

**HOW DO UK CONSTRUCTION SME'S
APPROACH CRISIS MANAGEMENT?
WITH REFERENCE TO COVID-19**

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ABSTRACT

This research examines the field of crisis management and the ways in which it relates to small and medium sized business enterprises (SME's). This comprises of how SME's perceive crisis, how they approach crisis management, and the challenges/opportunities associated with crisis management at the small and medium scales. Additionally, this research focuses on a contemporary crisis event, in the form of the COVID-19 pandemic. In order to contextualise the field of crisis management to SME's in a relevant and comprehensible way, the COVID-19 pandemic is used as a frame of reference throughout the research project.

Research was carried out utilising a comprehensive study of extant literature relating to crises, crisis management, crisis management within SME's, and COVID-19 as a crisis. This was followed by the conducting of six semi-structured interviews, designed to gain a qualitative data set relating to the research topics outlined above.

The key findings were that crisis management is a challenging area for SME's, in terms of the ways in which SME's perceive crisis, approach crisis management, and self-assess their capabilities in preparing for, and responding to crisis events. The interviewed SME's varied considerably in their perceptions of crisis, and approaches to crisis management. Findings varied, with some participants rejecting the notion of crises being relevant to them, and rejecting the field of crisis management as unnecessary at the small and medium scale. As well, varying identifications of the effects experienced, and responses employed in regards to the COVID-19 pandemic were found; calling into question the severity of the pandemic for some businesses.

A range of conclusions and key findings relating to the above topics are produced, and presented, with recommendations made for SME's in regards to crisis management.

Keywords: SME (Small and Medium-Sized Business Enterprises), Crisis Management, Crisis/Crises, COVID-19

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CHAPTER 1.0 – INTRODUCTION

1.1 – CONTEXT OF RESEARCH

Crisis management refers to the response (or responses) that an organisation enacts in the face of a potentially unforeseen event, or an event that occurs despite the preparatory actions of an organisation carried out in their risk assessment/management operations (Galamyk, 2007). Srinivasan and Nandhini (2015) define a crisis as “*a sudden and unexpected event that threatens to disrupt an organization’s operations and poses both a financial and a reputational threat*”.

One can identify a range of crises types through a review of extant literature, with Reid (2000) identifying that crises can manifest as (proportionally) less severe, in the forms of delays on site, adverse weather conditions, etc. Other, considerably more problematic crisis types can be identified in the forms of economic crisis, legal proceedings, natural disasters, etc. In recent years however, there has been a perceived increase in ‘black swan’ events; events with catastrophic effects, whilst presenting little in the way of predictability of occurrence/outcome, and with an obscure solution/path to follow in resolving said crisis; for example, the 2008 Global Financial Crisis (Taleb, 2007).

The currently ongoing (at the time of writing) COVID-19 pandemic could be described as a black swan event, with the global effects of the pandemic being catastrophic and immeasurable in terms of ‘hard’ (quantitative), and ‘soft’ (qualitative) consequences; due to the global scale, and the enduring nature of the crisis, with no clear cessation or view of how the pandemic will continue to develop (Thorgren and Williams, 2020). Additionally, the pandemic is increasingly devastating to human life in the contexts of both health, and the associated economic impacts; with SME’s standing at the forefront of economic risk due to their lower degree of preparedness in the face of crisis (Doshi *et al.*, 2018).

Stride *et al.*, (2020) conducted a study into the impact of COVID-19 on the construction industry in the UK, and found that all interview respondents and their organisation had experienced negative effects caused by the pandemic, with 46% working remotely, just 15% still site-based, 23% furloughed and not working, and 16% having lost their jobs; 100% of interviewees also identified that their organisations were facing significant issues relating to

cash flow and site delays, both of which are included in the predominant crises that construction SME's experience (Srinivasan and Nandhini, 2015).

This lack of capability in crisis management and preparatory activities can be linked to limitations in financial capability, technological capability (Lam *et al.*, 2017), psychological capability in approaching crisis management (Acar *et al.*, 2005), or in terms of the frameworks through which they can pursue crisis management (primarily caused by a lack of literature and guidance to handling a crisis once it has already occurred (Herbane, 2012; Lukmanova and Yaskova, 2016).

There is limited qualitative research into the effects of the COVID-19 pandemic on SME's, particularly within the construction sector in the UK. This is a concerning reality as SME's comprise approximately 99% of UK construction contracting businesses (Department for Business Information & Skills, 2013), and seemingly lack the formal capabilities and guidance relating to crisis (Herbane, 2012), and have unique characteristics that make the effects of crises incredibly harmful and potentially challenging to respond to (Freeman *et al.*, 1983; Wedawatta *et al.*, 2010).

Furthermore, study of the effect that the COVID-19 pandemic is having across the world and across all industries provides the opportunity for conclusions to be drawn from the ways in which SME's have responded and been affected by the COVID-19 pandemic. As such this research has been conducted in order to gain a qualitative dataset on SME's experiences related to crisis management, particularly during the COVID-19 pandemic.

1.2 – RESEARCH AIMS AND OBJECTIVES

The research aim of this project is to determine the factors and challenges associated with the implementation and usage of crisis management methodologies in the UK construction industry at the small and medium sized scale, and to analyse the ways in which small and medium sized enterprises (SME's) approach the issue of organisational crisis management; with particular reference to the currently ongoing (at the time of writing) COVID-19 pandemic.

In order to successfully satisfy the research aim, the following objectives have been produced:

- i. To critically analyse the field of crisis management, and identify the associated theories and understandings of crisis management.
- ii. To develop a contextual understanding of crisis management as a field, and crisis management in specific relation to the construction industry at the small and medium scale.
- iii. To investigate the challenges that construction SME's face in crisis management, with a focus on the organisational characteristics and capabilities of SME's in responding to crises.
- iv. To assess the impacts that the COVID-19 pandemic has had on the construction industry at all scales, and to identify the relationship between the COVID-19 pandemic and crisis management as a field.
- v. To synthesize and critically appraise crisis management as a practice within SME's, in the broad context of crisis management, and the specific context of the COVID-19 pandemic.

1.3 – RESEARCH SCOPE

The scope of this study is to conduct semi-structured interviews with a target of 8 to 10 participants, all of whom will be involved and working within the UK construction industry at the small and medium sized scale.

This research project aims to cover the following areas:

- i. The elements that constitute a crisis, and the area of crisis management; primarily in terms of how existing crisis management practice operates, and the ways in which crises are classified and understood within extant literature.
- ii. Typical crisis types that different SME's within the construction industry may face and the relative severity/weight of consideration due across construction SME types.
- iii. Different types of challenges that small and medium sized organisations may face in responding to crisis – relating to their organisational capabilities in comparison to larger organisations operating within the same sector.
- iv. The impact which the currently ongoing (at the time of writing) Covid-19 pandemic is having on the construction industry, with particular focus on the small and medium scale.

1.4 – DISSERTATION STRUCTURE

The contents of this research project will be communicated in the following structure:

- i. **Chapter 1.0 – Introduction:**
This chapter outlines the context and purpose of the research project; framing the research aims and objectives against a brief background covering crisis management within SME's. An overview of the dissertation structure is provided.
- ii. **Chapter 2.0 – Literature Review:**
The review of extant literature (academic and official) is carried out in order to develop a thorough understanding of the greater context in which this research topic resides, and to identify the key themes and topics that will guide and shape the course of this research effort.
- iii. **Chapter 3.0 – Methodology:**
This chapter will outline the selected research methods and approached utilised in the course of this research project, with justification being provided also. The semi-structured interview questions will be stated, as will relevant reasoning and justification. A response to research ethical requirements will also be presented.
- iv. **Chapter 4.0 – Findings Presented and Analysis:**
Findings developed throughout data collection are discussed and framed in the context of the research topic and in the wider context of the construction industry in the UK. The findings will also be analysed, drawing links between the literature review's findings.
- v. **Chapter 5.0 – Conclusions:**
After the analysis of the semi-structured interview findings, concluding statements will be developed, as will recommendations for future research opportunities and options available to SME's relating to crisis management methodologies.
- vi. **References:**
Appropriate Harvard referencing for all sources utilised throughout this research project will be provided.
- vii. **Appendix 1 – Interview Brief and Consent Form:**
Appendix 1 supplies the briefing document and consent form provided to all interview participants prior to the undertaking of an interview. This document informs the participants of the purpose of the research project, and explains the how

their responses will be utilised.

viii. **Appendix 2 – Interview Questions**

Appendix 2 supplies the interview questions utilised in the semi-structured interviews.

ix. **Appendix 3 – Interview Transcripts**

Appendix 3 supplies full transcripts for all interviews conducted.

CHAPTER 2.0 – LITERATURE REVIEW

2.1 – CRISIS MANAGEMENT

2.1.1 – Introduction to Crisis Management

Glaesser (2006) states that crisis management is the strategic approach to responding to crises, with Coombs (2007) outlining that crisis management is the process by which an individual or an organisation can prevent or minimise the damaging effects inflicted by a crisis, and that this process can be divided into the following three phases: (1) pre-crisis, (2) crisis responses, and (3) post-crisis activities. A crisis can be defined as “*a sudden and unexpected event that threatens to disrupt an organization’s operations and poses both a financial and a reputational threat*”, as detailed by Srinivasan and Nandhini (2020).

Loosemore (1998) identifies that whilst there is a wealth of literature relating to crisis, that these studies typically focus on crisis causes in order to develop a response that can be utilised in the future if a similar event occurs (post-crisis activities), rather than successfully navigating the complex challenges produced after a crisis occurs (crisis response stage). This view is somewhat paralleled by the findings produced by Sahin *et al.*, (2015) that organisations tend to focus on preparation and risk identification, rather than the actual process by which an organisation navigates the environment produced after a crisis has occurred/is occurring; reinforced by Loosemore and Teo’s (2000) study into the preparedness of construction companies for crisis.

Gilpin and Murphy (2008) state that crisis management success is not a guaranteed result that can be achieved through specific approaches and robust systems, but rather is determined by a range of factors including; the nature of the organisation, the crisis itself, and the influences that the context exerts on decision making in response to crisis management. This view is supported by Mitroff *et al.*, (1987) stating that often the circumstances an organisation operates within contribute more considerably to crisis management success/failure rates, rather than robust and rigid measures that said organisation may employ in the face of crisis. Sahin *et al.*, (2015) go some way in detailing that the practice of crisis management should not attempt to prevent crises from occurring, but rather to assist organisations in effectively navigating the complex situations and challenges that arise after a crisis has occurred.

Jacques (2007) states that a purely reactive approach can be less effective than employing proactive measures to respond to the challenges that can result from complex project sub-systems, as identified by Browning and Ramasesh (2015) with supporting evidence for this argument of crises arising through increasing complexity of projects, associated systems, and modern working practices (Perrow, 1984; Heath, 1998; Coombs and Holladay, 2012; Nachbagauer, 2017).

Nachbagauer (2018) states that attempts to manage complexity within a project through means of well-defined and controllable structures and processes can be problematic, in that crises are inherently chaotic, and generally defy control. Oftentimes an effective approach to handling crises is to relax these structures, and empower teams to develop reactive responses to crisis, responding to the unique circumstances and challenges that are presented by said crisis.

