “underdog,” and that adjudicators would look more favourably towards a sub-contractor rather than a main contractor. Of those interviewed, three were standard sub-contractors and all shared the same opinion that adjudicators did not favour them in their awards. However, the four major and regional contractors all believed that the adjudicator would be biased against them. One of the contractors did state that not only was this true for the cases

they had been involved in with a sub-contractor, it had benefited them when they had adjudicated against a client. There is another reference to the disproportional costs involved in the adjudication versus the award values.

Table 6-28: Issues with adjudication: Adjudicators fees; length of process; dissatisfaction with the outcome

Organisation type	Level of adjudicator fees too high	Failure to stick to the 28-day process	Dissatisfied with outcome
Major contractor	Yes	Yes	Yes
Sub-contractor	Yes	Yes	Yes
Large national sub-contractor	They have also gone up	No	Yes
Professional	Of course not! Actually some adjudicators are	Yes	Most parties usually are
Regional contractor	They have also gone up	Yes	Generally
Small sub-contractor	Yes	Yes	Yes
Major contractor	They have also gone up	Yes	Usually
Regional contractor	They have also gone up	Occasionally	50/50
Sub-contractor	Cheaper than going to court	No	Yes
Client	Yes	No	It resolved the issue, but wasn't pleasant

The increase in the cost of adjudicators' fees is confirmed as an issue in the adjudication process, as has been discussed previously, by all those interviewed, including the construction professional, who is an adjudicator. Another item was the failure to abide by the 28-day statutory duration for adjudication. There is provision for the 28-day period to be extended, but it was intended that a majority of disputes would be resolved in the 28-day period. As shown in Table 6-28, from the interviews it would appear that the majority (60%) identified this as an issue, with one commenting that it occurred occasionally.

Seven of the interviewees recorded that they were dissatisfied, or generally dissatisfied, with the outcome of adjudications. In addition, one recorded his view as

"50/50" on whether he was dissatisfied with the outcome, and another said, "It resolved the issue, but wasn't pleasant."

Table 6-29: Mediation: successful: support for mediation

Organisation type	Reason for mediation?	Was it successful?	Do you support mediation?
Major contractor	We proposed on all of them	Generally	Generally, yes
Sub-contractor	We proposed	Resolved the issue	Probably
Large national sub-contractor	A desire to avoid court – publicity and costs	Yes	Generally, yes
Professional	There was no provision for adjudication, therefore they were mediating before going to court	No – because one party would not engage – which was stupid because it was clear there was a deal to be done!	Yes – but not to replace adjudication. Perhaps mediate prior to adjudicate – perhaps that should be my first question? But you have to be careful with timescales – some subbies adjudicate because they are desperate for the money, which they could potentially have within 28 days
Regional contractor	Great fear of cost of proceeding to court, complexity of the case, sufficient lack of pure detail, lots of issues interlinked, and a good relationship to maintain. It was a binding mediation		Yes – but should be enforceable. Even if it does not settle, it often clarifies issues, which allows for agreement later
Small sub-contractor			
Major contractor	We proposed, both client and sub-contractor	Mostly; even the one that didn't settle, we managed to agree on without going to court	Yes
Regional contractor	The first one was proposed by a client, the second we proposed to a client. 3 & 4 were to large sub-contractors	Yes – all four produced results that we could live with, and kept to repeat clients!	Definitely

Organisation type	Reason for mediation?	Was it successful?	Do you support mediation?
Sub-contractor	To avoid court	No	Yes – because it was clear the other party just wanted to go to court. It was much better than adjudication.
Client	Best cost option	Generally	Yes – but the construction industry doesn't seem to get it

The two major contractors both advised that it was company policy to propose mediation, where suitable, as the first step in the dispute resolution process (Table 6-29). The other main contractors also supported mediation, with one of the main contractors being persuaded to use mediation by the other party to a dispute. Following the success of the first mediation, both in the process and the settlement, the contractor proposed mediation on further disputes. Of those that used mediation, the majority settled on the day of the mediation, or soon after.

The majority of the interviewees supported mediation as a process for construction dispute resolution, but said that there appeared to be a number of barriers preventing greater use of the process.

Table 6-30: Perceived barriers to greater use of mediation

Issue	Agreed	Disagreed	No opinion	Comment
Government/ local authorities (LA) do not like to make decisions	4	0	6	Client: “When I worked in a LA, there was a reluctance because officials do not like to make decisions”
Getting the other party to engage	6	0	4	Major contractor: “Subbies are very suspicious of the process”
Lack of knowledge or awareness of mediation process	9	1	0	Professional: “A little knowledge is a dangerous thing. People claim to understand mediation, but it is clear they do not”
New	1	0	9	
Viewed as unprofessional	2	0	8	Professional: “Mediation does appear to have an image problem, even though most mediators are construction professionals or legal people”

Issue	Agreed	Disagreed	No opinion	Comment
Mediation seen as buying time, a delaying tactic; it can take up to a month to organise and prepare	3	0	7	Regional contractor: "I have seen it used as a delaying tactic"
Assumption that it is not enforceable	3	0	7	Regional contractor: "Yes, back to lack of knowledge"
Seen as soft option (but is definitely not)	6	0	4	Professional: "Soft? – yes – again, this is an educational issue – from the professionals down to the one-man-band subbies"
Fear of bullying into settlement by the main contractor.	3	0	7	
Standard contracts containing adjudication clauses	8	0	2	Main contractor: "Adjudication is the industry default"
Often have to threaten court action to get the other party to engage, which will start to incur costs	3	0	7	

The interviewees were asked to comment on their perceived views on the issues that were preventing greater use of mediation in construction disputes. One comment supported by 40% of those interviewed was the reluctance on the part of government organisations/local authorities to agree to mediation, as shown in Table 6-30. This appears to be due to the reluctance of an official to make a negotiated agreement. By allowing an adjudicator or a judge to make an award or issue a judgement, the judgement of the official on agreeing to a settlement cannot be questioned. 60% of those questioned stated that getting the other party to agree to mediation was an issue, especially if the proposal was from a main contractor to a sub-contractor. These two issues indicate that one of the barriers to the greater use of mediation is the attitudes of stakeholders and their relationships with each other.

There was a view stated by the majority of those interviewed that although many people claimed to understand what mediation was, there was still a clear lack of detailed knowledge of the process. This was highlighted when reasons for not mediating were given by the other party, showing a poor understanding of mediation. This is also reinforced by responses that parties have refused to mediate because

there is an assumption that mediation is not enforceable, it is seen as a soft option, and because there is a fear of bullying into settlement by the main contractor during mediation. It was intended that this lack of detailed knowledge will be tested through strategic questions in the questionnaire – asking if the respondent has knowledge of the mediation process and then asking further detailed questions later in the questionnaire.

One interviewee thought that the processes was relatively new to the construction industry (which is slow to accept change) and that in time, the process would gain wide acceptance. The image of mediation as a professional process was also considered an issue.

30% thought there could be an issue with mediation being seen to be a delaying tactic to commencing an adjudication or court proceedings, with one respondent confirming that he had seen mediation used in this way. This appears to be a valid concern. 80% of those interviewed thought that the standard construction contracts containing an adjudication clause were a barrier to mediation. As shown above in the case studies, disputes were taken to adjudication because it was the default mechanism under a standard construction contract for dispute resolution. Where there is not a default in favour of adjudication, the interviewees said that it is often necessary to threaten court action to get the other party to engage and consider mediation, which results in both parties starting to incur additional costs.

Table 6-31: Contractual and CPR with regards to mediation and adjudication

Organisation type	Should mediation be a contractual requirement?	What about the penalties for going to court without meditation?	Should this apply to adjudication?
Major contractor	Difficult one	Good move	Adjudicator should have option to direct the parties to mediation – but maybe it's too late by that stage?
Sub-contractor	Maybe	Good idea	It should certainly be a question that an adjudicator should ask
Large national sub-contractor	Perhaps	Not sure	It may make companies use it so that they become aware of the process
Professional	Yes, but not compulsory	A good idea	As discussed above, there are pros and cons with this. It is more important for

Organisation type	Should mediation be a contractual requirement?	What about the penalties for going to court without meditation?	Should this apply to adjudication?
			mediation to become embedded in the construction culture as the first step, before starting an adjudication – although I'm not sure how you would do this!
Regional contractor		Good	No
Small sub-contractor	It should appear in contracts to raise its awareness	It would be daft not to try it	No view
Major contractor	Needs something	A good move	Somehow, but needs to be early in the process so that the 28-day adjudication process isn't affected
Regional contractor	Difficult. Needs to be in the JCT/NEC etc. somehow – but not compulsory?	Yes	In some way, but not sure how
Sub-contractor		The other party was determined to go to court so it was a waste of money	
Client	Yes	Best thing ever	If it would make the construction industry use it

Most those interviewed (70%) thought that there was a need for a process to be included within standard construction contracts to encourage the use of mediation, although most were against making it compulsory. The majority also supported the introduction of the CPR and encouragement to use mediation prior to proceeding to court, as shown in Table 6-31. The question was then posed: should the same principle be applied to adjudication, i.e., should parties be encouraged to attempt mediation prior to adjudication. The response was generally in favour of some pre-process, with the adjudicator inquiring if the parties had attempted mediation prior to commencing the adjudication; however, concern was raised that it should not have an impact on the 28-day statutory process of adjudication.

Table 6-32 - Experience with other forms of ADR

Organisation type	Principles meeting	Negotiation	Other
Major contractor	Yes	Negotiation	Expert determination, which appeared to be similar to adjudication
Sub-contractor		Negotiation	
Large national sub-contractor	Yes	We end up negotiating something on nearly every contract we do	
Professional		Negotiations goes on full time in the industry	Expert determination is another option, but is close to adjudication
Regional contractor			
Small sub-contractor		We try to negotiate with the main contractors' QS	
Major contractor	Yes	Negotiation	Expert and also used DRBs
Regional contractor		Negotiation	DRB
Sub-contractor		QS negotiation	
Client	Yes	Negotiations	DRB, experts, etc.

In addition to adjudication and mediation, the construction industry utilises other forms of ADR processes (Whitfield, 2012). The interviewees were asked to identify the additional forms of dispute resolution processes that they had previous experience with (Table 6.32). All identified that negotiation was a key process. Four of the ten interviews also identified that they had been involved with principles meetings – a meeting where senior members of the organisations who are not involved directly with the dispute meet to discuss the issues and try and reach a settlement. Four interviewees also identified expert determination but 50% of these likened this process to adjudication. Three interviewees had experience of dispute resolution boards.

Table 6-33: Mediators: retained on projects; qualifications and mediation panels/boards

Organisation type	Should meditators be retained on a project?	Should mediators have a relevant qualification, like most adjudicators?	Mediation panels
Major contractor	Good idea but has issues	Should be relative – like adjudicators	There are a lot of panels at the moment, but few are independent (qualification)
Sub-contractor	On large projects it could be useful but they could be seen to be biased in favour of the main contractor	Yes	Not sure
Large national sub-contractor	Very good idea, but would need to have a recommendation process – say, offer three for the parties to select from	Of course	
Professional	Yes – but who would pay? Perhaps a levy across all the contracts as a retainer? And who would select and would they be available?	Yes, it is really important	There are too many panels already, but if there was an approved “list” that was easy to access that you could select your mediator from, that would be useful
Regional contractor	On complex contracts definitely – perhaps “on call” on smaller ones?	Yes	Really good idea – because issue-specific mediators can be selected in the same way you would choose an adjudicator
Small sub-contractor	This would be really good – but perhaps a choice so that they are not seen to be the main contractors’ mediators	Probably	That would be really useful
Major contractor	Useful on major projects, but subbies would be suspicious that they were in the main contractors’ pockets!	Yes	Need simplifying away from the big "old mates" organisations
Regional contractor	Costs – and subbies would be suspicious	Vital	Not sure

Organisation type	Should meditators be retained on a project?	Should mediators have a relevant qualification, like most adjudicators?	Mediation panels
Sub-contractor		Of course, why wouldn't they be?	Mediators need to be more accessible
Client	Yes, but costs/appointment by whom?	Yes	Need to be truly independent – and cost-effective

The interviewees were asked their opinion on mediators retained on large projects, or even on framework/repeat projects (Table 6-33). The view was generally that while the principle was good and it was supported by the interviewees, there were issues that would need addressing. These primarily related to cost – how these retained mediators would be paid, and how to ensure that the mediators would be seen to be completely independent, especially in the way they were selected. Adjudicators tend to have professional or legal qualifications as well as being qualified as an adjudicator (Trushell et al., 2012), the most common profession being quantity surveyors. The interviewees were asked if the same should apply to mediators. They all replied in the positive, with some expressing the view that it was vital.

To aid the selection of the mediators, the interviewees were asked about construction mediation boards/panels. The view was that generally, a way of accessing mediators with the appropriate, relevant qualification was essential, but that a number of mediation panels already existed; these existing mediation panels, some set up professional organisations, some provided by training organisations, appeared to be populated by restricted, selected members and the cost of appointing a mediator through these organisations did not offer value for money.

Key findings from the interviews

There was a clear response from all stakeholders interviewed that the construction industry is adversarial. The stakeholders also confirmed that the main dispute resolution process used by their organisation was adjudication. Of the interview group, the majority had used mediation, which shows the relationship between the selected group and myself, rather than the norm for the construction industry; however, because the interviews were conducted in order to explore attitudes to both mediation and adjudication, this was not detrimental to the information collected. The use of mediation, however, was recorded by the stakeholders who had used it as being low

compared to the use of adjudication. Adjudication was viewed as being a “necessary evil” by the stakeholders, but with the view that costs had increased, the documentation required was extensive, and some parties are a “bit quick” to use it, rather than negotiate. Damage to relationships was also cited as an issue with adjudication, along with some stakeholders viewing some adjudicators as favouring smaller sub-contractors. Generally, there was dissatisfaction with the outcomes of adjudication. When the stakeholders used mediation, there is a belief that the process was generally better than adjudication, quicker and more cost-effective. The stakeholders said that there were barriers to the use of mediation, including a lack of knowledge, especially within the sub-contract sector of the industry, and the industry default of using adjudication, as specified in construction contracts. The stakeholders also identified other forms of ADR they have used. All had experience with negotiation, with some having used expert determination, which was likened to adjudication. The professionalism of the mediator was also raised, with the majority of stakeholders identifying that this should be an expert in the field of the dispute.

6.6 Review of key factors and links

Having undertaken the first stage of this research through the case studies and interviews, the key factors and links developed previously are reviewed. By considering each of the key factors – stakeholder, project, contract, and structure – through the lens of the findings, their validity for inclusion in a conceptual model (Section 6.7) is ascertained. The identified links of characteristics, relationships, terms, influences, timeline, and attitudes are also compared with the research findings.

Stakeholders

The case studies support the literature review and confirm that the stakeholder groups most likely to have a dispute are main contractors and sub-contractors. In the interviews, all the stakeholders stated they believed the construction industry was adversarial. In addition (Table 6-25), the stakeholders generally stated their dissatisfaction with adjudication (if they had used it previously), partially due to the increasing costs and complexity of issues. Those who had mediated supported the process and found it generally successful. When asked the question why, given this support, it was not used more in the industry, 90% stated that this was partially due to a lack of knowledge within stakeholder groups (Table 6-30). The resistance to mediation by government organisations and local councils was also mentioned; this required an official to make a decision on settlement value that may be difficult to defend. The

professionalism of the mediator (as compared to a judge or adjudicator) was also cited as a barrier, with all interviewees asserting that the mediator should be professionally qualified and an expert in the subject of the dispute.

Project

Of the case studies, Table 6-2 shows that items under dispute result in 70% of changes in the project. Whilst these may be additional works that have been instructed, it is more likely to be due to changes in the scope of works due to the nature of the project, reaffirming that the project is contributory to disputes. The literature review identified DRB as part of the dispute resolution structure. Consequently, the interviewees were asked if they had used project DRBs, with 30% replying in the positive. The use of mediation panels and mediators retained as project mediators was discussed, with the majority supporting the proposal but stating that some clarification and detailing would be required (Table 6-33).

Contract

30% of the adjudication disputes in the case studies were due contractual issues (Table 6-2). With the case studies related to mediation, 70% of the causes of disputes concerned agreement about the scope of the works, as defined in the construction contract (Table 6-12), supporting the finding from the literature that the contract can be contributory to disputes. In addition, the majority of interviewees (70%, Table 6-31) thought that a robust mediation clause was required in construction contracts to encourage greater use of the processes and give parity in a contract to that of adjudication.

Structure

The literature review suggested that the complex structure of the construction industry contributed to the level of disputes. This is reaffirmed by the interviews; Table 6-26 shows that the interviewees believe that disputes referred to adjudication were often too complex, partially reflecting the structure of the industry. As concerns the case studies, Table 6-2 reaffirms that those most likely to be in dispute are main contractors and sub-contractors, showing the contractual structure is a contributor to disputes.

Links

The links between the key factors, as identified through the literature review, were also considered, based upon the findings from the interviews and case studies. The

characteristics, relationships, terms, influences, timeline, and attitudes are each reviewed below:

Characteristics

The case studies and interviews supported the research findings in terms of the characteristics of a dispute in subjective terms but provided no additional objective evidence.

Relationships

Tables 6-8 and 6-9 confirm the literature findings, that adjudication adversely affects the relationship of the parties to the dispute, and that at least 70% of those stakeholders who had adjudicated no longer worked together. However, looking at the mediation case studies (Tables 6-16 and 6-20), the converse is true, with at least 70% of stakeholders saying that would work together again. The interviewees reaffirm that adjudication is detrimental to relationships.

Terms

Table 6-4 confirms that those who referred a dispute to adjudication did so because it was a right under the construction contract, reaffirming that the contract terms and clauses are influential in the selection of the dispute resolution method. In the mediation cases, there were no specific terms that referred the parties to mediation; in fact, half of the disputes were set for litigation (Table 6-13). They were only referred to mediation on legal advice.

Influences

In regards the selection of dispute resolution process, the interviews indicate that previous experience of adjudication would influence them by make them more likely to consider mediation. As Table 6-28 confirms there is a general dissatisfaction with adjudication, and Table 6-29 identifies that the majority of those with knowledge of mediation, would opt for mediation in preference to adjudication.

Timeline

From the literature review, it seems that the timeline of a dispute can influence the dispute resolution processed selected. From the case studies, as depicted in Tables 6-2 and 6-3, issues often escalate due to the amount of time and costs invested in the dispute. The mediation case studies show that it is possible to successfully mediate a dispute at any point on the timeline, but that the majority of cost savings are realised if

the mediation occurred early in the dispute; this confirms that mediation can be used successfully at any point on the timeline.

Attitudes

The time invested in an issue, as shown in Table 6-3, shows that there is an attitude in the part of stakeholders that pushes them to pursue a claim through to a dispute. The literature review indicates that there is an opportunist attitude within the construction industry, and the case studies and interviews support this.

6.7 Conceptual model

By connecting the key elements identified above (stakeholders, project, contract, structure), together with the key links identified, a basic structure for a conceptual model has been developed. Evidence from this research (the literature review, case studies, and interviews in Chapters 2, 3, 4, and 6) and others (Cheung and Pang, 2013; Fenn et al., 1997) indicates that the formal contract is central in understanding relationships, the development of disputes, and the dispute resolution method utilised. Allocating the links between the key factors, a framework for the conceptual model has been constructed, as shown is Figure 6-3. The allocation of links between factors is based on the effect each link has on each factor and each factor on each link.

The contract is linked to the structure through specific terms (Murdoch and Hughes, 2007). Wong and Cheah (2004) confirmed the flow of contractual terms through the structure of the contract can create conflict and disputes. The contract is also linked to the stakeholders through relationships. Murdoch and Hughes (2008) identified that the industry relies on commercial relationships and maintaining these relationships are important, with frameworks and partnering contracts utilised (Uff, 2005: Adriaanse, 2007). As Mason & Sharratt (2013) identified, relationships often are damaged when using adjudication as the dispute resolution process. Stakeholders are linked to the project through characteristics. For example, the stakeholder's attitude to finance and funding will affect the characteristics of the project (Whitfield, 2012; Trushell et al., 2012; Cheung and Pang, 2013), developing the way the project is delivered through financing vehicles such as private finance initiatives (PFI).

The project is also linked to the contract through various influences. These influences will guide the project to the selection of the form of contract (Murdoch and Hughes, 2007). These influences can be numerous, vary from project to project and reflect that each project is unique (Murdoch and Hughes, 2007). The timeline links the project

through to the structure. Although the passage of time may not escalate an issue to a dispute (Alway Associates, 2005) the timing of the dispute within the stages of the project may influence the selection of dispute resolution method (Moore, 2003).

