An Insight into Alternative Dispute Resolution (ADR) and how this is executed to solve common Construction Disputes.

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Abstract

The construction industry suffers from frequent conflicts and disputes between all parties involved in construction contracts. This is because the industry is ever-evolving making it more complex and leading to further complications. In this thesis, construction professionals conducted semi-structured interviews and questionnaires within the context of alternative dispute resolution (ADR). The main goal of the study was to determine the relationship between cost and time within the ADR sector and signify the effects of this in comparison to traditional methods, also to determine the type and frequency of conflicts and factors that influence the transition into disputes.

This thesis explores an extensive literature review which summarizes the main definitions of disputes and conflicts. The thesis also explores a brief background of Alternative dispute resolution (ADR) and how this originated to become part of the standard form of contract and the main method of dispute resolution. Furthermore, the literature explores the ways within ADR and the circumstances in which the process is used. Once analysed, the three research methods were triangulated to form conclusions and make recommendations.

The main findings indicate that conflicts and disputes are an inevitable factor in the construction industry due to the complex nature of the industry and the vast amount of interdependent parties involved. They can occur at any time in the process, even before design work is carried out. Furthermore, the findings show that ADR, compared to litigation, is much more effective and efficient in terms of time and cost. However, there is still a place for legal proceedings that should take the dispute spiral out of control in terms of costs.

The findings also presented the most common causes of dispute. In some way or other, the results from both the literature and primary data have identified the same recurring causes for many years, indicating a potential link between these disputes requiring further scope for study. Solutions found, including early interventions of conflict, can significantly impact saving cost, time, relations and how disputes develop.

Acknowledgements

Declaration

I declare that the work contained within this dissertation be my own innovative work and that no part has been plagiarised from any source whatsoever. Where work and theory or concepts have been taken or adapted from other authors, these have been properly cited or referenced.

This dissertation stands at _____ words approximately.

Signed:

Print Name:

Date: _____

Abbreviations

ADR – Alternative Dispute Resolution

NBS – National Building Survey

EOT – Extension of time

TCC – Technology and Construction court

LADs – Liquidatedand AscertainedDamages

RICS – Royal Institute of Chartered Surveyors

L&E – Loss and Expense

FAV – Final Account Variation

VOV – Valuation of Variations

FTU – Failing to understand

CPR – Civil Procedure Rules

HGCRA - Housing Grants, Construction and Regeneration Act

ANOVA – Analysis of Variance

GCDR – Global Construction Dispute Report

NCCLS - National Construction Contracts and Law Survey

Chapter 1.0:Introduction to the research topic

1.1 Introduction

Alternative dispute resolution(ADR)allows construction disputes to be handled compared to other traditional methods, such as litigation. By utilising ADR, disputes can be resolved through mediation and arbitration. However, other disputes may be resolved by more formal litigation.

Disputes are common in any workplace, however, more so in construction, due to the diverse nature of the industry and the variation of individuals all working for different corporations. It is only a matter of time before some form of the dispute arises.

ADR techniques have gained popularity in managing conflicts and disputes(Lee, WingYiu, & Cheung, 2016). This is because people involved became unpleased with the traditional methods to solve disputes, which were incorporated into the standard contract form.

Fenn, Lowe & Speck (1997)stated conflicts and disputes are two distinct notations. A conflict is where the interests of two parties are incompatible. However, this can be handled with the possibility of preventing a disagreement. Disputes are different as they're one of the main reasons for a project not reaching completion, and these require resolution by means of either mediation, arbitration, negotiation etc. (Cakmak & Cakmak, 2014).

The main causes of construction disputes are money and time, e.g. not being paid and delays due to inclement weather etc. This can then result in delays and dependant on who's responsible, i.e. the employer, and then the contractor can claim an extension of time (EOT) and loss and expense claim.

1.2 Hypothesis

Due to alternative methods, ADR has made settling disputes more effectivein terms of cost and time.

1.3 Negative Hypothesis

Due to alternative methods, ADR has not made settling disputes more effective in terms of cost and time.

1.4 Research Primary Aims:

- To research ADR and gather insight into the reasoning for its use.
- Investigate and Identify the main methods of ADR

1.5Research Objectives:

- A brief insight into the history of ADR to gain an understanding of its origins and how it has changed over the years
- Establish the main reasons for the dispute and explore the causes within the construction industry
- Formulate a comparison between ADR and other forms of dispute resolution
- Identify whether ADR has had a positive/negative effect on the construction industry since its incorporation of solving disputes

Chapter 2.0:Research Methodology

2.1 Methodology

The literature review is crucial to confirm that the proposed hypothesis is acceptable. The first stage will be to familiarize the subject area of alternative dispute resolution (ADR) through extensive research. This allows the author to understand the subject area and fine-tune the aims and objectives of the thesis.Torraco(2016)acknowledged that literature reviews are carried out for different purposes and take different forms for various audiences.

Once the research is conducted and basic knowledge is acquired, a literature review will be formed, allowing the author to understand an in depth and up to date view of the subject and the best route to progress the research. The literature review will be based on a significant amount of secondary data such as articles from journals, written work from books, and research gathered from the world wide web.

2.2 Quantitative or Qualitative strategy

Two different research strategies and methods can be identified under the terms 'Quantitative and 'Qualitative'(Laycock, Howarth, & Watson, 2016). When choosing the research methodology, the purpose of the study and the data required will be conclusive (Naoum, 2013). Table 1 provides the key features of both types and their research approaches.

Aspect	Quantitative	Qualitative
Research perspective	Scientific	Interpretive
Research approaches	Environmental	Ethnographic; Phenomenological; Grounded theory
Researcher role	Neutral	Immersed/may be participant
Research environments	Controlled and monitored	Naturalistic
Research data	Measurable and numeric Obtained from testing	Descriptive Emergent from the field of study Rich insights into social worlds, practices and phenomena
Research outcomes/ findings	Facts	Specific to the research context
Scope of findings	Generalisable	

Table 1 - Features of qualitative and quantitative approaches to research(Laycock, Howarth, & Watson, 2016)

2.2.1 Quantitative research data

Quantitative data is measurable and normally in a numerical form that can be rigorously and statistically analysed.This can be drawn by collecting data from methods such as questionnaires, case studies, literature etc (Laycock, Howarth, & Watson, 2016). Furthermore, Naoum(2013) states that quantitative research clarifies a theory by analysing data through objective research.

2.2.2 Qualitative research data

Qualitative data is based on opinions, perceptions and feelings. This data is captured through interviews, discussions, observations, etc. This provides results in non-numerical data, i.e. it uses words, which provides data that is more open to interpretation(Laycock, Howarth, & Watson, 2016). Furthermore, Naoum(2013) describes qualitative research as subjective and 'Exploratory' when there is limited knowledge of the topic or 'Attitudinal' when assessing an individual's perspective towards an object.

2.3 Primary Data

Primary data can is data collected directly from the author to support the research (Naoum, 2013). This method is considered to attain the most reliable research. It gives the researcher more control over the collection of data. Furthermore, carrying out this type of research provides the author with an understanding of how real industry practices relate to the author's-world experiences (Laycock, Howarth, & Watson, 2016).

2.4 Secondary data

Generally, secondary data can be collected very easily; researchers have to find the source of that data and then collect it. The most significant advantages of secondary data are related to time and cost. Generally, it is much less expensive to use secondary data than to conduct a primary research investigation (Naoum, 2013).

Chapter 3.0: Proposed Methodology

3.1Questionnaires

Questionnaires are a form of research instrument that sets out a series of questions to compile data from respondents to gather opinions, feelings, and perceptions on the selected topic. Closed question questionnaires provide a predictable and simple set of answers. Closed questions are desired because there is a collection of answers produced in advance that can be listed on the questionnaire(Brace, 2018).This type of question enables an easy way to collect data provides an effortless way for the respondent to record their data.

Closed questionnaires will be thoughtfully written to avoid incompletion and to ensure the data collected can be analysed. Fellows & Liu(2015) state the questions should be unambiguous and easy for the respondent to answer. They should not require extensive data gathering by the respondent. They will use the most widely used Likert scale and multiple-choice style questions to attain accurate views and to what extent they agree/disagree with a statement. In addition, they will closely follow the objectives to ensure the thesis aims are fulfilled.

The purpose of the questionnaires will be to learn about ADR and its effectiveness compared to traditional methods and what methods were used. These will be first piloted before distribution to warrant their effectiveness and provide constructive feedback(Fellows & Liu, 2015). Questionnaires will be distributed to construction law sector participants with experience in alternate dispute resolution. An expectation of around10-15%returned and completed will suffice for suitable data analysis. The participants will be sourced via social media networks such as LinkedIn and contacts obtained during university.

3.2Interviews

Interviews will also be carried out following the questionnaires and developed based on the questionnaire responses. The interviews aim to provide qualitative data as opposed to quantitative which cannot be obtained via questionnaires alone. Interviews can be defined as a verbal interaction between two or more people where information is directed from the interviewee to the interviewer (Laycock, Howarth, & Watson, 2016).

Interviews can take form in different types, thus being fully structured, semi-structured and unstructured. Semi-structured interviews will take place for this thesis as this type offers greater flexibility and depth in the interviewee's responses. I plan to carry out semi-structured interviews via telephone, preferably skype interviews if possible, to allow convenience for the interviewee. I plan to carry these out with the following participants:

- **Interviewee P1**Quantum Claims Consultant
- **Interviewee P2** Chartered Surveyor

The interviews are expected to last around 30 minutes; however, a cap of 15 minutes extra if needed. It is thought the participants will provide me with specialist opinions within this niche subject area. Initially, it was intended to conduct face-to-face interviews. However, most interviewees preferred telephone interviews which they considered would be less intrusive on their time, so interviews over the phone were carried out.

All interviewees must fill out a consent form before the commencement of the interview. This will be included in appendix 1. All interviews will be recorded via a Dictaphone,

borrowed from the university, with consent from the interviewees prior to questioning and recording for transcription and analysis. Data analysis will be thematically analysed, and common trends in the answers will be identified within my analysis.

3.3 Data Triangulation

Triangulation is a research application of two or more data collection methods to ensure the viability of data and attenuate the flaws with the associated methods (Naoum, 2013). It draws upon information from different sources and people's perspectives, i.e. literature review, questionnaires, and interviews, to aid in producing robust data and mitigate any flaws with each method. By using a variety of data collection methods (figure below), the likelihood of any inconsistency within the data being identified increased; therefore, the data represents real-world opinions and has aided in robust conclusions.

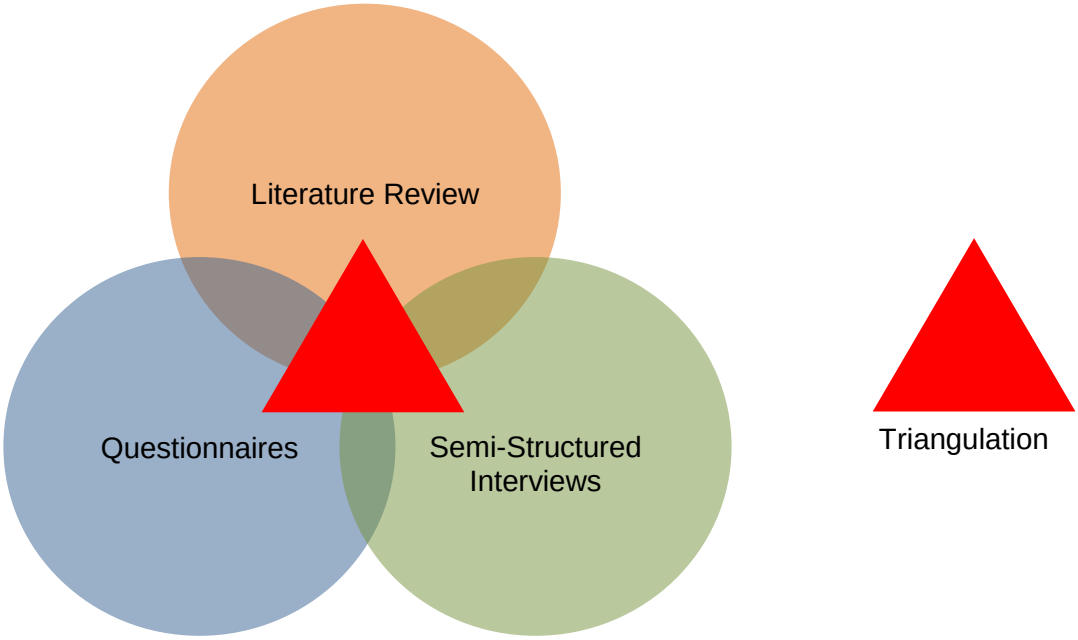

Figure 1 - Triangulation

3.4 Methodology model

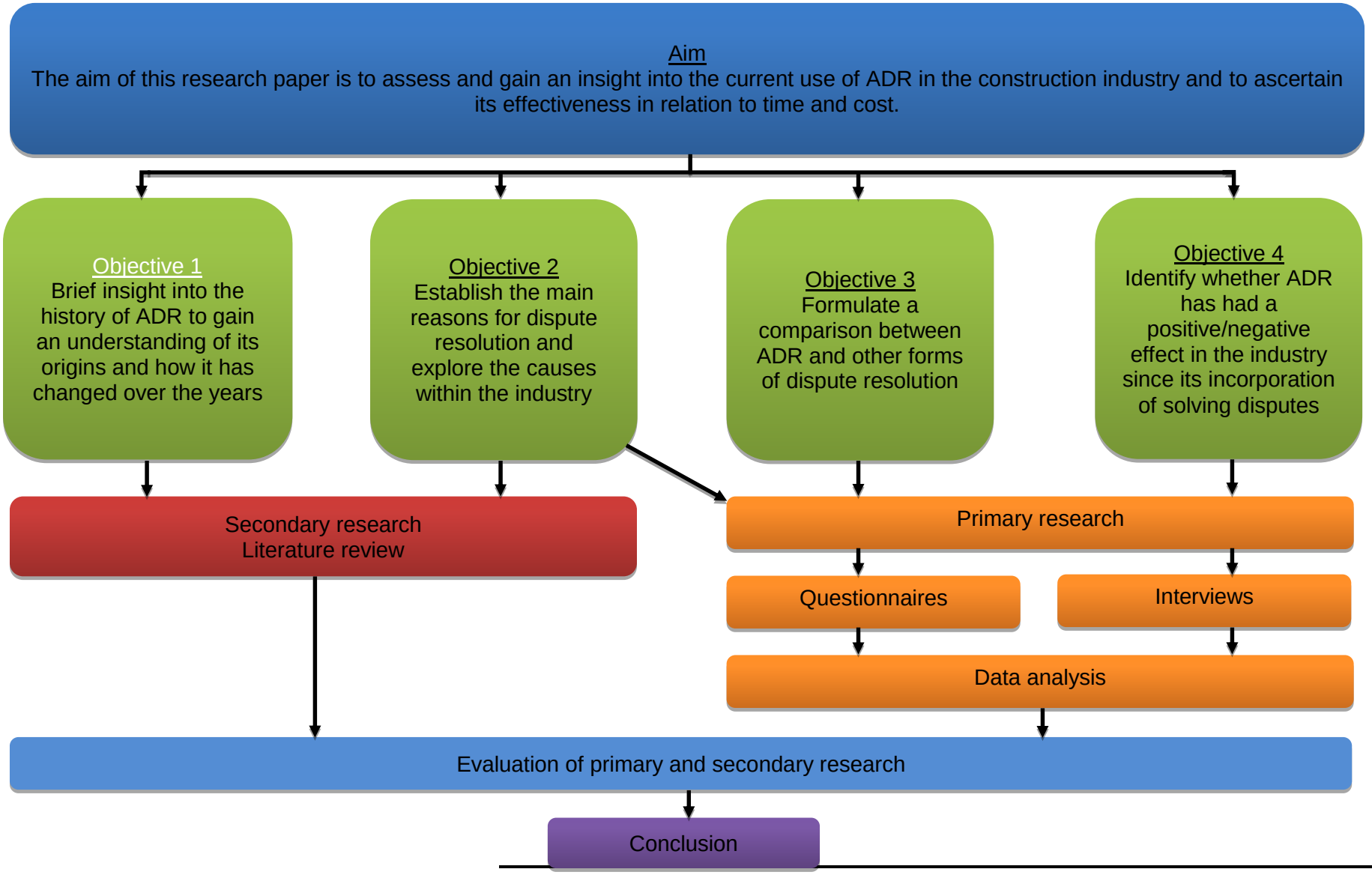

Figure 2 - Methodology model

3.5 Limitations of research

Within the early stages of research, there were limitations recognised and considered. First was the limited accessibility of current research to form the secondary data within the literature review. This proved a lengthy and difficult process, with an element of leeway that allowed for more aged sources. Through extensive research, the author also discovered that more recent literature was obtainable by widening the global search criteria, so this was utilised. Furthermore, acquiring reasonable data collection for the questionnaires proved a difficult process with a limited amount. This is due to the specialist sector ADR falls into and the accessibility to participants with the desired skills and knowledge required to fulfil the needs of the aims and objectives.

Furthermore, some of the questions had limited options for participants in the survey; for instance, in questions 3, 6 and 9. An open-end provides an opportunity for participants could have provided more insights. Therefore, this could have potentially affected the results of the study. In addition, at least three interviews were planned, but the emergence of Coronavirus and its prevalence in the UK restricted the study to only two interviews. Therefore, this could have affected the findings of the study. Including more interviewees in the analysis may have improved the study, which is an implication for future research.

3.6 Contingency Plans

Case studies will be utilised if issues arise, such as gaining insufficient data from the questionnaires. If data collected from the interviews are deemed inadequate, further interviews with the author's LinkedIn connections will be requested.

3.7 Research Gantt Chart

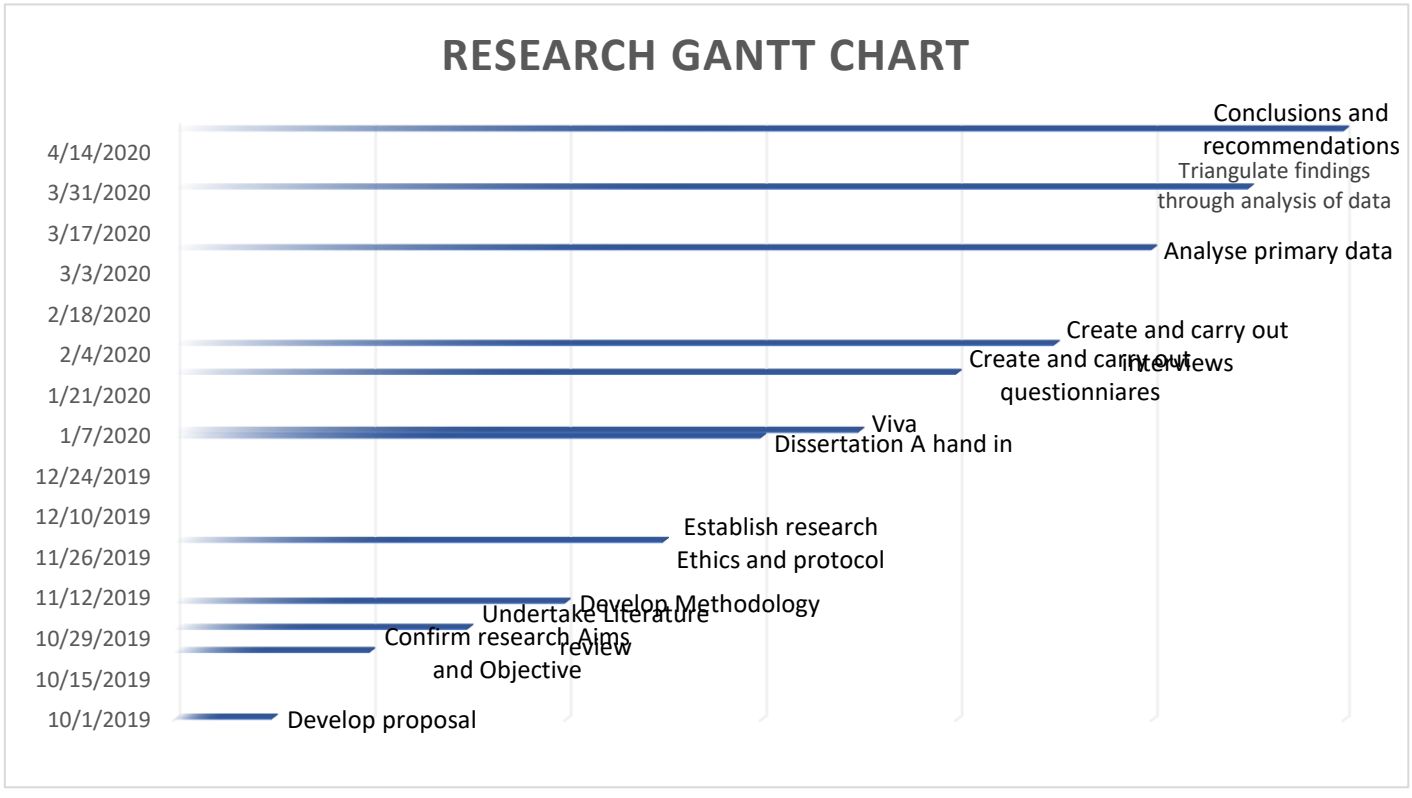

Figure 3 - Research Gantt Chart

Chapter 4.0: Ethical Considerations

The author has always carried themselves professionally throughout the thesis by maintaining quality and integrity standards. They have ensured confidentiality and anonymity as their main priority, as well as incorporating mechanisms to avoid any harm towards participants whilst conforming with the appropriate ethical standards.