2.1.2 – Crisis Types

A range of crisis types can be found within extant literature, with Reid (2000) identifying that crises can manifest as less concerning for construction enterprises, in the forms of delays on site, adverse weather conditions, etc. Other, considerably more problematic crises can be identified in the forms of economic crisis, legal proceedings, natural disasters, etc. Additionally, crises can often occur without prior identification and can manifest as 'black-swan' events; identified by Taleb (2007) as being challenging to identify, and generally generate few warning signals at all.

Aven (2013) cites Lindley (2008) and his critical view of 'black swans' in crisis probability; stating that the probability of 'seeing' black swans increases considerably when you see a lot of swans; essentially stating that as crises occurrence seemingly increases, as will the probability of experiencing events that could be considered as 'outliers' as per Taleb's definition of black swan events. Aven bluntly states: "*Sorry, Taleb, but the calculus of probability is adequate for all kind of uncertainty and randomness*".

Crises can also be categorised by type, with Mitroff, Pauchant and Shrivastava (1988) drawing on Jungian typology to assess the ways in which crises may manifest. These categories focus on internal crises, and external crises, with additional identifications of whether a crisis is the result of sociological, organisational, technical, or economic factors, drawing on Jung's thinking/feeling dimension. Whilst this method of categorisation isn't

complete and universal, it aims to assist identification of crisis types through a range of criterion (internal, external, technical/economic, and sociological/organisational).

Lepetsos, Theofilou and Siomkos (2015) compile a range of classifications from extant literature, drawing on the findings of authors mentioned above, in addition to others. This typology compilation is provided below:

<u>Crisis Type</u>	<u>Source</u>
<ul style="list-style-type: none"> • Internal • External 	Skoglund (2002)
<ul style="list-style-type: none"> • Manageable crises • Unmanageable crises 	Augustine (1995)
<ul style="list-style-type: none"> • Crises caused by internal/external factors • Crises caused by technical/social factors 	Mitroff, Shrivastava and Udwadia (1987)
<ul style="list-style-type: none"> • Natural • Organizational crises 	Richardson (1994)
<ul style="list-style-type: none"> • Cobra • Python 	Seymour and Moore (2000)
<ul style="list-style-type: none"> • Technological • Confrontational • Crises of malevolence • Crises of managerial failure 	Lerbinger (1997)
<ul style="list-style-type: none"> • Victim focused crises • Accidental crises • Intentional crises 	Coombs (2004)
<ul style="list-style-type: none"> • Immediate • Emerging • Sustained 	Parsons (1996)
<ul style="list-style-type: none"> • Sudden • Cumulative 	Hwang and Lichtenthal (2000)

Table 1: Crisis Types within Extant Literature (Lepetsos et al.,2015)

Gundel (2005) states that “*classifying crises is the first step to keep them under control since they can be named and analysed.*” However, some scholars note that classification can be an extremely challenging, and potentially futile activity due to the unique circumstances that

organisations are often situated in regards to crisis (Kraus *et al.*, 2013; Meutia, Ismail and Umami, 2018).

2.1.3 – Structure and Lifecycles of Crises

Ritchie (2004) develops the following framework for the structure and lifecycles of crisis, drawing on the works of Faulkner (2001), Fink (1986), and Roberts (1994). A figure compiling the lifecycle of crises is provided below:

<u>Faulkner's (2001) Stages:</u>	<u>Fink's (1986) Stages:</u>	<u>Robert's (1994) Stages:</u>
Pre-Event		Pre-Event: where actions can be undertaken to prevent the crisis from occurring.
Prodromal	Prodromal: Where it becomes obvious that there is impending, unavoidable crisis.	
Emergency	Acute: The point from where the crisis has occurred, and mitigation is the main task at hand.	Emergency: when the effects of the crisis have occurred and been experienced.
Intermediate		Intermediate: when the short-term needs are dealt with, and longer term objectives are put to one side; restoring function and normality expediently.
Long Term	Chronic: Recovery, clean-up, self-analysis of the crisis and responses.	Long Term: continuation of the previous stage, with longer-term goals being worked towards in restoring normality, and revising crisis management methodologies.
Resolution	Resolution: Status quo resumed, or enhanced 'new normal'.	

Figure 1: Structure of Crises (Ritchie, 2004)

Veil (2011) claims that the “three-stage approach” is typically used in segmenting the crisis lifecycle into the following: pre-crisis, crisis response, and post-crisis. Coombs (2007) identifies that if an organisation survives the stages of pre-crisis, crisis response, and post-crisis, they will return to the pre-crisis stage where preparatory actions for the next crisis which may occur begin to be undertaken.

Coombs and Holladay (2012) suggest that the best means of managing a crisis stem from pre-crisis activities and preventing crises from occurring in the first place. Coombs and Laufer (2018) detail that the pre-crisis stage involves the prevention of crises and the minimisation of the potential impacts of crises. Pre-crisis activities may relate to risk assessment (sectoral analysis based on past events), in that the identification of potential crises is vital for crisis management (OECD, 2019).

Additionally, Bundy *et al.*, (2017) focus on the importance for the assessment of organisational preparedness in preventing the breakdown of internal systems that can result in crisis, prior to a crisis' occurrence. Stakeholder interaction can also be identified as an important area in preparing for crisis, in order to bastion supply chains, and increase the likelihood of crises that develop from said supply chains are positively identified and prevented (Alpaslan *et al.*, 2009).

In regards to the crisis response stage, many scholars identifying that the primary purpose of crisis management comes into effect during the crisis response phase (Loosemore, 1998; Olaniran *et al.*, 2012; Sahin *et al.*, 2015; Coombs, 2019). The crisis response stage focuses primarily on actual, tangible responses to the crisis event, and will focus on internal, and external actions taken. Defining such crisis response actions can be challenging, due to the unique circumstances of various organisations, and the chaotically unique challenges introduced by various crises (Baird *et al.*, 1988).

Post-crisis activities should focus primarily on organisation learning in relation to crisis management; in order to develop more robust plans for responding to future crisis (Baird *et al.*, 2000). t'Hart (2014) details that this process of ‘adaptation’ is the derivation of value from a crisis; in that considerable organisation change or reform can be insituted in regards to policy, insitituional overhaul, and a revival of effective leadership within an organisation to better handle future crises; a view supported by Novalia and Malekpour (2020) in identifying that post-crisis adapation can better prepare organisations for future crisis.

2.1.4 – Challenges of Crisis Management

Crisis management can be extremely challenging for any organisation, due to the complexity of identifying the unforeseeable (Darling, 1994; Abiad, 2003). Perrow (1984) suggests that crises are inevitable due to the complex nature of modern organisations, projects, and associated systems; stating even that accidents become a normal consequence of complex systems; a circumstance that seems to be increasing rapidly as the scale and scope of projects increases (Dao *et al.*, 2016).

Nachbagauer (2017) provides a supporting argument in their research relating to 'managing the unexpected'; identifying that the structural complexities of a project increase risk exponentially, and that beyond risk management there lies a serious consideration that a crisis may develop due to this impossible management of factors that remain unidentifiable throughout planning and delivery stages (Winch and Maytorena, 2011).

Lalonde and Roux-Dufort (2013) identify that a primary challenge in the field of crisis management lies not within the scope of managing crises per se, but rather in 'teaching' crisis management, due to what they identify as being the three challenges in crisis management teaching: the conceptual level, the theoretical level, and the reflective level.

In regards to the conceptual challenge, Lalonde and Roux-Dufort (2013) identify that organisations must first grasp the concept of crises; citing several scholars (Borodzicz and Van Haperen, 2002; Boin, 2005) in their claims that this is extremely challenging, as the term "crisis" is often synonymised with other terms such as: catastrophe, disaster, and conflicts. Morin (1993) develops a viewpoint that "crisis" is generally stripped of its classical meaning of an event with both positives (possibility, opportunity for growth and development), and negatives (threat, risk, danger).

The theoretical challenge of crisis management outlines that the field of crisis management is inundated with theoretical approaches; increasing difficulty for organisations in learning about crisis management. Anderson (2007) states that in research fields with a high number of theoretical concepts, those wishing to educate themselves can experience great difficulty and frustration due to the overwhelming volume of theoretical concepts. Boin (2009) notes that SME's tend to experience difficulty in learning valuable lessons from crisis in order to develop responses and frameworks for future crisis response.

A table of the range of crisis management theories identified by Lalonde and Roux-Dufort (2013) is presented below:

<u>Crisis Management Theory/School:</u>	<u>Scholars:</u>
The Planning School	(Fink, 1986; Perry and Lindell, 2003)
The School of Organisational Contingencies, or the Sociology of Catastrophes	(Dynes, 1970; Fischer, 1998)
The Configuration School	(Miller and Friesen, 1980; Meyer <i>et al.</i> , 1990)
The School of Organisational Learning	(Smith and Elliott, 2007)
The School of Situated Cognition	(Weick, 1993; Jacques <i>et al.</i> , 2007)
Normal Accident Theory	(Perrow, 1984)
The “High Reliability Organisations”	(Rochlin, 1996; Roberts <i>et al.</i> , 2001)
Theory of Postmodern Risk	(Gephart <i>et al.</i> , 2009)

Table 2: Range of Crisis Management Theories (Lalonde and Roux-Dufort, 2013)

2.1.5 – Oppositions to Crisis Management

Hajikazemi *et al.*, (2015) identify that when referring to crisis and crisis management, particularly in reference to black swans, that a project organisations’ maturity and individual characteristics are vital in response to black swan events, and that employing proactive measures in the wake of a crisis can mean the difference between catastrophe and success.

This identification that individual characteristics of organisations can often be more vital than the context of a crisis, in crisis management, is supported by (Kraus *et al.*, 2013; Meutia *et al.*, 2018). It may be suitable to take a ‘resource based view’ (RBV) of an individual firms capabilities in order to assess their capabilities regarding crisis management. A resource

based view refers to the “financial, physical, human, and organisation assets used by a firm” (Barney, 1995).

Contingency theory in the context of crisis management is described as being an opposition to the concept that there is one particular methodical approach (or range of approaches) that can be applicable in all circumstances, in responding to crisis (Tosi Jr. and Slocum Jr., 1984). Simply put; contingency theory states that there is no optimal approach to organisation, leadership, or responses to situations; the best means of responding to these issues are increasingly dependent on the internal and external characteristics of the issues, events, or circumstances of the organisation.

Luthans and Stewart (1977) identify that contingency theory can be increasingly relevant, as the rate of change within organisational complexities, and subsequent increase in complexity of crises, and requires the examination of environmental variables in assessing how crisis events should be approached and responded to.

2.2 - SME'S AND CRISIS MANAGEMENT

2.2.1 – Introduction to SME's

The European Commission (2005) defines micro, small and medium sized enterprises as those employing less than 10, 50 and 250 people respectively, with SME's making up approximately 99% of all businesses (OECD, 2019). Approximately 99% of UK construction contracting businesses are SME's (Department for Business Information & Skills, 2013).

Herbane (2010) identifies that whilst SME's may experience the effects of crisis in a lesser purely economic sense, where total value of loss may be lower than large organisations, but still substantial and potentially resulting in a greater amount of financial loss (proportionally) and be more damaging as SME's typically have less fluid cash, and a smaller amount of capital (Wong *et al.* 2018).