In turn, the structure is linked to the stakeholders by attitudes. Whilst there are a number of structures that can be utilised for construction delivery, the attitude of the stakeholder will guide this selection. In addition, opportunistic behaviours exist within the stakeholder groups (Cheung and Pang, 2013) which can affect the development of disputes which consequently are formed by the structure. These links are shown in the model in Figure 6-3 below.

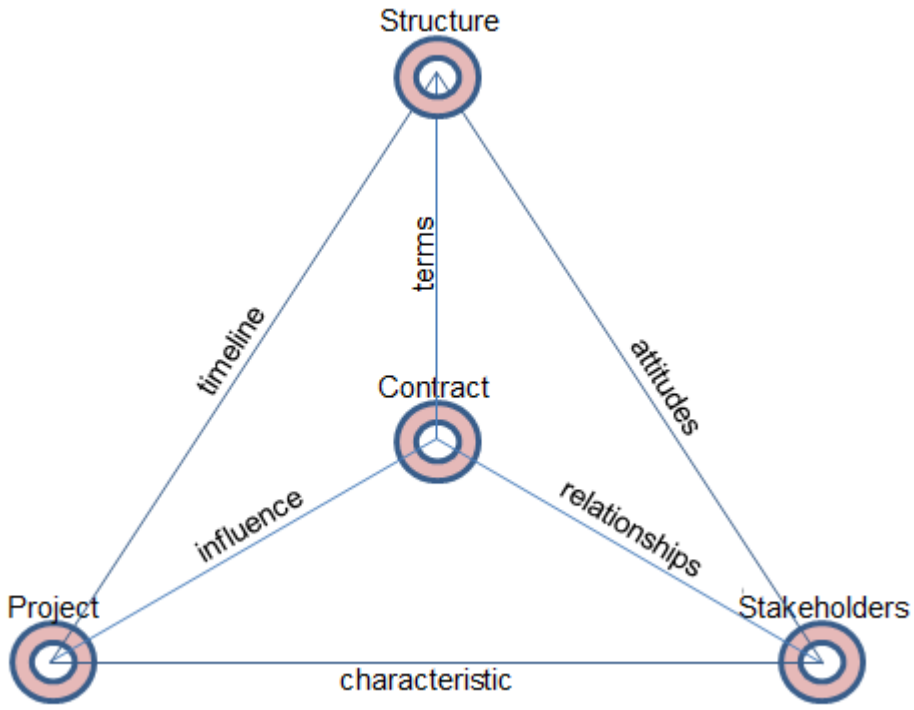

Figure 6-3 – Initial conceptual model

The types of conflict identified by Cheung and Pang (2013) can be allocated to this conceptual model. It appears, for example, that value conflicts, opportunist claims, site events, and quantity issues are both project- and stakeholder-related factors. On the other hand, relationship-based conflicts and failures of collaboration or partnering would lie between stakeholder and structure. Time-based conflicts, programme disruption, and opportunist programming could lie between the project and the structure on the timeline. It is intended to arrange a workshop with construction

professionals and stakeholders involved in construction disputes to discuss and review this apportionment. This apportionment is shown in Figure 6-5.

The factors affecting the selection of dispute resolution methods are detailed in Figure 6-4. As discussed in Chapter 1, the most common form of dispute resolution in construction is adjudication. In addition to the factors identified below, the question of timing of the selection of the dispute resolution process should also be considered, and whether this influences the selection or success of the process used.

Under the *HGCR Act*, a party to a construction contract (as defined) has the right to refer a dispute to adjudication. From the results of the case studies and the interviews of this research, it would appear that this statutory right and the written inclusion within construction contracts leads the majority of construction disputes down the route of adjudication. Other factors that may lead to the selection of adjudication include recommendation by solicitors, previous usage (although this was not a common form in the case study and interview results), guaranteed decisions, and a lack of detailed knowledge of the other options available, such as mediation.

As discussed above, of the ten mediation case studies reviewed as part of this research, seven meditated only as a precursor to court – i.e., the contract was not a construction contract as defined by statute, and there was no provision within the contract for adjudication. This is common for construction work on private dwellings directly for the property owner, where the contractual redress is often litigation (for example, the JCT homeowner's contract). The CPR clearly state that dispute resolution (mediation) should be utilised before proceeding to court, and financial penalties have been levied against those who have not done this (see Chapter 4).

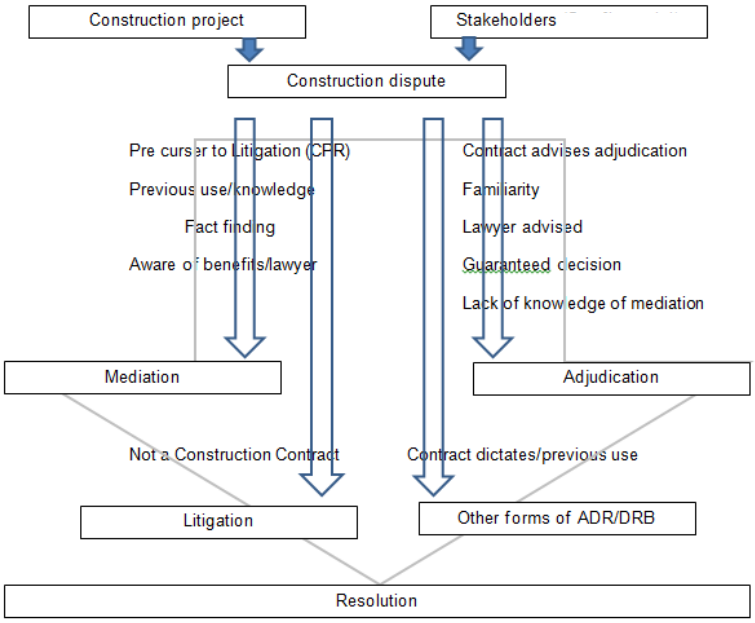

Figure 6-4 - Selection of dispute resolution method

Around the circumference of the Cheung and Pang model sits the dispute resolution processes available (Cheung and Pang, 2013, p.16, Figure 1) and the process selection. By applying the same process of encompassing the developing model from this research (Figure 6-3) within the dispute resolution selection from Figure 6-4, the conceptual model in Figure 6-5 is established.

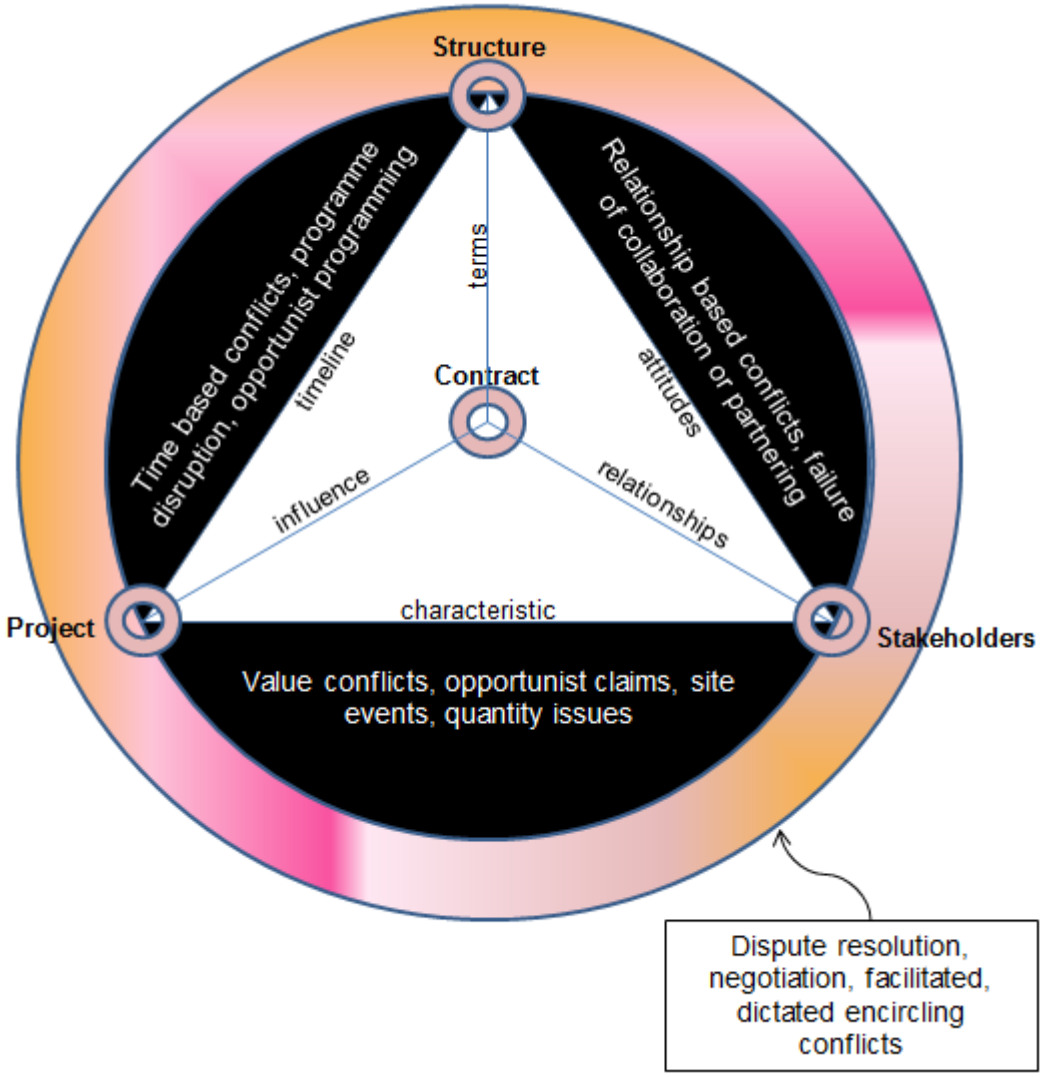

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Figure 6-5 - Developed conceptual model: Factors influencing dispute resolution process

6.8 Development of concept and testing

From the limited existing empirical evidence and the case studies and interviews compiled in this research, the possible factors influencing the selection of mediation as a dispute resolution process are indicated. Further research was required to test these initial findings and the conceptual model. Consequently, a questionnaire was issued to clarify and test these factors, specifically looking at the low use of mediation.

There are key questions that require answering:

i. Does the timeline of the dispute influence the dispute resolution process selected?

ii. Do the specific terms and conditions of the contract affect selection?
iii. Is there sufficient detailed knowledge of mediation to encourage its selection?
iv. Does the size and type of organisation/project influence the use of mediation?
v. What would encourage/discourage the use of mediation?
vi. Where a party to a dispute has had previous experience of adjudication, how would this affect selection of either adjudication or mediation?
vii. If mediation has been used, why was it used and how successful was it?

Information collected through the completed questionnaires will be used to answer these questions. This is reviewed in Chapter 7.

7 Questionnaire Results

7.1 Introduction

This chapter analyses the survey questionnaire which was administered to construction stakeholders, including professional and trade organisations and critically examines the methods used and the success and of integrity of the data and subsequent results. The questionnaire survey was conducted to complement both case studies and interviews - as discussed in Chapters 6 and 7. The survey used a wider samples size which has the advantages of countering potential biases inherent in case studies and interviews. The quantitative analysis was undertaken to test the qualitative data which developed in the conceptual model

7.2 Design Issues

Purpose of the questionnaire survey

In order to validate the information collected from the case study and interview analysis and to test the conceptual model a questionnaire was devised for as wide a circulation throughout the construction industry as could be achieved within the confines of this research. The questions were developed to further understand the use and attitudes towards mediation and adjudication. By ensuring a wide distribution, the responses from different stakeholders could also be considered.

Target and structure for the questionnaire survey

The design of the questionnaire was predominately closed questions, although there was the opportunity for general comment. Initially there were 20 questions, with multiple sub-questions, but the final selected questions numbered 13. The initial questions attempted to establish the type of organisation responding by offering the following categories:

- Client (Government or LA)
- Client (Other)
- Design/Professional team
- Principal Contractor (Major £50m and over)
- Principal Contractor (Main contractor less than £50m)
- Sub-contractor
- Specialist Contractor

- Other (please give details below)

This was followed by then classifying by the following annual turnover bands which was intended to enable analysis by stakeholder by both type and size:

- Less than £300,000
- £300,000 – less than £1m
- £1m – less than £5m
- £5m – less than £10m
- £10 – less than £50m
- £50m and over

The next question ascertained the organisations experience with adjudication as it was felt that this could influence their attitudes towards mediation. The options were:

- Yes
- No
- Don't Know
- How many times (if known)

It was anticipated that, by recording the number of times the stakeholder had been involved in mediation, that this would demonstrate an influence on their attitude to mediation.

The remainder of the questions related to the use, experiences and understanding of mediation by the stakeholders and, because some of the questions identified from this research were similar to part of the survey undertaken by Agapiou and Clark (2011), the method of data collection and analysis used was similar to the Likert scale to enable comparison between the data collected by this research and the information collected by Agapiou and Clark (2011).

Pilot questionnaire

A pilot was circulated to ten volunteers to test the structure, attitudes scales etc of the questionnaire. Some of these were also participants of the interviews (The client, one of the top 5 contractors, one of the regional contractors, two of the sub-contractors and the adjudicator). Where this was not possible other participants with similar roles were contacted to ensure the same demographic structure as the interview selection.

Following the return of the results for the pilot questionnaire, minor changes were made and the questionnaire was then made available through Survey Monkey® between June 2012 and January 2013. The responses from the pilot study were not included in the final data. The survey was left open for six months to assist in obtaining as wide and extensive response as possible. It is thought that there were no known changes in attitudes to the use of mediation during this period that may have influenced the responses to the questionnaires.

Administering the questionnaire

Information with regard the questionnaire and a request for participation was sent electronically by email to the following professional organisations, asking for circulation to their membership: five professional organisations (such as the RICS, RIBA and ICE), five local authorities (through the Local Government Association and other contacts) and several trade organisations (including the National Federation of Builders; Civil Engineering Contractors Association and the UK Contractors Group) as well as those attending trade association seminars. This was to ensure that a wide range of stakeholders of construction disputes would access the survey to optimise the return rate and its representativeness. A list of the construction organisations invited to participate is included in Appendix D. In addition a copy of the questionnaire was also sent to the office of the current construction minister, who has requested a copy of the final research.

Approach to analysis of the questionnaire

The data from the questionnaire was analysed using the statistical software SPSS version 20. This enabled the comparison of responses to a number of the key questions as identified below. Descriptive statistics were used to explore the data. Descriptive analysis was used mainly to investigate the extent while inferential statistics was primary for comparative reasoning. In addition cross tabulation was utilised for comparing primary responses with other parameters such as those with mediation or adjudication experiences to assess if this affected the response.

7.3 Analysis of response to questionnaire

The response from these organisations was varied, some offered full support immediately with distribution to their membership of the survey as they felt the research was important to their members, others had no direct access to the companies and

organisation that the survey was directed at but passed on contacts for other organisations that were appropriate and yet others declined to participate. This approach is considered to have been successful with a wide spread of stakeholder types responding to the questionnaire.

Questionnaire response rate

Reminders were sent out prior to the final online close of the survey, which was after the set cut-off date. 357 questionnaires were completed and usable for analysis, with 11 incomplete or contained spurious data (e.g. excessive number of mediation completed etc) which were not included in the final analysis. As identified by Rhodes, (2014) 2.1 million people are employed in the construction industry (representing 6.3% of the UK total) in Q3 of 2014. The estimated number of companies in the industry is 234,000 as contractors/businesses (BIS, UK Construction, An economic analysis of the sector, accessed 5th May 2017 at:

https://www.designingbuildings.co.uk/wiki/UK_construction_industry, July 2013). As discussed previously, it was important that this questionnaire was distributed throughout all aspects of the construction industry, including the smaller contractor and sub-contractor markets. By accessing the organisations detailed above and included in appendix D, as well as the author's network of contacts, this required distribution could be achieved. It is known that 3 of the organisations did not circulate the questionnaire. By taking the membership of the other organisations the resultant estimated population of this group was 6000. To determine the sample size a confidence level of 95% was taken (as this is research in the social sciences rather than clinical research) with a confidence level of 5%. Using the sample size calculator available at http://www.surveysystem.com/sscalc.htm (accessed 22 November 2016) the sample size needed is 361, which is comparable to the 357 usable responses from this research. This was considered an acceptable return rate and comparable with Gould (1999), and as identified above, provided a representative cross section of construction stakeholders.

Representativeness of the respondents

The questionnaire was successful in collecting responses from a representative sample of stakeholders across the construction industry who could become involve in a dispute. Table 7-1 shows the spread of respondent organisation (Gregory-Stevens et al., 2016). The questionnaire reference numbers are shown in brackets in the question header of each table. Contractors were segregated by turnover, with those of £50m or

more per annum being classified as major contractors, and those with under as main contractors. These two groups accounted for 36% of respondents. Sub-contractors, specialist contractors and suppliers were also grouped together, accounting for 49% of respondents. 8% were clients (local authorities and private sector clients), and 8% were consultants (designers and other professionals). As Trushell et al.(2012) identify that those most likely to be involved with a dispute are main contractors and sub-contractors the response to the questionnaire is representative of the stakeholders to be studied as part of this research.

Table 7-1 - Breakdown of responses by stakeholder group and turnover

		Annual Turnover £('000,0000')(2)						
Stakeholder group	Total	<0.3	0.3 - 1	1.0-5.0	5.0-10.0	10.0-50.0	>50.0	Percentage
Local authority	2	0	0	0	0	0	2	1%
Client other	26	0	9	2	3	7	5	7%
Design/professionals	27	11	7	3	5	1	0	8%
Major Contractors	12	0	0	0	0	0	12	3%
Main contractors	115	0	0	4	46	65	0	32%
Sub-contractors	133	20	78	26	5	4	0	37%
Specialist sub-contractors	38	9	19	10	0	0	0	11%
Other (suppliers/logistics)	4	1	2	0	0	0	1	1%
Total	**357**	**41**	**115**	**45**	**59**	**77**	**20**	
Percentage		11%	32%	13%	17%	22%	6%	**100%**

Analysis of the unusable responses

The majority of the responses were completed and provided fully analysable data. A few contained potentially spurious data – for example one respondent claimed to have undertaken almost 300 mediations. Whilst this could be technically possible, it is

extremely unlikely, so this response, and those similar, were not included in the overall analysis. This accounted for 11 questionnaire returns.

Representativeness

A high proportion of the respondents were contractors and sub-contractors at 85% of the total respondents. Although this may be disproportionate to the construction industry composition, it should be beneficial to this analysis as these are the two parties most likely to be in a construction dispute (Trushell et al., 2012).

Validity and reliability

Given the circulation of the questionnaire through my professional network, as well as the other routes of distribution, there was a possibility of a high response in regards to those who have used mediation. As such the statistics on the number of those who have mediated should not be taken as a fair representational percentage across the construction industry as a whole. However, this higher response was predicted to should assist in providing additional data for the other questions posed. The respondents contacted through my professional network were generally the managing director, commercial director or proprietor of the organisation. Those contacted through circulation to trade organisations and professional bodies would require to be either a senior construction professional or senior member of the organisations responding to have access to the information required to complete the questionnaire.,

7.4 The extent of use of mediation and adjudication

For the response data to be useful in this thesis it was important for a significant number of the respondents to have experience in adjudication or mediation. To analyse the present situation a descriptive analysis using cross tabulation was undertaken to explore the extent of involvement with both adjudication and mediation. This produced the results below which support the requirement that a significant number of respondents have experience in adjudication or mediation

Use of adjudication

Adjudication is the most common form of formal dispute resolution used in construction industry and for this reason the questionnaire contained a specific question on the use of adjudication. From my previously published work from this research (Gregory-Stevens et al., 2016) table 7-2 shows the previous use of adjudication by stakeholder group.

Table 7-2 - Summary of previous use of adjudication

Stakeholder group	Involvement with adjudication (3)				Percentage previous use of adjudication
	Yes	No	Don't know	Total	
Clients	8	13	7	28	**29%**
Consultants	8	14	5	27	**30%**
Main contractors	43	81	3	127	**34%**
Sub-contractors/supplies	46	128	1	175	**26%**
Total response	**105**	**236**	**16**	**357**	
Percentage	**29%**	**66%**	**4%**	**100%**	

Table 7-2 shows the responses to the question of previous use of adjudication by stakeholder group. It shows that 29% of all respondents were aware that they had been involved in adjudication. It also shows a comparable split across all stakeholder groups with sub-contractors at 26% through to main contractors at 34% of their relative groups. Consultants, at 30%, initially appears high, but this is caveated by clarification comments from over 50% of the respondents that this was involvement supporting their client at an adjudication rather than being an actual party to the adjudication.