Participants have been informed of the research method and the potential outcomes. Any participant will not be aware of the other participants, and interviews will be carried out over the telephone. All collected data will conform with EU General Data Protection Regulations (GDPR) and be stored safely on university servers. All data will be kept until marking has been completed. Once this has been carried out, the data will be deleted unless otherwise stated.

Due to the nature of data collection, minimal risks were present. Therefore, a risk assessment was not required. Instead, consideration of any activity that may have caused an unreasonable risk was accounted for.

Chapter 5.0 Literature Review

5.1 Disputes in the construction

Construction disputes arise because of disagreements between the parties to a contract. It is suggested that because of contrasting opinions among the participants of the projects, conflicts are inevitable and, when incorrectly managed, quickly transition into disputes(Alaloul, Tayeh, & Hasaniyah, 2019). The author also goes on to say that complexity continues to increase within construction, increasing the complexity of contract(Alaloul, Tayeh, & Hasaniyah, 2019) Thus, making the probability of disputes arising at an all-time high and almost unavoidable.

According to Eilenberg (2003), disputes range in levels, with disagreements at the lowest level followed by arguments. Substantiation of the difference between conflict and dispute is not covered by Eilenberg(2003). However, consideration of the suggestion is made by Fenn, Lowe & Speck (1997), who states that conflict could be the lowest level of dispute in a construction contract. Consequently, in this context, it would be fair to say that if nothing initially happens to manage the conflict, it could transition into a dispute.

Furthermore, findings within the National Construction Contracts and LawSurvey 2018 support this as figure 4 below shows over 12 months between 2017 and 2018, 19% of contracts had at least one dispute ranging up to 4% having at least four disputes, consequently making disputes still a common occurrence within the construction sector(Malleson, 2018).

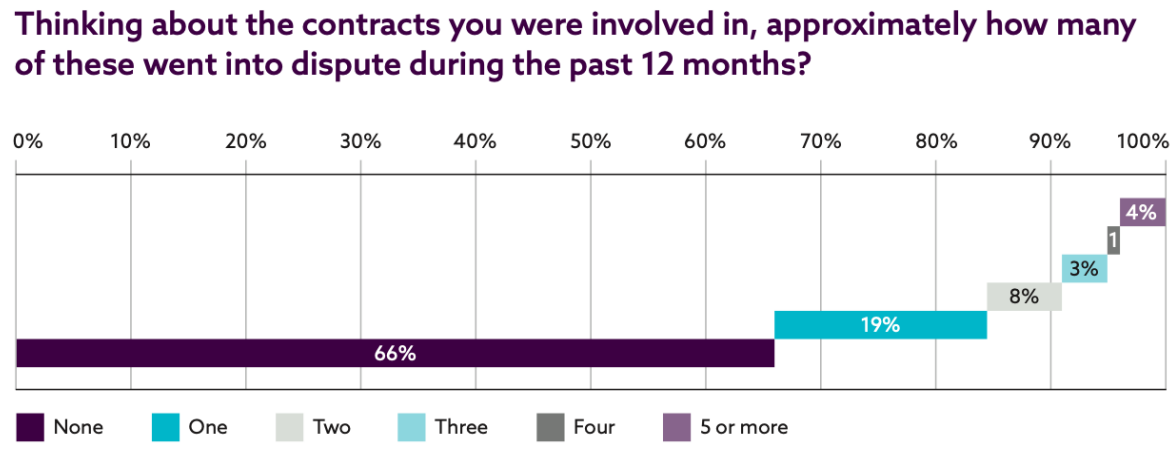

Figure 4 - Contracts in dispute accessed on 15/11/19(Malleson, 2018)

Global Construction Disputes Report 2019definesa a dispute where two parties are in a situation where both differ in opinions of a contractual right, resulting in a decision being made under the terms of the contract, which transitions into a formal dispute (Arcadis, 2019). Alazemi& Mohiuddin (2019) and Aryal&Dahal(2018) agree the construction process makes conflicts unavoidable, especially due to the nature of the industry, which creates uncertainty. However, Netscher (2015) argues that 99% of construction claims can be settled without going down the dispute resolution process, minimizing the occurrence of disputes.

5.2 Causes of Disputes in Construction

This chapter evaluates the causes of disputes in construction specified by other researchers. When a dispute arises, the causes must be identified to enable a suitable resolution for all parties involved.

5.2.1 Disputes

Inevitably, conflict and disputes are natural and real in every project (Opata, Owuss, Oduro-Apeatu, & Tettey-Wayo, 2015). They may become apparent for a number of different reasons and can be categorised into 3 main groups(Jaffar, Tharim, & Shuib, 2011).

- **Organisational** – Increased project complexity has led to ambiguity which expresses uncertainty, and misunderstandings occur, giving rise to conflicting situations(San Cristóba, Carral, Diaz, Fraguela, & Iglesias, 2018).

- **Contractual** –Increased contractual complexity is inherent within the construction and can increase the incidence of disputes occurring, such as a claim for an EOT, liquidated ascertained damages(LADs), loss and expense (L&E), payment etc (Sinha & Wayal, 2013).

- **Technical**–Errors/Incomplete technical specification, overdesign etc (Jaffar, Tharim, & Shuib, 2011).

Despite the categorisation of disputes, they can occur at any time during the process, even before any design work is carried out. Disputes can surface for many reasons and from as early as the initial stage of a project when it is first being discussed. The construction industry and its processes are niches compared to many other industries creating unpredictability and risks sure to happen.

Mason (2016) suggests disputes seem to follow the boom and bust cycle. As profit margins decrease, many people compete for smaller amounts of work. Arguably, many disputes have their seeds sown at the project's planning stage to hurry the commencement of construction, putting pressure on the consultants(Ekhator, 2016). Ekhator(2016)also states the agreement between client and contractor contains contractual obligations for both parties; however, these are sometimes not well-defined, presenting differing interpretations, often leading to disputes.

These claims support the literature in figure 7 from the NCCLS 2018, where client and contract, client, and consultant make up many parties in dispute. In support of this literature, a study by Kumaraswamy &Yogeswaran(1998) identifies the common causes of disputes are mainly related to contractual matters, such as variations, EOT, complying with payment provisions, accessibility of information, administration, management and unreasonable expectations of the client. In further research Harmon(2003)emphasized conflicts may develop due to the limitations of available resources such as labour, materials and equipment, limited time, money etc.

This can be linked in today's world with the causes of dispute not differing, instead growing throughout the revolution and the ever-increasing complexity of the construction industry. The GCDR 2019 findings indicate that parties fail to understand and comply with contractual obligations as the number one cause of dispute(Arcadis, 2019). However, according to Malleson(2018), the most common reason for disputes is EOT, followed by valuations of the final account and valuation of variations. Figure5 supports Mallesons suggestions, and figure 6 supports Arcadissuggestions.

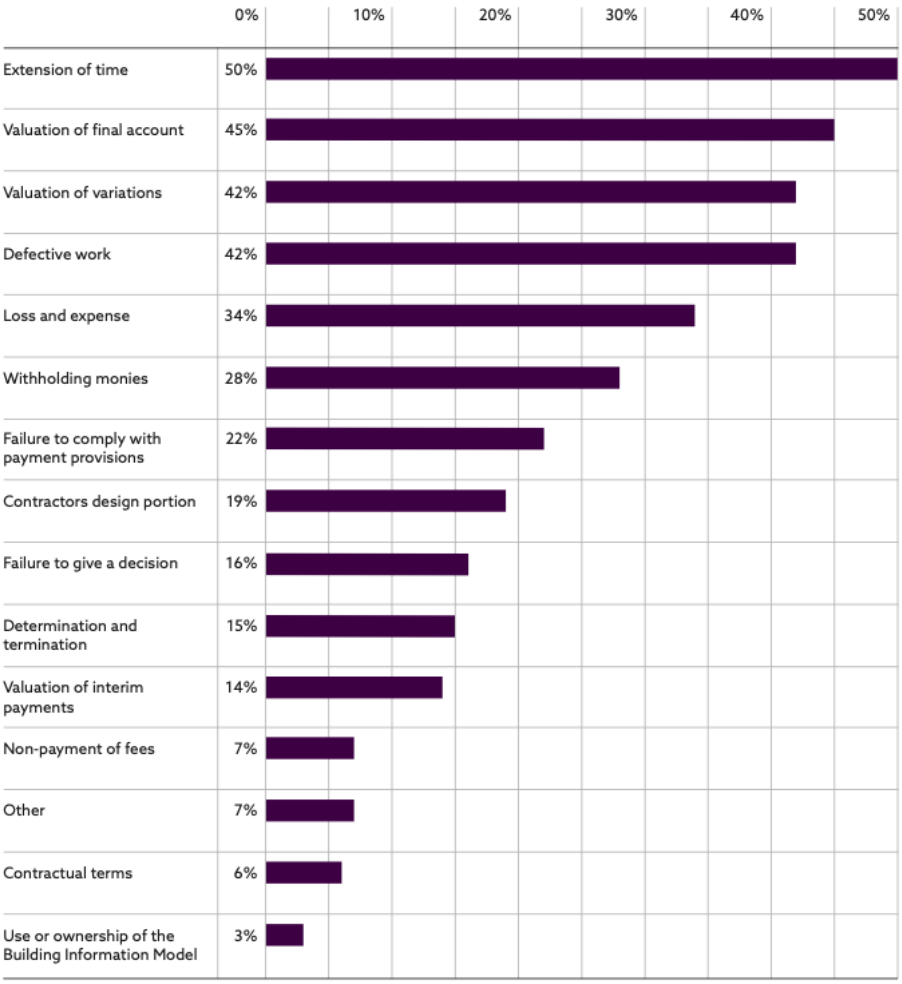

Figure 5 - Main issues in dispute accessed on 15/11/19 (Malleson, 2018)

2018 RANK	OVERALL DISPUTE CAUSE	2017 RANK
1	Owner/Contractor/Subcontractor failing to understand and/or comply with its contractual obligations	3
2	Errors and/or omissions in the contract document	2
3	Failure to properly administer the contract	1

Figure 6 - Number one cause of dispute accessed on 15/11/19(Arcadis, 2019)

It can be deciphered from the literature that there is a common link to disputes arising, such as an EOT and contractual obligations that can be closely linked. The reason is contractual obligations are complex, and not all parties fully understand the clauses and how to abide by them, thus creating an idyllic opportunity for disputes to arise.

5.3Common parties in Dispute

Sakal(2004)states the construction industry today is different. From the 1980s and beyond, there was a shift from public financing by the central and local government, which prompted the industry to become more reliant on profit-oriented development. Consequently,

relationships and trust between clients, contractors, and subcontractors withered and were replaced with distrust and conflict.

Arguably, this has impacted the relationship between the client, main contractors and subcontractors, thereby increasing the incidence of disputes which can be supported by Malleson (2018) findings in figure 7, which identifies that 74% of disputes are between the client and main contractor and 26% between main contractor and subcontractor. Kennedy, Milligan, Cattanach& McCluskey (2010)argues this is the reverse situation, as the most common parties in dispute remain the main contractor and subcontractor. However, the client and main contractor account for a significant portion.

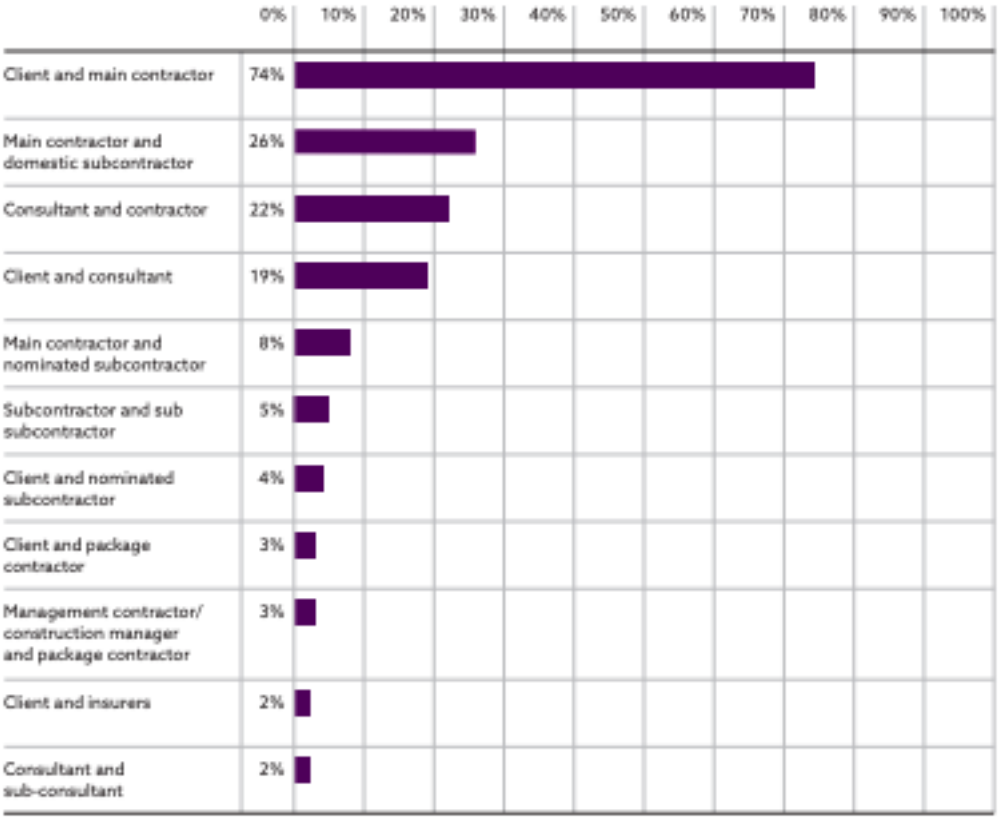

Figure 7 - Common parties in Dispute accessed on 15/11/19 (Malleson, 2018)

5.4Main causes for Disputes

5.4.1 Extension of time

Raj (2009)supports previous literature by stating that EOT claims are one of the most common and can only arise from a critical delay affecting contract completion. However, Alnaas, Khalil and Nassar(2014) argue that any delay to the progression of the contractors for reasons consequential to the client may argue they're entitled to an EOT even if this doesn't delay the contract completion. Construction contracts generally allow the contract period to be extended if a delay occurs that is not the contractor's fault. The purpose of an EOT is to relieve the contractor of liability from such things as LADsfor any time prior to the extended completion date (Rosenburg, et al., 2017)(Keane & Caletka, 2015).

Furthermore, the benefit of an EOT for the employer is that is establishes a new contract completion date which prevents work completion time from becoming 'at large'(Klee, 2018, p. 299). The authors agree that an EOT is a provision in a contract whereby the contractor may request an extension to the original completion date should the client be responsible for the delay(Linnett, De Moraes, Lowsley, & Smith, 2015)(Eggleston, 2009). An EOT benefits the employer and the contractor (Linnett, De Moraes, Lowsley, & Smith, 2015). However, Eggleston (2009) contradicts this, stating that people within the industry use EOT claims to increase profitability via further loss and expense claim, which is also supported in Figure 5.

5.4.2 Final account valuations

A final account is an agreed statement for the amount paid at the end of the contract by the employer to the contractor. This is supported by Garner (2015) statin a final account valuation is a conclusion of the contract sum that signifies the agreed amount of money the employer will pay the contractor. Furthermore, the final account typically includes any loss and expense associated with any EOT and any other claims, and it's also an indication of the finalisation of disputes between parties(Garner, 2015).

Many people find it makes sense to have a single dispute at the end of the final account rather than having a series of ongoing adjudications throughout the project lifecycle (Contract Dispute Resolution Ltd, n.d.). In support of this, parties prefer resolving disputes as they arise contemporaneously during a project to split disputes into more manageable sizes(Bell, 2019).

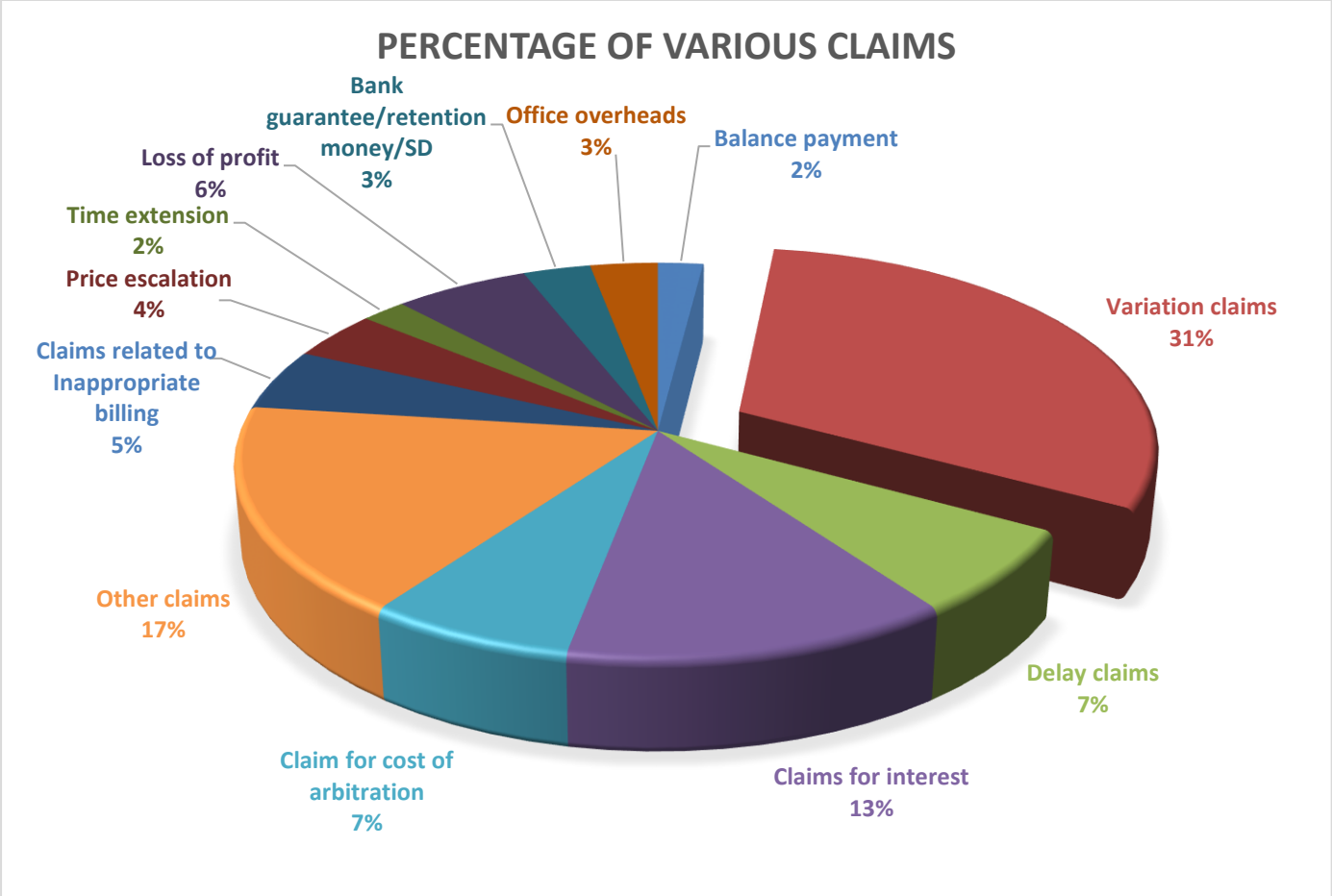

Figure 8: variation of percentage

5.4.3 Valuation of variations

Variations are works that are not included in the original contract and contracted price(Iyer, Chaphalkar, & Patil, 2018). The valuation of variations may consist of expenses other than work described in the variation instruction. It is not uncommon that disputes often relate to contract variations, especially the method by which the variation is valued. Disagreements occur for such things as the value of the variation being greater than the perceived value returned. This, in turn, leads to disputes. Rules were incorporated into the standard form of contract for valuing additional work. However, disputes still arise about which valuation rule applies and how its interpreted(Carolan, 2017).

Valuation of variations is amongst the most common causes of disputes arising, which is supported by the CCLS2018 in figure 5and according to Sutrisna, Proverbs, Potts, &Buckley (2004), this has long been recognised as one of the most common causes of disputes. Further evidence is included in the pie chart below to support these statements. Out of a total of 821 claims, 254 of these were raised due to variations. These variation claims can be due to a change in specifications or a change in quantity etc (Iyer, Chaphalkar, & Patil, 2018)

5.4.4 Noncompliance of contractual obligations/errors and omissions/administration of a contract

For this research, all three causes are grouped as all contractual related and appear to be the main cause of dispute. Aryal&Dahal(2018) state that the number one cause of dispute during 2016 was poor contract administration and failing to understand and comply with contractual obligations, which has continued throughout recent years as figure 6GCDR2019 above states that these are still the main cause. Anand (2017) supports these claims, stating that disputes are mainly related to disagreements on the contract's terms and conditions or misunderstandings of the contractual obligations.

A study by Hasheminasab, Mortaheb&FardFini(2014)delves deeper into the root causes of this ongoing problem related to contractual obligations. It states the contractor's attitude towards risk sharing is unfair and inaccurate evaluation of contractors leading to failing to perform their obligations. Some problems associated with the administration of the contract are outlined by Sebastian & Davison (2011) acknowledged that ambiguous specifications, scope change, delay of the completion date, behavioural issues, and external factors are only a few of a diverse range of causes.

Kitt (2015) states that early recognition is essential to reduce a dispute arising from poor contract administration. Sebastian & Davison (2011) argue that going beyond identification is key to determining why these occur and using an organizational behavioural problem-solving model to identify the roof causes of the risks.