2.2.2 – SME's and Crisis Management

Extreme events, and crises typically not only create considerable challenges for SME's (in regards to business operations, business continuity) but also pose challenges in regards to crisis recovery, post-crisis adaptation, and long term crisis planning (Gunawansa and Kua, 2014; Gasbarro *et al.*, 2018). There is also evidence that in the wake of crisis, many SME's

do not reopen; with Ballesteros and Sonny (2015) finding that approximately 25% of SME's do not reopen following catastrophic events.

Herbane (2012) identifies that SME's tend to have a lower level of formalisation of their crisis management methodologies, with inadequate insurance to mitigate business interruption, resulting in the potential for bankruptcy, or enormous organisational loss (in terms of reputation, capability, etc). In another research article, Herbane (2010) also identifies that SME's typically miscategorise risk of crisis in the following two ways:

- i. Growth Vulnerability Paradox – “where growth and diversification are perceived to reduce risk”
- ii. Risk Elastic – “where a growth opportunity is eschewed in order to reduce financial uncertainty”

Spillan and Hough (2003) conducted a quantitative study of SME's and their crisis management capabilities, and observed a similar effect to Herbane (2012) in regards to the recognition and research into impacts associated with crises being better researched and established in relation to larger firms. There is an identifiable effect of SME's typically possessing a lower level of preparedness, an increased vulnerability to the adverse consequences of crisis, and ultimately an increased reliance on government assistance/intervention in some specific circumstances relating to crisis (Runyan, 2006).

2.2.3 – SME Characteristics and Capabilities in the Context of Crisis

Lam *et al.*, (2017) identify that the main areas in which SME's and larger firms differ in terms of more limited resources; essentially that SME's lack personnel, the financial capability, and relevant knowledge and understanding in regards to adopting and implementing new technology and innovative processes; a view shared by Acar *et al.*, (2005). Freeman *et al.*, (1983) state that the main that SME's face in times of crisis and hardship is their 'smallness'; in that their capabilities in accessing resources pale in comparison to those of larger organisations.

Wedawatta and Ingirige (2016) identify that the main factors that limit SME's in regards to resilience to crisis can be identified as 'vulnerability', with a range of factors contributing to an SME's overall vulnerability, including the size of the SME, similarly to Freeman, Carroll and Hannan (1983), the business specialisation of the SME resulting in case-specific considerations regarding an SME's resilience to crisis, and leadership attitudes and styles.

Sullivan-Taylor and Branicki (2011) cite Weick and Sutcliffe's (2001) four category framework as effective in assessing an SME's capabilities and characteristics in regards to crisis management. Such capabilities include:

- i. **Resourcefulness:** essentially the capabilities of managers in identifying potential issues, and acting in order to avoid damage or disruption to business operations.
- ii. **Technical:** the ability of managers to ensure that organisational systems can continue effective operation when subjected to crisis events
- iii. **Organisational:** the organisational capabilities of managers to make and put into action decisions to combat crisis vulnerability and consequences.
- iv. **Rapidity:** the capability of managers to swiftly respond to potential crises, and crisis events.

Following on from these identifications of areas for consideration in relation to crisis management in SME's, Kurschus *et al.*, (2015) notes there is a need for a qualitative assessment of a range of factors (management, personnel, company market position) becomes necessary; due to the nature of SME's being more fluid and reactive in their business management strategies, with hard quantitative data (financial statements, etc.) not providing an accurate, contextual view of SME capability for crisis. This links primarily into the assessment by Beleska-Spasova (2014) that in the modern, complex environments surrounding business organisations, and crisis events, in that there is no robust means of approaching crisis management, and any approaches must be constructed via an assessment of the internal and external factors surrounding such organisations and crises.

Kraus *et al.*, (2013) conducted a qualitative-empirical investigation into crisis management within 30 SME's (across multiple sectors), and found that contributing factors to crisis preparedness and recovery included entrepreneurialism, quality and type of leadership, landscape factors specific to an SME's business activities, and stakeholder engagement (internal and external).

This is paralleled by Gubitta and Gianecchini (2002) in assessing the ways in which SME's are managed and how they respond to crisis, stressing that crises are complex, and so consequently are crisis management methodologies; informed by the complex situations and circumstances SME's often reside in. Meutia, Ismail, and Umami (2018) find that leadership

within SME's during times of crisis is a vital consideration in assessing SME capabilities in managing crisis; this is primarily due to the leadership of a managing director, manager, or appropriate figure of responsibility feeding into the overall approaches of an organisation to crisis management (proactive, reactive, interactive, etc).

However, SME's are due fair consideration in regards to their capabilities to respond to crisis; as their small size and (proportional) lack of complexity in both organisational structure, and project types they're associated with, can result in a more adaptable and dynamic capability for SME's in times of crisis. Dunford (2013) supports this hypothesis of flexibility in SME's allowing for rapid organisational change and adaptation, through pragmatic, reactive, and improvisational responses to externalities (crisis, need for innovation, etc).

The notion of SME's possessing an inherent opportunity-granting characteristic of their smallness, flexible nature, and dynamic capabilities is well supported in extant literature; with Alpkhan *et al.*, (2007) supporting the notion that a degree of flexibility in strategic planning for crisis is effective for organisational processes and outcomes. This is paralleled by Nachbagauer (2018) finding that relaxing robust, strict frameworks can allow more effective management of challenging events.

Additionally, Cowling *et al.*, (2018) found that in the wake of the 2008 global financial crisis, that larger, more experienced SME's in the UK were affected more severely than smaller, newer SME's; and found organisational agility and flexibility as being the key driver for this.

2.2.4 – Challenges for SME's in Crisis Management

Wedawatta *et al.*, (2010) found during a study into the preparedness of SME's for extreme weather events that often SME's and their leadership structures do not utilise proactive, pragmatic measures in preparing for crisis, often opting to miscategorise risk of crisis as being unworthy of attention to the potentially rare occurrence of crisis level events. McManus *et al.*, (2007), and Cutter *et al.*, (2008) also identify that smaller organisations may not prioritise crisis preparation measures relating to crises they perceive to possess a lower risk of occurrence, despite being capable of assessing their vulnerability to crisis events.

The concept of SME's being acutely aware of their vulnerability to crisis, but not actively employing formal crisis management practices is paralleled by Asgary *et al.*, (2020) finding that SME's typically are not as proficient as larger organisations in successfully perceiving different aspect of risk and crisis, as well as finding a disparity between crisis risk identification, and tangible responses or methods of crisis management to said crises, where SME's were able to identify impending crisis.

Similarly to Meutia *et al.*, (2018), Hong *et al.*, (2012) identify that the mindset of leadership within SME's is vital for crisis management effectiveness; finding that innovative, robust, and proactive leadership measures can be more effective in dealing with crises. Kraus *et al.*, (2013) supports this view, in their research into qualitative characteristics of SME capabilities.

Market position can also pose a challenge for SME's in response to crises, with Wedawatta *et al.*, (2010) finding that the business areas that an SME operated within can affect "coping" during times of crisis. This is partly linked to the specific context of a crisis, and how it impacts an SME's workloads; if a particular sector is impacted uniquely, SME's with a specific focus in that sector can experience great difficulty in coping effectively (Hult *et al.*, 2004).

Contrastingly, Gregory *et al.*, (2002) state that due to the niche specialisations of some organisations, there is an expansion of opportunity, as they may be able to react uniquely and individually to crisis challenges. This is supported to an extent by de Kok *et al.*, (2013) stating that whilst business specialisations can allow for SME's to continue working in niche markets during crisis, that certain specialisations can actually have a negative effect due to the high dependency of technical, complex systems on a stable macro-economic environment.

Primarily however, the key challenge for SME's can be linked to their defining characteristic; their size, and the associated scale of assets and capabilities, and the overall challenges associated with crisis management as a practice for any organisation, regardless of their size and capabilities (Boin, 2009), as detailed above in the literature review section examining SME characteristics and capabilities.

2.3 – THE COVID-19 PANDEMIC AND CONSTRUCTION SME's

2.3.1 – Introduction to the COVID-19 Pandemic

Initially recognised in December 2019 in Wuhan, Hubei Province (China), the COVID-19 pandemic has been the global spread of a coronavirus somewhat similar to the SARS and MERS viruses (Velavan and Meyer, 2020), that has resulted in approximately 130,000,000 cases worldwide, with global deaths standing at approximately 2,830,000 thus far at the time of writing. With stay-at-home orders, the suspension of normal business activity, and social measures to limit the spread of the virus, widespread interruptions and major adjustments to business operations and normal life for average civilians have been recorded (Shah *et al.*, 2021).

Thorgren and Williams (2020) suggest that the currently ongoing (at the time of writing) COVID-19 pandemic could be classified as a 'black swan' event under Taleb's (2007) definition, due to the wide reaching, severe impacts.

The Secretary-General of the OECD called for the following during a summit on COVID-19: "*decisive and collective action...to provide assistance for people and workers...businesses, particularly SME's in regards to the effects of the COVID-19 pandemic on businesses*" (Gurria, 2020a).

2.3.2 – The COVID-19 Pandemic and Construction SME's

The pandemic is increasingly devastating to human life in the contexts of both health, and the associated economic impacts; with SME's standing at the forefront of economic risk due to their generally lesser degree of preparedness in the face of crisis (Doshi *et al.*, 2018).

Stride *et al.*, (2020) in a study of COVID's impacts on UK construction SME's experienced all interview respondents and their organisations experiencing negative effects caused by the pandemic, with 46% working remotely, 15% still site-based, 23% furloughed, and 16% losing their jobs; 100% also identified that their organisations were facing issues relating to cash flow and site delays.

Ogunnusi *et al.*, (2020) identify a series of effects that the pandemic has had, and through a survey of participants develop the following findings, presented overleaf:

Questions	Options/Descriptions	Frequencies	Percentage (%)
Did COVID-19 affect your project?	Yes	69	97.2
	No	2	2.8
Do you consider permanent changes to your working process?	Yes	42	59.2
	No	29	40.8
In the face of the Pandemic, did you obtain or anticipate getting any benefit from the government (e.g. tax or VAT waver, furlough)?	Yes	17	23.9
	No	54	76.1
In which way did COVID-19 affect your project(s)?	Full stoppage	29	40.8
	Partial stoppage	36	50.7
	Others	6	8.5
What is the current status of your project(s)?	Work returned with disruptions and progress affected	52	73.2
	Work has not returned	13	18.3
	Work returned without affecting our weekly progress	6	8.5
Reason(s) for suspension of work or why not resuming work?	Government decision	40	56.3
	Business decision	14	19.7
	Personal decision	7	9.9
	Other reasons	10	14.1
If COVID-19 affected your project, what is the level of its impact on your workflow?	Severe	11	15.5
	Major	23	32.4
	Moderate	27	38.0
	Minor	5	7.0
	Insignificant	5	7.0
Rate the impact of the lessons learnt on your projects / business	Very significant	0	0.0
	Significant	24	33.8
	Average	36	50.7
	Minor	6	8.5
	Minimal	5	7.0

Figure 2: Responses to Ogunnusi *et al.*, (2020)

Adam and Alarifi (2021) carried out research into the effects of the COVID-19 pandemic on SME's, citing a range of challenges and consequences that SME's have had to respond to, citing the following: shortages of labour and production inputs (Gurria, 2020b), their financial capabilities in fulfilling financial obligations (Robinson and Kengatharan, 2020), and an overall decrease in consumer spending due to a reduction in consumer earnings, and feelings of uncertainty (Gurria, 2020b).