Use of mediation

To gain a better understanding of the reason for use of mediation in construction, the questionnaire asked if the organisations had used mediation, their experiences of the process, attitudes and views of the low usage of the process in the construction industry. Questions were also included to test if those who said they had an awareness of knowledge of mediation really understood the process. Table 7-3 (Gregory-Stevens et al., 2016) shows the responses to the questionnaire by stakeholder groups in regards their usage of mediation.

Table 7-3 - Breakdown of previous use of mediation by stakeholder group

Stakeholder groups	Previous involvement with mediation (8)				
	Yes	No	Don't know	total	Previous use (%)
Client including local Authorities	7	18	3	28	25
Consultants	13	14	0	27	48
Major/Main contractors	17	110	0	127	13

Sub-contractors/Specialists/Suppliers/Others	15	158	2	175	9
Total	**52**	**300**	**5**	**357**	

Table 7-3 shows the responses to the question of previous use of mediation by stakeholder group. The highest group who had been involved with mediation was the consultants. As with the responses for adjudication, the questionnaire allowed comments to be added, and a number of consultants/construction professionals clarified their responses as being in regards to the involvement in adjudication and mediation, rather than the disputing party – their roles being as an advisor to one party to a dispute. As part of this research is about understanding attitudes with in the construction industry in regards the use of mediation generally, the data from these consultants/construction professionals is considered valid (as they may be asked to advice selection of dispute resolution process or influence a decision) and included in the findings and analysis.

One quarter of clients were aware have having been involved with mediation. However, only 13% of main contractors were aware of being involved in mediation. Even less sub-contractors - only 9% - were aware of being involved in mediation. Looking at the comparison with adjudication in table 7-2, 34% of main contractors had been involved with adjudication and 26% of sub-contractors. As these are the largest stakeholder groups likely to have a dispute, this difference is significant as it confirms the dominance of adjudication.

Awareness of both mediation and adjudication

By combining the responses to the use of adjudication and the use of mediation Table 7-4 shows that overall 9% of respondents have had experience of both mediation and adjudication. 29% of all stakeholders were aware of being involved in adjudication whereas half of that amount – 15% - said they were aware of being involved in mediation.

Table 7-4 – Experience with mediation and adjudication

Stakeholder group	Adjudication		Mediation		Both	
	Total in stakeholder group	Percentage of stakeholder group	Total in stakeholder group	Percentage of stakeholder group	Total in stakeholder group	Percentage of stakeholder group

Clients	8	29%	7	25%	3	11%
Consultants	9	30%	16	48%	4	15%
Main contractors	43	34%	17	13%	17	13%
Sub-contractors/supplies	45	26%	12	9%	8	5%
total response per question	**105**		52		32	
Percentage of total responses	**29%**		**15%**		**9%**	

By stakeholder group the split is very different. Within the client group there is almost parity between the use of mediation and adjudication and within the consultants the rate of mediation is higher than adjudication (this data may be affected as previously identified by the respondents to the survey and the network relationship to myself). However, with the main contractor and sub-contractor groups those who have adjudicated is more than double those who have mediated, being 34% against 13% and 25% against 9% respectively. This shows a dominance of adjudication amongst contractors and sub-contractors – the groups previously identified as having the highest number of construction disputes (Trushell et al., 2012).

Mediation Policy

The respondents we asked if their company had any specific policies on the section of dispute resolution process, particularly in regard the use of mediation. The responses are shown below in tables 6-5 and 6-6 both by stakeholder organisation and then by organisation annual turnover.

Table 7-5 - Breakdown by stakeholders of organisation attitude to select mediation

Stakeholder groups	Policy towards the use of mediation (5)						
	Consider Mediation Policy	No Policy	'Avoid' Mediation policy	Don't know/other	Total	% with policy to avoid mediation	% with policy to consider mediation
Client including local Authorities	16	7	5	0	28	18%	57%
Consultants	12	15	0	0	27	0%	44%
Major/Main contractors	34	86	3	4	127	2%	27%
Sub-contractors/ Specialists/ Suppliers/ Others	23	127	23	2	175	13%	13%
Total	**85**	**235**	**31**	**6**	357		
Percentage	24%	65%	9%	2%	100%		

Table 7-5 shows that the client stakeholder group is the highest (as a percentage of respondent) to have a policy for mediation at 75% in total; of these, 57% support mediation and 18% avoid the use of mediation. The consultants group have no policy to avoid mediation, but 44% have a policy to consider mediation. Of the main contractors group only 2% have a policy to avoid mediation and 27% have a policy to consider mediation. The only other group to have a notable percentage to avoid mediation is the sub-contractor group with 13% of the group having a policy to avoid mediation with the same percentage to consider mediation. This shows that the more informed group in regards mediation – the consultants group – are more likely to consider mediation and would not actively avoid it whereas those with least knowledge and experience of mediation – the sub-contractors group – has the lowest percentage of policy for considering mediation. This indicates that those with knowledge and experience of mediation are more likely to consider using the process. The exception to this is the client group, but as identified above, local Government clients will avoid mediation and this is reflected in the percentage responses for this group.

Table 7-6 - Breakdown by turnover of organisation attitude to select mediation

Stakeholder groups	Policy towards the use of mediation (5)						
	Policy to Consider Mediation	No Policy	Policy to Avoid mediation	Don't know/ other	Total	% with policy to avoid mediation	% with policy to consider mediation
Less than £300k	6	34	0	1	41	0%	15%
£300k to less than £1m	12	79	23	1	115	20%	10%
£1m to less than £5m	9	31	3	2	45	7%	20%
£5m to less than £10m	9	47	2	1	59	3%	15%
£10m to less than £50m	32	43	1	1	77	1%	42%
£50m and above	18	0	2	0	20	10%	90%
Total	**86**	**234**	**31**	**6**	**357**		
	24%	66%	9%	2%	100%		

By carrying out a similar analysis by turnover rather than organisation type the result show two interesting relationships:

- Mediation policy is related to turnover: all those with turnover over in excess of £50 million per annum have a policy - 90% have a policy to consider mediation and 10% have a policy to avoid. In the contrary, those with a turnover of Up to £10m per annum, fewer than 30% have mediation policy. The 10% of those with turnover in excess of £50 with a policy to avoid mediation are local Government Authorities clients.
- Tendency to 'consider' mediation is linked with turnover. Those with a turnover between £300k and £1m their policies tend to be more restrictive than supportive. This turnover group is predominately the sub-contractor group. Those with greater turnover tend to embrace mediation.

These are shown in the following table 7-7.

Table 7-7 - Breakdown by stakeholders of organisation attitude to select mediation with previous experience of adjudication and mediation

Stakeholder groups	Attitude towards mediation							
	Previous experience of adjudication				Previous experience of mediation			
	Policy to consider Mediation	Policy to avoid mediation	Total with experience of Adjudication	Percentage with a policy to mediate	Policy to consider Mediation	Policy to avoid mediation	Total with experience of Mediation	Percentage with a policy to mediate
Client including local Authorities	5	3	8	63%	4	3	7	57%
Consultants	7	0	8	88%	9	0	13	69%
Major/Main contractors	32	2	43	74%	12	1	17	71%
Sub-contractors/ Specialists/ Suppliers/ Others	17	7	46	37%	11	2	15	73%
Total	**61**	**13**	**105**	58%	**36**	**6**	**52**	
Percentage	58%	12%	100%		69%	12%	100%	

As table 7-7 shows, after experience of adjudication the number of stakeholders who have a policy to consider mediation increase from 24% to 58%.The largest increases are in the main contractors group who increase from 27% to 74% and the sub-contractors who increase from 13% who have a policy to consider mediation to 37% who have a policy. This would indicate that experience of adjudication affects the stakeholders view on the use of mediation and to avoid adjudication.

Having experienced mediation the percentage of those who have a policy to consider mediation increased from 24% overall to 69% indicating that mediation was a more favourable dispute resolution process than anticipated by the stakeholders. The largest changes from not having a policy to consider mediation to having a policy was in the

main contractors and the sub-contractor groups with 27% increasing to 71% and 13% increasing to 73% respectively. Consequently experience of mediation appears to increase the desire to utilise the process for future disputes. As discussed above the client stakeholder group is affected by Local Authorities actively avoiding mediation.

7.5 Analysis of factors affecting findings

The subsequent analysis is groups into 7 main areas:

- Trust among Stakeholders
- Previous experience with adjudication
- Mediation related concerns
- Preference for adjudication over mediation
- Previous records of mediation
- Enforceability of mediation
- Professionalism of mediation

Analysis of the decision to mediate including lack of trust

The questionnaire attempted to identify other key items that may influence the decision on whether to use mediation or not. These were developed from those identified in the case studies and interviews, as well as those identified by industry comment as possible factors.

These cover belief that adjudication was more appropriate that mediation, the belief that the other party would not undertake mediation in good faith, the case was not suitable for mediation, did not know enough about what mediation entailed, belief that negotiation would settle the case, the strength of the legal case, mediation would take too long, mediating would make the party look weak, perceived high cost of mediation and that mediation would involve compromise.

Table 7-8 - Breakdown of those stakeholders who believe that adjudication was more appropriate than mediation

Stakeholder groups	Belief that adjudication was more appropriate than mediation (7h)				% yes	% no
	Yes	No	Don't know	Total		

Client including local Authorities	9	2	17	28	32	7
Consultants	5	6	16	27	19	22
Major/Main contractors	17	31	148	196	9	16
Sub-contractors/Specialists/Suppliers/Others	62	13	31	106	58	12
Percentage	**26%**	**15%**	**59%**	**100%**		

The above table (7-8) shows nearly twice as many (26% compared to 15%) respondents believe that adjudication is a more appropriate form of dispute resolution for construction disputes over mediation. The highest number of these was in the sub-contractor group where 58% believed adjudication was more important than mediation. This is compared to only 12% who disagreed. In the consultants' category this is fairly balanced at 19% compared to 22%, however the majority of the clients group believe adjudication is more important with 32% supporting adjudication and only 7% disagreeing. The main contractors group generally has a low response against this item with by far the largest percentage answering "don't know". Of those that did select a response 9% supported adjudication and 16% disagreed.

Table 7-9 - Factors affecting a reason to decline mediation

Stakeholder	The extent of agreement with the factor ("Yes" as % of total response)							
	Did not know enough about what mediation entailed	The strength of our legal case (7c)	Belief that the opposing party would not take part in good faith	The case type not appropriate for mediation (7e)	Belief that negotiation was capable of settling	Mediation would take too long 7g	Mediating the case would have made us look weak (7j)	Mediation would have involved compromise
Client including local Authorities	21	18	25	18	18	21	25	25
Consultants	7	19	19	19	4	11	0	0
Major/Main contractors	6	13	17	13	14	10	9	3
Sub-contractors/Specialists/ Suppliers /Others	15	7	11	7	10	8	9	9

	12	**11**	**15**	**11**	**12**	**10**	**10**	**7**

The above table (7-9) shows those 15% of stakeholders had declined to mediate as they did not believe the other party would take part in good faith, demonstrating a lack of trust between stakeholders. Approximately one fifth of main contractors identified this as a reason to decline mediation. 84% of respondents said they did not know. These results are compared later with the same questions posed to those who have previous mediated and who have previous experience with adjudication

Only 11% of stakeholders have refused to mediate as they did not believe that the case was suitable for mediation as shown above in the table, 9% stated that they had not refused mediation as it was not suitable. This indicates that approximately 50% who had an opinion felt that mediation would be appropriate. In addition 12% of stakeholders had refused a mediation because they did not knowledge of mediation, with another 75% classing this as don't know or not applicable. The significantly highest number by stakeholder group with this lack of knowledge is the sub-contractor group. The consultants group only had 2 respondents who had refused mediation due to a lack of knowledge. The above table (7-9) shows that 12% of stakeholders have declined mediation as they believed that negotiation could resolve the issue. 18% of clients believed this to be the case, however only 4% on consultants considered this possible. The main contractors and sub-contractors were similar with their responses at 14% and 10% respectively.11% across all stakeholders have refused mediation in the belief that their legal case was strong. Unlike previous questions the consultants group is the highest in this category at 19% with the consultants at a similar percentage (18%). The lowest group are the sub-contractors at 7%.

The total percentage across all stakeholder groups that believed mediation would take too long was 10%. As with the previous question, again the consultants and client stakeholder group have the highest positive response to this question (10% and 11% respectively). The lowest response as to this being an issue was the sub-contractors at 8%. Again this clearly demonstrates a lack of knowledge of the mediation process. The above table (7-9) shows that only 10% of stakeholders though that mediating would indicate to the other party that their case was weak. A quarter of clients have refused mediation based on this assumption, whereas no consultants have used this as a reason to refuse mediation. The main contractor and sub-contractor groups both responded at 9% as a reason to refuse mediation.

8% of all stakeholders have declined mediation due to the perceived high cost of mediation. The highest stakeholder group that answered positive to this question were the clients at 14%. The lowest was the main contractors with sub-contractors at 8%. The consultants responded as 7% who have refused mediation due to the perceived high cost of mediation. This supports the premise that there is true knowledge of mediation in the industry, and especially in the sub-contractor sector. The table (7-9) shows that 7% of all stakeholders have decline mediation due to a belief that it would involve compromise. Again the highest stakeholder group that answered positive to this question were the clients at 25%. The lowest were the consultants – none of whom replied that they had refused mediation due to the perceived high cost of mediation. The main contractors and sub-contractors responded positively at 3% and 9% respectively.

Table 7-10 - Ranking of factors influencing the decision to decline mediation

Influencing factors	Total responses	Yes response as a percent of total responses	Ranking
Belief that adjudication was more appropriate.	93	21%	1
Belief that the opposing party would not take part in good faith	53	12%	2
The case type not appropriate for mediation	52	12%	3
Did not know enough about what mediation entailed	43	10%	4
Belief that negotiation was capable of settling the case	42	9%	5
The strength of our legal case	40	9%	6
Mediation would take too long	36	8%	7
Mediating the case would have made us look weak	34	8%	8
The high cost of mediation	27	6%	9
Mediation would have involved compromise	26	6%	10

The ranking of factors in table 7-10 (Gregory-Stevens et al., 2016) shows that most important reasons for declining a mediation were: (1) preference for adjudication; (2) lack of trust; (3) limited understanding on the appropriateness of mediation and (4) lack of knowledge of mediation. The preference for adjudication is significantly higher at 21% than the second most important - factor of lack of trust (12%) - reinforcing the significance of the familiarity and contract inclusion of adjudication This ranking was then examined by stakeholder group as shown below in table 7-11 (Gregory-Stevens et al., 2016) by summarising the total responses. This table shows how each stakeholder group perceives the most important reason for declining mediation. As with other questions the stakeholder groups rated the factors differently, however, sub-contractors, consultants and main contractors closely matched their top five factors.

Table 7-11 - Detailed ranking by stakeholder groups

Influencing factors	Ranking by stakeholder groups				Overall ranking
	Clients	Consultants	main contractors	sub-contractors	
Belief that adjudication was more appropriate.	1	4	4	1	1
Belief that the opposing party would not take part in good faith	2	3	1	4	2
The case type not appropriate for mediation	10	2	2	3	3
Did not know enough about what mediation entailed	5	7	8	2	4
Belief that negotiation was capable of settling the case	8	8	3	5	5
The strength of our legal case	7	1	5	10	6
Mediation would take too long	4	5	6	9	7
Mediating the case would have made us look weak	6	9	7	6	8

The high cost of mediation	9	6	9	8	9
Mediation would have involved compromise	3	10	10	7	10

In the recent publication, Gregory-Stevens et al., (2016) considered the results of this ranking and observed the dominancy of contractor and sub-contractors.

> *"…four out of the top five factors voted by main contractors were also voted on the top five by both consultants and sub-contractors. This includes:*
>
> - *Belief that other party would not take part in good faith was ranked the 1st by main contractors; 3rd by consultants and 4th by sub-contractors;*
> - *The case type not appropriate for mediation was ranked the 2nd by both main contractors and consultants but 3rd by sub-contractors;*
> - *Belief that negotiation was capable of settling the case was ranked the 3rd by main contractors; at 5th place by sub-contractors and 8th by consultants;*
> - *Belief that adjudication was more appropriate was ranked 4th by both main contractors and consultants but ranked 1st by sub-contractors; and*
> - *The strength of our legal case was ranked the 5th by contractors but the 1st by consultants and 10th by sub-contractors.*
>
> *Clients had relatively higher scores on most factors, with the top three scoring 32%, 25% and 25% respectively. The fourth to sixth factor each scored 21% while the seventh to ninths scored 18%, 18% and 15% respectively, and least ranked factor scored 7%. Consultants did not vote for both "mediating the case would have made us look weak" and "mediation would have involved compromise" signifying they had better understanding of mediation than their clients – which is also evident from the ranking of "did not know enough about what mediation entailed" at 7th place (9% of votes). This score is also similar to the related factor, "the high cost of mediation" ranked at the sixth place."*

The ranking of the sub-contractors is considered as the use of mediation is lower amongst this stakeholder group that the others, yet they are one of the highest groups involved in construction disputes. Gregory-Stevens et al.(2016) review this and comment:

"the top five factors were closely examined. These factors were voted by at least 10% of respondents from these groups while the bottom 5 factors received 7-9% of the votes. Specific scores were as follow:

- *35% of sub-contractors and suppliers believed that "adjudication was more appropriate";*
- *15% of sub-contractors and suppliers admitted that they "did not know enough about what mediation entailed";*
- *15% of sub-contractors and suppliers thought that "the case type was not appropriate for mediation";*
- *11% of sub-contractors and suppliers "belief that the opposing party would not take part in good faith"; and*
- *10% of sub-contractors and suppliers "believed that negotiation was capable of settling the case".*

These results indicates the preference for adjudication (ranked at the top) was due to limited understanding of mediation - which is evidenced by the high ranking of factors that indicate mediation is not at all clear to some sub-contractors at the 2nd, 3rd and 5th place respectively. Lack of trust with the other party seems to be an overarching reason among all stakeholders (ranked among the top 4 by all groups)".

A number of the same questions were then compared by those who had have experience of mediation and those who have had experience of adjudication to understand if previous experience of either process affected their views on selecting meditation. The questions selected were based on the whether the previous experience could influence the response to the question. For example the experience of adjudication could affect the response to the following; Belief that adjudication was more appropriate than mediation; The case type not appropriate for mediation; The strength of our legal case; Mediating the case would have made us look weak; The high cost of mediation. Whereas the following should not be influenced by a previous experience of adjudication without additional knowledge of mediation; Belief that the opposing party would not take part in good faith; Did not know enough about what mediation entailed; Belief that negotiation was capable of settling the case; Mediation would take too long; Mediation would have involved compromise. The first section is those who have previous experience of adjudication. The second section is those with previous experience of mediation. The groups are not mutually exclusive.

Influencing issues affected by previous experience of adjudication

The following tables 7-12 to 7-16 show the responses to the issues questions when compared to those who had previous experience of adjudication:

Table 7-12 - Breakdown of those stakeholders who had adjudicated previously: believe that adjudication was more appropriate than mediation

Stakeholder groups	Those that had adjudicated previously: Belief that adjudication was more appropriate than mediation				
	Yes	No	Don't know	Total (Adjudicated previously)	% yes in group
Client including local Authorities	4	2	2	8	50%
Consultants	1	6	1	8	13%
Major/Main contractors	3	23	17	43	7%
Sub-contractors/Specialists/Suppliers/ Others	6	13	27	46	13%
Total	**19**	**44**	**42**	**105**	
Percentage	18%	42%	40%	100%	

Overall 18% of all stakeholders that had experience of adjudication believe that adjudication is more appropriate than mediation to resolve a dispute, as shown in table 7-12. Significantly, this compares to 26% of all stakeholder who believed that adjudication was more appropriate than mediation. Consequently it appears that experience of adjudication changes the stakeholders view on using mediation. The highest positive stakeholder group in this comparison is the client group, 50% of which believe adjudication is more appropriate than mediation (having had experience of adjudication). The largest change group is the sub-contract group who have reduced from 58% who believed adjudication was more appropriate, but after experience adjudication this reduces to 13%. A similar change is also shown in the main contractor group who believe adjudication is the most appropriate route at 9%, but once they have experience of adjudication then this reduces to 7%. This is also reflected in the no response – without experience of adjudication main contractors responded with 16% and sub-contractors at 12%. With experience on adjudication this is rated at 53% on main contractors and 28% on sub-contractors.