Anand (2017) argues that to avoid disputes concerning contract administration, the Project Manager, contract engineer or quantity surveyor must be put in place to help improve the cordial relationship with the client and eliminate pre-contract risks. Delving deeper, Anand (2017)states subcontractors are not reading and understanding all clauses/terminologies and use external assistance to aid in the legal jargon.

5.5Brief history of ADR

Between 1993 and 1994 alternative dispute resolution (ADR) became notable and, on the radar, due to a formal review being carried out by former construction minister and Member of parliament for the conservatives Sir Michael Latham. Latham (1994) announced that if the construction industry becomes less adversarial, we must re-examine the process and identify that to change the process, we must look at the relationship between the contractor/subcontractor. There is a need for positive working relationships between these parties as they form a crucial link in delivering successful projects. Therefore, disputes will continue to arise if people fail to trust one another(Latham, 1994).

Latham suggested the UK construction industry is not alone in this and that we should take steps like the US by implementing the use of ADR to avoid disputes driving towards litigation(Latham, 1994). The review led by Latham had been an interesting topic that had been discussed for years following similar review processes carried out in the 1950s through to the 70s. Furthermore, the Conservative Government Act 1996 welcomed the recommendations in the Latham report. It implemented legislation via The Housing Grants, Construction and Regeneration Act 1996 (HGCRA) based on some of these within the Latham report(Davies, Fenn, & O'Shea, 1998).

A study of the history of ADR carried out by Barrett & Barrett (2004)defined ADR as an alternative to solving problems by the power of the courts and is often thought of as a new method of resolving disputes; however, its beginnings go way back in human history and has had a crucial role to play in cultures around the world. Other research, such as by Sanchez (1996), highlighted that Anglo-Saxons used an arrangement of dispute resolution procedures similar to the modern-day methods of adjudication, arbitration, mediation and negotiation and that these were available to defendants during the lawsuit.

5.6Methods of ADR

5.6.1Negotiation

The most common form of alternative dispute resolution (ADR) is negotiation, which is normally the first step to take when trying to resolve a conflict. This is supported by The Construction Index (2019)&She (2010), who state that negotiation remains the preferred resolution method. These claims are supported by the Arcadis GCDR 2019, where negotiation ranked number one overall for the most common method utilised for dispute resolution:

2018 RANK	OVERALL MOST COMMON METHODS OF ALTERNATIVE DISPUTE RESOLUTION	2017 RANK
1	Party-to-party negotiation	1
2	Mediation	2
3	Adjudication	New in 2018

Figure 9 - Most popular methods for resolving disputes Accessed on 17/11/19 (Arcadis, 2019)

This form of ADR requires all parties to provide documentation to support their claims in an effort to reach an equitable settlement of their assertions(Yates, 2011). It is the most cost-effective method and sometimes the most proficient. Negotiation can be divided into two separate categories, competitive and collaborative. Collaborative negotiation focuses on creating a ‘win-win’ scenario where all parties involved get part or all of what they were

looking for. This approach seems to produce the best results in building long-term relationships and minimising conflicts(APM, 2019).

This method has its advantages in terms of cost and time as it provides quick turnaround inexpensively, offering full control of the process and its outcome due to an in-house procedure. Dispute Prevention and Resolution Services (2017)reports on disadvantages associated with negotiation and includes no guarantee of resolution and no legal precedence. It can also be used as a stalling tactic to prevent other parties from asserting their legal rights. Santiago (2019)supports this, suggesting enforcing decisions may be difficult because decisions depend on the goodwill of the parties involved, and poor negotiation skills may lead to a stalemate.

5.6.2Mediation

A study by Gould (2010)looked into the use of mediation in UK construction disputes concentrating on parties at Technology and Construction Court (TCC) in London, Birmingham and Bristol. These participants were interviewed on how they settled their disputes and their mediation experiences during litigation. The results showed that 35% of the cases settled after commencing litigation in the TCC used mediation.

The survey also looked at cost savings attributable to settled mediations were colossal and successful mediation was settled within the stipulated litigation time scales (Gould, 2010). Gregory-Stevens, Frame & Henjewele (2016) support this by suggesting mediation has its advantages enabling disputes to be resolved at reduced cost and providing greater satisfaction to all parties than litigation. Furthermore, research carried out by Byrne (2016) states mediation is non-binding, eliminating the judge's decision and giving you greater control over the outcome.

In contrast, Bennett (2018) states that no legal professional to enforce legal proceedings could lead to the procedure's exploitation. In addition, both parties must fully commit to the procedure and choose a mediator to prevent any prejudice to either side. This can prove to be a difficult task as the parties are already in disagreement, to begin with. Trushell, Clark & Agapiou (2016) counters it by stating that despite Bennett (2018) opinions, parties are required to compromise their positions to reach a settlement. This requires full discovery, which results in a negative impact on time and costs. At the same time, mediation focuses on making deals and overlooks the right and wrongs, supporting earlier literature on the exploitation of the procedure.

Furthermore, Bennett (2018)says the choice of the mediator can have a crucial effect on how the mediation is carried out, and a good mediator cannot be successful when the parties truly do not wish to settle. However, in contrast, a bad mediator may hinder a successful settlement when the parties wish to settle.

5.6.3 Adjudication

Adjudication can be defined as an interim dispute resolution process where all parties submit their dispute to an independent third party for a decision(Pickavance, 2016). Gaitskell (2007) states adjudication is the most important alternative dispute resolution (ADR) process in the UK and Commonwealth countries. In contrast, Bailey (2014)argues that arbitration was and had been for some time the dominant form of ADR in construction contracts.

Sakate& Dhawale (2017)states the adjudicator is a neutral individual who is not involved in the day-to-day running of the contract and often has no meeting with the adjudicator. Thwaites(2016) expands on this by stating this endeavour's drawbacks, such as

being unable to carry out cross-examination. This has been recognised by the courts, which have made it clear they will nonetheless enforce the adjudicator's decision even if it is wrong based on the facts or the law.

The main advantages associated with adjudication are of time and cost. Perrin (2014) states that its strength lies in its potential to save money and keep the project on track which other forms of ADR may have derailed. A distinct advantage of the adjudication process over other methods, such as arbitration or litigation, is speed. The decision is made within 28 days of service of the referral document, which is extremely fast compared to litigation(Thwaites, 2016).

Furthermore, regardless of the outcome, both parties must bear their costs, and although this is expensive to themselves, it is over a short period compared to litigation. If unsuccessful, they don't risk paying the other parties' costs. In contrast, although this is a speedy process, this means the process is inherently "rough and ready", thus meaning there is not enough time in the adjudication process for any detailed and careful analysis of the facts and issues of the dispute(Thwaites, 2016).

5.6.4 Arbitration

Before the introduction of other forms of ADR, arbitration and litigation were the main methods of resolving disputes. Some industry professionals feel it is the most effective way of resolving disputes. It is perhaps the oldest form of ADR and is used widely in construction disputes. To define this method of ADR, Mason(2016) states arbitration is an alternative to litigation whereby parties refer to an existing or future dispute to the determination of one or more independent persons acting judicially.

In this method, the arbitrator expresses the decision in an award, which then becomes legally binding and enforceable in a court of law. Arbitration is similar to litigation in many ways and has been described as 'litigation in suits rather than wigs'. Both arbitration and litigation are intended to be final and require both parties to prepare statements of their cases similar to litigation(Mason, 2016). However, a study by Khekale&Futane(2015)argues that many dissimilarities can be deciphered between arbitration and litigation and that no dispute commented that there is little procedural difference between the two processes.

5.7Traditional Method of Dispute Resolution

5.7.1 Litigation

Even though alternative dispute resolution (ADR) can be utilised, court proceedings are still one of the most common forms of resolving disputes(Cook, 2016). Litigation cases are referred to the Technology and Construction court (TCC), a specialist court governed by the Civil Procedure Rules (CPR) and TCC guide. The advantage of Litigation is that a judge will manage the claim process throughout the court proceedings. Complex issues can be dealt with, and the parties obtain a binding and enforceable decision.

Khekale&Futane (2015) state that the rising cost, delay and risk of the litigation process have prompted the industry to look for a new and more efficient way. Gaitskell (2005) supports this statement by expressing that most disputes are multi-party affairs with a huge number of solicitors and counsel, meaning a lengthy and expensive process. Consequently,

because of the CPR, litigants must undergo several procedures and incur substantial costs before proceeding.

There is still a place for litigation within dispute resolution despite being used less frequently due to the courts referring cases to ADR under the CPR. Litigation can be seen as a vital support role and used as a last resort when dealing with cases where ADR has failed (Wood, et al., 2017). Khekale & Futane (2015) counter this by stating despite Wood et al.(2017)opinions, litigation is not as efficient in terms of cost and time. However, Vos (2019) argues that not enough has been done and that it is a necessity for the courts to implement the use of intelligent technology reform in our current system.

5.8Conclusion

To summarise, the construction industry is a very complex and challenging environment, and with this comes conflicts, which are of great concern to the industry. To effectively manage this, the claims management process is required to ensure claims arising are dealt with in a way that is fair to every party involved. The literature review covers the main causes of disputes in the built environment and the dispute resolution methods to resolve these claims.

Chapter 6.0:Interview Analysis

6.1 Introduction

This chapter's primary aim is to investigate the effectiveness of alternative dispute resolution (ADR) in construction. For this purpose, professionals with ample industrial experience have conducted interviews that are directly involved in the dispute resolution process. Meanwhile, to analyse the data, thematic and statistical analysis have been used to shed light on the extent to which the study's primary question is being addressed and test the hypothesis. Lastly, the discussion has also been conducted to evaluate the extent to which the objective of the overall study is achieved.

6.2 Interviewee Profile

Participant Code	Category	Job Role	Date
P1	Affiliate Company	Quantum Expert	17/02/2020
P2	Legal Solution on Live Projects-Third part representative	Chartered Surveyor	20/02/2020

Table 2 Interviewee Profile

Semi-structured interviews were conducted with the above participants, with a minimum of 10 years' experience within ADR. The minimum sample size for interviews was two, which was achieved. Furthermore, the transcripts obtained were of a greater scale than normal, and the interviewees targeted were specialists within the ADR sector, ultimately providing a richer insight.

Thematic analysis is the most widely used qualitative data analysis method that emphasizes identifying, analysing and interpreting patterns present in the data. It has been stated that interview transcripts contain similar trends identified and analysed to address the research questions and can also be used to develop a theoretical framework(Braun, 2014). Meanwhile, it is also a more flexible method for analysing qualitative data since the researcher can identify the factors present in the data based on which themes are constructed, and transcripts comprising common answers are analysed and discussed under each identified theme. Similarly, interviewees are referred to as P1 and P2, and the line number of each transcript references a statement from the transcript.

6.3 Most Common causes of disputes between Clients and contractors

6.3.1 Extension of time

Disputes are a contradiction or disagreements between two parties over a matter, project, or event. The most common disputes being highlighted by P1 (66-69) are that EOT is a major issue, and P2 (82-87) states that time and budget constraints are issues affecting parties resulting in disputes. The core reason behind the conflict remains an EOT based on the fact when a party asks for this, it must be granted at the time of the event, as highlighted by P1 (60-61). P2 (106-108) supports this, stating that EOTs are quite subjective, which can be conflicting, meaning clients struggle to understand why more time is needed. In this regard, Alnaas, Khalil and Nassar(2014)and Keane &Caletka(2015)state contractors also ask for EOT due to reasons consequential to the client. However, they still claim EOT even when the project will not delay, and the core reason is to get relief from any liabilities due to any delay in time.

Hence, they already claim EOT. Meanwhile, P1(66-69) also stated that clients do not know how to claim EOTs leading to ignorance towards their responsibilities, causing further conflict down the line when trying to claim this time back. This can be correlated to not understanding the contract obligations. Although P1 and P2 have similar views on EOTs, P2 (92-94) suggested they do not have many conflicts about EOTs as they fall away quickly, but more about the monetary side of things which can be interpreted as differing opinions. (McCall, 2017)

6.3.2Final Account Variation

P2 (228) (117-123) states you have now got full-blown final accounts full of EOTs, for reasons such as subcontractors not performing, affecting the client and main contractor. This is supported by P1 (102-104), stating frequent changes and many variations are major reasons why disputes arise over the project. Issues and conflicts are inevitable given the industry involves various parties in one project, and their work is interdependent. Furthermore, another issue highlighted by P2(88-89) is that there is a 99.9% chance of change or variation because the contract allows for it, and the emergence of conflict depends on how well parties trust one another. Therefore, final account variations are highly expected but may not always lead to conflict.

6.3.3Valuation of Variation

P1 (105-108) states project change and not being able to agree even if it is viable is the main cause for dispute. P2 (89-90) states clients do not mind paying for change if it is not too much, implying that if the valuation is too costly, the variation will likely be rejected. It has also been discussed that variations are inevitable and are certain to occur irrespective of the proper contract implementation. While all variations do not lead to conflict, developers, commercial entities, offices, or businesses may lead to conflict since variations tend to require more time and costs. The other party may not agree on the valuation of variations due to their reasons as they consider the time as money, as reported by P2 (95-97). Hence, the parties may come into conflict overvaluation of variation that has occurred outside of the contract causing conflict. As per Carolan (2017), it is due to the rules of valuation and how they are interpreted which create conflicts between the parties.

6.3.4Non-Compliance with contractual obligations

P1(56-57) (61-63)(81-84) suggests the provisions for EOTs are not very good, and both client and contractor do not adhere to these. They say companies have not been applying for EOTs properly, and even senior staff do not fully understand the obligations associated with the contract.

Similarly, Anand (2017) states in the literature that subcontractors are not reading and understanding the clauses and terminologies, and P2 (326-330)(343-346) supports these comments stating neither party has got a clue when it comes to an understanding the contractual obligations because they do not even read the contract.P2 (124-134)(378-384)states contractors sometimes suddenly say we cannot do the work in the remaining period, or other parties not performing then the whole project suffers leading to further claims such as EOTs. The response of P1 and P2 implies a lack of compliance with the contractual obligations. This can lead to further claims, such as EOTs, which can be linked to other common causes, such as final account variation and valuation disputes.

6.4 ADRvstraditional method

6.4.1 Preference

Interviewees were asked about their thoughts on alternative dispute resolution (ADR) compared to traditional methods for handling disputes. Interviewee P1 (99-101) (120-121) stated ADR is mainly preferred due to time-related constraints and has been preferred since the late 90s since the process of courts is long and in construction, time is money. Similarly, Jaffar, Tharim&Shuib(2011) state that irrespective of the source of the dispute and the issue's relation, evolution is key since time is money (McCall, 2017). P2 (197-199) supports this, stating litigation is incredibly expensive and slow and has always been this way. The response indicates that ADR is preferred over legal proceedings for settling disputes.

P1(154-155) states they were not in the industry prior to ADR and now make a living from this, so that it could be interpreted as potential bias over the preference of ADR as opposed to litigation. However, interviewees insist on using ADR as it is effective for all parties pertaining to conditions, situations, and frequency of disputes. P2(207-211) (285-287) supports the claim that parties prefer ADR as court proceedings were being used to send companies that could be working in the plaintiff’s favour as they would not have to pay anybody. Also, since ADR involves solicitors, arbitrators and third parties to resolve disputes, the process is more efficient.

Therefore, it is a reason the UK government also today suggest ADR through third-party involvement before completely engaging in court proceedings. It is because most of the issues are resolved with ADR with a high success rate(GOV.UK, 2015). It is determined the respondents have commonly preferred ADR to traditional methods, given each party would lose a great amount of time and cost to approach a resolution.

6.4.2Negotiation

P1 (180) states the quickest way to resolve a dispute is by negotiation because it offers a quick way to resolve the dispute in which two parties are face to face and put all their issues together to approach a potential solution. Similarly, P1(256-259) further highlighted in their experience that negotiations favoured methods to resolve issues when they arise. In this regard, the construction Index (2019) and She (2010) has stated that negotiations remain the most favourite because it is the first step towards resolving a

conflict. Meanwhile, negotiations can take form collaborative and competitive, where most of the time collaborative approach is undertaken, which leads towards a win-win scenario for all involved in the conflict(APM, 2019).

6.4.3Mediation

With respect to mediation, P2(160-163)states in this process, they remain the third party and start communication between the parties. The respondent also highlighted that communication is the issue which creates a problem and mediation is the process in which communication is the only way to resolve the dispute. Furthermore, P2(299-304) states that mediation works well within commercial disputes between the parties; and the mediation process starts when parties contact them to resolve the issue. Therefore, it is determined that the mediation process is also preferred by the parties when the negotiations do not work.

In contrast, the basic difference between mediation and negotiations is that negotiations do not have a third party or mediator. Still, in the mediation process, a third person leads the parties and tries to resolve the issue. Meanwhile, due to the time constraints and costs associated with the other legal procedures, these ADR methods are preferred as this is supported by P2 (448) (454-456), stating mediation is the quickest method.

6.4.4Adjudication

P1(123) states adjudication is cheaper and quicker when parties do not want to involve in a litigation process; as per the literature, adjudication is a process in which all involved parties submit their arguments and then a third party takes the decision. Similarly, P1(273-276) states that adjudication is much quicker and can give a decision within 28 days, and P2 (218-220) (233)supports this, stating it is considered quick and dirty because the decision could be against of the party. Each party would have to follow the decision, which must be done in 28 days. However, P1(324-326) states an adjudication can take as long as 46 days to resolve the conflict. As per the pace of work in the construction industry, this can be costly to both parties in terms of losses because each party's work would probably be halted for the period.

6.4.5Arbitration

P2(404) states that the arbitration process is very slow and as expensive as courts; hence this could take a lot of time to resolve the conflict between the parties. In support of this, P1 (121-122)states that arbitration was mainly used at the beginning of ADR. However, due to the HGCRAeveryone moved towards adjudication as it was cheaper and quicker. Furthermore, P1 (191-194) (315-316) states you can spend months, even years, on arbitration costing hundreds of thousands, and then it still gets to litigation which is like a double down on time and cost. Also, Mason(2016) states that arbitration is similar to litigation, which is supported by P1 (319-320) stating a tribunal they were part of was effectively an arbitration. Therefore, it is evident that despite being part of alternative dispute resolution (ADR), it is not as effective and efficient as other methods of ADR.

6.5 Effectiveness of ADRin terms of cost and time

6.5.1 Positivity

The effectiveness of ADR has been discussed by interviewee P1 (155-156) (228-229)(181-182), stating that it has to be a positive, certainly the theory of it and that

ADRemerges as the most appropriate method to resolve the conflict since itis much faster and cheaper than litigation.P2 (397) (407-408) supports this by stating that ADR has a million good reasons of being incorporated into the standard form of contract and a benefit is it is confidential, and you have some form of experts. The responses imply that two parties can significantly save their company reputation, time and costs associated with the legal process. Also, parties involved would not normally agree to go to court since ADR is considered more effective than the litigation process saving time, cost, and the project.

In addition, UK courts and guidelines suggest that pre-action conducts and protocols in para 8-11 litigation should be the last option for parties and consider different forms of ADR that could enable parties to approach consensus before initiating legal proceedings. Meanwhile, para 9 further emphasizes settlement being engaged in legal proceedings (Justice GOV UK, 2020). Therefore, it is determined positivity of ADR always remains for the parties; even the legal department suggests engaging into ADRbeforeand even after proceedings to reach a settlement. In this regard, P2(281-282) (292-293)(272-273) supports ADR stating it's absolutely a major positive due to its effectiveness, implying the industry wouldn't use it otherwise and claiming that ADR is positive when comparing this to litigation.

6.5.2 Negativity

Similarly, P1 (266-269)ADR stated each party might not be happy with negotiations but willing to accept them since no party wants further delays that would have inevitable negative consequences in terms of monetary losses. Also, when parties engage in a dispute, it tends to affect their relations to some extent but not always, as reported by P1 (207-211), stating any parties go against each other to resolve conflicts and then work with each other again on the next project. Furthermore, arbitration is said to be equal to litigation in terms of time and costs.P1 (377-380) states when costs soar, litigation is essential; otherwise, parties will suffer colossal losses. Therefore, it is going to be a costly settlement either way.

6.6 Reliance

The interviewees' responses indicate that the best way to resolve the issue is in negotiations, and negotiations are only possible in the condition of pre-trial. Hence, ADR is a much quicker and cheaper process than litigation in the industry; it is also stated that in the process of adjudication, the decision may be obtained within 28 days, but if the litigation process is followed, that would take months and would probably be a costly decision for each of the party and this decision may also be against any of the parties creating complications in relations. Therefore, in either condition, both parties will suffer irrespective of a favourable decision. Thus, alternative dispute resolution (ADR) is the most effective way to sort out the problems through mediation, considering the consequences of delay, and it would also maintain the best relationship between the parties. P1(125-131) supports these claims by stating the industry relies on ADR rather than litigation, as it's looked upon unfavourably to go to litigation if you haven't tried ADR first.

Chapter 7.0: Questionnaire Analysis

7.1 Introduction

A pilot questionnaire confirmed the questions to be coherent and take around 6 minutes to complete. Following this, construction professionals with diverse experiences and job titles were approached mainly via the author's LinkedIn account. 71 people were contacted mainly by direct message via LinkedIn but also via email, and 244 people viewed the author's LinkedIn post. A maximum of 42 responses was obtained, leaving a return rate of around 13.3%.

7.2 Question 1 - Respondent's Experience

Approximately how long have you or your organization been using ADR services?		
	Frequency	Per cent
More than 5 years	37	88.1
3-5 years	3	7.1
1-2 years	1	2.4
Less than one year	1	2.4

Table 3 - Experience Level

Table 3 demonstrates the level of experience among the respondents of the survey, and findings show that the majority of the respondents consisted of 37 (88.1%) with experience over five years, and some other respondents also had experience levels ranging from one year to 5 years. The majority of the respondents were higher experienced in the construction industry. Hence this has provided more appropriate responses reflecting the true conditions of the industry.