Gamil and Alhagar (2020) carried out qualitative research gathering the insights of a range of construction industry professionals, finding that the suspension of projects, labour shortages, and time/cost overruns as being the most prevalent challenges introduced by COVID-19.

Additionally, Zamani *et al.*, developed findings relating to the challenges of COVID-19 for construction enterprises, and identified issues relating to one of two areas: either 'operational', or 'financial'. Operational issues relate primarily to project timelines being impacted, facing labour shortages, and experiencing logistical issues (relating to supply chains), whilst financial issues relate to late payments, increased project costs, and an overall reduction in the number of ongoing projects.

Clearly then, and as supported by a range of scholars as outlined above, the COVID-19 pandemic poses extremely challenging issues and considerations for SME's in terms of response, crisis management, and survival. Curiously however, Asgary *et al.*, (2020) note that many SME's do not recognise pandemics as a considerable risk, despite there being a swathe of evidence of pandemics affecting SME's globally, with Kuo *et al.*, (2008) finding that previous pandemics (such as SARS, and Avian Flue) having considerable, damaging consequences for SME's globally. Watkins *et al.*, (2008) find that generally, SME's do not have any recognisable approaches or responses prepared for response to pandemics.

CHAPTER 3.0 – RESEARCH METHODOLOGY

3.1 – RESEARCH APPROACH

This research project will utilise descriptive, exploratory research in order to gather and analyse the experiences and opinions of industry professionals within construction SME's, in relation to crisis management methodologies (preparation for, and response to crises). In addition to this primary research, secondary research will also be carried out in the forms of a literature review relating to the relevant topics for this research project.

As this research project is focusing on the perceptions and organisational approaches to crisis management methodologies within SME's, the selected research methods will primarily be qualitative in nature, with a side effort being dedicated to the gathering and analysis of secondary data in the form of a literature review. This is valuable as data from literature sources can reinforce themes in the research gathered throughout this course of this project (Hox and Boeije, 2005).

3.2 – SELECTED RESEARCH METHODS AND JUSTIFICATIONS

3.2.1 – Literature Review

3.2.1.1 - Purpose of Literature Review

Literature reviews are effectively an objective, thorough summary and analysis of relevant research and literature relating to a research topic (Cronin *et al.*, 2008). Knopf (2006) summarises that a literature review should concisely summarise from a set of relevant sources, information and conclusions that are directly relevant to a research topic.

3.2.1.2 – Justification of Literature Review

Essentially, this research project's literature review is being conducted in order to develop a contextual, and broad understanding of crisis management methodologies, and how SME's approach the challenge of crisis management. This analysis of extant literature

From this literature review, the author will be equipped with the relevant knowledge to identify the key themes and topics that will guide and shape the course of this research effort, as per Webster and Watson's (2002) identification that a literature review's purpose is to

motivate the research topic, describe key concepts, and ultimately be explanatory and creative in the context of the research project.

3.2.2 – Semi-Structured Interviews

3.2.2.1 - Purpose of Semi-Structured Interviews

Semi-structured interviews are being utilised in order to develop findings relating to the fields of crisis management, and COVID-19, and how SME's experience and respond to a range of challenges and considerations relating to these fields of study.

Essentially, semi-structured interviews are utilised in order to interview individuals, with only a "semi-strict" approach; in order to allow for an informal and conversational in order to gain an insight to the perceptions, beliefs, and experiences of individuals in relation to the research topic.

Whilst the research goal and scope of the interview is firm, the approach to extracting relevant findings from individuals is not firm; in that a discussion of a wide range of areas can take place, in response to the findings developed during the course of the interview.

3.2.2.2 – Justification of Semi-Structured Interviews

As this research is qualitative in nature, and utilising descriptive, exploratory approaches to gathering specific experiences and perceptions regarding crisis management and COVID-19, and associated considerations and challenges within SME's, it is beneficial to use semi-structured interviews.

As semi-structured interviews approach data collection by adopting a more informal, conversational line of questioning, a high level of data richness can be developed (Longhurst, 2003). Rabionet (2011) stresses the advantages of semi-structured interviews over unstructured interviews, as an unstructured approach runs the risk of not eliciting responses from participants relating to the research questions.

Additionally, Williams (2015) supports semi-structured interviews as a qualitative data collection method when seeking the independent thoughts and experiences of individuals in regards to the research topic. Richardson *et al.*, (1965) and Smith (1975) identify that semi-structured interviews are beneficial in the exploration of attitudes, experiences, and beliefs of individuals.

Whilst semi-structured interviews require the strict identification of research themes to take place prior to primary data collection (Adams, 2010), this research project involved the undertaking of a literature review in order to identify research themes and topics to be focused upon during the semi-structured interviews.

3.3 – SAMPLING

The aim of 8-10 interview participants has been selected for this research project, due to the in depth nature of the research. This limit on the sample size has been selected to provide a data-rich, yet manageable dataset, and also to facilitate a realistic target for conducting interviews. Too great a sample could result in the data gathered being less rich and thorough, and a far greater period over which interviews will be conducted; both of which could negatively impact the quality of this research project.

Analysis of their responses is intended to yield a diverse and multi-viewpoint understanding of the climate in which SME's reside relating to crisis management, and COVID-19. This method of targeted sampling is being utilised to ensure that interview participants are suitable for the research project, and to provide validity and a quality-of-worth to their responses (Watters and Biernacki, 1989). Robinson *et al.* (2006) identify targeted sampling as an alternative approach to traditional strict probabilistic sampling in order to acquire a mixture of qualitative and potential quantitative data from interview participants.

Conjunctively with targeted sampling, referral sampling is also aimed to be included as a component of this research methodology. Heckathorn (1997) identifies referral sampling to be the request of targeted participants to suggest potential participants that also fulfil the criteria for which they were selected (Etikan, 2015).

3.4 – INTERVIEW DESIGN

The semi-structured interview questions will be employed in order to gain valuable research data in regards to the primary themes identified in this research project so far. A figure detailing the questions utilised in the course of the research project are provided below:

Question 1:	Can you please confirm your name, your role within your organisation, and that your organisation satisfies the criteria for being an SME as has been outlined to you?
Question 2:	And now can you please provide an overview of your role within your organisation, and a description of the typical project types and business areas in which your organisation operates?
Question 3:	How would you identify that your organisation as an SME differs from larger organisations (such as Tier 1 Contractors)?
Question 4:	Can you please describe what constitutes a crisis, specifically relating to your organisation and general business operations? Any examples or context would be welcome now; in particular specific types of crisis you encounter.
Question 5:	Can you please now outline any crisis management methodologies that your organisation may employ?
Question 6:	Do you feel that (generally speaking), your organisation is well-prepared for the crises you have identified as being typical for your business operations?
Question 7:	Was the COVID-19 pandemic and subsequent challenges introduced by its occurrence an event that took your organisation by surprise? Specifically in terms of consequences/effects.
Question 8:	What responses did you or your organisation employ in responding to the challenges introduced by the COVID-19 pandemic?
Question 9:	Do you think that the COVID-19 pandemic has better prepared you for future crisis? This may be in terms of business continuity, risk contingencies, etc.
Question 10:	Are there any other areas you would like to discuss, potentially relating to crisis management or the COVID-19 pandemic?

Figure 3: Semi-Structured Interview Questions

A justification for each research question is provided overleaf:

Question 1: This question immediately confirms the suitability of the individual and their organisation for this research project, in terms of sector and scale.

Question 2: This question eases the interview participant into a line of a targeted questioning relating to the research topic, and to develop a contextual understanding of the interview participant's role, and the typical business operations their organisation carries out.

Question 3: Allowing the participant to identify differentiating characteristics and capabilities between their organisation and larger organisations can offset any cognitive bias from the researcher/author in their line of questioning. Additionally, this question provides the opportunity to identify any areas of challenge for SME's in responding to crisis, in terms of capabilities (financial, resource, opportunity, flexibility, etc).

Question 4: This question begins to focus on crisis and crisis management. Asking for an general classification of what constitutes a crisis allows the interview participant to begin considering the topic, without immediately delving into specifics. A reference point for any understanding of what constitutes a crisis is developed.

Question 5: This question delves into the potential for the SME's of focus already having an organisational approach or methodology in responding to crisis level events. Additionally, the presence or absence of any crisis management methodologies, and details of potential methodologies are identified, from which analysis can take place, and conclusions can be drawn.

Question 6: Assessing how SME's self-identify their own capabilities regarding crisis management can identify if formal crisis management methodologies work at the small and medium scale (if such methodologies exist), or if an SME may identify that a more flexible and reactive approach to crisis is more suitable and beneficial in their specific context.

Question 7: As identified within the literature review, often crises occur without prior identification or detectable warning signs. It is expected that all interview participants will agree to some extent that the COVID-19 pandemic was an unexpected occurrence, however this question is being used to further develop this line of questioning, and to assess how SME's identify the COVID-19 pandemic impacting on their business operations.

Question 8: Assessing how SME's responded to the COVID-19 pandemic/crisis can be beneficial in developing findings relating to the flexibility and resilience of SME's in

responding to crises. Additionally, some SME's may have already been well-situated to respond to the challenges of the pandemic; for example in terms of business continuity (home working, reduced number of employees on site-based jobs, etc).

Question 9: Developing an understanding as to how SME's can respond to crisis (sense-making, development of response frameworks for crisis) will be beneficial in analysing the capabilities of SME's in regards to crisis management, and ability to develop productively through the occurrence of crisis. Furthermore, asking this question after the interview participant has been considering crisis and crisis management for the preceding questions can act to inspire more complex and data-rich responses relating to the capabilities of SME's in responding to crisis.

Question 10: This question rounds off the research effort, allowing the interviewee to inject some individual, potentially unique contribution to the research effort regarding any areas they identify as being relevant, or that the interviewer may have potentially overlooked.

3.5 – RESEARCH ETHICS

The following issues could potentially arise during the conduct of primary data collection:

- i. Data and identity protection
- ii. Potentially time consuming nature of interviews
- iii. Bias
- iv. Participant availability, suitability and preparedness

In order to respond to these issues, it would be vital to outline to all participants that the interviews are taking place to inform research, and that their permission would be necessary in utilising any data gathered from an interview with them within the research project. Furthermore the completion of a Level One Ethics Review within the Research Proposal submission identified that there were no required adjustments to the research methodology.

The same interviewer will conduct all interviews, following a semi-strict framework, with the development (and provision to interview participants) of an introductory briefing document which would explain in lay terms the purpose of the research project, along with the associated aims and objectives, and the way in which the interview data will be utilised in this research.

This is useful in the context of a research project as it outlines the context of the research to the participants (confirming suitability of the individual for the sample group), and allowing them to prepare any necessary information relating to crisis management within their SME organisation. Furthermore, all information regarding the anonymity, and potential data protection issues, and solutions responding to those data protection issues will be provided to interview participants.

CHAPTER 4.0 – FINDINGS PRESENTED AND ANALYSIS

4.1 – INTERVIEWS

4.1.1 – Interview Participant Recruitment

The sample size of between 8 and 10 interview participants proved challenging to meet. 21 potential participants were contacted regarding this research effort, and a response rate of ~42.86% was achieved (9 responses), with 3 rejections. Overall successful recruitment stood at only 28.57%, out of the total potential participants contacted. Despite these concerning figures, by taking the mean average of the target sample size (between 8 and 10) of 9 participants, a recruitment rate of ~66.67% was achieved, and due to time constraints associated with this research project, this sample size was deemed suitable as no other recourse was available to the author.