Table 7-13 - Breakdown of those stakeholders who had adjudicated previously: believe the case type not appropriate for mediation

Stakeholder groups	Those that had adjudicated previously: The case type not appropriate for mediation				
	Yes	No	Don't know	Total (Adjudicated previously)	% yes in group
Client including local Authorities	3	1	4	8	38%
Consultants	1	3	4	8	13%
Major/Main contractors	5	22	16	43	12%
Sub-contractors/Specialists/Suppliers/Others	3	2	41	46	7%
Total	**12**	**28**	**65**	**105**	
Percentage	11%	27%	62%	100%	

The above table 7-13 - shows a total of 11% of all stakeholders would decline a mediation in belief that it was not appropriate for mediation having had experience of adjudication compared to 11% overall. Continuing to look at the main contractors and sub-contractors, the main contractors have reduced from 13% who would see this as a reason to decline mediation to 12% having experience with mediation. The Sub-contractors are 7%, remaining at 7%.

Table 7-14 - Breakdown of those stakeholders who had adjudicated previously: believe in the strength of our legal case

Stakeholder groups	Those that had adjudicated previously: The strength of our legal case				
	Yes	No	Don't know	Total (Adjudicated previously)	% yes in group
Client including local Authorities	2	1	5	8	25%
Consultants	1	3	4	8	13%
Major/Main contractors	4	21	18	43	9%
Sub-contractors/Specialists/ Suppliers/Others	2	2	42	46	4%

Total	**9**	**27**	**69**	**105**	
Percentage	9%	26%	66%	100%	

The above table (7-14) shows that the 9% of all stakeholders, with previous experience of adjudication, would decline mediation based on the strength of their legal case. This is a slight reduction from all stakeholders at 11%. Concentrating on the main contractors and sub-contractors, main contractors reduced from 13% to 9%. The sub-contractors reduced from 7% to 4% indicating that an experience with adjudication would make them more likely to consider mediation for dispute resolution.

Table 7-15 - Breakdown of those stakeholders who had adjudicated previously: believe mediating the case would have made us look weak

Stakeholder groups	**Those that had adjudicated previously: Mediating the case would have made us look weak**				
	Yes	No	Don't know	Total (Adjudicated previously)	% yes in group
Client including local Authorities	2	2	4	8	25%
Consultants	0	7	1	8	0%
Major/Main contractors	4	23	16	43	9%
Sub-contractors/Specialists/Suppliers /Others	3	9	34	46	7%
Total	**9**	**41**	**55**	**105**	
Percentage	9%	39%	52%	100%	

9% of all stakeholders, who had previous experience with adjudication, would decline mediation as it would make the party look weak compared with 10% across all stakeholders. Looking at the main contractors and the sub-contractors experience of adjudication reduces declining mediation from 9% to 7% in the sub-contract group. The main contractors remain at 9%.

Table 7-16 - Breakdown of those stakeholders who had adjudicated previously: believe the high cost of mediation would prevent use

Stakeholder groups	Those that had adjudicated previously: The high cost of mediation				
	Yes	No	Don't know	Total (Adjudicated previously)	% yes in group
Client including local Authorities	2	2	4	8	25%
Consultants	0	4	4	8	0%
Major/Main contractors	2	23	18	43	5%
Sub-contractors/Specialists/Suppliers/ Others	3	2	41	46	7%
Total	**7**	**31**	**67**	**105**	
Percentage	7%	30%	64%	100%	

Across all stakeholders 8% would decline mediation due to the perceived high cost involved. By comparing this to those who have experienced adjudication this reduced slightly to 7%. Concentrating on the two contractors groups, the main contractors would decline mediation due to perceived costs from 6% to 5% when considered by those with experience of adjudication. The sub-contractors reduce from 8% to 7%, indicating that experience of adjudication increases the likelihood of using mediation.

Influencing issues affected by previous experience of mediation

The above data is based on the responses by stakeholder group to the questions asked in regards to the reasons not to use mediation. These responses were then analysed comparing those that had either previous experience of mediation or adjudication. Tables 7-17 to 7-22 reflect the responses to those who had previous experience of mediation.

Table 7-17 - Breakdown of those stakeholders who had mediated previously: believe that adjudication was more appropriate than mediation

Stakeholder groups	Those that had mediated previously: Belief that adjudication was more appropriate than mediation				
	Yes	No	Don't know	Total (previously mediated)	% yes in group
Client including local Authorities	3	2	2	7	43%
Consultants	2	6	5	13	15%
Major/Main contractors	1	10	6	17	6%
Sub-contractors/Specialists/Suppliers/ Others	3	8	4	15	20%
Total	9	26	17	52	
Percentage	17%	50%	33%	100%	

The above table 7-17 shows that 17% of stakeholders who had previously mediated still believe that adjudication was the most appropriate for of dispute resolution, compared with 26% across all stakeholders. The highest percentage answering positively is the client group. Significantly, though, the number of sub-contractors that supported this view reduced from 58% if they had not experienced mediation to 20% if they had. This was similar to the main contractors group which reduced from 9% to 6% would decline mediation. This reinforces that there is dissatisfaction with the adjudication process.

Table 7-18 - Breakdown of those stakeholders who had mediated previously: believe the case type not appropriate for mediation

Stakeholder groups	Those that had mediated previously: The case type not appropriate for mediation				
	Yes	No	Don't know	Total (previously mediated)	% yes in group
Client including local Authorities	3	0	4	7	43%
Consultants	2	3	8	13	15%
Major/Main contractors	2	5	10	17	12%

Sub-contractors/Specialists/Suppliers/ Others	1	2	12	15	7%
Total	8	10	34	52	
Percentage	15%	19%	65%	100%	

Of those that had mediated previously 15% of stakeholders had declined mediation in the belief that the opposing party would not take part in good faith – as shown in table 7-19, compared to 11% across all stakeholders. The client group (being a small group) significantly affects this percentage. Main contractors reduced slightly from 13% to 12% when compared with previous experience of mediation. The Sub-contractors remain constant at 7%.

Table 7-19 - Breakdown of those stakeholders who had mediated previously: believe in the strength of our legal case

Stakeholder groups	**Those that had mediated previously: The strength of our legal case**				
	Yes	No	Don't know	Total (Previously Mediated)	% yes in group
Client including local Authorities	1	1	5	7	14%
Consultants	2	4	7	13	15%
Major/Main contractors	1	16	0	17	6%
Sub-contractors/Specialists/Suppliers / Others	1	3	11	15	7%
Total	**5**	**24**	**23**	**52**	
Percentage	10%	46%	44%	100%	

Only 10% of stakeholders, who had previously mediated, declined mediation due to the strength of legal case which is shown in the above 7-20. This is compared to 11% across all stakeholders. The main contractors group had the greatest reduction from 13% to 6% when the previous experience of mediation was applied. The sub-contractors remain constant at 7%.

Table 7-20 - Breakdown of those stakeholders who had mediated previously: believe mediating the case would have made us look weak

Stakeholder groups	Those that had mediated previously: Mediating the case would have made us look weak				
	Yes	No	Don't know	Total (Mediated previously)	% yes in group
Client including local Authorities	0	4	3	7	0%
Consultants	0	9	4	13	0%
Major/Main contractors	1	15	1	17	6%
Sub-contractors/Specialists/Suppliers/ Others	0	13	2	15	0%
Total	**1**	**41**	**10**	**52**	
Percentage	2%	79%	19%	100%	

The above table 7-20 shows that only 2% of stakeholders with experience of mediation have declined mediation as it would have made the case look weak. This relates to one stakeholder in the main contractors stakeholder group. This is compared to 10% total positive response when not compared to those that had pervious mediation. In the compared group 9% of the main contractors stakeholder group responded positive that belief that the case would have made them look weak made them decline mediation, but with experience of mediation this reduced to 6%. The other stakeholder groups recorded that with previous experience of mediation they would not decline mediation in belief this would make them look weak. Again this demonstrates there is a lack of knowledge of the mediation process.

Table 7-21 - Breakdown of those stakeholders who had mediated previously: believe the high cost of mediation would prevent use

Stakeholder groups	Those that had mediated previously: The high cost of mediation				
	Yes	No	Don't know	Total (Previously mediated)	% yes in group
Client including local Authorities	1	2	4	7	14%
Consultants	0	3	10	13	0%
Major/Main contractors	0	14	3	17	0%
Sub-contractors/Specialists/Suppliers/ Others	0	1	14	15	0%
Total	**1**	**20**	31	**52**	
Percentage	2%	38%	60%	100%	

The above table 7-21 shows that again only 2% of stakeholders, with previous experience of mediation, would decline to mediation due to the perceived high cost of the process. This is compared to 8% across all stakeholder groups. Only the client group (1 response) replied in the positive to this question, with all other stakeholder groups would not decline to mediation due to high cost, having had experience of mediation. This is compared to 7% for consultants, 6% for main contractors and 8% for sub-contractors. This would indicate then generally those with experience of mediation, would mediate again as there was acceptance that it is a cost effective process.

Mediation related concerns

The questionnaire asked the participants if they had mediated why they had chosen mediation as the dispute resolution process. The responses by stakeholder group are shown below in tables 7-22 to 7-31.

Table 7-22 - Breakdown by stakeholders on influential factions: legal fees

Stakeholder groups	A reduction in legal fees (6a)				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	6	5	17	28	21%
Consultants	12	1	14	27	44%
Major/Main contractors	17	0	110	127	13%
Sub-contractors/Specialists/ Suppliers/Others	16	3	156	175	9%
Total	**51**	**9**	**297**	**357**	
Percentage	14%	3%	83%	100%	

The above table - 7-22 - shows that 14% of all stakeholders would mediate to reduce their legal fees. By stakeholder group this related to 21% of client group and 44% on consultants group. This is much lower with the contractors groups with main contractors recording 13% and 9% with the sub-contractors group.

Table 7-23 - Breakdown by stakeholders on influential factions: the low size of the sum involved

Stakeholder groups	The low size of the sum involved (6b)				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	6	5	17	28	21%
Consultants	12	1	14	27	44%
Major/Main contractors	17	0	110	127	13%
Sub-contractors/Specialists/ Suppliers/Others	19	0	156	175	11%
Total	**54**	**6**	**297**	**357**	
Percentage	15%	2%	83%	100%	

The above table (7-23) shows that 15% of all stakeholders would select mediation due to the low size of the sum in dispute. By stakeholder group this relates 21% to client

group and 44% to the consultants group. The contractors groups are considerably low at 13% for main contractors and 11% for sub-contractors.

Table 7-24 - Breakdown by stakeholders on influential factions: Achieving a speedier resolution

Stakeholder groups	Achieving a speedier resolution (6c)				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	6	0	22	28	21%
Consultants	13	0	14	27	48%
Major/Main contractors	17	0	110	127	13%
Sub-contractors/Specialists/ Suppliers/Others	19	0	156	175	11%
Total	**55**	**0**	**302**	**357**	
Percentage	15%	0%	85%	100%	

The above table (7-24) shows that 15% of all stakeholders would select mediation to achieve a speedier resolution. Again the highest positive response is with the client and consultant's groups, recording 21% and 48% respectively. The contractors groups are again lower at 13% for main contractors and 11% for sub-contractors.

Table 7-25 - Breakdown by stakeholders on influential factions: Creative settlement

Stakeholder groups	Possibility of reaching a creative settlement				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	5	8	15	28	18%
Consultants	13	0	14	27	48%
Major/Main contractors	17	0	110	127	13%
Sub-contractors/Specialists/ Suppliers/Others	16	0	159	175	9%
Total	**51**	**8**	**298**	**357**	
Percentage	14%	2%	83%	100%	

14% of all stakeholders would use mediation because of the ability to achieve a creative settlement as shown in the table 7-26 above. By stakeholder group 18% of

clients and 48% of consultants would use mediation because of this benefit. The contractors groups are significantly lower with only 13% of main contractors and 9% of sub-contractors answering in the positive to this question.

Table 7-26 - Breakdown by stakeholders on influential factions: Maintaining an existing business relationship

Stakeholder groups	**Maintaining an existing business** relationship (6h)				
	Yes	No	Don't know	total	% yes in group
Client including local Authorities	5	8	15	28	18%
Consultants	9	4	14	27	33%
Major/Main contractors	17	0	110	127	13%
Sub-contractors/Specialists/ Suppliers/Others	19	0	156	175	11%
Total	**50**	**12**	**295**	**357**	
Percentage	14%	3%	83%	100%	

The above table 7-26 shows that 14% of all stakeholders would select mediation to resolve a dispute to maintain a business relationship. By stakeholder group 33% of consultants answered in the positive, however this was only 18% of the clients group. In regards the contractors, 13% of main contractors and 11% of sub-contractors answered that they would use mediation to maintain a business relationship.

Table 7-27 - Breakdown by stakeholders on influential factions: Gaining information on the other party's case.

Stakeholder groups	**Gaining information on the other party's case (6i)**				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	1	12	15	28	4%
Consultants	0	13	14	27	0%
Major/Main contractors	9	8	110	127	7%
Sub-contractors/Specialists/ Suppliers/Others	3	13	159	175	2%
Total	**13**	**46**	**298**	**357**	

Percentage	4%	13%	83%	100%	

Only 4% of all stakeholder confirmed they would use mediation to gain information on the other party's case. This is reflected in 4% of clients group and nil in the consultants group. In regards the contractors 7% of main contractors would mediate to achieve this and 2% of sub-contractors. Although this can be an issue with mediation, it is a low percentage risk.

Table 7-28 - Breakdown by stakeholders on influential factions: legal advice to mediate

Stakeholder groups	**Legal advice to mediate (6j)**				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	4	9	15	28	14%
Consultants	2	11	14	27	7%
Major/Main contractors	6	11	110	127	5%
Sub-contractors/Specialists/ Suppliers/Others	5	14	156	175	3%
Total	**37**	**25**	**295**	**357**	
Percentage	10%	7%	83%	100%	

Only 10% of stakeholders mediated based on legal advice so to do as shown in table 7-28. By stakeholder group this was 14% for the client group and 7% for the consultants group. In regards the contractors 5% of main contractors and 3% of sub-contractors have mediated on legal advice.

Table 7-29 - Breakdown by stakeholders on influential factions: Confidentiality of process

Stakeholder groups	Confidentiality of process				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	5	8	15	28	18%
Consultants	12	1	14	27	44%
Major/Main contractors	8	9	110	127	6%
Sub-contractors/Specialists/ Suppliers/Others	12	5	158	175	7%
Total	**37**	**23**	**297**	**357**	
Percentage	10%	6%	83%	100%	

The above table (7.29) shows that 10% of stakeholders would use mediation because of the confidentiality of the process. By stakeholder group this is 18% for clients and 44% for consultants. In regards the contractors, main contractors are at 6% and sub-contractors at 7%.

Table 7-30 - Breakdown by stakeholders on influential factions: Judge's or court direction

Stakeholder groups	Judges or court direction (6l)				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	3	2	23	28	11%
Consultants	2	3	22	27	7%
Major/Main contractors	8	9	110	127	6%
Sub-contractors/Specialists/ Suppliers/Others	5	9	161	175	3%
Total	18	23	316	357	
Percentage	5%	6%	89%	100%	

The above table 7-30 shows that only 5% of stakeholders undertook mediation at the direction of the court or judge. By stakeholder group this is 11% by client group and 7%

of consultants. With the contractors, 6% of the main contractors answered in the positive and 3% of sub-contractors.

Factors affecting decision to mediate affected by previous experience of mediation

The above data is based on the responses by stakeholder group to the factors that influenced their decision to mediate. These responses were then analysed comparing those that had either previous experience of mediation or adjudication. Tables 7-31 to 7-36 reflect the responses to those who had previous experience of mediation.

Table 7-31 - Breakdown by stakeholders with previous experience of mediation on influential factions: legal fees

Stakeholder groups	A reduction in legal fees with previous experience of mediation				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	5	1	1	7	71%
Consultants	8	1	4	13	62%
Major/Main contractors	12	0	5	17	71%
Sub-contractors/Specialists/ Suppliers/Others	6	2	7	15	40%
Total	**31**	**4**	**17**	**52**	
Percentage	60%	8%	33%	100%	

The above table 7-31 shows that when the stakeholders have experience of mediation, the percentage of stakeholders who would use mediation to reduce legal fees increases from 14% to 60%. By stakeholder group the client group increases from 21% to 71% with knowledge of mediation and with the consultants this increases from 44 to 62%. With the contractors groups this increases from 13% to 71% and for sub-contractors from 9% to 40%, both of which are significant increases. Consequently, knowledge gained through the use of mediation encourages re-use.

Table 7-32 - Breakdown by stakeholders with previous experience of mediation on influential factions: the low size of the sum involved

Stakeholder groups	The low size of the sum involved with previous experience of mediation				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	3	2	2	7	43%
Consultants	4	0	9	13	31%
Major/Main contractors	6	0	11	17	35%
Sub-contractors/Specialists/ Suppliers/Others	3	0	12	15	20%
Total	**16**	**2**	**34**	**52**	
Percentage	31%	4%	65%	100%	

15% of stakeholders would select mediation based on the low size of the sum in dispute, but with the experience of mediation this increases to 31% as shown in table 7-33. By stakeholder group the client group increases from 21% to 43% with knowledge of mediation and with the consultants this increases from 44% to 31%. With the contractors groups this increases from 13% to 35% and for sub-contractors from 11% to 20%.

Table 7-33 - Breakdown by stakeholders with previous experience of mediation on influential factions: Achieving a speedier resolution

Stakeholder groups	Achieving a speedier resolution with previous experience of mediation				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	3	0	4	7	43%
Consultants	7	0	6	13	54%
Major/Main contractors	8	0	9	17	47%
Sub-contractors/Specialists/ Suppliers/Others	9	0	6	15	60%
Total	**27**	**0**	**25**	**52**	

Percentage	52%	0%	48%	100%	

The above table 7-33 shows that when the stakeholder has experience of mediation the percentage of stakeholders who would use mediation to achieve a speedier resolution increases from 15% to 52%. By stakeholder group the client group increases from 21% to 43% with knowledge of mediation and with the consultants this increases from 48% to 54%. With the contractors groups this increases from 13% to 47% and for sub-contractors from 15% to 60%, both of which are significant increases.

Table 7-34 - Breakdown by stakeholders with previous experience of mediation on influential factions: Creative settlement

Stakeholder groups	**Possibility of reaching a creative settlement with previous experience of mediation**				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	5	1	1	7	71%
Consultants	11	0	2	13	85%
Major/Main contractors	12	0	5	17	71%
Sub-contractors/Specialists/ Suppliers/Others	9	0	6	15	60%
Total	**37**	**1**	**14**	**52**	
Percentage	71%	2%	27%		100%

14% of stakeholder would select mediation based on the option of arriving at a creative settlement, but with the experience of mediation this increases to 71% as shown in table 7-35. By stakeholder group the client group increases from 18% to 85% with knowledge of mediation and with the consultants this increases from 48% to 85%. With the contractors groups this increases from 13% to 71% and for sub-contractors from 9% to 60%. Again, this is a significant increase demonstrating that there is a lack of knowledge of the benefits of mediation – one of which is creative solutions.

Table 7-35 - Breakdown by stakeholders with previous experience of mediation on influential factions: Maintaining an existing business relationship

Stakeholder groups	Maintaining an existing business relationship with previous experience of mediation				
	Yes	No	Don't know	total	% yes in group
Client including local Authorities	5	0	2	7	71%
Consultants	9	1	3	13	69%
Major/Main contractors	17	0	0	17	100%
Sub-contractors/Specialists/ Suppliers/Others	13	0	2	15	87%
Total	**44**	**1**	**7**	**52**	
Percentage	85%	2%	13%	100%	

The above table 7-35 shows that when the stakeholder has experience of mediation the percentage of stakeholders who would use mediation to maintain an existing business relationship increases from 14% to 85%. By stakeholder group the client group increases from 18% to 71% with knowledge of mediation and with the consultants this increases from 33% to 69%. With the contractors groups this increases from 13% to 100% and for sub-contractors from 11% to 87%, both of which are significant increases.

Table 7-36 - Breakdown by stakeholders with previous experience of mediation on influential factions: Gaining information on the other party's case.