7.3 Question 2 - Role of Respondents

Role		
	Frequency	Percent
Contracts Manager	3	7.1
Director	13	31.0
Chartered Construction Manager	1	2.4
Adjudicator/Arbitrator/Consultant	6	14.3
Quantity Surveyor	3	7.1
Claims Consultant	3	7.1
Regional Director	2	4.8
Planning Manager	4	9.5
Commercial Manager	1	2.4
Chief Executive Officer	1	2.4
Others	5	11.9

Table 4 - Role of Respondents

Table 4 demonstrates the roles of respondents included in the survey. It is determined that 13 (31%) respondents were directors of the companies involved in construction, followed by Adjudicator/Arbitrator/Consultant 6 (14.3%), and others included contract managers 3 (7.1%) and Planning manager 4 (9.5%). It is evident that most of the respondents are from higher posts that tend to be more effective and provide more valuable responses compared to those at lower levels.

7.4Question 3

Thinking about the contracts you were involved in within the last 12 months, how many of these went into dispute?		
	Frequency	Percent
More than Six	9	21.4
Five or more	16	38.1
Three	2	4.8
Two	8	19.0
One	7	16.7

Table 5–Number of disputes in the last 12 months

Table 5 illustrates the number of disputes faced by the respondents in the last 12 months; it shows that 9 (21.4) respondents stated more than six, 7 (16.7%) stated one, 16 (38%) stated five or more, 8 (19%) stated as two. Lastly, 3 (4.8) respondents stated that they encountered three cases within the last month. This implies that on average 8 disputes are encountered by respondents yearly.

7.5Question 4

Who were these disputes between?		
	Frequency	Percent
Client and main contractor	1	2.4
Main contractor and subcontractor	3	7.1
Consultant and contractor	4	9.5
Subcontractor and subcontractor	1	2.4
Client and main contractor, Main contractor and subcontractor	1	2.4
Client and main contractor, Main contractor and subcontractor, Consultant and contractor, Subcontractor and subcontractor	32	76.2

Table 6–Relationship of parties in dispute

Table 6 illustrates the most common disputes between all parties involved and there is no specific majority in which parties mostly come in dispute. This implies that a dispute can be between any party at any time, irrespective of the party itself and its role; when a party's interest is being compromised, this leads to a dispute. However, the table shows that 32 (76%) mutually stated that dispute might incur from client to subcontract and everyone involved between them.

7.6Question 5

Of these claims, what method of ADR was utilised to resolve the dispute?		
	Frequency	Percent
Negotiation	11	26.2
Adjudication	2	4.8
Mediation	4	9.5
Arbitration	1	2.4
All	24	57.1

Table 7–Method of ADRutilised

Table 7 implies that the majority of respondents stated they use all these methods in resolution. Since less serious disputes are most likely to be resolved through negotiation, mediation or arbitration based on mutual respect and understanding. However, when these prove ineffective in handling the complex nature of the dispute, parties refer to adjudication for resolution. Therefore, it is determined that all methods of ADR are being used based on the complexity of the case and the type of party involved.

7.7 Question 6

In your most recent dispute, how long did the process take months?		
	Frequency	Percent
More than twenty	4	9.5
Fifteen to twenty	6	14.3
Ten to fifteen	8	19.0
Five to ten	4	9.5
One to five	18	42.9
One or less	2	4.8

Table 8 - Duration of dispute resolution

Table 8 illustrates the majority of respondents have stated that a dispute takes 1-5 months to resolve. It can be interpreted that resolution mainly depends on the complexity and matter on which a dispute has taken place within the parties. Hence, common disputes like EOTand failing to comply or understand the contracts could be resolved sooner than other disputes.

7.8Question 7

What were the main issues in dispute during the past 12 months?		
	Frequency	Percent
EOT	9	21.4
Final account valuation	1	2.4
Valuation of variations	1	2.4
Failing to understand & comply with contract obligations	2	4.8
Loss and expense	1	2.4
Failing to understand & comply with contract obligations, Errors and/or omissions in the contract document	3	7.1
EOT, failing to understand & comply with contract obligations	1	2.4
EOT, VOV	2	4.8
EOT, L&E, FAV, VOV, FTU& comply with contract obligations	2	4.8
EOT, L&E, FAV, VOV, FTU & comply with contract obligations, Errors and/or omissions in the contract document	1	2.4
EOT, FAV, VOV	2	4.8
EOT, L&E, VOV	1	2.4
EOT, L&E, FAV, VOV	1	2.4
EOT, L&E, Other	1	2.4
EOT, FAV	3	7.1
EOT, VOV, failing to understand & comply with contract obligations	2	4.8
EOT, L&E	2	4.8
EOT, L&E, FAV, VOV, Errors and omissions in the contract document	3	7.1
Errors and/or omissions in the contract document	1	2.4
L&E, VOV	3	7.1

Table 9 - Main issues in dispute

Table 9 illustrates the number of disputes being highlighted by the respondents. It is evident that most respondents have included EOT as the most common dispute, followed by failure to comply with contractual obligations and loss and expense or valuation of variations. Meanwhile, if the table is compiled, 6 common disputes among the parties lead to disputes.

7.9Question 8

What factors would influence your decision to choose a means of settling disputes?		
	Frequency	Percent
Cost	18	42.9
Time	6	14.3
Cost, Time, Confidentiality, Relations and Complexity	18	42.9

Table 10 - Factors influencing settling disputes

Table 10 illustrates the most common trend for settling disputes being cost, followed by time, supporting the consensus that time is construction money which is also expressed by interviewee P2 (97). Therefore, it can be determined that cost and time influence decision factors. Still, some parties also consider confidentiality, business relations and the complexity of a dispute to decide how to resolve it.

7.10Question 9

Do you think there is fewer or more advantages over disadvantages of using ADR services?		
	Frequency	Percent
More	35	83.3
Equal	4	9.5
Less	2	4.8

Table 11 - Pros and cons of using ADR

Table 11 illustrates whether there are fewer or more advantages over disadvantages of using ADR. The most common trend by a significant portion was83.3%stated that there are more advantages than disadvantages. This implies that most professionals prefer utilizing the ADR service to resolve disputes.

7.11Question 10

What would you consider to be the most effective method of dispute resolution?		
	Frequency	Percent
Negotiation	10	23.8
Adjudication	2	4.8
Mediation	1	2.4
Arbitration, Negotiation	2	4.8
Arbitration, Adjudication, Mediation, Negotiation	11	28.5
Mediation, Negotiation	1	2.4
Arbitration, Adjudication	13	31.0
Arbitration	1	2.4

Table 12 -Preferred method of ADR

Table 12 illustrates the most common trend of 23.8%participants who believe negotiation is the most effective, supported by interviewees P1 (256-257)and P2 (426-427), who state this is the best way to get around disputes. On the other hand, 28.5% of participants stated all four types of methods are preferred. Still, as the literature supports, negotiations are normally the first step, and if this fails, then other methods are used which become the most effective.

7.12Question 11

Do you think ADR has had a positive or negative impact on time?		
	Frequency	Percent
Extremely negative	1	2.4
Moderately negative	2	4.8
Slightly negative	1	2.4
Neither positive nor negative	4	9.5
Slightly positive	9	21.4
Moderately positive	13	31.0
Extremely Positive	11	26.2

Table 13 - ADR in relation to impact on time

Mean	**5.4634**
Standard Deviation	**1.50163**
Variance	**2.255**

Table 14 – Question 11 Descriptive statistics

Table 13 illustrates a common trend of ADR having a 78.6% positive effect on time ranging from slightly to extremely, whilst 9.5% remained neutral, stating neither positive nor negative. On the other hand, 9.6% of respondents stated ADR has a negative impact on time from slightly to extremely. Furthermore, the mean response of 5.46 indicates that, on average, respondents stated ADR has a slightly positive impact on time. Still, this mean value could increase or decrease by a standard deviation of 1.50. Meanwhile, it can be stated that the majority agreed ADR has a positive effect on time, and the few who disagreed may have had a bad experience with ADR.

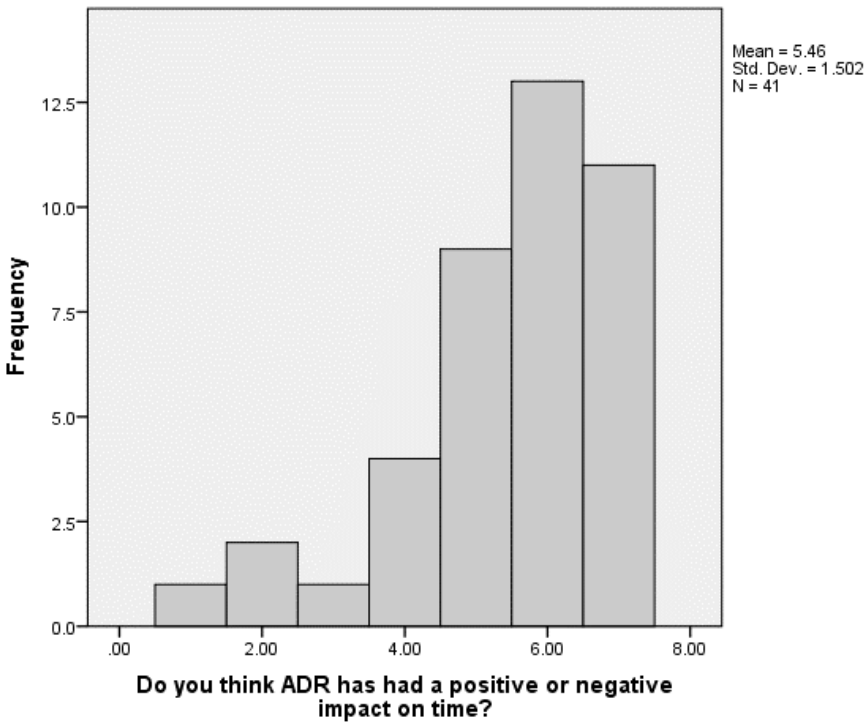

Figure 10 - Histogram on time

7.13 Question 12

Do you think ADR has had a positive or negative impact on cost?		
	Frequency	Percent
Extremely negative	1	2.4
Moderately negative	6	14.3
Slightly negative	3	7.1
Neither positive nor negative	6	14.3
Slightly positive	8	19.0
Moderately positive	8	19.0
Extremely Positive	10	23.8

Table 15 – Impact has ADR on cost

Mean	**4.8571**
Standard Deviation	**1.81553**
Variance	**3.296**

Table 16 - Question 12 Descriptive statistics

Table 15 illustrates the common trend of ADR having a 61.8% positive effect on cost ranging from slightly to extremely, whilst 21.3% of participants negated and stated it has a negative effect on costs, with 6 respondents stating ADR has a neutral effect on costs. Furthermore, the mean response of 4.85 implies that respondents have slightly agreed but have a mean of less than 5, suggesting that a good number of participants were not in agreement with the statement. The standard deviation is also slightly higher, indicating higher fluctuations in responses and that a large portion of professionals did not agree with the statement and either remained neutral or gave a negative opinion. However, it can be claimed majority agreed ADR has a positive effect on cost given that it saves costs in two ways; one in terms of money and the second in terms of time is construction money.

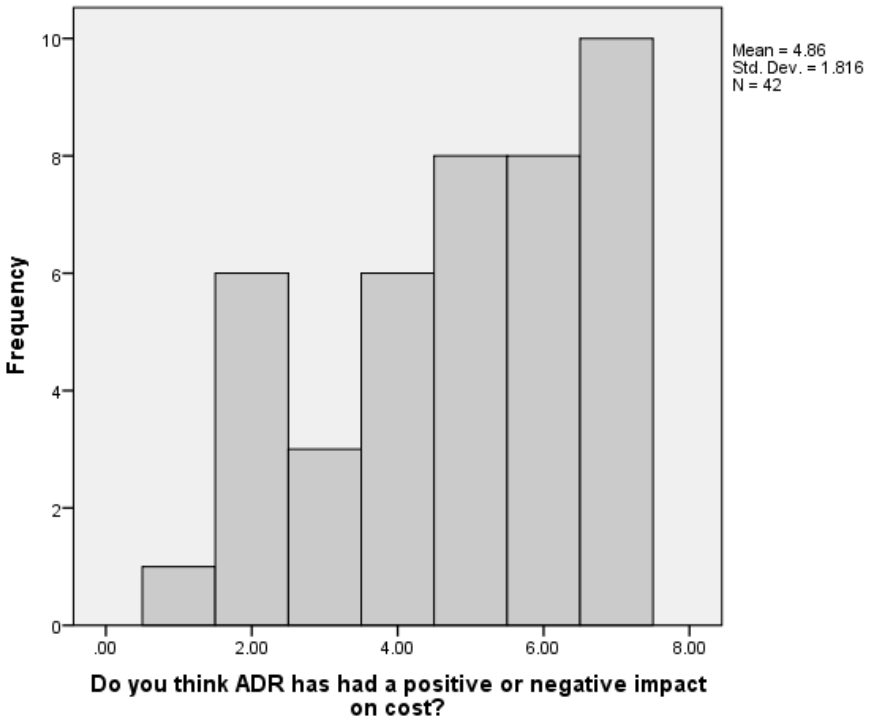

Figure 11 - Histogram on cost

7.14 Question 13

EOT is the number one cause of claims leading to alternative dispute resolution, do you;		
	Frequency	Percent
Disagree	6	14.3
Somewhat disagree	7	16.7
Neither agree nor disagree	6	14.3
Somewhat agree	9	21.4
Agree	9	21.4
Strongly agree	4	9.5

Table 17 - EOT claims

Mean	**4.4878**
Standard Deviation	**1.59878**
Variance	**2.556**

Table 18 - Question 13 Descriptive statistics

Table 17 illustrates the most common trend being52.3%in agreement ranging from somewhat to strongly agree to support literature (Raj, 2009). Whereas14.3% of respondents remained neutral, implying they may have encountered the same claims frequently. Furthermore, the mean response of 4.48indicates, on average, the response was between somewhat agree and neither agree nor disagree. Therefore, it can be stated those respondents have experienced a frequency of disputes other than EOT; hence they somewhat agreed and remained neutral.

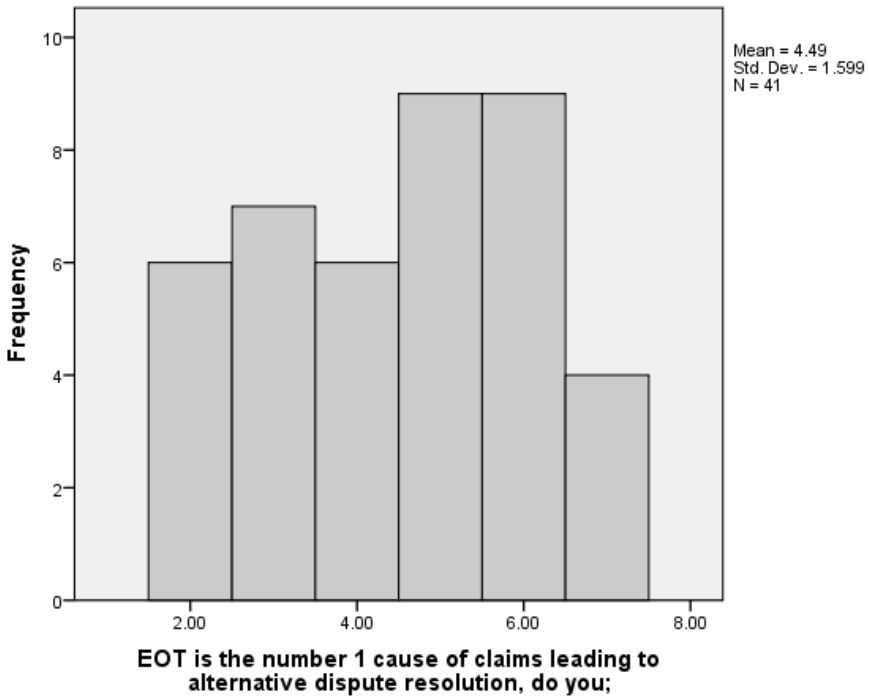

Figure 12 - Histogram on EOT

7.15 Question 14

Do you think the ever-increasing complexity of construction contracts has led to more complications of the contracts leading to disputes?		
	Frequency	Percent
Probably not	8	19.0
It might or might not	4	9.5
Probably yes	18	42.9
Definitely yes	12	28.6

Table 19 - Complexity of contract leading to disputes

Mean	**3.8095**
Standard Deviation	**1.06469**
Variance	**1.134**

Table 20 - Question 14 Descriptive statistics

Table 19 illustrates a common trend of a total of 71.5% stated probably to definitely yes to question 14, implying respondents agreed that the increasing complexity of contracts has led to more complications, thus leading to more disputes. In addition, the mean response to this question was 3.80, suggesting, on average, the responses fall within probably yes and might or might not; hence it can be interpreted that a portion of the study did not agree, but some portion also agreed on this statement. Therefore, it is determined there may be certain projects in which disputes occur due to the complexities of the contract, but this is not the case. On the other hand, it is evident that professionals had mixed opinions that emphasized remaining neutral on the statement. Thus, the mean response also fell within that category.

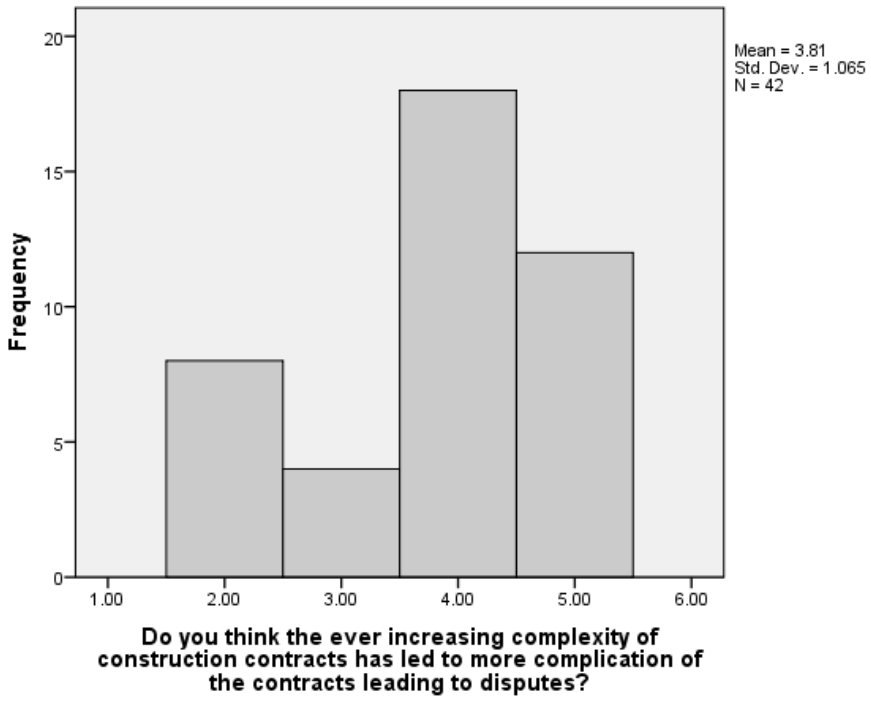

Figure 13– Histogramon complexity of contracts

7.16 Question 15

Do you think Litigation is better or worse way of dealing with disputes than ADR?		
	Frequency	Percent
Much worse	16	38.1
Moderately worse	4	9.5
Slightly worse	13	31.0
About the same	3	7.1
Slightly better	1	2.4
Moderately better	3	7.1
Much better	2	4.8

Table 21 - Litigation vs ADR

Mean	**2.6667**
Standard Deviation	**1.77608**
Variance	**3.154**

Table 22 - Question 15 Descriptive statistics

Table 21 illustrates the most common trend recorded where respondents stated they thought litigation is much worse than ADR at38.1%. A further31%stated slightly worse, meaning a total of 69.1% overall implied ADR is a better option in solving disputes. However, a total of 14.3%believed litigation to be better. Therefore, it can be said the majority agreed litigation is worse than ADR, suggesting it is not as effective or efficient. Furthermore, the mean response for this question was 2.66 with a standard deviation of 1.77, implying that, on average, respondents stated litigation is slight to moderately worse than ADR. This is because ADR is cheaper and quicker in getting a settlement. In contrast, litigation is seen as the worst-case scenario since it takes longer and incurs more costs increasing losses for both parties.