A Sankey diagram visualising the above figures is provided below:

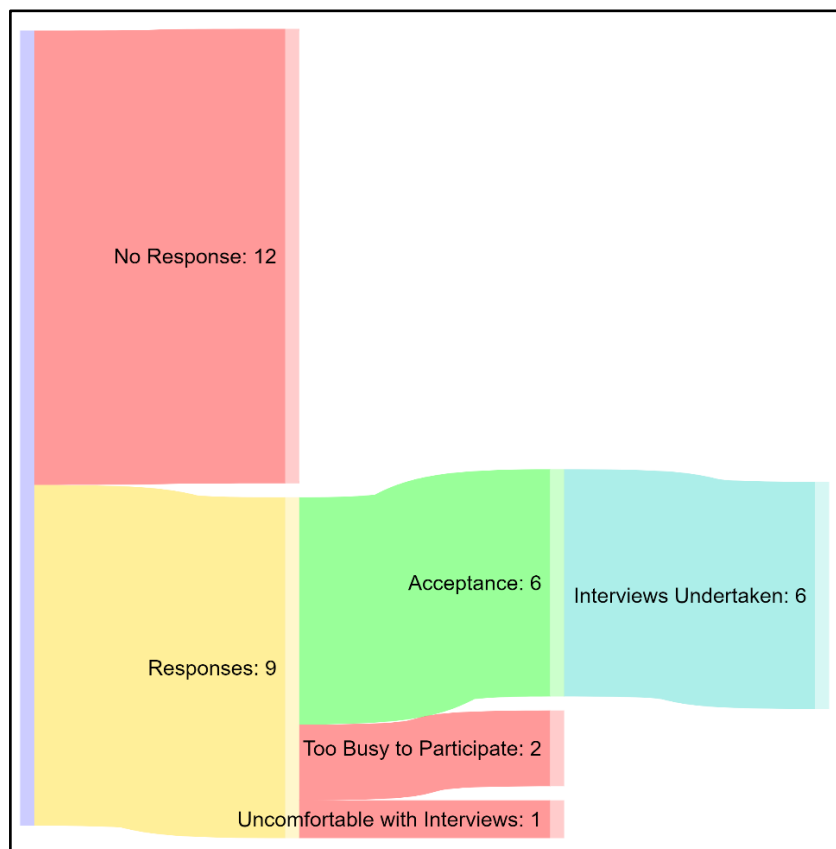


Figure 4: Sankey Diagram Depicting Interview Participant Recruitment

4.1.2 – Interview Participant Demographics

- i. **Participant 1:** Business Manager at a Midlands based building and design company, which primarily focuses on modular, 'net-zero' eco-buildings, predominantly in the education sector. 17+ years in industry.
- ii. **Participant 2:** Technical Manager at a Midlands based scaffolding contractors, operating predominantly in the commercial and industrial sectors. 12+ years in industry
- iii. **Participant 3:** Sole director of a Midlands based, private commercial property development business. Typically acquires properties to develop speculatively, and fit-out for commercial end use – retention of freehold and leasing/renting the premises out for business use. 40+ years in industry
- iv. **Participant 4:** Managing Director for a Midlands based residential property developer; typically operates on a design-and-build basis, offering full project management services. 9+ years in industry.
- v. **Participant 5:** Managing Director of a Midlands based building services, typically focusing on residential/domestic developments for clients. 20+ years in industry
- vi. **Participant 6:** Managing Director of a Midlands based bricklaying contractors, typically undertaking contracted work for large-scale British housebuilders, with some focus on commercial contracting additionally. 30+ years in industry.

4.1.3 – Conduct of Interviews

Of the 6 interviews, 3 were conducted via tele-conferencing software (Zoom), and 3 were conducted in person, at the interviewee's invitation. Of the interviews conducted in person, two took place within the interviewee's business office, and one took place in a home office.

The first two interviews were conducted using slightly different interview questions (in terms of order, and complexity). After review, these were altered in order to provide a better sequence of questioning, benefiting both the data gathered, and the general conduct of interviews. This did not impact on the quantity or quality of primary data gathered.

Each interview took approximately 30-40 minutes, with two outliers at approximately 25 minutes each.

4.2 – WHAT CONSTITUTES CRISIS FOR SME'S?

4.2.1 – Data Presented

Several interview participants identified large-scale, globally catastrophic events could constitute a crisis. Interviewee #1 said *“I wasn't here during 2008, but I know it was the most difficult time that this business ever faced...it got extremely difficult and came down to about the last week apparently”*. Similarly, Interviewee #6 stated that *“the industry was in crisis in 2008 when the banks started going bankrupt...that to me, is a crisis”*.

Interviewee #2 outlines *“a fire on our premises would be a crisis, because it would mean our normal business would have to stop... A crisis on site would generally be if an accident occurred, because an accident would be very bad for the company”*. Interviewee #4 paralleled this view of accidents comprising crises, stating that *“we had our first ever accident on site a couple of months ago... So health and safety on site is a massive thing”*.

In regards to supply chain issues, Interviewee #1 found that *“a lack of materials could be a crisis...if that material wasn't available to us that would be a crisis... that was a challenge, just ensuring that we were able to act in terms of managing and scheduling materials to site”*. Interviewee #3 found that labour and supply issues could constitute crisis also; *“It could become a crisis if you find out materials are in short supply though. Labour can be a crisis for us at times”*. Interviewee #6 paralleled this; *“We've always faced challenges with materials and supply chains. That's always been the case”*. Interviewee #4 states *“... things that might constitute issues or a crisis in terms of the words we're using; supply issues”*, with Interviewee #5 finding that *“materials within the COVID period...there has been a lack of materials...for me would be a crisis”*. Finally, Interviewee #6 identifies that there is *“a massive labour shortage within the industry”*.

Several interviewees also cited financial/capital oriented challenges; with interviewee #4 identifying that *“raising the correct finance, with the correct finance partner is probably the most crucial thing”*. Interviewee #6 also states that *“with any small to medium business managing cash flow is imperative”*.

Issues relating to personnel often came up as being areas potentially constituting crisis, with Interviewee #1 stating that *“if numerous members of our “top team” so to speak, were to fall ill or were to have to isolate or actually caught COVID... that would be very difficult for*

the business to continue... we would be absolutely screwed to be honest. I don't think we'd be able to open our doors". Interviewee #3 carries on to say "if anything went wrong with me, if it was illness or an accident or something, then yes that would be an issue and I would need to put in place somebody specifically with that job role".

Despite all interview participants initially identifying a range of issues that could be considered crises, there was a unanimous finding that the majority of these issues were not considered to be crises, but rather typical challenges that have always been prevalent within the construction industry. Interviewee #1 states that *"to be honest with you, we tend not to use the word crisis... there's obviously obstacles to overcome"*. When referring to the areas they'd identified as being challenging, Interviewee #3 states *"I don't think they are a crisis, they are just part and parcel of being in construction"*. Interviewee #4 claims that *"crisis is not a word I would use ever actually, I would say it's too dramatic of a word, because everything that you encounter on a day-to-day basis is absolutely normal, and it's part and parcel of doing what we do"*. Interviewee #6 also found that *"In this industry we always are going to have things that come up... nothing is ever going to go straight forward... I don't really see anything being a real crisis"*.

4.2.2 - Analysis

There is a range of evidence within extant literature supporting the general findings of events that could constitute crises, such as; delays, supply chain issues (materials and labour), accidents, and large-scale catastrophic events (Reid, 2000; Taleb, 2007; Wedawatta *et al.*, 2010; Herbane, 2012; Stride *et al.*, 2020).

However, the finding that the majority of interview participants identified that these issues tend not to comprise crisis events in their individual contexts is an unexpected one. Typically events as these do fall under the definitions for crises as defined by Srinivasan and Nandhini (2015). Therefore, it is unusual that SME's would not perceive such events as being crisis events.

Whether or not this can be linked to research suggesting that SME's tend to miscategorise or misidentify crises (Herbane, 2010), or can be linked to the lower levels of crisis management identification and response strategies employed within SME's (Runyan, 2006; Herbane, 2012) is unclear. This is due to the unique circumstances and past-experiences of SME's contributing considerably to their crisis management methodologies (Kraus *et al.*,

2013; Beleska-Spasova, 2014; Kurschus, Sarapovas and Cvilikas, 2015). Additionally, in regards to SME's misclassifying or being ignorant to the risk of crises (whether deliberate or not), McManus *et al.*, (2007), and Cutter *et al.*, (2008) find that some SME's may be incapable of crisis identification and management strategies due to the lack of resources made available to them in regards to crisis management.

This notion of SME's possessing a challenge in identifying the concepts relating to crisis management is identified by Lalonde and Roux-Dufort (2013), in that grasping the meaning of crises can be challenging, as the term "crisis" is often synonymised with other terms such as: catastrophe, disaster, and conflicts. Morin (1993) develops a viewpoint that "crisis" is generally stripped of its classical meaning of an event with both positives (possibility, opportunity for growth and development), and negatives (threat, risk, danger).

As such, if an SME is able to effectively respond to crisis events and even derive value from them (as was found to be the case in some interviews regarding the COVID-19 pandemic, which will be covered later in this chapter), or if these SME's experience certain events frequently and have developed a characteristic of 'resilience' in their repeated practice, then the term "crisis" may be unsuitable and misrepresentative of the events that SME's experience regularly.

This raises issues relating to the language and terminology associated with the field of crisis management, as many of the interview participants perceived that the term "crisis" was not relevant to them, their business operations, or typical challenges faced as part of said business operations. Additionally, this raises considerations regarding SME capabilities in developing an organisation resilience to typical challenges, and as such it is challenging to succinctly identify the events that constitute crises for SME's.

4.3 – SME CHARACTERISTICS AND CAPABILITIES IN RESPONDING TO CRISIS

4.3.1 – Data Presented

All interviewees recognised their size (in terms of personnel, project scopes/types, and capital resources) as SME's were a defining characteristic that set them apart from larger organisations.

Relating to the financial aspects, Interviewee #2 identified that they had *“a limited capital resource. We can't just go buying everything we want and spending money as we please”*. Interviewee #3 stated that *“we're financially more aware...of every cost involved...we have to make every element of it pay”*. 2 interviewees stated that their small size played a role in reducing financial challenges, in comparison to larger organisations. Interviewee #2 identified that *“we've got an advantage over them on the smaller jobs because our overheads are a lot smaller.”* which was also viewed as an advantage by Interviewee #6: *“We've got no real overheads really, our overheads are minimal...Our overheads are a very small percentage of what we turn over”*.

Several interviewees also cited their size (organisationally, personnel, etc) as being relevant in maintaining a close control on any challenges/issues that could potentially constitute crises, with Interviewee #1 identifying that *“we use all our own kind of contracted teams... generally we manage everything in house, and can do it in house... if one area needs help then we'll all sort of step in and wear different hats at different times you know, to be able to prioritise as a group and support people individually.”*. Interviewee #2 also identified that the relatively small size of project teams contributed to more effective project control and approaches to challenges: *“You'll find that one person here may, for example, carry out various different roles... the managing director and I can have a much tighter grip on what's going on the few tiers below”*.