Stakeholder groups	Gaining information on the other party's case with previous experience of mediation				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	1	5	1	7	14%
Consultants	0	7	6	13	0%
Major/Main contractors	5	7	5	17	29%
Sub-contractors/Specialists/ Suppliers/Others	1	10	4	15	7%
Total	**7**	**29**	**16**	**52**	

percentage	13%	56%	31%	100%	

4% of stakeholder would select mediation based on the gaining information on the other parties' case, but with the experience of mediation this increases to 13% as shown in table 7-36. By stakeholder group the clients group increases from 4% to 14% with knowledge of mediation and with the consultants a 0% for both options. With the contractors groups this increases from 7% to 29% and for sub-contractors from 2% to 7%. Gaining knowledge of the other party's case is the least reason from this set of questions, to select mediation.

Legal advice to mediate

The question in regards to undertaking mediation following legal advice to mediate will remain constant as previous experience of mediation by the stakeholder will not affect legal advice. Consequent this analysis has not been undertaken.

Table 7-37 - Breakdown by stakeholders with previous experience of mediation on influential factions: Confidentiality of process

Stakeholder groups	Confidentiality of process with previous experience of mediation				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	4	3	0	7	57%
Consultants	9	1	3	13	69%
Major/Main contractors	6	5	6	17	35%
Sub-contractors/Specialists/ Suppliers/Others	7	3	5	15	47%
Total	**26**	**12**	**14**	**52**	
Percentage	50%	23%	27%	100%	

10% of stakeholder would select mediation based on the confidentiality of the process, but with the experience of mediation this increases to 50% as shown in table 7-38. By stakeholder group the clients group increases from 18% to 57% with knowledge of mediation and with the consultants at 44% increasing 69%. With the contractors groups this increases from 6% to 35% and for sub-contractors from 7% to 47%.

Court direction to mediate

As would be expected, the response against Judges or court direction remains the same when compared to the same data, but with previous experience of mediation. Consequently there is no table of these results.

Factors affecting decision to mediate affected by previous experience of adjudication

The following tables 7-38 to 7-43 show the responses to the issues questions when compared to those who had previous experience of adjudication:

Table 7-38 - Breakdown by stakeholders with previous experience of adjudication on influential factions: legal fees

Stakeholder groups	A reduction in legal fees with previous experience of adjudication (6a)				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	4	2	2	8	50%
Consultants	6	0	2	8	75%
Major/Main contractors	11	0	32	43	26%
Sub-contractors/Specialists/ Suppliers/Others	8	1	37	46	17%
Total	**29**	**3**	**73**	**105**	
Percentage	28%	3%	75%	100%	

14% of stakeholder would select mediation based on a reduction in legal fees, but with the experience of adjudication this increases to 28% as shown in table 7-39. By stakeholder group the clients group increases from 21% to 50% with experience of adjudication and with the consultants at 44% increasing 75%. With the contractors groups this increases from 13% to 26% and for sub-contractors from 9% to 17%.

Table 7-39 - Breakdown by stakeholders with previous experience of adjudication on influential factions: the low size of the sum involved

Stakeholder groups	The low size of the sum involved with previous experience of adjudication				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	3	2	3	8	38%
Consultants	5	1	2	8	63%
Major/Main contractors	6	0	37	43	14%
Sub-contractors/Specialists/ Suppliers/Others	11	0	35	46	24%
Total	**25**	**3**	**77**	**105**	
Percentage	24%	3%	73%	100%	

The above table 7-39 shows that when the stakeholder has experience of adjudication the percentage of stakeholders who would use mediation due to the low sum involved in the dispute from 15% to 24%. By stakeholder group the client group increases from 21% to 38% with experience of adjudication and with the consultants this increases from 44% to 63%. With the contractors groups this increases from 13% to 14% and for sub-contractors from 11% to 24%.

Table 7-40 - Breakdown by stakeholders with previous experience of adjudication on influential factions: Achieving a speedier resolution

Stakeholder groups	Achieving a speedier resolution with previous experience of adjudication				
	Yes	No	Don't know	Total	Percentage yes in group
Client including local Authorities	3	0	5	8	38%
Consultants	8	0	0	8	100%
Major/Main contractors	6	0	37	43	14%
Sub-contractors/Specialists/ Suppliers/Others	6	0	40	46	13%
Total	**23**	**0**	**82**	**105**	

Percentage	22%	0%	78%	100%	

15% of stakeholder would select mediation based on achieving a speedier resolution, but with the experience of adjudication this increases to 22% as shown in table 7-41. By stakeholder group the clients group increases from 21% to 38% with experience of adjudication and with the consultants at 48% increasing 100%. With the contractors groups this increases from 13% to 14% and for sub-contractors from 11% to 13%, which is a very small increase.

Table 7-41 - Breakdown by stakeholders with previous experience of adjudication on influential factions: Creative settlement

Stakeholder groups	**Possibility of reaching a creative settlement with previous experience of adjudication**				
	Yes	No	Don't know	Total	% yes in group
Client including local Authorities	5	2	1	8	63%
Consultants	7	0	1	8	88%
Major/Main contractors	11	0	32	43	26%
Sub-contractors/Specialists/ Suppliers/Others	8	0	38	46	17%
Total	**31**	**2**	**72**	**105**	
Percentage	30%	2%	69%	100%	

The above table 7-41 shows that when the stakeholder has experience of adjudication the percentage of stakeholders who would use mediation to reach a creative settlement for the dispute from 14% to 30%. By stakeholder group the client group increases from 18% to 63% with experience of adjudication and with the consultants this increases from 48% to 88%. With the contractors groups this increases from 13% to 26% and for sub-contractors from 9% to 17%.

Table 7-42 - Breakdown by stakeholders with previous experience of adjudication on influential factions: Maintaining an existing business relationship

Stakeholder groups	Maintaining an existing business relationship with previous experience of adjudication				
	Yes	No	Don't know	Total	% Yes of group
Client including local Authorities	4	1	3	8	50%
Consultants	7	0	1	8	88%
Major/Main contractors	12	0	31	43	28%
Sub-contractors/Specialists/ Suppliers/Others	11	0	35	46	24%
Total	**34**	**1**	**70**	**105**	
Percentage	32%	1%	67%	100%	

14% of stakeholder would select mediation based on maintaining a business relationship, but with the experience of adjudication this increases to 32% as shown in table 7-42. By stakeholder group the clients group increases from 18% to 50% with experience of adjudication and with the consultants at 33% increasing 88%. With the contractors groups this increases from 13% to 28% and for sub-contractors from 11% to 24%.

Table 7-43 - Breakdown by stakeholders with previous experience of adjudication on influential factions: Gaining information on the other party's case.

Stakeholder groups	Gaining information on the other party's case with previous experience of adjudication				
	Yes	No	Don't know	Total	% Yes in group
Client including local Authorities	0	1	7	8	0%
Consultants	0	4	4	8	0%
Major/Main contractors	3	5	35	43	7%
Sub-contractors/Specialists/ Suppliers/Others	1	7	38	46	2%
Total	**4**	**17**	**84**	**105**	

Percentage	4%	16%	80%	100%	

The above table 7-43 shows that when the stakeholder has experience of adjudication the percentage of stakeholders who would use mediation to gain information on the other party's case does not change from 4%. By stakeholder group there is a slight change with the client group decreasing from 4% to 0% with experience of adjudication and with the consultants with no change at 0%. With the contractors groups there was also no change from the 7% for main contractors and for sub-contractors remaining at 2%.

Legal advice to mediate

The question in regards to undertaking mediation following legal advice to mediate will remain constant as previous experience of adjudication by the stakeholder will not affect legal advice. Consequent this analysis has not been undertaken.

Table 7-44 - Breakdown by stakeholders with previous experience of adjudication on influential factions: Confidentiality of process

Stakeholder groups	Confidentiality of process with previous experience of adjudication				
	Yes	No	Don't know	Total	% Yes in group
Client including local Authorities	3	3	2	8	38%
Consultants	4	2	2	8	50%
Major/Main contractors	4	1	38	43	9%
Sub-contractors/Specialists/ Suppliers/Others	4	2	40	46	9%
Total	**15**	**8**	**82**	**105**	
Percentage	14%	8%	78%	100%	

10% of stakeholder would select mediation based on the confidentiality of mediation, but with the experience of adjudication this increases slightly to 14% as shown in table 7-44. By stakeholder group the clients group increases from 18% to 38% with experience of adjudication and with the consultants at 44% increasing 50%. With the contractors groups this increases slightly from 6% to 9% for main contractors and for sub-contractors from 7% to 9%. This indicates that confidentiality of the process is not a strong driver to use mediation, reflecting the confidentiality of adjudication.

Court direction to mediate

As would be expected, the response against Judges or court direction remains the same when compared to the same data, but with previous experience of adjudication. Consequently there is no table of these results.

Preference for adjudication over mediation

As discussed above, the respondents were asked if they had knowledge of mediation and adjudication and, on a balance of their average disputes, which would be their preferred dispute resolution process. The responses to this by stakeholder group are shown below in table 7-45, with additional tables (tables 7-46 to 7-49) showing a comparison to whether the respondents had used adjudication and/or mediation.

Table 7-45 - Breakdown of those stakeholders preferred dispute resolution process

Stakeholder groups	Preferred formal dispute resolution process between mediation and adjudication					
	Adjudication	Mediation (and/or followed by other process)	Don't know/ Other	Total	% of group Adjudication	% of group Mediation plus
Client including local Authorities	14	8	6	28	50%	29%
Consultants	3	14	10	27	11%	52%
Major/Main contractors	89	22	16	127	70%	17%
Sub-contractors/ Specialists/ Suppliers/Others	105	17	53	175	60%	10%
Total	**211**	**61**	**85**	**357**		
Percentage	59%	17%	24%	100%		

The overall preferred process by all stakeholders was adjudication at 59%, with mediation scoring 17%, as shown in table 7-45. However by stakeholder group this result is different. The consultants group was the only group that showed the preferred process would be mediation (followed by an agreed second tier process) - 52% for mediation, with adjudication at 11%. The client group recorded 50% in favour of adjudication and 29% for mediation. The contractors were split differently with 70% of the main contractors opting for adjudication and 17% for mediation, whereas the range

for sub-contractors was much larger at 60% for adjudication and only 10% for mediation.

Table 7-46 - Breakdown of those stakeholders preferred dispute resolution process having previously experienced adjudication

Stakeholder groups	Preferred formal dispute resolution process between mediation and adjudication with experience of adjudication					
	Adjudication	Mediation (and/or followed by other process	Don't know/ Other	Total	% Adjudication	% Mediation plus
Client including local Authorities	3	4	1	8	38%	50%
Consultants	2	6	0	8	25%	75%
Major/Main contractors	12	20	11	43	28%	47%
Sub-contractors/ Specialists/ Suppliers/Others	10	27	9	46	22%	59%
Total	**27**	**57**	**21**	**105**		
Percentage	26%	54%	20%	100%		

As table 7-46 shows the overall preferred process by all stakeholders, with previous experience of adjudication, was mediation at 54%, which compares with 17% across all stakeholders, with adjudication reducing from 59% down to 26%. By stakeholder group the clients group shows 50% in favour of mediation (and second tier of ADR) rather than adjudication at 38%. This compares to 50% in favour of adjudication across the whole stakeholder group and 29% in support of mediation. The consultants group shows 75% in favour of mediation (and second tier of ADR) rather than adjudication at 25%. This compares to 11% in favour of adjudication across the whole stakeholder group and 52% in support of mediation). In the contractors groups the main contractors, which experience of adjudication, recorded 28% in favour of adjudication and 47% in favour of mediation. This compares with 70% in support of adjudication and 17% in support of mediation for those across all stakeholders. The sub-contractors group records 22% supporting adjudication and 59% supporting mediation, with previous experience of adjudication. This compares to 60% in support of adjudication and 10% in support of mediation across the all stakeholders.

Table 7-47 - Breakdown of those stakeholders preferred dispute resolution process having previously experienced mediation

Stakeholder groups	Preferred formal dispute resolution process between mediation and adjudication with experience of mediation					
	Adjudication	Mediation (and/or followed by other process	Don't know/ Other	Total	% Adjudication	% Mediation plus
Client including local Authorities	2	5	0	7	29%	71%
Consultants	1	12	0	13	8%	92%
Major/Main contractors	3	14	0	17	18%	82%
Sub-contractors/ Specialists/ Suppliers/Others	3	9	3	15	20%	60%
Total	**9**	**40**	**3**	**52**		
Percentage	17%	77%	6%	100%		

As table 7-47 shows the overall preferred process by all stakeholders, with previous experience of mediation, was mediation at 77%, which compares with 17% across all stakeholders, with adjudication reducing from 59% down to 17%. By stakeholder group the clients group shows 71% in favour of mediation (and second tier of ADR) rather than adjudication at 29%. This compares to 50% in favour of adjudication across the whole stakeholder group and 29% in support of mediation. The consultants group shows 92% in favour of mediation (and second tier of ADR) rather than adjudication at 8%. This compares to 11% in favour of adjudication across the whole stakeholder group and 52% in support of mediation. In the contractors groups the main contractors, which experience of adjudication, recorded 18% in favour of adjudication and 82% in favour of mediation. This compares with 70% in support of adjudication and 17% in support of mediation for those across all stakeholders. The sub-contractors group records 20% supporting adjudication and 60% supporting mediation, with previous experience of adjudication. This compares to 60% in support of adjudication and 10% in support of mediation across the all stakeholders.

However, several of those who said yes to mediation qualified their answer in the comments column to reflect that mediation could be a delay in the 28 day adjudication process (designed to enhance cash flow) and should only be used when appropriate.

Previous records of mediation

For those that had mediated the questionnaire asked the respondents to identify the total number of cases, how many cases had settles, partially settled and the number that did not settle. Table 7-48 shows the results of this question.

Table 7-48 - Breakdown by Stakeholders success of mediation

Stakeholder groups	Success rate of mediation				
	Settled	Part Settled	Not settled	Total	percentage settled or part settled by group
Client including local Authorities	8	2	6	16	63%
Consultants	21	1	4	26	85%
Major/Main contractors	28	4	9	26	78%
Sub-contractors/Specialists/ Suppliers/Others	21	8	7	36	81%
Total	**78**	**15**	**26**	**119**	
Percentage	66%	13%	22%	100%	

The above table (7-48) shows that 79% of all mediations either fully settled or partially settled. Only 22% failed to reach any agreement. This rate is constant with the success rate in other industries as discussed previously and reaffirms that mediation is suitable for construction disputes.

Given the considerably higher non-settlement rate of those in the client stakeholder group a split between the two groups within the client banding is shown below in table 7.49.

Table 7-49 - Breakdown by client stakeholders groups - success of mediation

Stakeholder groups	Success rate of mediation				
	Settled	Part Settled	Not settled	Total	percentage of not settled by group
Local Authorities	2	0	4	6	66.6%
Other clients	6	2	2	10	20%
Total	**8**	**2**	**6**	**16**	

The above table 7-49 shows that the highest group not to settle at mediation is the local authorities. Two thirds of local authorities have undertaken a mediation that has not settled compared to 20% of the other client group.

Satisfaction and Enforceability of mediation

Those that had mediated were asked the question on how satisfied they were with the following elements:

- The cost of the mediation
- The mediator
- The mediation process
- The mediation outcome

The results of these questions are detailed below in tables 7-50 to 7-54.

Table 7-50 - Breakdown by stakeholders of those satisfied with the cost of mediation

Stakeholder groups	Satisfied with the cost of mediation					
	Yes	Sometime	No	Don't know	Total	% Yes or sometimes by group
Client including local Authorities	4	2	1	0	7	86%
Consultants	7	4	1	1	13	85%
Major/Main contractors	9	5	2	1	17	82%
Sub-contractors/Specialists/ Suppliers/Others	11	2	2	0	15	87%

Total	**31**	**13**	**6**	**2**	**52**	
Percentages	60%	25%	12%	4%	100%	

The above table 7-50 shows that 60% of all stakeholders who have mediated were satisfied with the cost of the mediation. In addition a further 25% were sometimes satisfied with the cost. By stakeholder group those who responded yes or sometimes accounted for 86% of client group and 85% on consultants group. Similar percentages are recorded with the contractors groups with main contractors showing 82% and 87% with the sub-contractors group.

Table 7-51 - Breakdown by stakeholders of those satisfied with the mediator

Stakeholder groups	**Satisfied with the mediator**					
	Yes	Sometimes	No	Don't know	Total	% Yes or sometimes by group
Client including local Authorities	3	1	3	0	7	57%
Consultants	7	2	4	0	13	69%
Major/Main contractors	9	4	4	0	17	76%
Sub-contractors/Specialists/ Suppliers/Others	10	2	3	0	15	80%
Total	**29**	**9**	**14**	**0**	**52**	
Percentage	56%	17%	27%	0%	100%	

56% of stakeholders who have mediated were happy with their mediator, with 17% stating they were sometimes happy with the mediator. 27% responded that they were not happy with their mediator. By stakeholder group the client group stated that they we happy with the mediator only 57% of the time, leaving a high 43% when they were dissatisfied with the mediator. From the consultants group 69% were satisfied with the mediator. In regards the contractors groups the main contractors recorded 76% satisfaction all or sometimes and the sub-contractors the highest at 80%.

Table 7-52 - Breakdown by stakeholders of those satisfied with the mediation process

Stakeholder groups	Satisfied with the mediation process					
	Yes	Sometimes	No	Don't know	Total	% Yes or sometimes by group
Client including local Authorities	5	1	1	0	7	86%
Consultants	10	1	1	1	13	85%
Major/Main contractors	13	2	2	0	17	88%
Sub-contractors/Specialists/ Suppliers/Others	12	2	1	0	15	93%
Total	**40**	**6**	**5**	**1**	**52**	
Percentage	77%	12%	10%	2%	100%	

The above table 7-52 shows that 77% of all stakeholders who have mediated were satisfied with the mediation process. In addition a further 12% were sometimes satisfied with the cost. By stakeholder group those who responded yes or sometimes accounted for 86% of client group and 85% on consultants group. Similar percentages are recorded with the contractors groups with main contractors showing 88% and 93% with the sub-contractors group (being the highest response).

Table 7-53 - Breakdown by stakeholders of those satisfied with the mediation outcome

Stakeholder groups	Satisfied with the mediation outcome					
	Yes	Sometimes	No	Don't know	Total	% Yes or sometimes by group
Client including local Authorities	4	2	1	0	7	86%
Consultants	11	1	1	0	13	92%
Major/Main contractors	13	3	1	0	17	94%
Sub-contractors/Specialists/ Suppliers/Others	12	2	1	0	15	93%
Total	**40**	**8**	**4**	**0**	**52**	

Percentage	77%	15%	8%	0%	100%	

77% of stakeholders who have mediated were happy with the mediation outcome, with 15% stating they were sometimes happy with the outcome. Only 8%responded that they were not happy with their mediation outcome. By stakeholder group the client group stated that they we happy with the outcome 86% of the time. From the consultants group 92% were satisfied with the mediator. In regards the contractors groups the main contractors recorded 94% satisfaction all or sometimes and the sub-contractors 93%.

Compliance with mediation agreement

One comment that was made frequently as potential reason not to use mediation as a construction dispute resolution process, was that the agreement was unenforceable. Although this is not the case and legally binding agreements can be drafted at the end of mediation, the questionnaire attempted to establish the level of success in the compliance with the agreement, by the parties whether or not it was a legally binding agreement. Table 7-54 shows by stakeholder group, of those that had been involved with mediation, and had reached a settlement at the end of the process, whether the agreement had been complied with.

Table 7-54 - Breakdown by stakeholders of complied with the agreement

Stakeholder groups	**Compliance with the agreement**					
	Yes	Sometimes	No	Don't know	Total	% Yes or sometimes by group
Client including local Authorities	5	1	1	0	7	86%
Consultants	11	1	1	0	13	92%
Major/Main contractors	14	2	1	0	17	94%
Sub-contractors/Specialists/ Suppliers/Others	14	1	0	0	15	100%
Total	**44**	**5**	**3**	**0**	**52**	
Percentage	85%	10%	5%	0%	100%	

The above table 7-54 shows the 85% of all settlement agreements are complied with, with 10% stating that they are sometimes. By stakeholder group this is 86% by clients

and 92% by consultants. In regards the contractors group the main contractors recorded 94% with the sub-contractors noting that 100% complied or sometimes complied with the agreement. Consequently this demonstrates that mediation agreement produce an agreement that is likely to be adhered to by both parties.

Views on mediation

All respondents were asked to comment on five statements in regards to mediation in construction. These were:

- Making mediation a mandatory first step in disputes in the construction industry would be a positive development
- Adjudication is generally well adapted to the needs and practices of the construction community
- Mediation suffers from a lack of enforceability
- Construction contracts should contain a robust mediation clause
- There is a lack of awareness regarding mediation amongst the construction industry

The results of these questions are shown in tables 7-55 to 7-59 below.