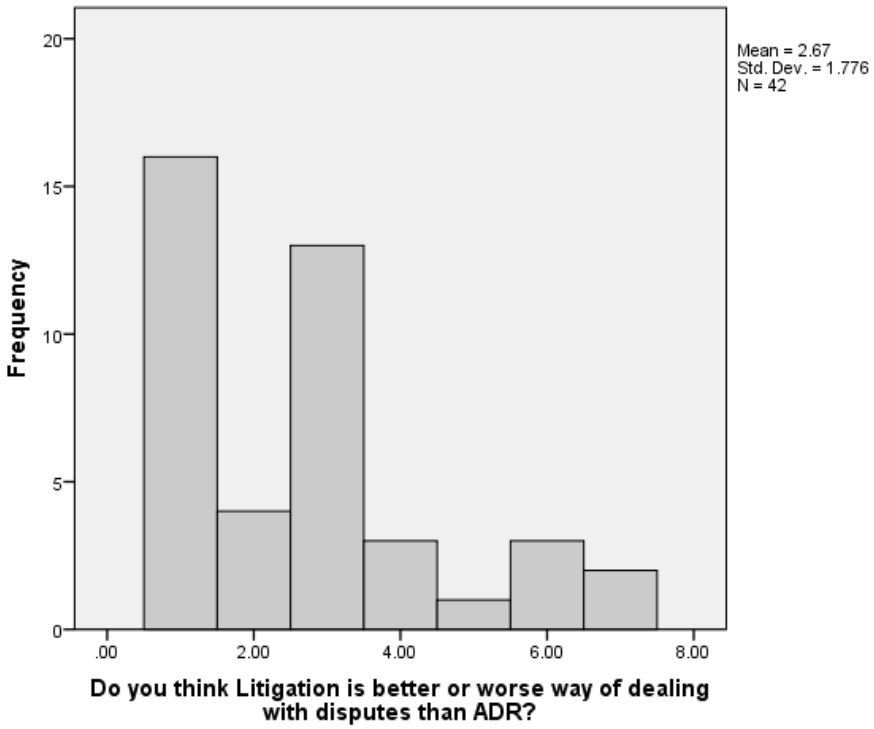

Figure 14 - Histogram on Litigation vs ADR

7.17 Independent Sample's T-test

Independent Sample's t-test is used to determine if there is a statistically significant difference between the mean of the two groups. Through this, the opinion of professionals from the construction industry was determined over the positive and negative effect of ADR on time and cost by their experience of more than 5 years and between 3-5 years. The results of the test are provided as follows:

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Do you think ADR has had a positive or negative impact on time?	Equal variances assumed	2.648	.112	.558	38	.580	.51351	.91995	-1.34883	2.37586
	Equal variances not assumed			.332	2.098	.770	.51351	1.54590	-5.84909	6.87612
Do you think ADR has had a positive or negative impact on cost?	Equal variances assumed	.002	.961	1.150	38	.257	1.27928	1.11270	-.97327	3.53183
	Equal variances not assumed			1.032	2.261	.400	1.27928	1.23934	-3.50472	6.06328

Figure 15 - Independent Sample's T-test

The sig. The value for Levene's test for equality of the variances is greater than alpha 0.05 (5%), suggesting the results of equal variances assumed. Meanwhile, referring to the t-test for equality of means for two sections, the sig value is greater than 0.05 (5%) in both sections suggesting not to reject the null hypotheses that state their mean difference between the two groups is equal to zero. Hence, it can be interpreted as there is no role in understanding and determining if either alternative dispute resolution (ADR)has a positive or negative effect on cost and time. This also shows that the selected population for a sample was aware of the dynamics of the construction industry, and this did not make any difference, but they still agreed on the positive effect of the ADR on the cost and time

7.18Chi-Square

Chi-Square is a statistical test used to examine if the relationship between the categorical variables exists; in the following test, it is determined if ADR having a positive on time is related to having a positive effect on cost(Kent State University, 2020). Meanwhile, suppose the relationship between these categorical variables exists. In that case, we can infer that professionals with a positive attitude towards ADR having a positive effect on time would also have a positive attitude towards ADR having a positive effect on cost. Meanwhile, the results of the test are presented as follows:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	101.664[a]	36	.000
Likelihood Ratio	61.837	36	.005
Linear-by-Linear Association	19.349	1	.000
N of Valid Cases	41		

Figure 16 - Chi-Square test

The null hypothesis of the Chi-square is that the first variable (positive effect on time) is independent of the second variable (positive effect on cost), whereas the alternate hypothesis is otherwise. The p-value of the chi-square is 0.00, implying that there is enough evidence to reject the null hypothesis that positive effects on cost and positive effects on time are independent; hence the alternate hypothesis is accepted that the relationship between positive effects on time and positive effects on costs exists. Therefore, we can conclude that those respondents said that ADR has a positive effect on time and that ADR has a positive effect on cost. This also indicates the importance of time and cost in the construction industry and that if the time of the project increases, then the cost would also increase and vice-versa

7.19One-Way ANOVA (Analysis of Variance)

This section analyses variance (ANOVA) to determine if the population mean of multiple groups is significantly different across populations. The null hypothesis of the ANOVA is where the mean of all populations is the same, and the alternate hypothesis is that at least one of the group's mean is not equal to the population of the other group's mean. The figure below illustrates the result of ANOVA in which the difference over the most common method of ADR is determined across professionals with different experience levels in construction.

7.20ANOVA test 1

ANOVA

What is the most common method of ADR you have used? - Selected Choice

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14.837	3	4.946	1.545	.219
Within Groups	121.640	38	3.201		
Total	136.476	41			

Figure 17 - One-Way ANOVA test 1

Figure 14 above elucidates f=1.54 [Sig. 0.219] suggesting that the sig value of the ANOVA is greater than the selected significance 0.05 (5%); hence there is enough evidence not to reject the null hypothesis and that the means of all populations across the groups is the same. This implies that there is consensus among the industry professions to select the common method of ADR, and there is no role of experience in determining the method of ADR. It can be interpreted that the consensus among the professionals over the common ADR methods shows that ADR is the most common concept in the construction industry, and each of the professionals, irrespective of experience, prefers ADR to the traditional method of handling disputes.

7.21ANOVA test 2

ANOVA

What factors would influence your decision in choosing a means of settling disputes? - Selected Choice

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.441	3	.480	.528	.666
Within Groups	34.559	38	.909		
Total	36.000	41			

Figure 18 - One-Way ANOVA test 2

The figure above shows the results of the second ANOVA test, where it is tested that there is consensus among professionals in considering factors when choosing a means of settling disputes by differing experience levels. Since the sig value of the test is 0.66, which is higher than the significance level, it is evident that professionals have a consensus in considering the factors when choosing the means of handling disputes. There is also no role of experience that considers those factors. This also implies that experience has no role in choosing the dispute's methods.

7.22ANOVA test 3

ANOVA

Do you think Litigation is better or worse way of dealing with disputes than ADR?

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	32.090	3	10.697	4.180	.012
Within Groups	97.243	38	2.559		
Total	129.333	41			

Figure 19 - One-Way ANOVA test 3

Figure 16 demonstrates the results of the third ANOVA test, which was tested against the role of experience in understanding which process is better for dealing with disputes involving either litigation or ADR. Since the sig value of the ANOVA is 0.012 and is less than the selected significance level, there is enough evidence to claim that at least one of the group’s mean is different from another group’s mean. This implies that there is no consensus among the professionals over whether litigation or ADR is better or worse. It means that there is statistically significant evidence that the experience level of the professional plays a very important role in developing a positive attitude towards ADR and a negative attitude towards litigation and vice-versa.

Chapter 8.0: Discussion and Conclusion

Industry professionals have used ADR to solve disputes at the earliest to save cost and time. It has been discussed by Alaloul, Tayeh, &Hasaniyah (2019) that the construction industry is highly sensitive to time and cost because if a project is delayed, everything associated with this gets affected. However, it is evident it is nearly impossible to avoid disputes in the construction industry since the complexity of the contracts has increased, meaning the probability of dispute increases. In this regard, Malleson (2018) argues disagreements may differ in intensity and levels; because various parties are involved in a construction project. The NCCLR 2018 has indicated that 19% of the contracts in construction have at least one dispute, and 4% of contracts have four disputes supporting these claims.

It is found it has become uncommon not to have a dispute in relation to construction contracts. The emergence of disputes is not a major issue; instead, conflict resolution between the parties is the major issue since time is money in the industry. In this regard, the literature suggests the most common causes of the disputes among the parties are EOT, final accounts valuation, valuation of variations and non-compliance to the contract obligations (Keane & Caletka, 2015)(Garner, 2015)(Iyer, Chaphalkar, & Patil, 2018)(Aryal & Dahal, 2018). Also, findings from the interview and questionnaire analysis suggested that EOT, valuation issues and lastly non-compliance to contract obligations are the most common reasons behind the disputes.

Furthermore, disputes have been resolved through litigation, but since this process takes months to come to a settlement, parties would find it difficult to continue work resulting in a loss for all involved. Thus, academic literature and professionals have criticised litigation, hence the need for more efficient methods due to the risk of higher costs and delays (Khekale & Futane, 2015). Therefore, the need for the most efficient resolution method has risen, and, in this regard, ADR was distinguished.

Therefore, the following study was conducted to research ADR and gather insight into the reasoning for its use and investigate and identify the main methods of ADR. For this purpose, industry professionals conducted interviews and questionnaires to examine the extent to which ADR is more efficient and has been used in construction contracts for dispute resolution. The primary findings indicated EOT, valuation of variation and non-compliance to the contract obligations as core reasons why disputes take place. Furthermore, despite initiating legal proceedings in a dispute settlement process, each party must compromise to approach a settlement. Each party also bears a great loss in terms of cost and delay in the project, as suggested (Bennett, 2018). Similarly, the survey findings suggest that a dispute may take months to resolve, which is unacceptable for each party. Hence, ADR emerges as the best solution against traditional methods.

In pursuance of the research objective, the interviews and survey findings have indicated the respondents have stated that they prefer to use ADR due to time-related constraints. Since the industry incurs many changes and variations, it means they don't have to refer straight to court for a resolution. This is because the contractor or client can claim compensation due to delays in the work. Hence parties prefer to utilise the most efficient method of resolution. In pursuance of the most efficient method of resolution, the survey findings show that most respondents have indicated that ADR has a moderately to extremely positive effect on time and cost, implying ADR techniques reduce costs and saves time in comparison to traditional methods.

In addition, respondents were interviewed regarding the effectiveness of ADR, and findings suggest the most efficient way of conflict resolution is negotiations. Still, if this is

deemed unsuccessful, other forms of ADR would be utilised to resolve, and industry professionals prefer these methods. Similarly, the study hypothesised that ADR has made settling disputes more effective in terms of cost and time due to alternative methods. The findings from the interviews and questionnaire suggested accepting the hypothesis that the ADR has made settling disputes more effective in terms of cost and time due to alternative methods.

To fulfil the aim of the study, an extensive literature review was conducted, as well as gathering primary data from industry professionals. It has been found ADR is an effective and efficient way of resolving disputes, given the construction industry is highly sensitive to time and cost. Multiple parties are involved in the project at different stages and levels, making the parties' work interdependent without a slack or grace period but in exceptional cases. The interdependence of parties makes the contracts complex giving rise to conflict and disputes.

The literature evidenced that traditional resolution methods are not as effective in terms of cost, time, and preserving business reputation. However, litigation is still utilised if costs start to soar and get out of control, as supported by interviewee P1(377-380). Yet, where industry professionals prefer possible ADR methods. Most frequently, negotiations are used as per the survey data, but, in contrast, most participants have also preferred to use all resolution methods. Meanwhile, the ADR method's selection and influence depend on factors other than time and cost, such as confidentiality and relations between the parties. Meanwhile, the survey data also shows that EOT is the number 1 cause supporting the authors' findings.

It is concluded that the emergence of ADRhas led to various benefits for everyone involved. Therefore, professionals prefer to utilize ADR rather than litigation; conflicts and disputes are unavoidable due to a highly versatile industry with lots of changes and frequent variations. However, the lack of understanding by all parties to contract obligations does not aid matters as this leads to non-compliance and then disputes. Therefore, in times of frequent disputes, court proceedings are not feasible. Hence, the use of ADR is more favoured to resolve disputes as the adjudication process is favoured in the UK construction industry, which is supported in the literature (Gaitskell, 2005).

Furthermore, ADR is found more effective and efficient where solicitors, arbitrators and third parties are involved, making the process quicker and easier to resolve. Meanwhile, before legal proceedings, the courts require parties to go through mediation and negotiations before pre-trials. Therefore, courts also recognise ADR as an effective and systematic solution. Since a lack of understanding causes most disputes, ADR is the best solution to keep relations intact before a solicitor and arbitrator’s involvement. Consequently, ADR is said to be the most preferable method of resolution.

Chapter 9.0:Recommendations

It is recommended for industry professionals to use ADR to resolve disputes and initially utilize negotiations because a common cause of the dispute is triggered by a lack of understanding between parties, where one does not understand the position of the other and vice-versa. In this situation, the use of negotiations is most feasible through which parties can resolve the disputes via one-on-one discussion and mutual understanding. In contrast, if the disputes are being resolved through litigation, then it becomes inefficient based on three facts (1) expensive process, (2) time-taking process and (3) business relations are damaged. These factors are highly important for the construction industry; hence if a dispute escalates to litigation, then this normally results in each party having to face inevitable consequences, willingly or unwillingly. Therefore, parties must refer to the use of ADR for resolution.

Further scope for the study is recommended regarding the most common causes of a dispute. The literature and primary data results have identified the same recurring causes for many years, indicating a potential link between these disputes. Lastly, further research is suggested by designing a survey questionnaire appropriately by including more open-ended options and the inclusion of further interview respondents. This will enable us to achieve better and improved results.

11819 word count

References

Alaloul, W., Tayeh, B., & Hasaniyah, M. W. (2019). A comprehensive review of disputes prevention and resolution in construction projects. *MATEC Web of Conferences, Vol.270*.

Alazemi, M., & Mohiuddin , A. (2019). Conflict Management of Construction Projects – A Research. *International Journal of Engineering and Advanced Technology*, 3809.

Alnaas, K. A., Khalil, A. H., & Nassar, G. E. (2014). Guideline for preparing comprehensive extension of time (EoT) claim. *HBRC Journal*, 308-316.

Anand, K. V. (2017). Most common causes for the construction disputes.

APM. (2019). *Negotiation*. Retrieved from Association for project management: https://www.apm.org.uk/body-of-knowledge/people/interpersonal-skills/negotiation/

Arcadis. (2019). *Global Construction Disputes Report.* Arcadis.

Aryal, S., & Dahal, R. K. (2018). A Review of Causes and Effects of Dispute in the Construction Projects of Nepal. *Journal of Steel Structure & Construction*, 144.

Bailey, J. (2014). In *Construction Law* (p. 1421). London: Routledge Taylor & Francis Group.

Barrett, J. T., & Barrett, J. (2004). In *A History of Alternate Dispute Resolution.* San Francisco: Jossey-Bass A Wiley Imprint.

Bell, A. (2019). *Global Construction Disputes Report.* Arcadis.

Bennett, S. C. (2018). Construction Mediation: Best Practices for Success. *The Practical Real Estate Lawyer; Philadelphia*, 3-17.

Brace, I. (2018). How to Plan, Structure and Write Survey Material for Effective Market Research. In I. Brace, *Questionnaire Design* (pp. 59-60). Kogan Page Limited.

Braun, V. C. (2014). How to use thematic analysis with interview data (process research).

Byrne, J. (2016). The pros and cons of various methods of dispute resolution.

Cakmak, E., & Cakmak, P. I. (2014, January 22). ScienceDirect. *An analysis of causes of disputes in the construction industry using analytical network process*, pp. 183-187.

Carolan, E. (2017, September 12). Method of Valuing Variations Under Construction Contracts. pp. 1-4.

Contract Dispute Resolution Ltd. (n.d.). *Final Accounts in Construction*. Retrieved from cdr: http://www.contract-dispute.com/further-reading/final-accounts-in-construction/

Cook, N. (2016). Different Methods Of Dispute Resolution In Construction Disputes. *Different Methods Of Dispute Resolution In Construction Disputes*.

Davies, E., Fenn, P., & O'Shea, M. (1998). In *Dispute Resolution and Conflict Management in Construction: An International review* (p. 103). Taylor & Francis.

Dispute Prevention and Resolution Services. (2017). *Dispute Resolution Reference Guide.* Canada: Department of Justice.

Eggleston, B. (2009). *Liquidated damages and Extension of Time in Construction Contracts.* Chichester: Wiley-Blackwell.

Eilenberg, I. M. (2003). Dispute resolution in construction management. Sydney: University of New South Wales Press Ltd.

Ekhator, J. O. (2016). Investigating causes of disputes in building construction project in Nigeira. *International Journal of Science, Environment ISSN 2278-3687 (O) and Technology*, 3516-3527.

Fellows, R., & Liu, A. (2015). In R. F. Fellows, & A. M. Liu, *Research Methods for Construction* (p. 157). Chichester: John Wiley & Sons, Incorporated.

Fenn, P., Lowe, D., & Speck, C. (1997, October 21). Construction Management and Economics. *Conflict and dispute in construction*, pp. 513-514.

Gaitskell, R. (2005). Adjudication - Its effect on other forms of dispute resolution (the UK experience). *Australian Construction Law Newsletter*.

Gaitskell, R. (2007). International statutory adjudication: its development and impact. *Construction Management and Economics*, 777-784.

Garner, J. (2015, December). *Final account procedures.* Retrieved from RICS: https://www.rics.org/globalassets/rics-website/media/upholding-professional-standards/sector-standards/construction/black-book/final-account-procedures-1st-edition-rics.pdf

Gould, N. (2010). RICS Legal Issues in Construction 2010 - The use of mediation in construction disputes. 21-28.

GOV.UK. (2015, June 23). *Alternative dispute resolution for consumers*. Retrieved from Department For Business Innovation & Skills:

https://www.gov.uk/government/publications/alternative-dispute-resolution-for-consumers/alternative-dispute-resolution-for-consumers

Gregory-Stevens, J., Frame, I., & Henjewele, C. (2016). Mediation in construction disputes in England. *International Journal of Law in the Built Environment*, 134.

Harmon, K. M. (2003). Conflicts between Owner and Contractors: Proposed Intervention Process. *Journal of Management in Engineering*, 121-124.

Hasheminasab, H. S., Mortaheb, M. M., & Fard Fini, A. A. (2014). Causes of Common and Frequent Claims in Oil, Gas and Petrochemical Projects of Iran. *KSCE Journal of Civil Engineering*, 1270-1278.

Iyer, K. C., Chaphalkar, B. N., & Patil, S. K. (2018). Intrinsic Factors Influencing Decision making of Arbitrators in Dispute Resolution of variation Claims. *Journal of The Institution of Engineers (India): Series A*, 287-293.

Jaffar, N., Tharim, A. H., & Shuib, N. M. (2011). Factors of Conflict in Construction Industry: A Literature Review. *The 2nd International Building Control Conference 2011*, 193-202.

Justice GOV UK. (2020, April 25). *PRACTICE DIRECTION – PRE-ACTION CONDUCT AND PROTOCOLS*. Retrieved from Ministry of Justice: https://www.justice.gov.uk/courts/procedure-rules/civil/rules/pd_pre-action_conduct#18.1

Keane, J. P., & Caletka, A. F. (2015). In *Delay Analysis in Construction Contracts* (p. 120). Chichester: John Wiley & Sons, Incorporated.

Kennedy, P., Milligan, J., Cattanach, L., & McCluskey, E. (2010). *The development of Statutory Adjudication in the UK and its relationship with construction workload.*

Kent State University. (2020, April 9). *SPSS TUTORIALS: CHI-SQUARE TEST OF INDEPENDENCE*. Retrieved from Kent State University: https://libguides.library.kent.edu/SPSS/ChiSquare

Khekale, C., & Futane, N. (2015, May). International Journal of Science and Research (IJSR). *Management of Claims and Disputes in Construction Industry*, pp. 848-854.

Kitt, G. (2015). Failure to understand contractual obligations is losing the industry millions. *Association for Consultancy and Engineering*.

Klee, L. (2018). In *International Construction Contract Law* (p. 299). Chichester: John Wiley & Sons.

Kumaraswamy, M., & Yogeswaran, K. (1998). Significant souces of construction claims. *International Construction Law Review*, 144-160.

Latham, M. (1994). In S. M. Latham, *Constructing the team* (p. 87). HMSO.

Laycock, E., Howarth, T., & Watson, P. (2016). The Journey to Dissertation Success : For Construction, Property, and Architecture Students. In T. H. Elizabeth Laycock, *The Journey to Dissertation Success* (p. 90). Oxon: Routledge.

Lee, C. K., WingYiu, T., & Cheung, S. O. (2016). Selection and use of Alternative Dispute Resolution (ADR) in construction projects — Past and future research.

Linnett, C. M., De Moraes, C., Lowsley, S., & Smith, M. (2015). *Extensions of time RICS guidance note.* London: Royal Institution of Chartered Surveyors (RICS).

Malleson, A. (2018). *National Construction Contracts and Law Survey 2018.* NBS.

Mason, J. (2016). Construction Law : From Beginner to Practitioner. In *Construction Law* (p. 284). Oxon: Routledge.

McCall, B. (2017, November 9). The Irish Times. *In construction, time is money*.

Naoum, S. (2013). In *Dissertation Research & Writing for Construction Students* (p. 49). Oxon: Routledge.

Netscher, P. (2015, April 10). How to Avoid Disputes in the Construction Industry.

Opata, C. N., Owuss, E. E., Oduro-Apeatu, K., & Tettey-Wayo, J. N. (2015). An Exploratory Study of Professional Conflicts and Disputes within the Construction Industry. *International Journal of Managerial Studies and Research*, 59-61.

Perrin, H. (2014). Alternative Dispute Resolution (ADR): An Overview of Some Common Mechanisms, and their Strengths and Weaknesses in Context. *Plymouth Law and Criminal Justice Review*, 72.

Pickavance, J. (2016). *A Practical Guide to Construction Adjudication.* Chichester: John Wiley & Sons, Incorporated.

Raj, N. (2009). Quick Guide To Construction Claims. Warsaw: Prime Consulting - Construction Claims and Contracts Consultants.

Rosenburg, K., Barry, D., Bayfield, R., Ennis, C., Kirkwood, K., Ramey, M., & Winter, J. (2017). In D. B. Kim Rosenburg, *Society of construction law delay and disruption protocol* (p. 64). Leicestershire: Society of construction law UK.

Sakal, M. W. (2004). *Constructing Projects in a Dynamic Environment: A Focus on Relational Contracting.* Master of Engineering Report University of California Berkeley.