Interviewee #3 stated that *“we are totally involved at every level you see, you know you can be the director but also doing other work... Whatever it takes to keep it all running”*. Interviewee #4 states that *“my role is to do absolutely everything... my role was to source the land, to get the planning uplift and the planning permission needed, to raise the finance, and now we start the actual build....the business being prepared, is basically me being reactive to it, getting it done and getting it sorted, and resolving the issue that day.* Finally, Interviewee #6 divulged that *“What I've done carefully, we've planned this... there's always been someone who can pick up the baton... there's nothing I can't do over the phone... we've got things in place now that we don't rely on one person”*.

The overwhelming finding however in this research topic was that the vast majority of the interviewee's identified that their key characteristic in effectively handling crises was “flexibility”, in that they could be reactive, responsive, and effective in managing the

challenges introduced in times of crisis. Interviewee #1 states that *“I think it's really ensuring that we were proactive really, and kind of reading the market”* when identifying how they approach challenges introduced by crisis. Interviewee #3 identified *“we are totally involved at every level you see, you know you can be the director but also doing other work... Whatever it takes to keep it all running”*. Additionally, due to the Interviewee developing properties to be retained and rented out, they stated that *“There's only us. We only answer to ourselves... We are the client”*.

In regards to flexibility being a key characteristic in responding to challenges, Interviewee #4 stated *“Yeah, flexibility absolutely... you'll have to think on your feet in that moment... and keep the cogs of the business moving... we're 100% flexible and agile... and I think it is very much as you've said; being reactionary to daily issues”*. Interviewee #5, when questioned about flexibility being vital for survival in challenging times said *“Yeah without a doubt I think”*, and went on to state that *“so you are proactive to an extent, but you'll find that you are doing things on a day-to-day flexible and reactive basis”*. Finally in regards to flexibility and reactivity as being relevant in responding to challenges, Interviewee #6 stated that *“we've got the ability to be able to be more flexible with the staff”* when questioned regarding labour issues.

4.3.2 - Analysis

The majority of interviewees cited their characteristic/capability of being flexible, agile, and reactive in approaching crisis challenges, and this is paralleled within the review of extant literature, with several scholars citing these areas as being necessary in assessing an SME's capabilities and characteristics in regards to crisis management.

Sullivan-Taylor and Branicki (2011) cite Weick and Sutcliffe (2001) in finding that “rapidity” is a vital area for crisis management, in regards to the capabilities of managers responding swiftly, and reactively to challenges. Additionally, Kurschus *et al.*, (2015) note that SME's are capable of being more fluid and reactive in their business management strategies, due to their smaller size (reducing intra-organisational delays in crisis response), and their lower degree of complexity in regards to project types (reducing the complexities of potential crises and subsequent responses).

Dunford (2013) supports this hypothesis of flexibility in SME's allowing for rapid organisational change and adaptation, through pragmatic, reactive, and improvisational

responses to externalities (crisis, need for innovation, etc). Similarly, Alpkan *et al.*, (2007) support that a degree of flexibility in approaching crisis management resolutions, or responses to challenges/crises, is required in order to both adapt to, and respond to said challenges. This can primarily be identified due to rigid plans and measures can undermine overall success in crisis management, due to the a priori, non-rigid/chaotic nature of challenges. This notion that approaching crises through the means of a flexible approach is supported by Nachbagauer (2018), finding that the relaxation of rigid structures can be more beneficial than maintaining them, in the context of crisis management. As such, the notion that flexibility is an advantageous characteristic that SME's can possess, in regards to crisis response and management, garners support from the findings from primary data collection.

4.4 – HOW DO UK CONSTRUCTION SME'S APPROACH CRISIS MANAGEMENT?

4.4.1 – Data Presented

All interview participants identified that their organisations did not possess any formal means of crisis management. When questioned if their of absence of crisis management methodologies was linked to a “resilience through repeated practice approach”, Interviewee #1 stated *“Very much so, and as we're taking on more complex projects, there's obviously a lot more work involved in that, you know?”*. Interviewee #2 responded to the research question by saying *“when I flipped through your questions, I did think we haven't really got any crisis management here”*. Further attempts to assess whether or not this interviewee and their organisation did in fact reveal that crisis management methodologies were employed showed that they were not.

Interviewee #3 simply states, in regards to crisis management methodologies, that *“we don't really have any, and it'll just be handled on a day-to-day basis. You can't just go ‘carte blanche’ with it, you just have to handle it in a certain way as every item is different really isn't it”*. Interviewee #4 outlined that *“Yeah I would say I don't really have any pre planned, you know, crisis management systems in place... there's no real identifiable crisis management plan, and I think it is very much as you've said; being reactionary to daily issues”*.

Interviewee #4 showed some promise in that they had carried out reading on crisis management methodologies prior to the interview, but concluded that *“My methodology would be... well building work is as I explained earlier is all expectations management... certainly there is no hard outlined paperwork or approaches that if A, B, or C happened; we will follow these procedures... it is literally managing things on a day-to-day basis”*. Finally, Interviewee #6 demonstrated incredulity in regards to crisis management methodologies having a place in his business; *“Not particularly, no. We just deal with things as they come... How do you deem a crisis?!...What I see is a day-to-day problem in the construction industry; others might think it's a crisis“*.

4.4.2 - Analysis

Data collected in regards to this topic was challenging, as the majority of SME's either didn't identify that crises were a relevant consideration for them, and due to all interviewee's identifying that their organisation did not employ any formal means of crisis management. Whether or not this is linked to ignorance, or non-suitability of crisis management methodologies, is unclear, as this research project was not aiming to develop a process-view of SME approaches to recruiting crisis management methodologies, but rather to examine the actual circumstances that UK construction SME's reside in currently, and during the COVID-19 pandemic.

Several scholars identify that SME's tend to miscategorise or misidentify the risks of crises (Herbane, 2010), and possess lower levels of crisis management identification and response strategies employed within SME's (Runyan, 2006; Herbane, 2012).

It would be valuable to ascertain whether or not the interviewed SME's neglect to employ crisis management methodologies due to their perceived successes and capabilities in responding to crisis.

There is the possibility that if these organisations were to employ more formal means of crisis management, then they may experience vastly increased successes and benefits, by responding to crises positively. However, without further research into the quantitative effects of crisis management methodologies on SME business activities, it is impossible to assess whether or not these SME's are currently adopting the best practice approach; as the means of handling crises they employ currently may be the best most beneficial, and have been arrived at through repeated practice, or "trial-and-error" in responding to crises. This distinction however, unfortunately cannot be identified within the scope of this research project.

4.5 – COVID-19 AND UK CONSTRUCTION SME'S

4.5.1 – Data Presented

Interview responses relating to the severity of the COVID-19 pandemic on business operations varied. Interviewee #1 found that generally, their organisation hadn't faced any considerable challenges; *"I think that the good thing for the sector that we work in is that we were considered to be essential workers... we kind of managed to continue working through it"*. Whilst they did experience some challenges relating to supply chain, the circumstances that resulted from the pandemic actually also carried some positive effects for their business: *"we've had to kind of operate around our supply chain, and the issues that they've had... there have been advantages of children not being in schools, in that we were able to move around a little more freely"*. Interviewee #1 then went on to state the following: *"We had in 2020, we had a record year... we've seen competitors fall by the wayside... we moved in and actually acquired that company and we also took their work"*. When questioned whether or not the business had prospered during the COVID-19 pandemic, Interviewee #1 states simply: *"Yeah, yes, very much so."*

Interviewee #3 cited that they had experienced few effects in the wake of the pandemic: *"The initial effect was that we stopped any construction work... within 6 weeks we realised that we could open up the construction more, so we then took on a project... we carried on as normal really"*. When asked if they had experienced a departure from the way they normally approached work (regardless of any crises), Interviewee #3 succinctly stated *"No."*

Interviewee #4 found that whilst the initial lockdowns introduced by COVID-19 did have an effect on their business; *"The original lockdown had a big knock on effect... basically we were out of work for 6 months"*, that once they were able to resume business operations due to acquiring a new development, that *"it hasn't been bad after the initial effect of shutdown, but since then it hasn't really affected us"*. When questioned if their aforementioned supply issues posed a real organisational threat, Interviewee #4 stated that they only had to be *"very proactive... pre-ordering stuff that we knew we might want... as long as you've got the contacts and the working relationships, it seems to be ok I think"*, essentially identifying that responding to supply issues didn't require an overhaul to business operations, rather a slight restructuring in regards to ordering materials ahead of time.

Interviewee #5 stated they had *“4 or 5 weeks off, because obviously we were on a lockdown”*. In regards to whether or not the pandemic had affected turnover negatively, Interviewee #5 laughingly explained *“No, Christ it got worse! People wanted to spend more money. There was a massive increase because people were off work, and they took to doing their houses up... I'm booked for the next, well, for the foreseeable future”*.

Interviewee #6 stated that in regards to the pandemic: *“There was some extra cost initially, with all the health and safety side of things... The main challenge really was coming to grips with what they wanted from us regarding PPE etc”*. When questioned if there had been other identifiable areas of effect on the business, stemming from the pandemic, Interviewee #6 states that *“it's all been quite laughable I think. I really do... We didn't change any aspect of our business at all really... We've had our busiest 2 years that we've ever had!”*, and in regards to the recovery time necessary for the business in the wake of the pandemic, Interviewee #6 stated *“we had 50% of the lads back within 2 days”*, and identified that *“We initially only had about a week off as well; there were 12 live sites of various sizes. Fortunately 3 of the biggest opened back up very quickly”*.

When asked to identify how business turnover had changed in the wake of the pandemic, Interviewee #6 outlined that *“There was a meeting with the construction directors at Taylor Wimpey... in January 2020... they wanted to reduce production by 15% or 20%... when we went back... they actually wanted output to be increased by 25%”*. The interviewee was then asked whether COVID had presented a profitable opportunity, interviewee #6 said *“It's a boom. And we honestly can't work out why or how”*.

Contrastingly to these findings however, one interviewee's organisation experienced some hard times during the pandemic. Interviewee #2 cited *“we had no work for our men, then having to lay people off... we did shrink our workforce a lot and we actually shrunk it down to 1 gang for a couple of months just during the first lockdown”*. They also noted that they had made use of the UK Government's “furlough” scheme, which provided income to out of work individuals: *“even now the furlough scheme is still being used when we haven't got work for everyone”*.

4.5.2 – Analysis

Assessing why the majority of SME's interviewed did not experience serious effects as a result of the COVID-19 pandemic is challenging, and puzzling; Stride *et al.*, (2020) in a

study of COVID's impacts on UK construction SME's experienced all interview respondents and their organisations experiencing negative effects caused by the pandemic, with 46% working remotely, 15% still site-based, 23% furloughed, and 16% losing their jobs; 100% also identified that their organisations were facing issues relating to cash flow and site delays.

Within the literature review, it seemed overwhelmingly obvious that the COVID-19 pandemic poses extremely challenging issues and considerations for SME's in terms of response, crisis management, and survival, by a large range of scholars (Doshi *et al.*, 2018; Gamil and Alhagar, 2020; Gurria, 2020b; Ogunnusi *et al.*, 2020; Robinson and Kengatharan, 2020; Stride *et al.*, 2020; Adam and Alarifi, 2021; Zamani *et al.*, 2021).