Table 7-55 - Breakdown by stakeholders: mediation as mandatory step

Stakeholder groups	**Mediation as a mandatory step (11a)**						
	Yes	Sometimes	No	Don't know	Total	% yes by group	% sometimes by group
Client including local Authorities	5	13	6	4	28	18%	46%
Consultants	12	7	5	3	27	44%	26%
Major/Main contractors	15	21	32	59	127	12%	17%
Sub-contractors/ Specialists/ Suppliers/Others	9	14	58	94	175	5%	8%
Total	**41**	**55**	**101**	**160**	**357**		
Percentage	11%	15%	28%	45%	100%		

The above table 7-55 shows that 11% of all stakeholders believe that mediation should be a mandatory step in disputes with 15% viewing that this should be the case sometimes. In regards stakeholder groups of those that answered yes, the clients group is at 18% and the consultants at 44%. With the contractors group the main contractors were at 12% for yes and 5% of sub-contractors. In regards to responding that this was appropriate sometimes by stakeholder groups of those that answered sometimes, the clients group is at 46% and the consultants at 26%. With the contractors group the main contractors were at 17% for yes and 8% of sub-contractors.

Table 7-56 - Breakdown by stakeholders: Adjudication suitable process

Stakeholder groups	**Adjudication suitable process**						
	Yes	Sometimes	No	Don't know	Total	% yes by group	% sometimes by group
Client including local Authorities	4	16	5	3	28	14%	57%
Consultants	3	14	10	0	27	11%	52%
Major/Main contractors	51	34	37	5	127	40%	27%
Sub-contractors/ Specialists/ Suppliers/Others	93	42	31	9	175	53%	24%
Total	**151**	**106**	**83**	**17**	**357**		
Percentage	42 %	30%	23 %	5%	100 %		

The above table 7-56 shows that that 42% of all stakeholders believe that adjudication is a suitable with 30% viewing that this should be the case sometimes. In regards stakeholder groups of those that answered yes, the clients group is at 14% and the consultants at 11%. With the contractors group, the main contractors were at 40% for sometimes and 53% of sub-contractors. In regards to responding that this was appropriate sometimes by stakeholder groups of those that answered sometimes, the clients group is at 57% and the consultants at 52%. With the contractors group the main contractors were at 27% for yes and 24% of sub-contractors. Sub-contractor are the largest stakeholder group that believe adjudication is a suitable process.

Table 7-57 - Breakdown by stakeholders: Mediation lack enforceability

Stakeholder groups	Mediation lacks enforceability						
	Yes	Sometimes	No	Don't know	Total	% yes of group	% sometime by group
Client including local Authorities	2	5	21	0	28	7%	18%
Consultants	0	3	24	0	27	0%	11%
Major/Main contractors	58	17	19	33	127	46%	13%
Sub-contractors/ Specialists/ Suppliers/Others	88	11	17	59	175	50%	6%
Total	**148**	**36**	**81**	**92**	**357**		
Percentage	41%	10%	23%	26%	100%		

The above table 7-57 shows that that 41% of all stakeholders believe mediation lack enforceability with 23% viewing that this is be the case sometimes. In regards stakeholder groups of those that answered yes, the clients group is at 7% and the consultants at 0%. With the contractors group the main contractors were at 46% for yes and 50% of sub-contractors. In regards to responding that this was appropriate sometimes by stakeholder groups of those that answered sometimes, the clients group is at 18% and the consultants at 11%. With the contractors group, the main contractors were at 13% for sometimes and 6% of sub-contractors. This demonstrates that there is a lack of detailed knowledge of mediation within construction stakeholders, particularly in regards the main contractors and sub-contractors groups.

Table 7-58 - Breakdown by stakeholders: Robust mediation clause in contracts

Stakeholder groups	There is a requirement for a robust mediation clause in contracts						
	Yes	Sometimes	No	Don't know	Total	% yes of group	% sometime by group
Client including local Authorities	21	1	6	0	28	75%	4%
Consultants	24	2	1	0	27	89%	7%
Major/Main contractors	43	6	59	19	127	34%	5%
Sub-contractors/ Specialists/ Suppliers/Others	22	7	85	61	175	13%	4%
Total	**110**	**16**	**151**	**80**	**357**		
Percentage	31%	4%	42%	22%	100%		

The above table 7-58 shows that that 31% of all stakeholders believe construction contracts should contain a robust mediation clause with only 4% viewing that this is be the case sometimes. In regards stakeholder groups of those that answered yes, the clients group is at 75% and the consultants at 89%. With the contractors group the main contractors were at 34% for yes and only 13% of sub-contractors. In regards to responding that this was appropriate sometimes by stakeholder groups of those that answered sometimes, the clients group is at 4% and the consultants at 7%. With the contractors group the main contractors were at 5% for sometimes and 4% of sub-contractors. The client and consultants groups (those with the greatest use of mediation) are strongly in support of a robust mediation clause, whereas the lowest uses of mediation, the sub- contractors groups, see it of little importance.

Table 7-59 - Breakdown by stakeholders: Lack of awareness of mediation

Stakeholder groups	Lack of awareness of mediation						
	Yes	Sometimes	No	Don't know	Total	% yes of group	% sometime by group
Client including local Authorities	25	0	3	0	28	89%	0%
Consultants	27	0	0	0	27	100%	0%
Major/Main contractors	43	4	78	2	127	34%	3%
Sub-contractors/ Specialists/ Suppliers/Others	35	8	101	31	175	20%	5%
Total	**130**	**12**	**182**	**33**	**357**		
Percentage	36%	3%	51%	9%	100%		

The above table 7-59 shows that that 36% of all stakeholders believe there is a lack of awareness of mediation. Only 3% view that this is the case sometimes. In regards stakeholder groups of those that answered yes, the clients group is at 89% and the consultants at 100%. With the contractors group the main contractors were at 34% for yes and only 20% of sub-contractors. In regards to responding that this was the situation sometimes by stakeholder groups - of those that answered sometimes, both the clients group and the consultants considered this to be 0%. With the contractors group, the main contractors were at 3% for sometimes and 5% of sub-contractors. There is a clear divide the between client and consultants groups (those with the greatest use of mediation) and the contractors groups. Those with less experience and less understanding of mediation also consider there not to be a lack of knowledge within the construction industry.

As a comparison to stakeholder view generally the same questions were then compared by those who had previous experience of adjudication. This was to examine if the experience of adjudication altered the stakeholder response, the results are shown in the following tables 7-60 to 7-62.

Views on mediation by those who had previously adjudicated

Table 7-60 - Breakdown by stakeholders who had previously adjudicated: mediation as mandatory step

Stakeholder groups	Mediation as a mandatory step						
	Yes	Sometimes	No	Don't know	Total previously adjudicated	% yes of group	% sometime by group
Client including local Authorities	2	3		3	0	25%	38%
Consultants	6	1		1	0	75%	13%
Major/Main contractors	12	15		3	13	28%	35%
Sub-contractors/ Specialists/ Suppliers/ Others	8	12		3	23	17%	26%
Total	**28**	**31**		**10**	**36**		
Percentage	27%	30%	0%	10%	34%		

The above table 7-60 shows that 27% of all stakeholders believe that mediation should be a mandatory step in disputes if they have experience of adjudication, compared to only 11% across all stakeholders. 15% of all stakeholder thought this was applicable sometimes, however when compared to those who have experience of adjudication this increases to 30%. In regards stakeholder groups, concentrating on the two contractor groups, the main contractors increase from 12% yes and 17% sometimes to 28% yes and 35% sometimes. In regards the sub-contractors this increased form 5% yes and 8% sometimes to 17% yes and 26% sometimes when compared by those with experience of adjudication. Consequently this demonstrates the adjudication experiences increases the desire to try mediation.

Table 7-61 - Breakdown by stakeholders who had previously adjudicated: Adjudication suitable process

Stakeholder groups	Adjudication suitable process						
	Yes	Sometimes	No	Don't know	Total previously adjudicated	% yes of group	% sometime by group
Client including local Authorities	1	4	2	1	8	13%	50%
Consultants	1	2	5	0	8	13%	25%
Major/Main contractors	4	11	28	0	43	9%	26%
Sub-contractors/ Specialists/ Suppliers/Others	5	10	23	8	46	11%	22%
Total	**11**	**27**	**58**	**9**	**105**		
Percentage	10%	26%	55%	9%	100%		

The above table 7-61 shows that only 10% of all stakeholders believe that adjudication is a suitable process if they have experience of adjudication, compared to 42% across all stakeholders. 30% of all stakeholder thought this was applicable sometimes, however when compared to those who have experience of adjudication this increases to 36%. In regards stakeholder groups, concentrating on the two contractor groups, the main contractors decrease from 40% yes and 27% sometimes to 9% yes and 26% sometimes. In regards the sub-contractors this decreased form 53% yes and 24% sometimes to 11% yes and 22% sometimes when compared by those with experience of adjudication. This confirms that experience with adjudication significantly reduces the desire to use the process again.

Mediation lacks enforceability

Experience with adjudication would be unlikely to increase or decrease detailed knowledge of mediation. Consequently the table of comparing this question to those with experience of adjudication is not considered useful information. Therefore a table has not been produced.

Table 7-62 - Breakdown by stakeholders who had previously adjudicated: Robust mediation clause in contracts

Stakeholder groups	Robust mediation clause in contracts						
	Yes	Sometimes	No	Don't know	Total previously adjudicated	% yes of group	% sometime by group
Client including local Authorities	6	1	1	0	8	75%	13%
Consultants	7	1	0	0	8	88%	13%
Major/Main contractors	18	3	20	2	43	42%	7%
Sub-contractors/ Specialists/ Suppliers/Others	10	4	21	11	46	22%	9%
Total	**41**	**9**	**42**	**13**	**105**		
Percentage	39%	9%	40%	12%	100%		

The above table 7-62 shows that 39% of all stakeholders believe that construction contracts should contain a robust mediation clause, if they have experience of adjudication, compared to 31% across all stakeholders. 4% of all stakeholder thought this was applicable sometimes, however when compared to those who have experience of adjudication this increases to 9%. In regards stakeholder groups, concentrating on the two contractor groups, the main contractors increase slightly from 34% yes and 5% sometimes to 42% yes and 7% sometimes. In regards the sub-contractors this increased form 13% yes and 4% sometimes to 22% yes and 9% sometimes when compared by those with experience of adjudication. This reconfirms that experience with adjudication significantly reduces the desire to use the process again.

Lack of awareness of mediation

Experience with adjudication would be unlikely to increase or decrease detailed knowledge of mediation. Consequently the table of comparing this question to those with experience of adjudication is not considered useful information. Therefore a table has not been produced.

Professionalism of mediation

As adjudicators are predominately from a legal or construction professional background so the questionnaire asked whether, in the opinion of the respondent, mediators should also be similarly qualified. The results in Table 7-64 below shows that 41% believe that mediators should be suitable qualified in the subject matter of the dispute which enables them to test the validity, reasoning and strength of the case with each party. Only 7% stated that this was not a requirement. The remainder of stakeholders stated that they did not have an opinion.

Table 7 -63 - Mediators qualified and/or expert in the subject matter of the dispute

Stakeholder groups	Mediator qualified or expert in the subject of the dispute					
	Yes	No	Don't know	Total	Percentage by stakeholder Yes	Percentage by stakeholder No
Client including local Authorities	23	5	0	28	82%	18%
Consultants	26	1	0	27	96%	4%
Major/Main contractors	53	9	65	127	42%	7%
Sub-contractors/ Specialists/ Suppliers/Others	43	11	121	175	25%	6%
Total	**145**	**26**	**186**	**357**	41%	7%
Percentage	41%	7%	52%	100%		

7.6 Chapter summary

This chapter contains the data received from the circulated questionnaires. It shows that adjudication is still the default dispute resolution process for construction industry disputes in England. However, it also shows that where some stakeholders have experience of adjudication, they are less likely to want to use it again, confirm that there are issues with the adjudication process. The data also confirms that there is still a lack of detailed knowledge about mediation, but once stakeholders have mediated they would generally mediate again.

The next chapter looks at how this information supports the conceptual model. It also looks at the key implications from the findings and considers possible solutions to encourage greater use of mediation.

8 Synthesis of results and model validation

8.1 Introduction

The previous chapter showed the results from the questionnaires issued as the final research of this thesis. This information is used in this chapter to validate the model developed in Chapter 6, which will look at the external influences on the selection of dispute resolution process in the construction industry in England. It demonstrates the suitability of mediation for English construction disputes and identifies key barriers to its greater use. It also considers the methods of influencing practice by addressing these key barriers, including a significant absence of understanding of mediation and a lack of trust, access to construction mediators, and the inclusion of robust mediation clauses in standard construction contracts.

8.2 Synthesis of the key findings

The aim of this research was to answer the main research question: Can mediation improve the process of dispute resolution for the English construction industry? And, in addition, the following sub-questions.

1. What are the factors influencing construction disputes, dispute resolution processes, and selection of the dispute resolution process?
2. What are the issues with the current process for resolving disputes?
3. Is mediation suitable for resolving construction disputes in England?
4. What are the barriers for greater use of mediation in construction dispute resolution?
5. How can these barriers be removed?

In Chapter 6, the conceptual model was developed, based on the findings from the literature reviews, the case studies, and the interviews undertaken as part of this research. By validating the model with the results of the questionnaire, the above questions can be answered.

Factors influencing construction disputes, dispute resolution processes, and selection of the dispute resolution process

The model identifies the key four factors: stakeholder, structure, contract, and project as being influential on the selection of the dispute resolution process. An in-depth analysis of the questions was used to answer the validation questions raised above, with each of the factors is examined below:

Influence of the stakeholder on the dispute resolution process

The aim was to test through the results of the questionnaire whether the stakeholder had a significant influence on the selection of the dispute resolution process. This premise was developed following the findings from the literature review, the case studies, and the interviews, which indicated that stakeholders have a high influence on this, predominately through knowledge or a lack of it and a lack of trust. The questions were designed to test if the stakeholders who claimed to have knowledge of the mediation process truly had that knowledge by asking detailed questions about mediation. The respondents to the questionnaire represented a cross-section of the construction industry; however, a high number (85%) were either contractors or sub-contractors. Although this may be disproportionate to the construction industry composition generally, it should be beneficial to this analysis because these are the two parties most likely to be involved in disputes (Trushell et al., 2012). From the literature review, case studies, and interviews, it is clear that mediation is suitable for the resolving the majority of construction disputes in England, but stakeholders do not appear to be engaging in the process as extensively as adjudication.

Although most contractors (particularly sub-contractors) said they were aware of mediation, it is clear that this is not the case, due to the misconception that mediation will not settle the case or will make the parties look weak, as identified in Table 7-9. This also demonstrates that it is the smaller organisations that generally have less knowledge of the mediation process. Table 7-9 also shows that there is a lack of trust between stakeholders, which results in rejecting mediation. The majority of stakeholders ranked adjudication as their primary process for dispute resolution. However, when this was compared to those who had experienced adjudication (Table 7-12), this was no longer the case, demonstrating that a number of those who had used adjudication were dissatisfied with the process. As Table 7-18 shows, of those who had experience of mediation, a similar proportion to those who had experience of adjudication would decline the former to use the latter. This demonstrates that although

there is dissatisfaction with adjudication, it still fulfils a role. This was reaffirmed when all the respondents were asked if they would select adjudication, mediation, or mediation followed by adjudication (Table 7-46); two-thirds of respondents selected adjudication. The highest supporters were the main contractors and sub-contractors, supporting previous findings. When this is compared with those who responded who had previous experience of adjudication, as shown in Table 7-47, this reduces to less than one-third.

One of the reasons for using adjudication is the speed of the process (a majority of cases completed within 28 days). Mediation does not greatly improve on this, and as Table 7-25 shows, only 15% would select mediation because of the speed of the process. Mediation is, however, generally quicker than going to court. One of the key advantages of mediation is the ability to reach a creative solution. With the allocation of fault in construction disputes often not clear-cut and both parties having influence on the issues, a creative solution, compromise, and even the timing of payments or actions can be hugely beneficial. As Table 7-35 shows, those who understand mediation said that one of the reasons for using the process was the ability to reach a creative solution and settlement.

Of those who have mediated, two-thirds settled on the day of the mediation. When this is added to those that went on to settle prior to court or adjudication, the success rate reaches 79%. This settlement rate is consistent with that of other industries. The client stakeholder group was analysed in separate parts, identifying local authority/government clients apart from other clients (Table 7-50). According to the results, two-thirds of the local authority groups did not settle, reflecting the reluctance of local government authorities to commit to an agreed settlement, as opposed to a prescribed amount issued by a judge or adjudicator. This client group is predominately responsible for spending public money and is required to demonstrate best value for money, which is difficult in the mediation environment.

These findings reinforce stakeholders as a key factor in the section of the dispute resolution process, showing that stakeholders have a preference over the process selection that is influenced by knowledge, understating, and experience. It also shows that there is a lack of knowledge, especially in the sub-contractor sector, about the awareness of the mediation process.

Influence of contracts on the dispute resolution process

Again, the questionnaire was used to test the model and premise developed in Chapter 6, that the construction contract is one of the key influences on the selection of dispute resolution process. Questions were asked about the inclusion of a robust mediation clause in standard construction contracts and the ability of the adjudicator to ask (if appropriate) if the parties had tried mediation.

As discussed, there is evidence that the contract itself and the clauses contained in it can cause disputes to arise and influence the selection of the dispute resolution process. From an analysis of the cases studies, it is clear that the HGCR Act and the subsequent introduction of the Scheme for Construction Contracts strongly influence the use of adjudication, with all of the adjudicated case studies citing the contract as the reason for selecting adjudication for dispute resolution (Table 6-4). From the mediation case studies, only 30% mediated when there was an option to adjudicate in the contract (Table 6-31), with the reminder mediating prior to court, demonstrating that the CPR guidance for mediation is effective. No such guidance exists for adjudication, although the interviewees were asked if similar rules should apply; for example, whether adjudicators should have the right to ask the parties to a dispute referred to them (if, in their opinion the case, was suitable for mediation) if they had attempted mediation. The responses (Table 6-31) were generally favourable (70%) towards some type of process, but most agreed this would be difficult and require careful consideration and clear guidance about the implications.

During the interviews, the issue of the inclusion of the contractual clause to adjudicate was raised as one potential barrier to the greater use of mediation, with 80% identifying this as an issue. The same question was posed again in the questionnaires, in question 11. Table 7-58 reveals that 31% of those surveyed believe that construction contracts should contain a robust mediation clause. This varied considerably by stakeholder groups, with clients supporting a change by 75%, main contractors at 34%, sub-contractors and specialists by 13%, and professionals at 89%. When this is compared with those who had mediated, 83% said that they would or sometimes would support the inclusion of a robust mediation clause. By stakeholder, this resulted in significant changes in the main contractor and sub-contractor groups, increasing to 82% and 80% respectively, as shown below in Table 8-1.

Table 8-1 - Breakdown by stakeholders who had previously mediated: Robust mediation clause in contracts

Stakeholder groups	Robust mediation clause in contracts					
	Yes	Sometimes	No	Don't know	Total previously adjudicated	% "yes" or "sometimes" of the group
Client, including local authorities	4	1	1	1	7	71%
Consultants	11	1	0	1	13	92%
Major/main contractors	12	2	1	2	17	82%
Sub-contractors/ specialists/ suppliers/others	11	1	0	3	15	80%
Total	**38**	**5**	**2**	**7**	**52**	
Percentage	73%	10%	4%	13%	73%	

It has been demonstrated that the contract and its clauses can influence the selection of dispute resolution process, and for mediation to enjoy the same success as adjudication, one requirement is for robust clauses in contracts stipulating this possibility. It is concerning that prior to this research, the compilers of the NEC standard forms of contract did not consider any mediation clause necessary.

Influence of the project on the dispute resolution process

The actual project was identified as a key factor influencing the selection of a dispute resolution process (Chapter 6). The questionnaire was used to test stakeholder attitudes towards project dispute resolution boards and the introduction of mediation first, with adjudication as the second option (where appropriate) to confirm that the project is a key influence. As discussed previously, although the project itself can cause disputes to arise (Hughes and Barber, 1992), it appears to have little influence on the selection of the dispute resolution method, with the exception of the inclusion of project dispute resolution boards (PDRB) in a scheme. The questionnaire indirectly asked about this process through two questions. Question 11 asked whether making mediation a mandatory first step in disputes in the construction industry would be a positive development, if it was the normal process following failed negotiations with a PDRB (Murdoch and Hughes, 2007), while question 13 asked if the respondent felt a

process of mediation followed by adjudication would be useful if the case was not settled. Again, this is similar to the first stages of the PDRB process.