Sakate, P., & Dhawale, A. W. (2017). Analysis of claims and dispute in construction industry. *International journal of engineering sciences & research technology*, 532.

San Cristóba, J. R., Carral, L., Diaz, E., Fraguela, J. A., & Iglesias, G. (2018). Complexity and Project Management: Challenges, Opportunities, and Future Research. 4.

Sanchez, V. A. (1996). The Ohio State Journal on Dispute Resolution. *Towards a History of ADR: The Dispute Processing Continuum in AngloSaxon England and Today*, 2.

Santiago, N. (2019). *Negotiation in Construction Industry Disputes: UAE Situation Dissertation.*

Sebastian, R. J., & Davison, B. (2011). The root causes of contract administration problems. *Journal of Public Procurement*, 171-189.

She, L.-Y. (2010). *Factors which impact upon the selection of Dispute Resolution methods for commercial construction in the Melbourne industry: Comparison of the Dispute Review Board with other Alternative Dispute Resolution methods.* Melbourne: RMIT University, Australia.

Sinha, M., & Wayal, A. S. (2013). Dispute Causation In Construction Projects. *IOSR Journal of Mechanical & Civil Engineering*, 54-58.

Sutrisna, M., Proverbs, D., Potts, K., & Buckley, K. (2004). A knowledge based system for valuing variations in civil engineering works: a user centred approach. *International Journal of IT in Architecture, Engineering and Construction*, 285.

The Construction Index. (2019, June 26). *Are we getting on better? Construction disputes in decline*. Retrieved from The Construction index: https://www.theconstructionindex.co.uk/news/view/are-we-getting-on-better-construction-disputes-in-decline

Thwaites, S. (2016, August 4). *A Guide: Adjudication – back to basics*. Retrieved from Wright Hassall: https://www.wrighthassall.co.uk/knowledge/legal-guides/2016/08/04/guide-adjudication-back-basics/

Torraco, R. (2016). Literature Reviews: Using the Past and Present to Explore the Future. *Sage Journals*, 405.

Trushell, I., Clark, B., & Agapiou, A. (2016). Construction mediation in Scotland. *International Journal of Law in the Built Environment*, 103.

Vos, G. (2019). Law Society Civil Litigation Autumn Conference. 6.

Wood, W., Allen, T., Andrews, N., Ross, G., Lumb, & Lawson, S. (2017). *ADR and Civil Justice.* CJC ADR Working Group.

Yates, J. K. (2011). The Art of Negotiation in Construction Contract Disputes. *Journel of legal affairs and dispute resolution in engineering and construction*, 94.

Bibliography

Brownlee, T. (2018). ADR is a faster, cheaper and more flexible route to resolving disputes.

Appendix 1 Ethics and Health and Safety

Consideration has been taken in terms of ethics in research by fully understanding and applying the basics. This is important as the thesis involves interaction with businesses and members of the general public who act as participants/respondents.

The author has carried themselves professionally throughout the whole of the thesis and has ensured to carry out the following:

- Quality and integrity
- Conformed consent
- Confidentiality and anonymity
- Participants to participate voluntarily
- Avoid harm to the participants
- Independent research

The author will ensure whether any type of harm could occur as part of the research and incorporate mechanisms to remove this potential harm, all whilst conforming with the appropriate ethical standards (Laycock, Howarth, & Watson, 2016).

Non-malfeasance and Beneficence

The nature of research involved posed minimal riskto the participants taking part in the thesis.Any risks identified will be taken into consideration and reduced to the lowest levels achievable and where still present reviewed by the supervisor for consideration (Laycock, Howarth, & Watson, 2016).

Integrity

Research to be carried out with integrity in mind and an audit trial to be created and made readily accessible to the dissertation supervisor upon their request (Laycock, Howarth, & Watson, 2016).

Informed consent

The participants taking place in the research to be informed of the method and reason of the research, also the potential outcomes to give them an idea of how and why their data is being used, a duplication will be included in appendix 1. This will be provided to the participants in good time with an opportunity for them to raise any concerns given.

Any participants who do not provide data anonymously can request the removal of some or all of their data and/or their name to be redacted up to 3 weeks before the submission date of the research (Laycock, Howarth, & Watson, 2016).

Interviews

- Interviewees will not be aware of the other participants.
- Where there is sensitive information discussed there will be a cause for confidentiality and the interviews will be remain unanimous.
- Interviewees to be carried via telephone

- Any recorded data will be used in accordance with the wishes of the interviewee. If the research is to be published, then permission will need to be clearly given.

Confidentiality and Anonymity

All data collected will conform to the EU General Data Protection Regulations (GDPR). All data is strictly confidential and treated as such with measures such as Qualtrics through the university server for any transcripts and questionnaires, all to ensure it stays secure (Laycock, Howarth, & Watson, 2016).

Impartiality

Any conflict of interest to be declared and dealt with(Laycock, Howarth, & Watson, 2016).

Data Protection

All participants raw data will be kept until marking has been completed, during this time the data will be deleted from the university servers. Some data in the research may be kept indefinitely and consent for this is covered by the ethics procedures of Sheffield Hallam, a link for this included in the consent form within Appendix 1.

Sensitive data collected will be in the form of the participants name, company for whom they work for and the position they hold, all of which will be stored separately from the collected research data securely and only accessible to the supervisor upon their request (Laycock, Howarth, & Watson, 2016).

Presenting Data

Interviews will be listed in an anonymised format such as interviewee P1 and questionnaires will be grouped into relevant data with no direct links to participants (Laycock, Howarth, & Watson, 2016).

Health and Safety

The author will ensure the health and safety of their own and that of others is not compromised by their actions. The author will not undertake any activity that puts them or others at reasonable risk. Due to the circumstances datawill begathered at the researcher's residence posing no risk to the author orothers therefore, in this particular instance no risk assessment was necessary.

Research Ethics Checklist

General Details

Nameofstudent	
Semail address	
Courseorqualification (student)	
Nameofsupervisor	
email address	
Titleofproposedresearch	An Insight into Alternative Dispute Resolution (ADR) and how this is executed to solve common Construction Disputes
Briefoutlineofresearchto include,rationale& aims(250-500 words).	Alternative dispute resolution (ADR) allows ways in which construction disputes can be handled compared to other traditional methods such as litigation. By utilising ADR, disputes can be resolved through mediation and/or arbitration, however other disputes may be resolved by more formal litigation. Disputes are common in any workplace, however more so in construction due to the diverse nature of the industry and the variation of individuals all working for different corporations, it is only a matter of time before some form of dispute arises. ADR techniques have gained popularity to manage conflicts and disputes (Lee, WingYiu, & Cheung, 2016). This is because people involved became unpleased with the traditional methods to solve disputes, so this was incorporated into the standard form of contract. Fenn, Lowe & Speck (1997) stated conflicts and disputes are two distinct notations. A conflict is where the interests of two parties are incompatible, however this can be handled with the possibility of preventing a dispute. Disputes are different as they're one of the main reasons for a project not reaching completion and these require resolution by means of either, mediation, arbitration, negotiation etc. (Cakmak & Cakmak, 2014). The main causes for construction disputes are related to money and time e.g. not being paid and delays due to inclement weather etc, this can then result in delays and dependant on who's responsible i.e. the employer then the contractor can claim for an extension of time (EOT) and/or loss and expense claim. Aims: • To research into ADR and gather an insight into the

	reasoning for its use. • Investigate and Identify the main methods of ADR Objectives: • Brief insight into the history of ADR to gain an understanding of its origins and how it has changed over the years • Establish the main reasons for dispute and explore the causes within the construction industry • Formulate a comparison between ADR and other forms of dispute resolution • Identify whether ADR has had a positive/negative effect in the construction industry since its incorporation of solving disputes
Where data is collected from individuals, outline the nature of data, details of anonymization, storage and disposal procedures if required (250-500 words).	Data collected from interviewees wasrecorded on the universities Dictaphone and then transcribedonto a word document for transcriptionall whilst being secured by the university's servers. Prior consent was obtained before the interviews were conducted and consent forms sent to the interviewees. Interviewees remained anonymous throughout the entire process including within the thesis. In relation to the questionnaires data obtained from the participants were securely stored on Qualtrics. Participant information sheets and consent forms were attached to the survey and all participants were remained anonymous throughout the entire process including within the thesis. All participants raw data will be kept until marking has been completed, during this time the data will be deleted from the university servers. Some data in the research may be kept indefinitely and consent for this is covered by the ethics procedures of Sheffield Hallam, a link for this included in the information sheet within Appendix 1. Sensitive data collected will be in the form of the participants name, company for whom they work for and the position they hold, all of which will be stored separately from the collected research data securely and only accessible to the supervisor upon their request.All data collected will conform to the EU General Data Protection Regulations (GDPR).

4.Research with ProductsandArtefacts

Please ensure the following are included with this form if applicable, tick box to indicate:

	Yes	No	N/A
Research proposal if prepared previously	☐	☐	☒

Any recruitment materials (e.g. posters, letters, etc.)	☐	☐	☒
Participant information sheet	☒	☐	☐
Participant consent form	☒	☐	☐
Details of measures to be used (e.g. questionnaires, etc.)	☒	☐	☐
Outline interview schedule / focus group schedule	☐	☐	☒
Debriefing materials	☐	☐	☒
Health and Safety Project Safety Plan for Procedures	☐	☐	☒

Participant Information Sheet

Appendix 1 - Interviewee Information Sheet

Participant Information Sheet

Dear XXXX,

Thank you for agreeing to participate in my undergraduate research thesis entitled:

An Insight into Alternative Dispute Resolution (ADR) and how this is executed to solve common Construction Disputes*.*

You have been approached because your experience and expert knowledge in this area will prove invaluable in moving my research forward.

The interview will last approximately 30 minutes and will consist of a mixture of questions to gauge your opinions on the application of 'Alternative Dispute Resolution' in the Construction sector and its implications, if any, on cost and time. You are free to answer these questions as broadly or concisely as you please and are not obliged to answer any questions should you not wish.To take part in the research, I ask that you complete a Participant Consent Form, and if at any time you do not wish to participate in the research project, you are free to withdraw without any consequence.

Our conversation will be recorded using a voice recorder and stored on a secure server at my university. A transcript of the conversation will also be produced. Only my supervisor, Nicola Power MEng, and I will have access to this data until its publication. Upon my graduation, any copies of this data will be deleted/destroyed in line with GDPR and Data Protection Act 2018. See link for your full rights

Recordings of the interview will be fully anonymised, and no individuals, companies or projects named publicly. At your request, a full transcript of the interview can be forwarded to you by email. You reserve the right to withdraw your contribution to the study for 14 days after the interview has taken place.If you have any further questions, please do not hesitate to contact me on the email address below.

Participant Consent Form

Appendix 1 - Interviewee Consent Form

Participant Consent Form

Please circle: RESEARCHER COPY / PARTICIPANT COPY

TITLE OF STUDY:

An Insight into Alternative Dispute Resolution (ADR) and how this is executed to solve common Construction Disputes.

Please answer the following questions by circling your responses

Have you read and understood the information sheet about this study?	YES	NO
Has the information sheet included details of the data controller, how data will be used, stored, disposed of?	YES	NO
Have you been able to ask questions about this study?	YES	NO
Do you understand that you are free to withdraw from this study and how you are able to do this?	YES	NO
Do you understand that you are free to withdraw from this study without giving a reason for your withdrawal?	YES	NO
Have you received enough information about this study?	YES	NO
Do you understand that your responses will be anonymised before they are analysed (unless you have given written permission to be identified)?	YES	NO
Do you agree to take part in this study?	YES	NO

Your signature will certify that you have voluntarily decided to take part in this research study having read and understood the information in the sheet for participants. It will also certify that you have had adequate opportunity to discuss the study with an investigator and that all questions have been answered to your satisfaction

Signature of participant:.....Date:.....
Name (block letters):.....

Signature of investigator:.....Date:.....
Name (block letters):.....

Please keep your copy of the consent form and the information sheet together. (Name, address, contact number of investigator)

Interview Questions

Semi-structured Interview Questions

Background Questions:

1) How long have you been working in the construction industry?
2) What is your current job title, and could you expand on your job role?
3) Do you have any specialist knowledge in alternative dispute resolution?
    A. If so, can you expand on this? (for your answer above)
4) What type of company do you work for?
5) How many people are currently employed at the company?

Main Questions:

6) In what capacity does your job role cover the instances of applying ADR to practice
7) From my initial research an EOT claim has been and is still one of the most common causes of dispute. Can you please explain why you think this is?
8) What factors do you believe contribute towards dispute arising?
9) What would you consider the number one cause of dispute causing the implementation of ADR in your organisation?
10) Has the construction industry become more reliant on ADR since it's prominence in the 1990's?
    A. Why do you think this? (for your answer above)
11) In your opinion, do you think ADR has had a positive or negative impact in how disputes are resolved?
    A. Can you expand and explain the positives/negatives associated with this?
12) Do you think that ADR has had a positive or negative effect in relation to cost and time?

A. Why do you think this? (for your answer above)

13) What are your views on ADR good or bad, and this being incorporated into the standard form of contract?

14) In your opinion, what is your most favoured method of dispute resolution compared to others and why?

15) In your most recent ADR claim, which route was taken and how long did it take do render an award?

16) Has a dispute you've ever been involved in ever gone to court?

    A. If yes, how long did the entire process take to resolve?

Questionnaire Questions

An Insight into ADR and how this is executed to solve common Construction disputes

Information Sheet

Dear Sir / Madam,

Thank you for agreeing to participate in my undergraduate research thesis entitled:

An Insight into Alternative Dispute Resolution (ADR) and how this is executed to solve common Construction Disputes.

Please answer the questions as honestly as possible, the questionnaire will be stored on a secure server at my university. Only my supervisor, Nicola Power MEng, and I will have access to this data until its publication. There is no obligation to participate in this questionnaire if you do not wish. Upon my graduation, any copies of this data will be deleted/destroyed in line with GDPR and Data Protection Act 2018. See link for your full rights.

Questionnaires will be fully anonymised, and no individuals, companies or projects named publicly. At your request, a full copy of the questionnaire can be forwarded to you by email. You reserve the right to withdraw your contribution to the study for 14 days after the questionnaire has taken place. If you have any further questions, please do not hesitate to contact me on the email address below. Alternatively, you may contactmy supervisor any time

Yours sincerely,

Q1 Approximately, how long have you or your organisation been using ADR services?

- ○ Less than 1 year
- ○ 1-2 years
- ○ 3-5 years
- ○ More than 5 years

Q2 Thinking about the contracts you were involved in within the last 12 months, how many of these went into dispute?

- ○ One
- ○ Two
- ○ Three
- ○ Four
- ○ Five or more
- ○ Other - Please specify:

_____

Q3 Who were these disputes between?

- ○ Client and main contractor
- ○ Main contractor and subcontractor
- ○ Consultant and contractor
- ○ Subcontractor and subcontractor
- ○ Other - Please specify:

_____

Q4 Of these claims, what method of ADR was utilised to resolve the dispute?

- ○ Arbitration
- ○ Adjudication
- ○ Mediation
- ○ Negotiation
- ○ Other - Please specify:

_____

Q5 In your most recent dispute, how long did the process take in months?

- ○ One or less
- ○ One to five
- ○ Five to ten
- ○ Ten to fifteen
- ○ Fifteen to twenty
- ○ Other - Please specify:

_____

Q6 What were the main issues in dispute during the past 12 months?

- ○ EOT
- ○ Loss and expense
- ○ Final account valuation
- ○ Valuation of variations
- ○ Failing to understand & comply with contract obligations
- ○ Errors and/or omissions in the contract document
- ○ Other - Please specify:

_____

Q7 What is the most common method of ADR you have used?

- ○ Arbitration
- ○ Adjudication
- ○ Mediation
- ○ Negotiation
- ○ Other - Please specify:

_____

Q8 What factors would influence your decision in choosing a means of settling disputes?

- ○ Time
- ○ Cost
- ○ Other - Please specify: _____

Q9 Do you think there is less or more advantages over disadvantages of using the ADR services?

- ○ More
- ○ Less
- ○ Equal

Q10 What would you consider to be the most effective method of dispute resolution?

- ○ Arbitration
- ○ Adjudication
- ○ Mediation
- ○ Negotiation
- ○ Other - Please specify: _____

Q11 Do you think ADR has had a positive or negative impact on time?

- ○ Extremely positive
- ○ Moderately positive
- ○ Slightly positive
- ○ Neither positive nor negative
- ○ Slightly negative
- ○ Moderately negative
- ○ Extremely negative

Q12 Do you think ADR has had a positive or negative impact on cost?

- ○ Extremely positive
- ○ Moderately positive
- ○ Slightly positive
- ○ Neither positive nor negative
- ○ Slightly negative
- ○ Moderately negative
- ○ Extremely negative

Q13 EOT is the number one cause of claims leading to alternative dispute resolution, do you;

- ○ Strongly agree
- ○ Agree
- ○ Somewhat agree
- ○ Neither agree nor disagree
- ○ Somewhat disagree
- ○ Disagree
- ○ Strongly disagree

Q14 Do you think the ever-increasing complexity of construction contracts has led to more complication of the contracts leading to disputes?

- ○ Definitely yes
- ○ Probably yes
- ○ Might or might not
- ○ Probably not
- ○ Definitely no

Q15 Do you think the complexity of the contractual obligations has a direct link to disputes arising leading to EOT claims?

- ○ Definitely yes
- ○ Probably yes
- ○ Might or might no
- ○ Probably not
- ○ Definitely not

Q16 Do you think Litigation is better or worse way of dealing with disputes than ADR?

- ○ Much better
- ○ Moderately better
- ○ Slightly better
- ○ About the same
- ○ Slightly worse
- ○ Moderately worse
- ○ Much worse

Consent Form

Have you read and understood the information sheet about this study?

- ○ Yes
- ○ No

Has the information sheet included details of the data controller, how data will be used, stored, disposed of?

- ○ Yes
- ○ No

Have you been able to ask questions about this study?

- ○ Yes
- ○ No

Do you understand that you are free to withdraw from this study and how you are able to do this?

- ○ Yes
- ○ No

Do you understand that you are free to withdraw from this study without giving a reason for your withdrawal?

- ○ Yes
- ○ No

Have you received enough information about this study?

- ○ Yes
- ○ No

Do you understand that your responses will be anonymised before they are analysed (unless you have given written permission to be identified)?

- ○ Yes
- ○ No

Personal details

- ○ Name _____
- ○ Role _____
- ○ Company name _____

By ticking I consent you will certify that you have voluntarily decided to take part in this research study having read and understood the information in the sheet for participants. It will also certify that you have had adequate opportunity to discuss the study with an investigator and that all questions have been answered to your satisfaction.

- ○ I consent
- ○ I do not consent

Data Collection Healthand Safety Risk Assessmentforthe Researcher

1. Will the proposed data collection take place on campus?

☐ Yes (Please answer questions 4, 6 and 7)
☒ No (Please complete all questions)

2. Where will the data collection take place?
(Tick as many as apply if data collection will take place in multiple venues)

	Location	**Please specify**
☒	Researcher's Residence	
☐	Participant's Residence	
☐	Education Establishment	
☐	Other e.g. business/voluntary organisation, public venue	
☐	Outside UK	

3. How will you travel to and from the data collection venue?

☐ On foot ☐ By car ☐ Public Transport
☒ Other (Please specify) **No travel required**

Please outline how you will ensure your personal safety when travelling to and from the data collection venue

No travel required

4. How will you ensure your own personal safety whilst at the research venue?

Research carried out and home residence

5. If you are carrying out research off-campus, you must ensure that each time you go out to collect data you ensure that someone you trust knows where you are going (without breaching the confidentiality of your participants), how you are getting there (preferably including your travel route), when you expect to get back, and what to do should you not return at the specified time. Please outline here the procedure you propose using to do this.

I will make a trusted individual aware of what time and where I will be finishing. Oncecompleted I will contact the individual to let them know I am ok.

6. Are there any potential risks to your health and wellbeing associated with either (a) the venue where the research will take place and/or (b) the research topic itself?

☒ None that I am aware of
☐ Yes (Please outline below including steps taken to minimise risk)

7. Does this research project require a health and safety risk analysis for the procedures to be used?

☐ Yes
☒

Appendix 2 – Interview Questions

N.b the colour codes were used on the transcripts in appendices 3-4

Research objective 2

Most Common causes of disputes between client and contractors

Research objective 3

Preference of ADR to traditional models

Research objective 4

Effectiveness of alternative dispute resolution (ADR) in terms of cost and time

Theme	Colour highlighted in text
Research objective 2	
EOT	
Final Account Variation	
Valuation of Variation	
Non-compliance to Contract	
Research objective 3	
Preference	
Negotiations	
Mediations	
Adjudication	
Arbitration	
Research objective 4	
Positivity	
Negativity	
Reliance	

Appendix 3

Thematically analysed interview transcription: Interviewee P1

Interviewee P1: That's what we, so that's what we do. Um, we, we sort of work in expert roles in quantum and delay. So, I've, I've worked as a, I've worked as a quantum expert, haven't yet worked just as a delay expert, but, um, that's my main field of work actually in delay analysis.

CN: Brilliant. Um, so do you have any specialist knowledge in ADR? Would you say that's the quantum side? Is the, the, the specialist knowledge that you possessed for that? [inaudible]

Interviewee P1: um, well I've worked I guess in ADR for the last, um, 12 years. So yeah. Um, yeah, I would say I've got good specialist's knowledge in that. Um, I worked, I'm sure I don't want to, I suppose I don't want to, I'm pre-empt your next questions, but um, yeah, so worked in pretty much every form of ADR there is.