However, as Asgary *et al.*, (2020) identify, many SME's do not recognise pandemics as being a considerable risk, with Kuo *et al.*, (2008) providing support that pandemics tend to have a damaging effect on SME's globally, but that said SME's remain obstructive to approaching crisis management in regards to pandemics. Additionally, Watkins *et al.*, (2008) find that generally, SME's do not have any recognisable approaches or responses prepared for response to pandemics.

Seemingly then, it is not enough to simply identify that pandemics, such as COVID-19, constitute crises for SME's (in regards to perception, and damaging effects). As such, drawing on the findings of Kurschus *et al.*, (2015), Beleska-Spasova (2014), and Kraus *et al.*, (2013), it seems there is a requirement for the qualitative assessment of a wide range of variables that may affect how an SME approaches the topics of crisis management, particularly in the context of global pandemics.

4.6 – THE FUTURE FOR UK CONSTRUCTION SME'S AND CRISIS MANAGEMENT

4.6.1 – Data Presented

Interviewee #1 concluded their interview by stating that *“what has kind of come out of this with schools... they are always going to need to have schooling in a physical way... that for us is quite good”*. They also identified that the COVID-19 pandemic had raised new areas for business expansion, stating that *“we started getting enquiries with our sales guys in and around care homes and things like that... perhaps we wouldn't have had that, so that's a new one area that we can see about”*. Summing up, Interviewee #1 professed *“we're just really lucky with the sectors that we're working in at the moment, and that there's a demand for this kind of thing”*.

When questioned whether or not they would explore methods of crisis management, interviewee #4 stated: *“But from my point of view; at the scale of what we are doing, it's more of a case of being reactionary and thinking on your feet as soon as that happens”*, and indicated that there would be no change in regards to their approach to crisis management.

In regards to whether or not there would be any quantifiable adjustments to the businesses crisis management approaches, Interviewee #5 simply identified that in the future they would continue to be *“snappy and proactive and reactive, because if you're not then the next builder down the road is going to have the materials you want”*.

When discussing alterations to business practice, Interviewee #6 did detail that past crises had catalysed a response: *“Not so much on the COVID side of things, but after the 2008 financial crisis I decided that I'd always have better cash reserves for the business... we've always believed in keeping a good cash reserve from what happened in 2008”*.

4.6.2 - Analysis

This area produced the fewest notable findings, as all interviewees essentially stated that they felt their existing practices relating to crisis management were sufficient, or that the introduction of crisis management methodologies were simply unsuitable for their business. There was no notable findings that any of the SME's interviewed would look to institute any organisational changes or responses in the wake of the pandemic, simply stating that they would continue as the have been.

This may be due to some of the interviewed SME's experiencing an increase in turnover, with which enhanced business security, and the opportunity to generate income are presented. As such, any motivations to alter existing practices are diminished, as innovative approaches to crisis management methods may be perceived as potentially harming the current profitable and beneficial circumstances some SME's find themselves in. Herbane (2010) identifies however, that this approach may be misguided and present as being 'risk elastic', where an opportunity for organisational change are abstained from in order to reduce financial uncertainty.

CHAPTER 5.0 – CONCLUSION

5.1 – RESEARCH PROBLEM

The aim of this research project was to determine the factors and challenges associated with the implementation and usage of crisis management methodologies in the UK construction industry at the small and medium sized scale, and to analyse the ways in which small and medium sized enterprises (SME's) approach the issue of organisational crisis management; with particular reference to the currently ongoing (at the time of writing) COVID-19 pandemic.

There is limited qualitative research on the effects of the COVID-19 pandemic on SME's, particularly within the construction sector in the UK. This is a concerning reality as SME's comprise approximately 99% of UK construction contracting businesses (Department for Business Information & Skills, 2013), and seemingly lack the formal capabilities and guidance relating to crisis (Herbane, 2012), and have unique characteristics that make the effects of crises incredibly harmful (Freeman, Carroll and Hannan, 1983; Wedawatta, Ingirige and Amaratunga, 2010). Overall, there also seems to be a lack of qualitative research relating primarily to the effects of crisis on SME's, and how SME's experience and respond to crisis (Spillan and Hough, 2003; Herbane, 2010, 2012; Etemad, 2020).

5.2 – KEY FINDINGS

Some SME's do not identify the relevancy or existence of crises

As identified in the previous chapter, and to an extent within the literature review, some SME's may not identify the relevancy or existence of crises (whether willingly, or unwillingly). This can be challenging, in that some SME's may be leaving themselves open to the negative effects of crisis unknowingly.

This finding was most notably identifiable in the findings of primary data collection, where several of the interviewees did not classify certain challenges (materials shortages, labour shortages, unforeseen circumstances affecting project delivery in regards to time, quality, cost, etc), and instead identified these challenges as being typical for their business, and normal parts of their working practice. Even further, some interviewees did not perceive the

COVID-19 pandemic as being worthy of the term *crisis* due to their successes over the relevant time period.

The reality of this perception is hard to determine, as many of the SME's identified that they handle typical challenges effectively, and that even during the COVID-19 pandemic, they have profited considerably, in strict contrast to the challenges faced.

SME's generally approach challenges and crises by being flexible and reactive in their working practice, rather than through crisis management methodologies

The majority of interviewees cited their characteristic/capability in being flexible, agile, and reactive in approaching crisis challenges, and this is paralleled within the review of extant literature, with several scholars citing these areas as being necessary in assessing an SME's capabilities and characteristics in regards to crisis management.

Whilst flexibility in approaching challenges is supported within extant literature, it is surprising to find the extent to which SME's do not employ formal crisis management methodologies, and opt instead to approach crises reactively, responding to the unique circumstances of the challenge, and within the unique circumstances of their business and business operations.

Whether or not this is actually a beneficial characteristic for SME's to possess is unclear; due to several researchers finding that SME's typically do not have effective methodologies for responding to crisis, and the limited scope of the research project; in that only a confirmation of flexibility within each SME from each participant was gathered, and there is no realistic way of assessing whether or not this is an area that contributes positively, or negatively to SME success rates in handling crises.

If the specific circumstances of SME's result in an increase in profitability, there is no obvious motivation to innovate, or introduce crisis management methodologies

As found in primary data collection and analysis, despite the COVID-19 pandemic resulting in far-reaching, severe consequences around the globe, certain SME's have managed to prosper, and increased business activities during these challenging times. As a result, within the primary data findings and analysis, there seemed to be a lack of motivation for SME's to innovate their working practice, or introduce crisis management methodologies. It is challenging to identify whether or not SME's are 'reluctant' to carry this out, in terms of

uncertainty or fear of negative consequences, or if they are simply not motivated to do so, in terms of not seeing any potential positives in doing so.

Regardless, the lack of motivation in introducing crisis management methodologies may imply that such methods are not suitable for implementation at the small and medium scales.

More likely however, is that despite the potential positives of implementing crisis management methodologies, there is not a sufficient driving force in spurring this change within SME's.

The specific context surround SME's, and crisis events is vital in assessing the opportunities and challenges faced by businesses

As the interviewed SME's each identified their capabilities in regards to responding to crisis events different, as well as their successes/shortcomings in the wake of the COVID-19 pandemic, it becomes necessary to review the unique circumstances of individual SME's (in regards to their capabilities and characteristics, their business areas, their resources, and their overall resilience to crisis events) in order to successfully identify the factors relating to effective crisis management.

Classifications of crises are problematic, and challenging for SME's

Within the review of extant literature, various definitions and examples of crises (specifically in reference to SME's) were outlined, whilst in the research findings, there was a notable sense that classifying crises at the small and medium scale is not a straightforward process.

Several of the interviewed SME's did not identify the specific existence of "crises", even rejecting their existence or possibility in some circumstances. However, all of the interviewed SME's did identify challenges they viewed as being a result of operating within the construction industry (materials shortages, labour shortages, unforeseen circumstances affecting project delivery in regards to time, quality, cost, etc).

This may link into the theoretical and conceptual challenges associated with crisis management; in that at certain scales, grasping the theories and concepts associated with crisis events and crisis management is either challenging, or under-represented in terms of literature, and education.

Regardless however, the identification of SME's experiencing difficulty in the field of crisis management can be made, with various support for this notion being found in extant literature.

5.3 – RECOMMENDATIONS

An initial recommendation the author would prescribe to SME's in the context of this research project is to explore avenues relating to crisis management, even if only in terms of education and research, rather than implementing specific crisis management methodologies into working practice.

This could prove valuable in identifying areas relating to crisis management, that SME's haven't previously considered or been aware of. This may be in terms of crisis types, crisis management stages (pre-crisis, crisis response, and post-crisis), or in regards to the ways in which crisis management related to SME's. This approach to self-education in the field of crisis management may spur innovation, or organisational change in certain SME's, which may result in successes relating to crisis management.

At a larger scale then, it may be valuable for certain trade bodies, unions, or governmental departments to take a more practical view regarding crisis management education with SME's, and provide formal training or advice relating to these areas.

In summary then, in regards to recommendations to SME's relating to crisis management, the author would identify that whilst businesses may have prospered during the current COVID-19 pandemic, there is the possibility and potential likelihood that future crisis level events may present themselves, with far more damaging and challenging (in terms of response, coping, etc) consequences for any unprepared SME's. As such, even a preliminary review of material and literature relating to crisis management, could prove beneficial for SME's in increasing their resilience to external events, and in producing effective means of dealing with crises.

5.4 – RESEARCH LIMITATIONS

As with any qualitative study conducted utilising interviews, a lack of quantitative data gathered produces an immediate limitation in assessing factual, quantifiable data in relation to the research topics. The conduct of research interviews was limited in terms of sample

size, sample diversity, and regional characteristics (as all interview participants were based in the West Midlands).

Another limitation that can be identified is the lack of experience that all interviewees possessed in regards to formal crisis management; however this can be identified as being simply characteristic of SME's. As such, it was challenging to ascertain whether or not what interview participants provided in terms of interview answers stemmed from ignorance of crisis management, or from the lack of education surrounding crisis management for SME's, as was identified as being an issue within the literature review, or simply a non-suitability of crisis management methodologies for such organisations.

5.5 – AREAS FOR FUTURE STUDY

To advance this research area further, a larger scale qualitative study of SME's and their relationships with crisis management would be valuable, as would the introduction of a quantitative element to research methods. The conduct of research via case study could provide valuable information to knowledge surrounding crisis management research; potentially by examining a project's delivery during a time of crisis (financial crisis, pandemics, etc). This would enable findings to be developed associated with the practical steps taken by an organisation to respond to crisis and still deliver a project. As such a case study into the successes of SME's during times of crisis could be beneficial in identifying what characteristics (business sector, size, working practices, agility, etc.) may enable this organisational resilience.

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7.0 - APPENDIX 1 – INTERVIEW BRIEF AND CONSENT FORM



INFORMATION SHEET

School of Engineering and the Built Environment

This research is being undertaken by Alfie Sillito-Tooth on the MSc Construction Project Management course, and is being supervised by Professor David Boyd during the period 21 September 2020 to 17 September 2021. This research aims to determine the factors and challenges associated with the implementation and usage of crisis management methodologies in the UK construction industry at the small and medium sized scale, and to analyse the ways in which small and medium sized enterprises (SME's) approach the issue of organisational crisis management; with particular reference to the currently ongoing (at the time of writing) COVID-19 pandemic.