As Table 7-46 shows, of the stakeholders who responded to the questionnaire, the majority preferred adjudication as the first step in dispute resolution, with the main contractors group and the sub-contractors group having the largest percentages, at 70% and 60% respectively. This supports that these two groups are the most likely to use adjudication over any other form of dispute resolution. However, when this is compared to those who have true knowledge of mediation (through use), this preference changes to mediation, or mediation followed by another process (Table 7-48) for these two stakeholder groups, with the main contractors' desire to use adjudication reduced to 18% and their choice of mediation or mediation followed by adjudication increasing to 82%; sub-contractors preference for adjudication as the first step was reduced to 20%, with these who would select mediation or mediation followed by adjudication increasing to 60%. This clearly shows that there is a lack of knowledge of mediation, especially in the main contractor and sub-contractor sections of the market.

This is further supported by the attitudes of these two stakeholder groups in their responses to question 11, in particular as to whether making mediation a mandatory first step in disputes in the construction industry would be a positive development; adjudication is generally well-adapted to the needs and practices of the construction community and there is a lack of awareness regarding mediation in the construction industry. Making mediation a mandatory first step would be a similar process to project DRBs. The support for this, caveated by its application only where appropriate, again changes for those who have experience of adjudication. As discussed previously, those who had not experienced adjudication believed that the process was suitable for the construction industry (Table 7-57); however, asking the same question to those who had experienced adjudication (Table 7-62), the response was significantly different with a half less agreeing, with the greatest change being in the main contractor and sub-contractor sections of stakeholder respondents.

The interviewees were questioned on their views on retaining mediators during a project (Table 6-33). While project dispute boards with mediators were regarded as a good idea, there were concerns about funding, selection of members, and ensuring the boards are seen as neutral. In conclusion, the project itself could contribute to the selection the dispute resolution process by the use of PDRB.

Influence of structure on the dispute resolution process

The findings from the existing research, case studies, and interviews show that the project and the relationship between the parties can influence the selection of the dispute resolution process. The questionnaire was used to reaffirm this finding and reaffirm the structure of the project as one of the key factors. As seen from the case studies, interviews, and previous research, mediation is recognised as maintaining relationships (Stitt, 2004; Liebmann, 2000), while adjudication is seen to be detrimental to this (Gould, 2010; Mason and Sharratt, 2013).

As discussed previously, the maintenance of relationships is extremely important, commercially necessary (Murdoch and Hughes, 2008) and vital for partnering and framework agreements to be successful (Uff, 2005; Adriaanse, 2007). From the case studies in Table 6-8, it is clear that adjudication damages relationships, with 70% of partners no longer working together, and one client stakeholder confirming that once a contractor has commenced adjudication against them, that contractor is then precluded from working with them again. One respondent stated that adjudication was detrimental to relationships, stating that it "has become very 'final,' with regards to relationships."

Interestingly, one of the mediation case studies found that mediation was selected to maintain relationships (Table 6-14), with 80% of those involved stating that they would work together again (Table 6-19). One interviewee said that one of the reasons mediation had been selected was the desire to retain a relationship (Table 6-29). In the questionnaires, respondents were requested to say if they would select mediation to resolve a dispute due to its potential to maintain existing relationships (Table 7-36). 85% of those who had mediated responded that this was a consideration in selecting the process, confirming that the structure of the project and the maintenance of relationships influences the selection of the dispute resolution process.

The issues with the current process for resolving disputes

The most common form of formal dispute resolution used in construction is adjudication (Table 6-23 and Table 7-2). The literature review indicates that there are significant issues with adjudication, including the costs involved (Bingham, 2009; Minogue, 2010; Kennedy et al., 2010) and its effect on relationships (Mason and Sharratt, 2013). From the interviews and the focus groups undertaken during this research, these issues have been reaffirmed (Tables 6-26 to 6-28). The questionnaire tested these issues further. Comparing Table 7-22 to Table 7-38 and the use of mediation to reduce legal fees, it can be seen that stakeholders who have previous experience with adjudication come to

almost double those who had no previous experience when opting for mediation, confirming the existence of an issue with the cost of adjudication. In addition, by comparing Table 7-56 to Table 7-61 – adjudication as a suitable process – those who had previous experience of adjudication were significantly less likely to agree than those with no experience of the process, again supporting the idea that there are issues with adjudication. In addition, comparing Table 7-26 with Table 7-42 – using mediation to maintain business relationships – stakeholders who have previous experience with adjudication but who then choose mediation are more than double in number with respect to those who had no previous experience with adjudication, again confirming that there is an issue with relationships being affected by the use of adjudication. Finally, Tables 7-45 and 7-46 show that with no experience of adjudication, 59% of stakeholders would prefer adjudication, yet once they have experienced it, this falls to 26%, again indicating that the process is problematic. All this forces one to the conclusion that there are significant doubts concerning the process of adjudication.

Suitability of mediation for resolving construction disputes in England

The literature review revealed that mediation is considered suitable for resolving construction disputes in the USA (Stipanowich, 1996). In addition, the research by Gould (2009) has demonstrated that mediation enjoys a high success rate for construction disputes in England and Wales. From the case studies and interviews, it also appears to be suitable for use in England. The results from the questionnaire (Table 7-48) reaffirm the findings by Gould (2009) as concerns the percentage of the success rate for settlement, with 66% of cases settled and 13% part-settled, which is a similar success level to other industries and sectors (Stitt, 2004; Liebmann, 2000). As Tables 7-50 to 7-53 show, the majority of people with experience of mediation were satisfied with the process, the mediator, the cost, and the outcome. The lowest satisfaction was with the mediator, of who 56% were always happy and 17% of were sometimes satisfied, which may indicate that further research is required into construction mediators. Table 7-54 identifies that a significant number of mediation agreements are complied with (85% always and 10% sometimes). This confirms that mediation is suitable for construction dispute resolution in England.

Barriers to the greater use of mediation in construction dispute resolution

The literature review offered little insight into the reason for the low use of mediation in construction. The interviews provided an indication to the barriers, with 90% of

respondents suggesting that a lack of knowledge was a key issue (Table 6-30), with a fear of bullying, it being seen as a soft option, an assumption that agreements were non-enforceable, and it being viewed as a time-buying tactic and unprofessional confirming this. To test this, the questionnaire asked if stakeholders had knowledge of mediation, to which 75% responded that they had. However, when this was tested by asking detailed questions about the process, the results were significantly different. As Tables 7-9 show, the reasons for declining mediation include the belief that the strength of the legal case would remove the need for mediation; that the case was not suitable; that mediation would take too long; and that mediating would have made the party look weak and would involve compromise. Other issues cited include the perceived lack of enforceability of a settlement (Table 7-57). Table 7-59 shows that 39% of stakeholders believe there is a lack of awareness and understanding of mediation.

Another barrier identified through the interviews was the detailed inclusion of the adjudication process in construction contracts. Both the interviews and the focus groups' opinions support the notion that adjudication has become the default process for construction disputes in England (Table 6-30). The findings from the case studies reaffirm (Table 6-4) that adjudication was selected as the dispute process because it was in the contract or was the construction norm.

The interviewees were asked about accessibility of mediators and their professionalism. Table 6-33 shows that the majority believe there should be access to an independent construction mediation panel not governed by any of the existing, individual organisations, which are often restricted concerning meditator membership and fee-paying, as shown in Table 6-33. This table also shows that those interviewed considered that mediators should have relevant quantifications and experience in the subject of the dispute. The questionnaire asked the same question; Table 7-63 depicts that 41% answered in the positive and only 7% in the negative, showing clear support for the idea.

Removal of barriers to the use of mediation

From the above, it is clear that there are four key barriers to be addressed by this research: the lack of knowledge and understanding of stakeholders; the construction contract clause; the professionalism of mediators; and their accessibility. There is an indication that there are issues surrounding mediators, but this was not explored within the scope of this research and is therefore recommended for further research.

The lack of knowledge is greatest with the main contractor and sub-contractor stakeholder groups. Accessing these groups to raise awareness and offer training is necessary to remove this barrier. It is proposed that this is done by approaching the professional organisations in the industry to contact their members and academic organisations.

To increase awareness of mediation and give it the same validity as adjudication, the interviewees supported the inclusion of a robust mediation clause in contracts. Table 8-1, which details the results from the questionnaire, also demonstrates there is strong support for the inclusion of such a clause. The JCT has always supported mediation and the inclusion of a mediation clause, and it will be approached with the findings of this research. It is hoped that this will also persuade the NEC to revise its views on the inclusion of a mediation clause.

To provide an independent board of construction mediators, CE has also been approached. The format will provide access to mediators with construction and legal knowledge, and a wide range of professional qualifications. This would enable easy and open selection and/or recommendation by either party to the dispute and a method of shortlisting the mediators that both parties will accept.

8.3 Validating the model

The content of the model developed from the literature review, the case studies, and the interviews was validated by the responses from the questionnaire, as detailed in Section 8.2. The model was then circulated around the focus group for final discussion on its adoption as a standard for understanding the relationships and issues relating to contraction disputes and dispute resolution selection. The group (as detailed in Appendix C) consider that it captures the key issues that, in their experience, affect the formation of a dispute and influence the selection of dispute resolution method. There was debate over the central factor – whether the stakeholder or project should replace the contract factor as the central point of the model - but it was eventually agreed that the contract was the factor that tied the other three factors together and therefore remained central. The allocation of dispute types against the links was discussed, with agreement that these were a good fit with examples on NEC driven disputes being identified. The encompassing circle of dispute resolution selection was discussed and agreed that, because of the various influence factors within the circle - the factors and links – that it could not be a series of concentric circles for the various dispute resolution options. Finally, it was identified as an important tool for inclusion in the

training modules being developed, and gave clear, visual dimensions to the factors affecting construction disputes.

8.4 Influencing the industry

From this research, it is clear that although there are many influences on the selection of the dispute resolution process, the key influences are: that stakeholders have a lack of knowledge and understanding of mediation and are therefore reluctant to use the process; that the construction contract itself contains clauses (as required by legislation) to refer disputes to adjudication; that the project may have a dispute resolution board in place that dictates the process; and that the project structure and the relationships between the parties may influence the dispute process selected. Following the support received from the focus group for the model, this will be used as the central point for the materials to be used for the training programmes discussed below.

The research has already started to influence the industry, more specifically at my own professional practice level, with two cases being referred to mediation rather than adjudication. I provided the parties with a draft copy of the article now published in the *International Journal of Law in the Built Environment* (Gregory-Stevens et al., 2016) and consequently, both parties to the two disputes opted for mediation, and settled successfully.

As identified above, to address these barriers and ensure greater use of mediation in English construction disputes, a number of key activities are required, which are currently being pursued as part of this doctorate. The first is a need to raise awareness and detailed knowledge of the process, particularly within the main contractor and sub-contractor stakeholder groups, who have been shown to be the most likely to be in dispute and have the least knowledge of mediation. To achieve this, I am working with the CIOB and Constructing Excellence (CE) to develop a strategy for delivering this training, particularly aimed at those in small main contractor and sub-contractor organisations. In addition, I am currently co-authoring two papers, one to support a university to substantially increase the ADR module of its MSc, and another to develop an ADR module within its range of construction courses. Two further issues identified by this research are the accessibility of construction mediators and their professional qualifications. Working with Construction Excellence and the chair of the CE mediation working group, the organisation Mediators4Construction has been formed and the website went live on the 1st October 2016, allowing the industry to access construction

mediators without using professional organisations and to easily identify the qualifications, background, and expertise of the mediator. Finally, during this research, the need for the inclusion of robust mediation clauses in standard construction contracts and draft clauses for bespoke contracts has been identified. Contact is currently being made with the JCT, who are supportive concerning the development of a mediation clause in their standard contracts. Once this has been achieved, a new approach will be made to the NEC council.

As discussed in Chapter 7, the Department for Business, Innovation and Skills is interested in the outcome of this research. The government is aware of the benefits to the English construction industry of significantly increasing the use of mediation and this research can assist in promoting greater use. Consequently, a copy of the final thesis will be sent to the ministry upon publication, as requested.

8.5 Chapter summary

This chapter has confirmed the key factors highlighted in the existing research, case studies, and interviews that were used to develop the conceptual factors influencing the dispute resolution process model, and the testing of this model with the results from the questionnaires. The key factors of stakeholders, the construction contract, the structure of the project, and the project itself have all been confirmed as being influential in the selection of the dispute resolution process. The primary influence is that of stakeholders, because their attitudes and knowledge of the processes strongly dictate the process selected. The lack of knowledge about mediation has been clearly identified, along with many misconceptions about the process that steer stakeholders to a cultural use of adjudication, even when the case is more suitable for mediation.

The secondary influence is the contractual/statutory right to adjudication. Adjudication was introduced for the quick resolution of simple issues and it has been demonstrated to still fulfil this function. However, more often adjudication, is selected to resolve complex issues, resulting in extensive investments in costs and time, with no guarantee of a fully successful outcome. Construction disputes by their very nature are rarely simple, with many issues affecting the dispute and with both parties partially complicit, making them particularly suitable for mediation.

The research has already started to influence the industry, both at a local level and with a much wider audience. It establishes that for mediation to become widely adopted, there is a need for detailed knowledge and understanding of the process by the key stakeholder groups, particularly by the main contractors and sub-contractors, both

through training and by professionally qualified mediators becoming accessible to all stakeholders. It also demonstrates that there is a need to include robust mediation clauses within standard construction to encourage use and awareness throughout the industry. The interest and support shown by both the CIOB and Constructing Excellence in this research will enable these findings and conclusion to be implemented nationally, through industry-wide training. The inclusion of ADR modules in academic construction-related courses is seen as important by the providers, with two now actively developing new modules and early discussions with other universities. The instigation of the construction mediation panel driven by this research through Constructing Excellence is helping to address the issue of the accessibility of mediators, with the website Mediators4construction launched and now being updated with construction mediators. Dialogue has been commenced with the JCT concerning developing more robust mediation clauses. All this is starting to change practice.

9 Conclusion

9.1 Introduction

The adversarial nature of the construction industry and the cost and time spent on construction disputes is a concern both within the industry and for the government. In addition, the contribution made to the country's GDP by the English contraction industry is not insignificant, yet it operates on small margins and spends a disproportionate amount on disputes. The first chapter of this thesis identified that based on my experience in practice, there is an issue with the amount of time and costs spent on resolving disputes. My experience also identified that the primary method used for resolving these disputes – adjudication – is itself contributing to the costs and time expended. Adjudication was the original solution introduced by the government through the HGCR Act. Unfortunately, adjudication no longer appears to fully fulfil this requirement and the need for a new solution to provide a cost-effective and time-efficient dispute resolution process is required, Mediation is used successfully in other industries and for the resolution of construction disputes in other countries such as the USA.

The main question of this research is whether mediation can improve the process of dispute resolution for the English construction industry, and in addition, this raised the following questions:

1. What are the factors influencing construction disputes, dispute resolution processes, and the selection of the dispute resolution process?
2. What are the issues with the current process for resolving disputes?
3. Is mediation suitable for resolving construction disputes in England?
4. What are the barriers for greater use of mediation in construction dispute resolution?
5. How can these barriers be removed?

This final chapter summarises the findings of this research, critically reviews those findings, and seeks to understand the requirements to deliver to the industry. It considers the impact of this research on professional practice and identifies its limitations. In addition, the chapter reflects on the research methods and effectiveness of the information gathered.

9.2 Key findings from the research

This research linked the key factors that contribute to a construction dispute and influence the selection of the dispute resolution. It identified the prevalent use of adjudication and confirmed that this is due to the statutory right to adjudicate and the inclusion of adjudication clauses within construction contracts. The research also identified that stakeholders consider that construction contracts should contain robust mediation clauses, encouraging its use and raising awareness of the process.

There were clear indications that where stakeholders had experience of adjudication, they were generally keen to avoid the process in future and some were interested in understanding more about mediation, confirming that adjudication does not always deliver the service it was developed to provide. This research also identified that the amount spent on the dispute was not always proportionate to the amount claimed, nor guaranteed a positive outcome.

Generally, those who had mediated before were supportive of mediating again. With regards to knowledge of mediation, although stakeholders stated that they knew what the process was, it was clear by asking key questions about mediation (for example, enforceability and costs) that they did not. They were also unaware of the benefits such as cost-saving, developing creative settlements, and maintaining relationships, while those who had mediated before agreed that these were benefits that mediation can offer.

The research also confirmed that mediation shows a similar settlement rate if undertaken at any stage of the process, be it during the early stages through to mediation prior to attending court (with court dates set). However, to benefit from the maximum cost-saving that mediation can offer, it should be undertaken at the earliest possible opportunity, before time and costs have been spent on preparing extensive documentation. The research also confirms that mediation settlements are generally complied with, at a higher rate than those imposed by adjudication or courts, thereby reducing the costs and time involved in recovering a debt. As discussed, mediation agreements can create a legally binding contract. The benefit of the creative solutions that mediation offers has been proven to be extremely beneficial to the construction industry, where disputes are rarely clear-cut and flexibility about solutions, actions required, or payment may represent a better resolution to the dispute for all parties.

Local government authorities have issues with mediation, and this may well apply to similar organisations. An authority has to justify the expenditure of public money and by taking a construction dispute to adjudication or court, the authority is instructed on the awarded amount, while in mediation, the settlement is by agreement. The authority would need to justify the amount settled to demonstrate value for money, meaning that an imposed judgement is a more attractive option.

The research has confirmed that most stakeholders believe the mediator should be an expert in the subject matter of the dispute, as is the case with an adjudicator, enabling the testing of a claim. There does seem to be an issue at the moment with the quality and type of mediators working on construction disputes, and this will need to be addressed if mediation is to grow. The interviewees were asked about the possible creation of a construction mediation board, which received a favourable response.

Factors influencing construction disputes

The factors that influence the development of construction disputes were identified through both the existing theory and in this research. The case studies and interviews identified the influence that the four key elements (stakeholders, contract, project, and structure) have on the development of an issue into a dispute.

The complex and contractual relationships that exist between the numerous parties that are required to execute a construction project enable disputes to develop, be they opportunist, planned, or accidental. Although a construction project often has a low margin, a relatively significant amount is spent on dispute resolution. Government reports and intervention have not addressed this issue, although the introduction of adjudication is seen as a significant improvement. However, there has been a significant rise in costs and time to issue or defend adjudication, causing concern that this is no longer the best automatic solution. Adjudication is still suitable for simple issues requiring speedy resolution, especially those relating to payment and cash flow.

Dispute resolution processes and selection

This research has shown that the most commonly selected form of dispute resolution is adjudication. The research has also identified that the costs of submitting and defending adjudication can become both extensive and expensive. It has also shown that mediation is not regularly selected as the dispute resolution process, with many of those who have mediated being guided in the mediation direction by the CPR requiring mediation (where appropriate) prior to attending court.

The four key elements also influence the dispute selection process. The stakeholders rely on knowledge of the processes available and that of the construction contract point's disputants towards adjudication or court. The project can also influence the route of dispute resolution, due to elements such as project dispute resolution boards. Finally, the structure and relationships between the parties may influence the dispute process selection, given that adjudication has been shown to be extremely detrimental to business relationships.

Validity of the conceptual model

The conceptual model – the factors influencing dispute resolution process model – was developed from the literature review, the case studies, and the interviews. It identified the four key factors that result in the selection of the dispute resolution process, supported by other elements. The questionnaires substantiated these key factors but also showed that they exerted different levels of influence on the selection of the process. Stakeholders (and their knowledge of mediation) and the construction contract (with its statutory right to adjudication) have the greatest influence on the process selected. In addition, the model has been validated and its efficacy agreed by the stakeholders in the focus group.

9.3 Impact on professional practice

The English construction industry is a significant contributor to the UK economy. UK construction made up 6.1% of the UK GDP in 2013, being valued at £92.4 billion, with 2.1 million people employed, representing 6.3% of the UK total in Q3 of 2014. Given that the industry struggles to achieve margins in excess of 4%, it is not insignificant that the industry spends 2% on construction disputes. By changing the way the construction industry resolves disputes by adopting a process such as mediation, costs and time will be saved. In addition, relationships are more likely to be maintained, which may have a positive influence on the overall adversarial nature of the industry.