CN: Brilliant. Um, um, roughly how many people are currently employed at your company that you work for at the moment? Just roughly.

Interviewee P1: We, so we have, we have affiliate companies, so, so it means that it's not actually our company, but we work as if were the same company. But in the actual UK company, that's a relatively small amount, so about seven or eight of us.

CN: Right. Okay. Brilliant. Um, right. That leads me onto some of the main questions then. Um, again, some of these we may not have time to cover what we'll go for as many as we possibly can. Um, so in what capacity does your job role cover the instance of applying ADR to practice?

Interviewee P1: Um, so basically what happens is, um, a contractor and a client and employer, um, will obviously get into difficulties and then they will follow that contractual procedure usually to whichever, um, method of ADR is available within that.

CN: Yeah.

Interviewee P1: And then they will usually employee, um, legal services and then the legal services will employ us as technical experts. Well, delay experts and quantum experts. Um, so, so if the root is arbitration for instance, um, we would be brought in at the stage where, um, an expert report was needed for that arbitration.

CN: Yup. Okay. So, so these, a little bit of difference between quantum and delay then, is that right? Am I right in saying that?

Interviewee P1: Yes, so quantum has numbers, quantum is costs. You'll, you'll be aware that when, um, when projects overrun, um, they overrun in terms of time and cost. So, quantum is getting the cost back for the client. Um, time is trying to, um,

either, uh, if you're working for the contractor to, um, stop them being levied, liquidated damages if you're working for the client to, um, to prove that the contractor that should pay liquidated damages.

CN: Right. Okay. That's sort of, then probably leads me onto my next question. I don't know if it's related, but from the research I've done on the lit review, um, it seems to be that, uh, one of the main claims is an extension of time. Uh, it seems to be one of the most common causes. Can you explain why you think that might be?

Interviewee P1: Um, yes, I think so. Um, so that sort of, first of all, contractual provisions for extensions of time are not very good generally. Um, so obviously there are several forms of contracts, but probably the NEC contracts best, um, the, because they're, they're, um, prescribed that you have to do it at the time. So, so you have to give any EOT at the time of the event and you can't go back on that. So that, that's probably the best way. Um, but generally, and generally the contracts are not adhered to either. So, the client or the contractor or both, um, do not adhere to the contract. And, um, and, and actually the other, the other issue I think, um, which is probably not a popular opinion, but I think the contract has, uh, trying to keep the clients so happy all of the time that they, that actually, um, they're not probably contractual enough to claim the EOTs properly, and then only when they get into a dire situation at the end of the contract do they think, well, actually, you know what it is, we're not in this situation because of our own faults and we need to try and claim this time back. And sometimes it's too late, sometimes they're time barred. Um, sometimes they can get the time back, but it's not as easy as it would have been at the time. And, um, you have to sort of go through, um, forensic analysis often as often as you're probably finding Casey, uh, they have to employ a method of ADR instead of actually just using the contractual mechanism.

CN: So, do you think then maybe cause some of my literature as well I've sort of linked to not understanding contractual obligations linked to also extensions of time. So, do you think possibly costs that don't, not everyone understands the full obligations then that can then lead to delays and then claims for extensions of time? Do you think that sort of is related?

Interviewee P1: a hundred? 100%? Yeah. I mean I, I've, I've been into companies to um, for free to give the folks on, um, on how to prepare proper EOTs and how the contracts, um, ask you to do that. And to be honest with you, even the senior commercial staff don't really fully understand the contractual mechanisms.

CN: Right. Okay. Okay. That's, that's, that's quite good information. Yeah. Um, right. Okay. So, what would you consider then the number one cause of dispute, um, in your organization? What's like so basically what I'm trying to say is what's the one, what you probably come across the most often? Uh, what, what seems to create disputes.

Interviewee P1: Um, yeah, good question. Um,

CN: I bet it's quite a tricky one to answer because you probably go through quite a lot.

Interviewee P1: Yeah, yeah. I want to make sure I'm not answering, I'm answering your question and not the question that I want to answer that first of all that the main cause of, um, the main cause of ADR being needed, I think is, um, is time-related instances. Um, but, but, but how that occurs, um, or rather, um, what's most prominent in that probably is, um, well there's lots of stuff not agreeing about, you know, having tons of change on the project. Tons of variation, not being able to get, not being able to get that agreed at the time. Um, or the, that being rejected. Um, even though even though it could be, um, viable. Um, yeah, generally change actually, I think project change is probably the most, it's probably the reason I would look for, to answer your question, yeah. Project change and then, and not being able to agree the reason for that project change.

CN: Brilliant. Yeah, I'm can understand that. It's quite a tricky, tricky question to answer to be fair cause there's a lot, lots of different variables to as why it can occur, but, no, that's brilliant. Um, so moving on a little bit, uh, I've sort of talked a little bit about the history of ADR, just to get an idea of how it came about. So it seemed to become prominent in the 1990s from my research. Uh, do you reckon, do you reckon in your experience with become more reliant on it since then as well? Uh, do you think we started to use it more and more instead of the traditional ways of, uh, you know, solving issues like litigation, stuff like that?

Interviewee P1: Ah, yeah, I think so. Um, and I think the reason for that probably is that it was quite novel, quite new, obviously in the 90s and in the late, in the late nineties. It was probably more about, well, first of all was about arbitration, but then, but then the housing grants act came in and everyone tried to move towardsadjudication because that was the cheaper and quicker way to do things. So, so the thethe balance sort of changed in the majority of certainly in the UK, Casey, um, the majority of, um, ADR disputes were in the adjudication area. Um, the now yes, I think the construction industry is quite reliant on, um**,** ADR as opposed to Litigation and the reason for that is because there is, there's usually something called a pre action protocol and the pre action protocol usually means, um, it's not in all cases, but it usually means that it's looked, it's looked upon quite unfavourably. If you, if you go straight to litigation against somebody and you haven't tried to use a method such as the mediation adjudication or arbitration to resolve it in the first instance.

CN: Right. Okay. Yeah. So that makes sense. Yeah. Uh, I suppose it's like you said as well, it's probably a more confidential way as well. Uh, I suppose of trying to get it resolved through ADR instead of going straight to the courts I suppose. And it's quicker turnaround. Uh, I suppose it's, yeah,

Interviewee P1: Adjudication is arbitration's not particularly confidential at all. So arbitrations will come, will be published and will can come out. If you're not meant, you know, you know, meant to, um, you can say, you can almost say what you like in adjudications and nobody will ever find out about it.

CN: All right. Okay. I didn't know that. That's something new I've learned. I thought there was all sorts of confidential way. I don't know. That's good to know.

Interviewee P1: Well, I don't think so. No, not arbitrations.

CN: So, in your opinion then, do you think ADR has had a positive or a negative impact in how disputes are resolved? I think I'll know your answer for this but I'll ask you anyway.

Interviewee P1: Yeah, the two difficulties that, um, i'm only 38 so I wasn't really around when before ADR. Um, and the second difficulty is I make a living out of ADR so I do tend, I mean, trying to pull myself away from that though, I do tend to think that it is, that it has to be a positive thing and the most positive thing would be actually to have better contractual mechanisms for people to stick to those. But actually, is that ever going to happen? I don't think so. Um, so yeah, I think it is, uh, it is a positive way to do things. Um, and I, I think, I think that the difficulty is, and I'm not sure whether this is part of your analysis, but the difficulty is, um, it's not difficult for me because I make more money when this happens, but the difficulty is, the difficulty actually is that, um, mechanisms that were brought in to, um, maintain cashflow or to, uh, resolve a dispute relatively quickly, um, don't really work. They don't really exist anymore. I mean, every now and again you have an adjudication which costs about, say it might cost about 35 grand and gets the job done. But I think it's more prominent now where adjudications are costing closer to a hundred grand, you know, and that's, that's not really, it's not really what they were brought in for.

CN: Right. Okay. So that sort of leads me a little bit onto the next question as well. So similar sort of question about positive and negatives. So, do you think it's had a positive or a negative effect in relation to cost and time? Um, and why'd you think, why do you think this,

Interviewee P1: um, in terms of the cost and time of a project,

CN: uh, in terms of, uh, so yeah, so relation in costs and time. So, does it sort of in the long run, would it save money compared to, again, traditional methods? Uh, and is it also a quicker turn around, um, all round? Yeah, the project life cycle.

Interviewee P1: Yeah, the the quickest, the quickest thing is negotiation. But if you can't, if you can't negotiate, then ADR, ADR still much quicker than litigation and much cheaper than litigation.

CN: Right. Okay. So, in that, in that, in that aspect, it's, it's probably a more of a positive than a negative. Do you think, do you think it has any negatives effects though in terms of cost and time in any, in any way?

Interviewee P1: Um, yes, it, it, it can, it can do the, the, the instance I would think of, um, you, you could never know this at the outset. That's the problem. But the difficulty can be that, um, you might go through the, your contract might say go straight to arbitration for instance, and you go, you go to an arbitration and you spend four months on the arbitration and, and you know, 150, 200, 200 grand, um, and then the, and then you go to the litigation. So that's like a double down, you know, that's a double down on time and its a double down on cost. Um, so, so that's the difficulty. It can spiral a little bit. Um, the, the, the other side of, it's, it, you know, it

can just settle pretty quickly, or, or actually in adjudication on an arbitration can, um, bring the two sides together to say, do we really want to continue down this route? You know, can we not just thrash out a deal.

CN: Yeah. Yeah. Okay. So I mean really there's the positives I would say outweigh the negatives, but I suppose like you said, if it doesn't get resolved by ADR, then it will end up going down the litigation route, which then, which then will make it longer than it would have initially been if it just went through litigation. But again, like you said, you don't know on the outset of what, what is, what's going to happen to you. So

Interviewee P1: Very true. And the other there that they're there that positives and negatives. I can think of Casey are, um, the, I see a lot, I mean especially in larger clients, I see a lot of larger clients adjudicate and against each other and arbitrating against each other and then wiping that, wiping them out and moving on and working together on the next project, which is good. You know, even though it can get a bit dirty, that that tends to happen, I see much less. Mmm. I see much less, less litigating and preserving of relationships once you, once you push that litigation button, it's difficult to,

CN: to sort of maintain that relationship afterwards. Yeah, I suppose so yeah. I didn't really think of it actually, that's quite a good, a good point I could proper look at as well that it does maintain, maintain good relationships still, even though they are still disputing against one another, but there's still get to keep a good relationship and work through that. Yeah. It's a good point. Yeah. Um, so what would you, what's your views on ADR? I mean, I'll probably, again, again, it's a difficult question as your work in that, area, that sort of area, but good or bad. Uh, and what, and how would you feel that it? How would you feel that it being incorporated into the standard form of contract, do you think? Do you think overall is is being a good decision? Um, or do you think the, you know, do you think there could've been better ways to, to deal with stuff?

Interviewee P1: No, I, I think, um, obviously I think it's positive and I certainly think the theory of its positive, even practicality isn't always positive. I do. I do strongly feel that contracts, they tend to now anyway, but I do strongly feel that contracts should prescribe, um, almost on a paint by numbers basis, how, how the parties should deal with disputes. Um, I know that some contracts just still say, um, we, we think you should adjudicate and if you adjudicate you should use the RICS or whatever. Um, but it is getting a bit more standard now in contracts to describe it a bit more than that. And um, it, I think the more prescriptive contracts could be in that respect, the better. Because I think both when both sides realize they're in dispute, they don't, they just, even though they might not know at the time, they just want to be told what to do and how to, and how to move on with it. And, um, I think that's the job. That's the job of the contract, but certainly then they need improving in that respect.

CN: Yeah. I mean it's a complex process in it, I suppose. When, when sort of disputes arise that, like you said, they just need somebody to tell them what to do and how to go about doing that. I suppose so, yeah. I mean.

Interviewee P1: Well they end up paying, they end up paying lawyers for that, which

is fine, but, um, if the contract was very prescriptive, they'd still pay lawyers, but, um, the, the lawyers would only be telling them what the contract shows, so it would probably be cheaper.

CN: Yeah, true. Yeah. Um, so in your opinion then, uh, what would be your most favoured method of dispute resolution compared to others and why would this be? If that makes sense, so in terms of a negotiation methods, mediation, what, in your opinion, probably from your experience, what, what do you, what would you say is the most favoured for yourself and why?

Interviewee P1: Well, I think, not for myself, but I think the, I think the best way, um, to, to get around these issues. It's definitely an in negotiation. The, although that's obviously not, I guess that's not really a form of ADR is it? I don't think so. Um, but maybe it is, I'm not sure.

CN: Yeah. I think, I think it comes under, I believe it does come under ADR. Yeah. I believe it does, I've, I've, I've collected a little bit of data as well. Uh, and, and with you saying that it's quite, it's quite, um, good that I've done that cause a lot of people actually favour that as well. Uh, negotiation seems to come up quite often.

Interviewee P1: Yeah, I would say that definitely. I mean it's just common sense actually that if you can, if you can get to the table and negotiate something and get to a figure or an EOT amount that**,** that both sides are maybe not happy with but willing to swallow that that's certainly the best way to maintain relationships. Um, maintain cashflow, uh, move on quickly from something. Um, I generally think if you can't do that, um, it's a, it's a, it's a tough one. If you can't do that because I really like adjudication as you know, it's not, it's not it's only enforceable until it gets appealed or challenged. Um, but if an adjudication does what it says on the tin and gets you out in 28 days with a decision, um, even if it's a bad decision against one of the parties possible because adjudications are a bit quick and dirty, if I'm honest.Um, that then generally as I said, parties are able to wipe their mouths and move on and, and maintain some sort of relationship because they, all they've done is put their case to, to a decision maker and decision maker is ultimately responsible for that award.

CN: Right. Okay. So, so, so in negotiation you, you would, you would agree with is probably the most favoured way of way off, obviously dealing with claims just simply because it's, it's a quicker way and like you said, it gets, gets things moving on an a and then obviously maintains a good relationship as well. Okay.

Interviewee P1: And generally you don't need experts, you know, we sometimes get involved in negotiations, but, generally you don't need, you don't need external consultants to negotiate or, or you might very briefly, which obviously, um, external consultants are expensive, so,

CN: yeah, yeah, yeah, exactly. The extra fees and to I suppose so negotiation wise, just a little bit off the topic. Who would, who would not, so would, would you need to be sort of qualified in, in that area for negotiation or could it be, I don't know how, how does that sort of process work roughly?

Interviewee P1: Generally, it's, it's really simple. Casey, generally, um, the might be, might possibly get some external advice as to your strengths and weaknesses. Um, but to be honest with you, um, generally one of the, one of the directors of the company will meet with one of the directors of the other company and negotiate.

CN: All right. Okay. I didn't know that. That's pretty useful as well then. So, all right. Okay. So, it can be just done by a director level and then come to an agreement that way. All right. Okay. Yeah, that's probably, that's probably why it's a lot favoured as well then I suppose if it can be, if it can be dealt that way, it's nice and nice and easy. Yeah. Um, so in your most recent dispute, which route was taken and how long did it take to render an award, if you're able to discuss that?

Interviewee P1: Um, I always have multiple disputes running, so it's a bit difficult, I can give you a couple of examples.

CN: Yeah, Yeah that would be good.

Interviewee P1: So my most extreme examples probably are, um, without probably will give the projects away, but I won't mention the names. One of them is a canal project in central America. Um, and I've, we've been working on the arbitrations for that for since 2015 so five years. Um, and, and the other extreme example was a nuclear power plant in Finland and, and we worked on that for about seven years on that dispute. Yeah. So that's the one end of the spectrum. Um, the, the, the ones in central America as a series of arbitrations, the one in, um, Finland was a tribunal, so effectively an arbitration but a panel, a panel of judges. Um, so, but, but then on the, on the UK on a UK level, I'm working on, uh, uh, probably my most recent example is a data centre in London. Um, that that is going, unfortunately, I think that's going to go a litigation this year but prior to that, there's been a series of negotiations and um, one adjudication. Um, so the adjudication was it did not take 28 days. It took, um, it took all the full extension. So, whatever that is now, these days, 46 days or whatever it is. Um, so, so, but that was resolved in that time. Um,

CN: Oh, so did that, did that not go through to litigation then? Did it get resolved in the 40 days of adjudication? Is that right?

Interviewee P1: Yeah, that was a cost issue. That was a quantum issue and it was just that he had to, so whatever the decision was that that was just paid, the money was paid. And that was adhered to, um, the, the, the delay issue has not gone to an adjudication yet. Um, it's just been, it's just been a series of negotiations, but, um, it's felt now that it's probably too far for that. So, um, the legal advice is to go to, uh, uh, to go to litigation.

CN: Right. Okay. So, you sort of answered the actual last question in a way because I was going to ask if you've ever been involved in a dispute that's ever gone to court. So obviously when it goes to litigation, I'll expand on it a little bit. So, what, what would you say is the reasons for, so say for instance in negotiations, doesn't work and then adjudication doesn't, so it goes to litigation. What, what's in your opinion from your experience, what's the main reasons why, why it doesn't work in them, uh, ADR stages before, what's the main cause? Is it just, just complete disagreement or is, is there other factors involved in that, if, if, if that makes sense to you?

Interviewee P1: Hmm. Um, no, it does make sense, the short answer is, um, just complete, uh, unwillingness to accept the decision. Oh, actually it's a little bit deeper than that. Yeah. Um, I'll try and say this without swearing. I was about to swear there. A company can just be in real trouble, Casey. And it's there last last throw of the dice and, and maybe I don't mean in terms of folding or anything like that. Um, what you, what you probably need to understand is that some of, some of a lot of people get sacked for things if the decision goes wrong, their gone, um, you know, if it's, if it's their ship, if it's their ship that's sinking, um, then their job doesn't exist anymore. So, it's a, I think, I think that, um, if failure to negotiate certainly is like it because it, negotiation is a constant thing. It, it, it, when ADR happens, when, when other forms of come in, it doesn't, negotiation doesn't stop. It never stops. So the, the directors of the companies, always try and, or should be anyway, always trying to have sit downs in the middle of adjudications in the middle of, um, arbitrations to try to try and just, you know, um, nip it in the bud so they don't have to have a decision from it from a third party.

CN: Right. Okay. Okay. I didn't know that actually. That's good. That's a good point. So, there's always, there's always multiple ADR services going on, so it's not just one, one method and that's it. There's obviously there's negotiation still going on in the background while, whilst, yeah, okay. That's,

Interviewee P1: but obviously it's only ever a negotiation and another ADR methods it's never, you can't negotiate you can't arbitrate and adjudicate on the same issue at the same time. But yeah, so no, that's constant. It's always constant negotiation, um, going on or there should be anyway, there is in my experience, um, the problem comes when, you know, you try that five, six, seven times and you get nowhere and then people start to resent each other. And, um, you know, it gets to a point where the negotiations are just not working. Um, the decision might be so bad for one of the parties that, um, you know, heads have to rule for that. Um, it means it means that the company lose, lose a lot of money and have to find, you know, ways to deal with that. So essentially, um, let's say it's a, for ease of numbers, let's say it's a 10 million pound dispute, um, and, and each and each side's trying for 5 million of that, um, if it gets to a point where a legal team says, look, this litigation will cost you 400,000, but if you don't litigate, you going lose 5 million. The problem that the likelihood of them throwing another 400 thousand at it could be quite high because, um, you know, it's like their last shot.

CN: Yeah. Okay. Right. Okay. That's, that's, that's some food for thought as well as that's some, uh, some good advice on that. Um, so in your experience, have you ever been involved with litigation or do you know how long the process has taken? Uh, once it's gone to litigation?

Interviewee P1: Yeah, I've never, I've never, I've never testified in a litigation. I've certainly worked on, um, reports for litigation and, um, yes, probably like a standard litigation in the UK well i say a standard, but like, you know, a few million pounds, 10 million pounds maybe, um, litigation in the UK. Um, I would say a minimum 12 months.

CN: Right. Okay. So, a minimum of 12 months, so again, just to divert a little bit. Sowould you, would you say, um, the value of the dispute would, would influence use of litigation over other methods? Would, does the value would like that? So that, okay. That sort of makes sense as well. So, so the higher the value, it's more chance to go into litigation and being solved, solved in the courts.

Interviewee P1: It's very expensive. You're not going to litigate. If the litigations going to cost you 400 grand, you're not going to litigate on a 400 grand dispute, because.

CN: It just wouldn't. Yeah, it wouldn't make sense.

Interviewee P1: No,

CN: That's brilliant. Um, I'll just, uh, I'll just stop recording now. One second.

Appendix 4

Thematically analysed interview transcription: Interviewee P2

CN: Hi, how are you doing?

Interviewee P2: Yeah, very good. Thank you.

CN: Good. Um, just before we continue the call, is it okay if I record you?

Interviewee P2: Yes of course

CN: Is that, is that okay? Yeah. Brilliant. Um, do you have the questions in front of you that I sent a few weeks ago? Yeah. Brilliant. All right, so sort of a semi structured interview where I might just sort of deviate a little bit from the questions just to get a bit more data to analyze anyway. Um, but first couple of questions just to just get a background really, uh, of your job role. So, I'll just, I'll just, should be quite quick questions, so I'll just start off with them if that's all right with you.

Interviewee P2: Yeah course

CN: So how long roughly have you been working in the construction industry?

Interviewee P2: Um, since 96, so what's that, Uh, too long.

CN: Yeah. You could say that. Um,

Interviewee P2:yeah since 96, so what's that I should know shouldn't I I've been a quantity surveyor.

CN: Yeah. So, it's 20, 20 odd. Yeah, yeah, yeah. Around that area. Um, so what's your current job role? Uh, and could you expand on what that entails?