I am engaged in an ongoing work with the CIOB and Constructing Excellence to develop the knowledge required ensuring greater use of mediation. The development of construction mediation boards will assist in making mediation easier to access, with professionally qualified mediators. At a personal practice level, raising knowledge of mediation though undertaking this research and associated publications has already had a positive impact on two cases.

9.4 Limitations of the research

In recognition to the subjective nature of a limited number of case studies and interviews used in this study, a wider sample was used in the questionnaire survey to address the shortfalls and better represent the industry. This not only represented experienced professionals (involved in both case studies and interviews) but also triangulated the results across a larger group of stakeholders. The case studies were from my experience in practice and the interviews from experienced construction professionals – as were those participating in the focus group. To reduce the potential for subjectivity and bias, the questionnaire was circulated through various networks, as detailed previously. This range of distribution also ensured the total anonymity of the responses. This use of mixed methods research is also recognised as appropriate for this type of research in the built environment. Although the questionnaire was circulated through various organisations, it is also circulated through my network of construction contacts, who have a higher than average level of experience of mediation. As this research concerns the experience of the barriers to the use of mediation, and the use of adjudication, this higher level of those with mediation experience enhances the information gathered for this research. This research is limited to the construction industry in England, influenced by English law.

The scope of this research was limited by time, access to information, and defined boundaries to ensure the key issues were identified. It would have been useful to have investigated further into the performance of mediators and the profession of those currently meditating construction disputes to understand if the profession of the mediator affects the outcome of the mediation, and to investigate if there are “good” or “bad” mediators working currently in this field.

9.5 Areas for further research

Following on from the findings of this research and the boundaries set, the following items have been identified as requiring further investigation:

- Issues around mediators, including performance of the mediator (Tables 6-33 and 7-51), mediation styles, the professionalism of the mediator (Tables 6-33 and 7-63), and the affect these have on the success of a mediation;
- The use of project dispute resolution boards (PDRB) as identified in Table 6-32, if they are successful, and the cost of implementing and maintaining them in relation to project values;

- Whether mediation boards and panels that sit outside the current professional organisations make selection easier or are developed for each project (see comment on PDRB);
- The effect the allocation of risk has on the development of a dispute.

It could also be useful to understand the full effect of the implementation of the Construction Act by carrying out similar research in countries without adjudication imposed by legislation.

9.6 Personal reflection

Completing this final chapter has allowed me to reflect on the journey through the doctorate. When starting this research, it seemed obvious that mediation was the answer to all construction disputes, but it became clear that adjudication is important and has a place in construction disputes for simple issues that can be quickly resolved – exactly what adjudication was implemented for originally. The research has enabled me to communicate the benefits of mediation to a much wider audience, with support coming from a number of organisations such as Constructing Excellence and the CIOB. It has given me an understanding of research methods and methodology, as well as helping me to develop an ability to critically review established documents. This ability has led to the identification in this research of errors and omissions in these industry established documents that have resulted in industry standards being introduced without full understanding of the implications.

The interest in my findings has been encouraging and is allowing the knowledge of mediation to be spread wider in the construction industry. There is still much to research and implement, but I have learnt that knowledge is ongoing and, through the friends and contacts I have made on this journey, the research will continue.

9.7 Final summary

This research started from my involvement in construction disputes and the high level of costs and time spent on resolving those disputes, primarily through adjudication. Having been introduced to mediation, it appeared to offer the obvious solution, yet there was and is low usage of the process in the industry. This research set out to understand if mediation was suitable for the resolution of English construction disputes (offering the usual benefits of the process) and if this was the case, why was there not greater use of mediation.

The research has demonstrated that mediation is both suitable and successful. It has also identified the key barriers to greater use, including the contractual/statutory right to use adjudication and the lack of detailed knowledge of mediation. By now working with prominent industry organisations, a strategy for raising knowledge among stakeholders (focusing on main contractors and sub-contractors) is being developed, along with the formation of a construction industry mediation board. There is also indication of support from the CIOB and the JCT, who are publishers of some of the standard forms of construction contracts, to include a more robust mediation clause in their contracts.

This thesis will not change the adversarial nature of the English construction industry, and will not prevent disputes from happening. However, if mediation can become more widely used as a dispute resolution process as a result of its findings, saving significant time and money for the industry and assisting in maintain relationships, then this research will have fulfilled its purpose.

Glossary

Adjudication

A form of dispute resolution which is used in the construction industry. An adjudicator is obliged to decide a dispute within the adjudication period (28 days but often extended to 42 and sometimes longer). The adjudicator's decision is temporarily binding on the parties to the adjudication.

Adjudicator

The decision-maker in the adjudication process. The adjudicator will have experience in dispute resolution and is also likely to be a construction industry professional or lawyer specialising in construction.

Adjudicator Nominating Bodies

Professional bodies (which often represent a group of construction industry professionals) that will arrange, for a fee, the appointment of an adjudicator following receipt of an appropriate application by a referring party.

Alternative Dispute Resolution (ADR)

A set of dispute resolution techniques which avoid the inflexibility of litigation and arbitration, and focus instead on enabling the parties to achieve settlement.

Arbitration

A process, similar in many respects to litigation, for the final determination of disputes by the decision (an 'award') of one or more arbitrators. Arbitration is governed by the Arbitration Act 1996.

Award

The term used to describe the arbitrators decision at the conclusion of an arbitration.

Construction Contract

Defined in section 104 of the Housing Grants, Construction and Regeneration Act 1996. It is a contract for the carrying out of 'construction operations' (which are defined in section 105). The definition of construction operations is very broad. Under the original HGCR Act a construction contract must have been made in writing or evidenced in writing and entered into on or after 1 May 1998. However, this has been

superseded by the new Construction Act (as detailed below) and contracts by performance (where no written formal contract exists) can also now be adjudicated.

Decision

The term used to describe the adjudicators decision issued at the conclusion of an adjudication

Dispute

The Act defines a dispute as including 'any difference'. A point must have emerged from the process of discussion such that there is something which needs to be decided after the parties have themselves, attempted to resolve their differences by an open exchange of views. The Oxford Dictionary defines it as a disagreement or an argument.

Final Account

The term used in the majority of construction contracts to define the final, total amount to be paid for to the contractor at the completion of the project. It will include adjustment for any financial changes in the project.

Housing Grants Construction and Regeneration Act 1996 ('the Act')

The legislation that contains the statutory right to adjudicate. The Act contains various mandatory provisions which must be included within a construction contract. This Act has been subsequently superseded by the Local Democracy, Economic Development and Construction (LDEDC or the Construction Act) Act (2009),

Liquidated and Ascertained Damages

An amount typically included within a construction contract that is a pre estimate of cost that would be incurred by one party should the completion date (or revised completion date) in the contract be exceeded.

Litigation

A process for the final determination, by the courts, of disputes. Construction and engineering related disputes are usually handled by the Technology and Construction Court. Litigation is governed by the Civil Procedure Rules.

Main Contractor

The main contractor (or principle contractor under certain forms of contracts) is the primary contractor on the contract. That is, they will typically be in contract to the project client and mange and number of sub-contracts for the delivery of the project.

Mediation

A flexible process conducted confidentially in which a mediator actively assists parties in working towards a negotiated agreement of a dispute or difference, with the parties in ultimate control of the decision to settle and the terms of resolution.

Mediator

A neutral person who will try to help disputing parties arrive at an agreed resolution of their dispute. The mediator presence creates a new dynamic that is absent when parties undertake direct negotiation.

Part 36 Offer

The Part 36 mechanism provides a formal, regulated procedure for a party, including a claimant, to express a willingness to accept something less than total success in his open position in litigation.

Sub-Contractor

A sub- contractor, which may also be referred to as a specialist contractor, will be in contract with the main or principle contractor on a project. Unless additional warrantees are introduced they have no direct contractual relationship with the project client.

Technology and Construction Courts

A branch of the High Court that deals with technology, construction and engineering related cases.

Tolent Clause

A clause in a construction contract (named after the 2000 case of *Bridgeway Construction Limited –v- Tolent Construction Limited*) whereby one party agrees to pay the other party's costs of any adjudication, as well as their own, whether they win or lose.

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Appendix A – Published works & conference papers

1. Construction disputes – the option of mediation.

   Presented at the RICS COBRA conference September 2010

2. RICS – Surveyor South West Summer 2010

   What is mediation - Article on the use of mediation

3. RICS – Construction Journal June-July 2010

   Keeping an open mind – Article on the use of mediation in construction disputes

4. International Journal of Law in the Built Environment

   Mediation in construction dispute in England July 2016

Appendix B – Questionnaire

The Construction Industry and Mediation

Q1. What is your firm's or organisation's role(s) in project(s)?

Response

Client (Government or LA)

Client (Other)

Design/Professional team

Principal Contractor (Major £50m and over)

Principle Contractor (Main contractor less than £50m)

Sub-contractor

Specialist Contractor

Other (please give details below)

Q2. What is your firm or organisation annual turnover?

Less than £300,000

£300,000 – less than £1m

£1m – less than £5m

£5m – less than £10m

£10 – less than£50m

£50m and over

Q3 Has your company been involved in adjudication?

Yes

No

Don't Know

How many times (if known)

Q4. Are you aware of the process of mediation?

Yes

No

Don't Know

Q5. How would you describe your firm's or organisation's policy or practice towards mediation? (please click one option button only)

It is my firm or organisation's policy or practice to consider mediation

My firm or organisation does not have a policy or practice regards mediation

It is my firm or organisation's policy or practice to avoid mediation

Don't know

Other

Q6. Has your company been involved in mediation?

Yes

No

Don’t know

If yes how often was each of the following factors relevant to your decision to mediate?

	Yes	Sometimes	Never	Don’t know/ n/a
A reduction in legal costs				
The low size of the financial sum in dispute				
Achieving a speedier settlement				
The possibility of reaching a creative settlement				
Enabling continuation of a business relationship				
Gaining information on the other side’s case				
My lawyer told me				

to mediate				
Confidentiality of the process				
Judges direction or court requirement				
Other (please give details below)				

Q7. If you have ever declined a proposal of mediation from either your lawyer or an opposing party in a dispute how often was each of the following factors relevant to your decision to decline?

	Yes	Sometimes	Never	Don't know/ n/a
The high cost of mediation				
I did not know enough about what mediation entailed				
The strength of my legal case				
Belief that the opposing party would not take part in good faith				
The case type not				

appropriate for mediation				
Belief that negotiation was capable of settling the case				
Mediation would take too long				
Belief that adjudication was more appropriate.				
Mediation would have involved compromise				
Mediating the case would have made me look weak				
Other (please give details below)				

Q8. If you have experienced mediation please estimate the number of cases that settled, partially settled or did not settle on the day or within 2 weeks of the mediation.

Total number of cases

Number of cases that settled

Number of cases that partially settled

Number of cases that did not settle

Q9. On the basis of your general experience of mediation, how often have you been satisfied with the following elements? (please click the appropriate options button for each element)

	Yes	Sometimes	No	Don't know / n/a
The cost of mediation				
The mediator				
The mediation process itself				
The outcome of mediation				

Q10. In respect of those mediations which settled, how often have the parties complied with the agreements reached?

Always

Mainly

Sometimes

Not often

Never

Don't Know

Q11. Please tick the box which best reflects your view concerning the following statements

	Yes	Sometimes	Never	Don't know/ n/a
Making mediation a mandatory first step in disputes in the construction industry would be a positive development				
Adjudication is generally well adapted to the needs and practices of the construction community				
Mediation suffers from a lack of enforceability				
Construction contracts should contain a robust mediation clause				
There is a lack of awareness regarding mediation amongst the construction industry				

Q12. Do you believe it is important for the mediator to be an expert in the subject of the dispute (as is common in adjudicators and adjudications)

Yes

No

Don’t Know

Q13. If you have knowledge of mediation and adjudication, on a balance of average disputes which would be your preferred dispute resolution process

Mediation

Adjudication

Mediation followed by adjudication if the case does not settle

None of the above

Don’t know

Q14. Please use the following space to make any other comments that you feel is relevant to the development of mediation in construction disputes.

Appendix C – Focus Group questions

The focus group was formed to assist in canvassing the opinions of other experts in the field of construction disputes.

It consisted of up to five construction professionals plus myself, all involved in varying numbers of construction disputes, all with experience of mediation and adjudication.

To continue with the compliance of the Ethics Approval issued for this research, the identity of those involved has not been included for publication.

These focus groups were arranged as a number of telephone conference calls, transcripts of which are listed below.

Telephone conference call held 8/4/16:

JGS:
So do we still think the construction industry is adversarial and argumentative?
PS:
I still manage to make a comfortable living! Now we are coming out of recession things [construction claims and disputes] are as busy as ever.
PB:
Agreed, contractors have become aggressive again, chasing every variation.
RD:
Yes I would agree with that – with sub-contractors as well. There is a feeling as the industry appears to be slowly recovering that they can be a bit more bullish again. There is still a shortage of certain trades [sub-contractors] in some areas and they are using this to get as much as they can from the main contractors.
PS:
And back to being willing to spend considerable sums on preparing cases for adjudication.
RD:
Yes but still after value for money – they want assurances they funds are being well spent.
JGS:
So opting for mediation them?
RD:
No, not really
PS:

Of course not – I haven't seen a mediation for nearly 3 years. After spending a chunk on training as a mediator, I'm still doing adjudications.

AB:

I've not even had a lawyer recommend mediation – the last one I was involved with, I had to prompt him to mention it to the contractor. Adjudication is still the default.

JGS:

Adjudication the default?

AB:

Yes – contractor or subbie has a dispute, they always assume they are right and their solicitors seem to encourage them – so off to adjudication.

PS:

It's [adjudication] what it tells you to do in the [construction] contract.

JGS:

So what about CPR before court?

PS:

Solicitors still seem to only reluctantly recommend mediation – it's almost like they want the other party to refuse so that they can carry on to court.

Telephone conference call held 11/4/16:

JGS:

The NEC claims that their contract is all about "…mutual trust and co-operation." So less claims and disputes then?

PB:

Of course – not! The NEC – given the complexity of managing the contract actually leads, I think, to more disputes.

PS:

Agreed, I've not noticed any reduction, just a change in the split between NEC and JCT

AB:

If you have a NEC savvy main contractor, they can be really aggressive with time bars to their sub-contractors

TS:

And they have to understand about the importance of project programmes. I agree, the NEC contract itself can cause more disputes. It does also raise the importance of the contractor's project manager – they really need to understand the NEC rules.

JGS:

Talking of the PM, do you think that different members of the construction team have a different attitude to dispute escalation?

PB:

Of course. Your QS is out to get as much money as possible by over claiming up stream [to the client] and under valuing downstream [to the sub-contractor] and the PM just wants to get the project finished on time, with a good relationship with the client and the sub-contractors.

PS:

What you mean is the QS is ensuring the PM isn't spending all the profit!

TS:

A good PM will also have an eye on cost, but it will not be his main driver – having said that the QS should ideally also have a good relationship with the client and the sub-contractors as it make agreeing accounts upstream and downstream smoother.

RD:

The PM and QS should work as a team, but the PM needs cooperation to get the budget built from the sub-contractors and often flexibility from the client on certain issues to get hand over.

AB:

QSs are more adversarial – it is part of what they do.

PS:

The problem is, as long as we keep bidding projects at 3% margin or less, the QS will always be chasing money – which must be the main reasons for disputes.

Telephone conference call held 3/10/16:

JGS:
Just checking you have all received a copy of section 6 - 8 of chapter 6 and the model? So, does it capture everything?

AB:
Initially I thought the stakeholder should be central to the model, but it is the contract that ties it all together – or should do – so I now agree. Although you could argue that the project is central point.

JGS:
The logic behind putting the contract in the centre was based on comments in the literature review I did – as you say it should be central, tying all the parts together.

AB:
Agreed, but without the project there is nothing to pull together

JGS:
But you could also say that about the stakeholders.

AB:
Fair point – I suppose as the factors are linked it isn't the main driver from the model

PS:
It does nicely capture everything in one place

TS:
The time line link is important, especially under a NEC contract where the programme is critical and the source of many a dispute. Mind you, the same could be said of the attitudes link – the NEC is supposed to be all about collaborative working, but as we all know, it is just another set of opportunities for claims.

RD:

What do you mean?

TS:

The NEC is full of land mines for the unwary – time bars for example and payment notices – all meant to encourage working closer together but in reality give those in the know more opportunities for creative claims

RD:

Fair comment

JGS:

But the model captures this?

TS:

Yes – showing the type of claim against each of the links is very clear – it shows the influence these have on the claims. Good categorisation.

JGS:

By claims do you mean disputes?

TS:

A claim is a dispute waiting to happen…

JGS:

I have produced a couple of other diagrams showing this development, can I circulate them as well?

TS:

Yes

PB:

You put the quantity issues/claims against characteristics – why?

JGS:

Because they often sit with the opportunist claims. Also it will generally be the project or stakeholder that will determine if quantities change – but this can also be influenced by the contract – hence locating in this sector.

PB:
Yes that makes sense

TS:
I've received the other diagrams – is the reason your dispute resolution selection outer circle isn't a series of concentric circles reflecting the levels in you other diagram is because the difference factors inside the outer circle may influence dispute method selection rather than strictly following the path of that shown in those diagrams.

JGS:
Correct

PS:
As I said before, this is a good visualisation that incorporates the other diagrams – it would be also good for teaching about how the elements to a dispute interact and how they can all have an influence on the dispute resolution method selected.

AD:
I agree – it shows the importance of intelligent stakeholders when it comes to knowing what ADR is available

TS:
And by intelligent stakeholder you mean knows what mediation is?

AD:
Absolutely

JGS:
Perfect. Any more comments?

AB:

Now you just need to get it circulated throughout the industry…

Appendix D - Construction organisations invited to participate in the survey.

Royal Institution of Chartered Surveyors; Royal institute British Architects; Institute of Civil Engineers; National Specialist Contractors Council; British Property Federation; Local Government Association; National Federation of Builders; Painting and Decorating Association; Home Builders Federation; Civil Engineering Contractors Association; UK Contractors Group; National Federation of Roofing Contractors; National Association of Shopfitters; Building & Engineering Services Association; Electrical Contractors Association; Federation of Master Builders; Glass and Glazing Federation; National Federation of Builders.

Appendix E – Ethical approval.

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Jackie Gregory-Stevens
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26th April 2011

Dear Jackie,

Project Number: *FST/FREP/11/050*
Project Title: Construction disputes - the option for mediation.
Principal Investigator: *Jackie Gregory-Stevens*

Thank you for supplying revisions to your application for ethical approval, as requested by the Faculty Research Ethics Panel (FREP) following its review.

I am pleased to inform you that your research proposal has been approved by the Chair of the Faculty Research Ethics Panel under the terms of Anglia Ruskin University's *Policy and Code of Practice for the Conduct of Research with Human Participants*. Approval is for a period of three years from 26/04/2011.

It is your responsibility to ensure that you comply with Anglia Ruskin University's Policy and Code of Practice for Research with Human Participants and specifically:

- The procedure for submitting substantial amendments to the committee, should there be any changes to your research. You cannot implement these changes until you have received approval from FREP for them.
- The procedure for reporting adverse events and incidents.
- The Data Protection Act (1998) and any other legislation relevant to your research. You must also ensure that you are aware of any emerging legislation relating to your research and make any changes to your study (which you will need to obtain ethical approval for) to comply with this.
- Obtaining any further ethical approval required from the organisation or country (if not carrying out research in the UK) where you will be carrying the research out. Please ensure that you send the FREP Secretary copies of this documentation.
- Any laws of the country where you are carrying the research out (if these conflict with any aspects of the ethical approval given, please notify FREP prior to starting the research).
- Any professional codes of conduct relating to research or research or requirements from your funding body (please note that for externally funded research, a project risk assessment must have been carried out prior to starting the research).
- Notifying the FREP Secretary when your study has ended.

Information about the above can be obtained on our website at:

http://web.anglia.ac.uk/anet/rdcs/ethics/index.phtml/ and or
http://www.anglia.ac.uk/ruskin/en/home/faculties/fst/research0/ethics.html

Please also note that your research may be subject to random monitoring by the committee.

Please be advised that, if your research has not been completed within three years, you will need to apply to our Faculty Research Ethics Panel for an extension of ethics approval prior to the date your approval expires. The procedure for this can also be found on the above website.

Should you have any queries, please do not hesitate to contact me. May I wish you the best of luck with your research.

Yours sincerely

F. Salmon

Felicity Salmon
Secretary, Faculty Research Ethics Panel, for Science and Technology

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cc. Supervisor