Interviewee P2: Yeah, so I mean, I'm a chartered quantity surveyor so that's my role, my, my title if you like. Um, but my job is split, um, in a few different directions, so I do a fair bit of what I call contract solutions. Um, so basically contractual advice on live projects. Um, generally with issues or problems or matters that need to be resolved but can be done so usually while a job carries on and then, and then my other work is all dispute resolution, so either I'm pointed as an expert witness or a mediator, or a party rep in adjudication.

CN: Right. Okay. Brilliant. Um, so do you have any specialist knowledge in ADR? I suppose you've sort of already answered that in, in a certain way.

Interviewee P2:yeah, I guess the short answer to that is yeah. Um, uh, you know, yes. Experience, but yeah, and then qualifications, which led to the experience and the role I've got. So yes, I have.

CN:
Brilliant. And what type of company do you work for or do you work just sort of work

on a freelance basis?

Interviewee P2:I'm an employee at a small practice of specialist's surveyors. Yep. So that that practice has myself a chartered surveyor who does quite a fair bit of contract administration and like project work but very much for one client. Um, and then does some expert witness work when he can or he gets appointed. And then we've got a barrister in there that does a lot of adjudication and contract work. And then my principal he's mainly expert witness and he's also an adjudicator on the RICS panel so that's his main sections of work. And then a full-time adjudicator on the RICS panel.

CN: Brilliant. So, in what capacity does your job role cover the instances of applying ADR to practice? So, I'm guessing if, if like you've just said that there's a lot of specialists, surveyors, I'm guessing it's pretty much 99% of your work, I'm guessing. Is that right?

Interviewee P2:yeah, it's all around contract issues. You know, as a chartered QS I don't do any chartered Qs'ing if you know what I mean. The only time I think QS'ing work is when I'm doing an expert witness report like I just finished one yesterday I was acquainted as a single joint expert by the court, but by two by two parties, but the courts told them they had to go away and get a single joint expert to make sense of what they were doing. Um, so yeah, so use my quantity surveying skills then to write and prepare my expert witness report to say what I think counted on the job. Um, and then, you know, then it's, then mainly then it's down to what I know about sort of contracts constructions, and then a lot to do with um, um, this scheme and construction act when it comes down to a adjudication, and mediation to a certain degree.

CN: Right. Okay. So that's quite interesting as well because from my research, what I've carried out in my literature, are contractual obligations and not complying to them seems to be a main cause. But what I've sort of focused a little bit on is extension of times. So, it seems to be still one of the most common causes of dispute. Can you explain why you think that is?

Interviewee P2: Um, well, it's a little bit like money in the sense people you know, you've got two parties pulling opposite directions. So that's why there's always going to be disputes in the construction industry because you've got one party who have got a budget and they don't really want to spend any more than that budget. And you also then got a contractor to really, their main role is to get the job finished but also make a profit. Um, and, and there always you know, not always, but ok let's say 99.9% of the time, there's change or variation to the contract because the contractallows for it.Um, now clients don't mind sometimes paying a bit of money for a change if it's obvious but don't want to pay too much. The times a funny sort of thing because a lot of the time, uh, buildings are being built for use for business. I mean set aside a home for example, let's, I don't ever in my mediations I get involved i don't often have many arguments about extensions of time. They usually fall away quite quickly. It's usually a monetary thing cause if you imagine the homeowner, it's money out of their own pocket. Whereas you have a business, they have a budget set, but they're probably the most important are if they're a developer or a commercial entity, an office or business, then time is money to them. So, if

you're trying to get to say to them well you've made this variation, you made this change, this compensation event, if it's NEC, then they're saying right we're going need more time. Well time also includes money sometimes not all the time, the times a funny one because it's someone trying to say, well we, you know, we need an extra 10 weeks and then they're only a couple of months in, and then they're like oh my god. I think times a difficult, difficult one to get your head around. And it's quite subjective as well. People see numbers on a page, you think, well, okay, 10 grand for that will be about right or look and see 20 grand your having a laugh go away and think about that again. Um, so time is quite subjective, so I think the subjectiveness of extensions of time can be quite um, conflicting. Um, I think clients struggle to get their heads around why you would need more time. I think a lot of the time.

CN: So, um, again, a little bit deviating away from that as well from some of my research. Uh, a lot of the disputes arise between the common parties are between the client and the main contractor. So, I'm just guessing if there's a link between that and, and what you've just mentioned there about extensions of time, cause it does seem to come out that quite a lot of the, you know, a lot of the disputes are between the contractor and the client more than the contractor and subcontractor for instance.

Interviewee P2: Yeah. Well you've got, you've got, you might, you might seesubcontractors or, or some sort of effect on the project for whatever reason they're not not performing, the main decision makers are the top who's the client or employer or whatever you want to call them. Um, they're the ones that are making the decision. So any decisions and filtered all the way down to, to, um, to the subbies and suppliers, you know, at these things in mind by the employer I'll call them the employer, um, might have an effect on the main contractor, but then if it's the time related issue, it's going to affect all of their suppliers and all of their subcontracts because if they, if for instance, they've given them a program that subcontractors, say use a 10 week example again, you know, it's about thinking about starting work, right we've got that job starting in five week time and then he tells them we can't do that for 10 weeks that has a massive effect on them becauseA, there's bodies however many people or plant on and all that sort of thing and they might be really desperate for that work.
They then might go and get more work, which means that they might not have the same resources when it comes around to do the job they would have done five weeks ago, haven't it been for 10 weeks extension of time, there all sorts. There's a myriad of things that going on there.

CN: Yes, I suppose. I suppose when you look at it that way, that's why I probably extension of time comes up as probably the number one cause cause it has an effect on more than just one party. Like you said, it affects the contract. Uh, it affects the subcontractors, the suppliers. So obviously there's, there's more, there's more area for disputes arising.

Interviewee P2:my experience is that I see more money disputes than I do extension of time, some of the time there often linked in some ways. But they usually argue over the money is usually they all are, some of them use extensions on to bolster their arguments but you know, most of them speak openly and at the end day comes down to money on the table really

CN: brilliant. So what factors do you believe contribute then towards a dispute arising, So I mean it can be any sort of dispute probably the ones better what you deal with them a day to day basis.

Interviewee P2:I can answer that very easily

CN: Yeah. Say that again, sorry. Uh, I missed that

Interviewee P2: It's simply to me is simply communication.

CN: Right. Okay. Brilliant.

Interviewee P2: Every dispute I see especially in mediation, I get the parties to tell me what's happened, right from the start. And then as they sat both telling me the story, hopefully in the same room. I then spot and go right there that's where your communication failed, and dispute began to develop. Um, whether that's a QS and I call notices under the under the contract also communication cause there's all, there's all types of communication. So, if they're not supplying an application, if the contractor is not applying for money at the right time because he hasn't read the contract or the employer's not issuing pay less notice or payment certificates on time, it's all, it's all a part of communication. When that doesn't happen, they don't talk to one another up and often it leads and builds up and others come in, fans the flames and before you know where you are, you're in a dispute.

CN: Yeah. Brilliant. Um, so in your experience and what would you consider the number one cause of dispute is in your organization what you would deal with on a majority basis? Basically?

Interviewee P2: Well, as a matter of money generally payment is main issue, lack of payment. Um, by employees is the main the main.

CN: The main cause that you'll deal with? Yeah.

Interviewee P2: Yeah. Most definitely. Yeah.

CN: Brilliant. Um, again, so I looked a little bit on the history on ADR just to see, see how it came about. So, uh, it does seem to be they come more reliant, uh, on, well it sort of, it became more popular should I say in the 1990s. Uh, why do you think this is since you've been working in, I mean, I suppose you haven't been working in ADR since 1996 I believe you said.

Interviewee P2: No, my, my background is I have a building company, family building company for 15 years and then I moved into more consultancy and surveying work and eventually

CN: yeah. Into the sort of law side of it. Yeah. So why would you think it's become more popular? Is, is it because the litigation do you think was potentially getting too expensive so they needed to incorporate something or

Interviewee P2:it's not a case of it when it got too expensive, to me it was always

been expensive, It's not as expensive as it used to but it’s incredibly expensive and incredibly slow. Um, at the end of the day, as you, you know, as well as i do, cashflow is King. So, construction companies, need cash to survive. Um, and I'm sure in your research you come across the Latham report.

CN: I have, yeah, I've mentioned that in the history section. Yeah.

Interviewee P2: Yeah. So that was , it was really down to adjudication for instance, if, you know, you have a dispute with other parties in a contract and you have to go to court, by the time you've got to court you've probably bust, you know, so, you know, and then cause main contractors and large employers were using that using that to send companies because they knew once they, they didn't pay them and then they went under they wouldn't have to, wouldn't have to pay anybody. Um, so that was trying to put a stop to that and then of course the construction act was, was, um, was put together and, you know, the, the first, first version spawned from that came from adjudication scheme. Um, the construction contract regulation in 98 um, I think what the first act was 96

CN: yeah, yeah. 96. Yeah. Yeah.

Interviewee P2: So, um, there rules the basis of adjudication basically and because adjudication, it was supposed to be quick and dirty to get the money flowing in the right direction. That was all it was, that was all it was really ever designed for. I mean it's turned into a different animal now.

CN: All right. Okay.

Interviewee P2: Well I mean there's all sorts of disputes going to adjudication now you've got what I call technical adjudications, which are, you know, pay less certs, pay less notices and was this valid was this a valid payment, uh, uh, application etc. And you've got full blown final accounts all full of extensions of time and um, expert reports on, you know, programs and delay analysis.

CN: So this seems to be more

Interviewee P2: well you still got all to be be done in 28 days you know.

CN: Wow. Okay. Okay. So there seems to be more, more issues arising then within that then.

Interviewee P2: Yeah, because the, the act says that um, a party to a construction contract can can, uh, can, you know, go to a, adjudication at any time. It doesn't say it has to be about payment or it has to be about XYZ. It can be, a dispute as long as there is a dispute you can take it to adjudication. My, my, um, wife was Crossrail and she had an adjudication between, you know, the, um, employer and Vinci, uh, and their dispute was multi-millions. Um, numerous ones. But um, you know, I think that one they gave the adjudicator/arbitrator he offered an extension time. Um, and I think it was they did it in about eight weeks in the end, but it was, it was tens of millions.

CN: Wow. So, it was pretty quick turnaround then for that kind of cost though.

Interviewee P2: Well, it's massive. And, and because once that adjudicator has made his decision unless you then trot off to court to get it, you get it, you know, that's the only way that adjudicator decisions, going to change until someone actually follows through what the adjudicator says you can never knew much about anyway. So, he says that you're going to have to pay something unless he's completely got it absolutely wrong. It's going to, you can, I mean you can take them to court if the adjudicator has got it seriously wrong but you'd want some money behind you to do it because ordinarily the courts will enforce the adjudicator decision whether he's got the law wrong, or the facts wrong is doesn't really matter. As long as he's answered the right question, even if he's answered that question wrong, his decision is enforceable. So, it's very difficult.

CN: Wow, okay. That's interesting.

Interviewee P2: Yeah.

CN: Um, right. Okay, just moving on to some positive and negatives then. So, in your opinion, um, do you think ADR has a positive or a negative impact on how disputes are resolved and to probably link the next question as well. Do you think it has a positive or negative effect in relation to cost and time? So do you think so basically I'm trying to say positive and negative in relation to how it's resolved and also time and cost as well.

Interviewee P2: Well I think if you compare it, if you compare it to litigation, it's got to be a positive thing. Latham had the bright idea in that you need cashflow in the industry and you couldn't keep just withholding money from subbies and supply chains and expecting the industry still to perform, um, and projects to perform. You know If you wanted bad projects, then you know, not paying people is a pretty way of doing it because then the performance falls and then the job doesn't get done properly. Um, so there's two strings. Yes. Cash but also does actually what are we trying to do here? What's the contract about what are we building, what's the whole purpose of this contract? Um, so in regard to, is it, um, I can't remember exactly how you worded your question, but is it a positive is ADR good for disputes? Absolutely. Yes. It is. It's a major, I mean, it's a fact that, you won't know, and you won't find anywhere. But, um, I mean the RICS, the main two main gig in town when it comes to adjudication, for example, for referrals and the RICS presidents panel for adjudicators is the busiest by far in all the other panels. I mean you've got RICS, you've got RIBA, you've got, um, uh, the solicitors association, um, sounds abit like Tesla, but it's not, and then you've got the bar association and various others. But the RICS last year, um, there was 1200 adjudications referred to the RICS nominated panel and I think they're up 10% already this year. So, we found that, I'm a member of Arbrix so we find all that stuff out when we go to once every six months conference, next one is in March92. So that's information you won't find anywhere else. Um, so that's how effective and um, well how effective the industry think it is cause otherwise they wouldn't use it. I couldn't give you the same facts and figures about mediations is I know that um, um, one of the solicitors, they do a mediation biannual mediation paper, which you might have come across.

CN: Yeah, yeah, I have. Yep.

Interviewee P2: Yeah. So, they give some numbers on that, but that's a bit wide. That doesn't view the construction industry, that's just a commercial mediation, excuse the figures a little bit, but i think mediation works as well, works well. So long as the lawyers don't get involved too much. But you know that that's the, um, part and parcel of the work and I say that with, with uh, with proof my own record with mediation. If I mediate, I have parties contact me directly. Um, I have parties, I get nominated through clerksroom, which is one mediation panel, ADR group and the RICS. I'm on the president's panel uh, presidents panel of mediators. The RICS now the RICS panel generally refer disputes to me. Oh, sorry refer disputes to mediation that are homeowner disputes and very rarely they got lawyers involved because just the sums are not, the sums are large to them they might be tens of thousands, and I've had them over a million but. Um, they haven't got lawyers involved who have then gone and billed them 40 grand for a load of work. Um, and I have a hundred percent success rate with the RICS for that reason. I think, um, whereas all the other panels I'm around about, sort of seven of 10, because often unfortunately it doesn't end up being an argument about the dispute, but it ends up being an argument or a barrier to settlement should I say about legal fees. Um, so you know, that's, that's unfortunately not, that's a sidearm of um mediation and the reason they don't settle, that's the problem.

CN: So, um, would you say, um, as well, just going back to some potential causes, do you think, cause I think we brushed on it about how complex the industry is and contracts are. Do you think that has, sort of incorporated towards more disputes there? How complex the contracts are and not understanding the obligations, not administering the contracts?

Interviewee P2: I think it's the users never ever ceases to surprise me, albeit if they start reading I'd be probably quickly out of a job, but I'm never, ever ceased, I never am surprised by how big a job it is and how important the payment structure of a contract is. Yet it seems neither party haven't got a clue what they're doing when it comes down to it. So, when they do fall out between themselves, both of them got it wrong. Um, whereas whenever I've got a new fairly recent client where it was successful to an adjudication wasn't overly surprised in the end after I got all the information I didn't really need as I had it at the start anyway, I'm on now doing what I call conflict avoidance, you know, this contract says that your due date, you've got to put your applications in the 24th of the month, if you put it on the 23rd or the 25th you will not, you are not entitled to any money this month. And they always said, well that can't be right. Well, look that's what the contracts says you signed up to it, no we haven't signed it so that doesn't count and i get all that. It doesn't matter you're on the job you're starting so by your conduct you've agreed you got to put your application, so straight away all the contractor has got to do two things. Got to do what it says on the plans and in the specifications got build, whatever it says and the other thing he's got to do is try and do it on time. Then really all he has to do then is ask for his money to keep the business going, not really a great deal to ask is it to be honest. It never ceases to surprise me how they haven't got a clue and they don't even read the contract when I say to them a when's the final date of payment? I don't know. When's your application go to be in?, Don't know. When's your due date?, don't know. So, it never surprises me and then after that then I'm teaching them, you

know, I lose clients all the time by giving them too much information, I suppose. You know, after a while they learn. Um, because I'm having to say to them well if you put your application in time, it's valid and if it's valid then the other and then you don't get paid and they don't serve a pay less notice or anything else, then you can write to them and say, you know, say seven day's time, you don't pay us in full were downing tools and we'll leave the site until we are paid. Well the construction act says you can so you can, but you've got to get all your ducks in a row first.

CN: Yeah.

Interviewee P2: But because they don't that leads to full blown disputes because both parties have got it wrong and it's all about who's got it more right than the other one or who's cocked it up less than the other one.

CN: All right. Okay. That's food for thought. That's interesting. Um, yeah, I suppose I suppose sometimes it will happen as is, you know, construction is quite a fast paced environment and I suppose people are a bit ignorant to the contract obligations cause they've got that much going on. I suppose you could look at it that way, that they don't spend the time needed to sort of look through the contract. I mean I think it's a to be fair, i suppose it's not even just the construction industry. I think any sort of contracts, not most people I would say wouldn't look through the all terms and conditions of everything, so.

Interviewee P2:no, but you might, if you bought a house or a car on finance of something like that, you'd certainly look through all your numbers and you'd look for when you were going to pay out your money and how much it's going to be. I mean a construction contract really, it's probably about 1 and a half pages that actually really matter to anybody. Breaching other parts of it really have really know effect, so if you're building it on time, um, and you'll, you know, you're putting your applications in for payment, really there's nothing much more the contractor has to do because, because, because every building is different and the conditions in which we build in are different and every day is different and there's so many different, um, parties involved, so you've got architects, consultants, contractors, subcontractors, supply chain and you've got your employer and maybe a bank or you may have a special purpose vehicle, to set up to do that development. Theres so many hands in the pot or chefs in the kitchen, or whatever you want to call it that have an effect. And you only really want one of those not performing and all of a sudden, the whole lot starts tumbling now.

CN: Right, brilliant. So, moving on a little bit, I think we're sorting getting towards the latter end of the questions. Um, I assume you're going to have a lot of good views on ADR, but I've got to ask you anyway. So, what, what are your views on ADR? Good or bad? And this,

Interviewee P2:sorry, what? Say that again.

CN: So, what, what are your views good or bad of ADR been incorporated into the standard form of contract? I mean, like I said, I suppose there's a million. Good, good you know, views

Interviewee P2: yeah there's a million good ideas.

CN: Anything, anything negative, like what would you probably consider towards ADR or is it mainly a positive system?

Interviewee P2: Well the only thing I would say is um, the only thing I would say about ADR, I think they could probably do with something in between. Um, at the moment you've really got adjudication and mediation abit because slightly different but you've either got adjudication or the courts. There is arbitration it's mainly international but very rarely parties use arbitration nowadays in the UK, it's just a slow, just expensive as the courts. Albeit the only benefit is it's private and you can, and you have sort of experts. Mind you have experts in the courts now we have the TCC. But um, I think you know, having something like maybe a hundred day arbitration scheme of some kind that was built in the construction contracts that would pull larger disputes, larger projects they may be a good idea. But that's abit pie in the sky really.

CN: yeah. Throwing some ideas out there

Interviewee P2: Or if you've got adjudication and the adjudicator thinks you need more time you can ask for it so long as the referring parties is happy you can do it. And then he's good to go. So overall, good.

CN: Right. So, what's your most favoured method of dispute resolution then compared to the others? Like what would you say?

Interviewee P2: Without having to go to tribunal that's the best one, you know, not having to go adjudication, not having to go to a judge, not having to go to an arbitration or not even having to go to a mediation because if you can help the party to, um, negotiate and keep the job going and get paid.

CN: Yes. I was going to say, does that come under negotiation?

Interviewee P2: I have to adjudicate with people that my client doesn't want to go to adjudication at all and I don't want him to either. What it is is to say look, if you don't stop messing around this is what's going to happen. Um, and just because you serve a notice doesn't mean you have to go to adjudication because adjudication doesn't start until there referral lands on the adjudicator desk. So, you've always got that. So, it's a little bit of a bit, you know, putting them, putting their arm behind their back and saying, look, can we just get around the table and talk about this? Otherwise, you know, we going to adjudicate, and they'll decide it and you'll have to pay interest and you know, you'll have to spend time defending it etc. So, there's a bit of that, I know, yeah, I have, I give that advice more than I give that going to adjudication straight away.

CN: Okay. So, in your most recent ADR claim, which route was taken and how long did it take to render an award? That's if you're allowed to talk about that, if you're not allowed to talk about anything like that it's ok.

Interviewee P2: No I can, so I had one last week but it wasn't successful

unfortunately, but um, yes, you know, it was 28 days and we got the decision. Um, the quickest ones are my mediation ones I suppose so I've got one Friday, but I had one, um, couple of weeks ago and you know, you're, you're looking at half the day to prepare and a days mediation, you get a result.

CN: Right. That's quite quick then.

Interviewee P2: So that's the quickest route if you like, not necessarily for the parties cause they might of been living with it for a couple years. Um, that's the quickest way. Um, if you, if you say depends cause if a project ongoing adjudication quickest because obviously you can, while it's under the contract, you can refer that dispute anytime. So, um, that's the fastest route I guess mediations usually about job's that have finished and they're arguing between the final account and defects and bits of other pieces, um, so yeah.

CN: Brilliant. Um, so that leads me on to the final question. Uh, so have you been ever, ever involved in a dispute that's gone to court, so litigation and if, if you have, how long's the entire process taken to resolve, so have you sort of acted as an expert

Interviewee P2: I haven’t actually, as soon as it started to look like that then I would pass it to lawyers, so I would then step away because when that usually happens I'm involved with a client who’s in a dispute with someone, nothing happened as in an dispute resolution and then someone presses the litigation button. Um, we can hang on for a while and hopefully we can advise and then maybe get them out of that and then get back to some sort of negotiation or settlement. But as soon solicitors start getting appointed, then we have to step away because that's really then Lawyers role. But I'm involved in in litigation, but that is as an expert witness and not having a party representative advocate.