QUESTIONS AND ANSWERS – ABOUT THIS RESEARCH

No	Question	Answer
1	Title of your project?	An investigation into crisis management methodologies within construction sme's: with reference to COVID-19
2	What is this research about?	The research aim of this project is to determine the factors and challenges associated with the implementation and usage of crisis management methodologies in the UK construction industry at the small and medium sized scale, and to analyse the ways in which small and medium sized enterprises (SME's) approach the issue of organisational crisis management; with particular reference to the currently ongoing (at the time of writing) COVID-19 pandemic.
3	Why have I been invited to participate?	You have been invited to participate as a professionally competent and knowledgeable practitioner who has accrued many years of experience working in the industry – your views and opinions will be invaluable. Furthermore, the organisation you work for/run satisfies the criterion for a 'small and medium sized business enterprise'.
4	What input do you require from me?	The research will require information and data from you, colleagues within your organisation or about your organisation directly relating to crisis management and the effects of COVID-19 on business operations.
5	Where will data collection take place?	Data collection will take place via teleconferencing software (in line with COVID-19 restrictions) such as Zoom, Microsoft Teams, Skype, etc.
6	How often will I need to participate in this research and for how long?	You will be required to partake in 1 interview that will only take approximately 30-60 minutes.



7	At what stage in the process will I have the opportunity to discuss my participation?	You will be able to comment upon your participation at the end of the interview, and at any time between the date of the interview, and the 17 th September 2021.
8	Who is responsible for the information and data collected when this study is complete?	Responsibility for information and data collected is the responsibility of the lead researcher and the supervisor – who must abide by Birmingham City University research ethics rules and regulations.
9	Who will have access to the information and data?	Only the lead researcher and staff at Birmingham City University.
10	What will happen to the information/data supplied when this research is complete?	At the end of the study, all information and data will be securely disposed of (including raw data) and only anonymised data will be used for publishing the findings as part of this research. At no time will any data be passed to a third party (willingly or otherwise).
11	How will the information and data be used?	The information and data will be used to create a research paper that will not contain any personal details of participants or organisations supporting this work.
12	How long is the research project duration?	The research commences 21 September 2020 and finishes by 17 September 2021. Contact with participants will only be at short, intermittent periods so as not to disrupt your working arrangements.
13	Is my data and information secure?	All information is stored electronically on the University's secure 'One Drive' and/or locked away in a secure cupboard.
14	Can I have access to the research results?	Yes, a summary of the research findings from this study results will be made freely available to all participants.
15	What if I do not wish to participate in this research project?	Participation is completely voluntary and you do not have to participate.
16	What if I change my mind during the research project?	You can withdraw from the research at any stage of the process.
17	Who do I contact if I experience any concerns or if the study generates any adverse effects?	In the first instance, you need to contact my supervisor Professor David Boyd who should refer the matter to the Faculty Academic Ethics Committee. David.boyd@bcu.ac.uk

8.0 – APPENDIX 2 – INTERVIEW QUESTIONS

INTERVIEW QUESTIONS

- i. Can you please confirm your name, your role within your organisation, and that your organisation satisfies the criteria for being an SME as has been outlined to you?
- ii. And now can you please provide an overview of your role within your organisation, and a description of the typical project types and business areas in which your organisation operates?
- iii. How would you identify that your organisation as an SME differs from larger organisations (such as Tier 1 Contractors)?
- iv. Can you please describe what constitutes a crisis, specifically relating to your organisation and general business operations? Any examples or context would be welcome now; in particular specific types of crisis you encounter.
- v. Can you please now outline any crisis management methodologies that your organisation may employ?
- vi. Do you feel that (generally speaking), your organisation is well-prepared for the crises you have identified as being typical for your business operations?
- vii. Was the COVID-19 pandemic something that took you or your organisation by surprise? Specifically in terms of effects and consequences.
- viii. What responses did you or your organisation employ in responding to the challenges introduced by the COVID-19 pandemic?
- ix. Do you think that the COVID-19 pandemic has better prepared you for future crisis? This may be in terms of business continuity, risk contingencies, etc.
- x. Any other areas you would like to discuss relating to crisis management or Covid-19?

Thank you for your participation in this research
project.

9.0 – APPENDIX 3 – INTERVIEW

TRANSCRIPTS

Interview #1

All non-italicised text is representative of the interviewer's speech.

All italicised text is representative of the interviewee's speech.

Blue text represents each interview question being asked.

A: Can you please confirm your name, your role within your organisation, what your organisation does, and that your organisation satisfies the criteria for being an SME?

M: *Yeah, so it's [REDACTED], and the company is called [REDACTED] and we are a design and build Construction Company, and we certainly fit the criteria as an SME.*

A: And then just very briefly what sort of typical project types and business areas does the company operate in?

M: *Our main sector, which is kind of 95% of our work at the moment, is within the education sector. So we are doing all sorts of different buildings for schools throughout the UK and those could be varying different projects. They could be sports facilities, they could be multiple classrooms, they could be brand new nursery settings or it could be a kitchen and catering facility, so could be a dining hall etc.*

A: Ok and I understand that there is also a modular eco-building aspect, such as green roofs and things like that?

M: *Yeah yeah, very much so. So in terms of our kind of product, it is very energy efficient and we use materials from sustainable sources wherever possible, and yeah lots of varying different kinds of green products to incorporate. So the likes of sun pipes, or as you said sedum roofs, glass roofs as well... and PV panels also kind of give a good kind of carbon footprint payback.*

A: How would you identify your company as an SME differs from Tier 1 contractors, and much larger organisations?

M: *Within our sector there is a lot of kind of large construction companies that tend to do much larger projects, say above £5 million I'd say, and they tend to be kind of more volumetric in terms of their build process, like they use craned in solutions, or they're sectional in that they're building as much in their own factory and sectioning it out, to then be craned into position on site.*

So we are pretty much, you know our projects tend to range between £250,000 and £3,000,000 for an individual project depending on what it is. Our process is very much a low impact system in as much that it is kind of SIP's (Structurally Insulated Panels) panels that kind of go together, so we pre-manufacture those panels within our factory so it's made up of floor, wall and ring beam, for the building to sit on.

And we differ from a lot of those bigger operators because we don't use a massive heavy-duty construction equipment so we can work on live sites and so that building goes up pretty quickly, with minimal disruption to the educational facility.

A: I suppose as well, being a smaller company than you know a Tier 1 contractor, a lot of the stakeholders are more internal to the company, with less stakeholders involved I suppose, because if you're managing things in-house, you're not having to bring on extra companies and contractors and so on.

M: *Yeah that's another big difference, you have explained that quite well, that we use all our own kind of contracted teams that we've managed, developed, and supported you know, that have been with us for a long time. And albeit, they are associate businesses, and they have their own businesses, they are almost completely aligned to [REDACTED].*

So in terms of our projects... We can kind of trust them to do a complete project from the ground upwards, right up to the handover of the keys. We do use other specialist companies as well that we've got some really good relationships with, and those would be obviously for the civils and some groundworks; particularly on some of the bigger projects there is a lot more of that which is required so we tend to use those, and also when we are doing a building or buildings that have got an extensive depth in them where we putting in you know, structural beams and so on, we do work with other contractors as well for that.

But generally we manage everything in house, and can do it in house. We've got an architect, we've got an engineer as part of our team, you've got a full design team in house, and we've got in-house project managers and an operations team to support each of the projects.

A: So next question then; in relation to your company specifically and the project types you carry out, excluding the covid-19 pandemic for now, are there any sort of situations that arise or generally arise that you would identify and classify as being crisis events? Examples will be welcome now.

M: *Yeah... to be honest with you, we tend not to use the word crisis (Laughs) that sets off all sorts of alarm bells. But there's obviously obstacles to overcome, and a lot of change management within the industry, but a key thing as we've evolved and we've taken on larger and larger projects, the risk elements tend to be in the ground. so it's basically ensuring that all those kind of in-depth ground investigation surveys are all done in detail in terms of service connections and that, Obviously we've got all the sort of the main building regulations compliance linked in as well, to the DFE (Department for Education), they will have guidelines as well that we kind of have to meet for educational builds.*

A: So I suppose a big part of it is because you are quite well established in the project types that you're carrying out, your responses to, and I understand that the word "crisis" can be problematic because that means anything really, but the typical issues you come up against you have quite well established processes and responses to them now, because they're something you've been doing for a fair amount of time?

M: *Yeah, and you learn as you go, and in most companies you do get stung every now and then, and you have to reassess your operations in terms of ensuring that I you've got optimum productivity, and that there's the alleviation of any surprise elements on-site. So*

you can stick to the program because that's all key and important because, you know, you've agreed a programme of works for the customer and once that starts to wane a little bit or go off track there can be some risks in that in terms of clawing back the time, and clawing back the project on track.

So yeah, kind of as we've developed and particularly with taking on larger projects, the more extensively you have to ensure that you cover every angle in terms of the build process, and preparation is key.

A: So it's resilience through repeated practice in a way?

M: *Very much so, and as we're taking on more complex projects, there's obviously a lot more work involved in that, you know?*

A: And would you say that responding to these issues is more through pre-planning? Or would you say it's more reactive, and responding to situations as they arise?

M: *One thing that we are doing now is, once the planning has been granted, and the building is starting to be fabricated, we would have a pre-site meeting with all partners. So we will take our own team on site, the operations and project management team on site, and meet with all the key partners and all the key people from the school; whether it be the building surveyor, or their Estates Manager, or somebody from the Local Authority.*

And we would have that very kind of detailed meeting to just ensure that we've got a complete understanding by all parties, to alleviate any of those risk factors and ensure that everyone is on the same page, and to ensure that everyone agrees to the project program going through all the building specifics in terms of setting up the site if you like, and having a secure site obviously. You know, we would set up a compound, access routes into the site for bringing materials in, the timings of when to work, and who the best contacts are at the school etc.

Times of work... (laughs) you know obviously we are working in and around the school operational times, and also in certain circumstances we have to consider neighbouring properties and people around that as well, so we're minimising disruption for all really. And to be honest with doing all that kind of setting up your stall, it's proving to be more and more effective having that meeting, pre-commencement of the project.

A: And moving onto some COVID specific questions, obviously the COVID-19 pandemic was something that was unexpected for everybody, but were there any sort of consequences or effects that were particularly problematic for [REDACTED]? And that might be in terms of, you know, difficulty for getting people on site, having people in offices, and planning and adjusting to working from home? Anything like that?

M: *Yeah I mean again, I think it's really ensuring that we were proactive really, and kind of reading the market. I think that the good thing for the sector that we work in is that we were considered to be essential workers so while other construction companies in other sectors kind of downed tools we kind of managed to continue working through it and I can't think in terms of the actual build process that we've had hardly any setbacks in terms of that with restrictions of schools being closed or people not being available on site or what have you*

so I think the key things that during lockdown and that and throughout the COVID-19 pandemic.

A: I suppose that with schools closing quite early last year and staying closed for an extended period of time, were there actually any opportunities for you to get onto these sites to carry out work with them being closed? In terms of access, working around kids, etc.

M: *To be honest it was hard not so much from a building point of view, but hard for the sales point of view, because you know nobody was in the school's, there was nobody on-site and people weren't allowed to travel potentially to go to that site. So to actually go in and do a site survey, we've had quite a few issues with that, and trying to make contact with people in schools as they were working remotely. So that I would say had a bit of a knock on effect. But actually from the building point of view, there have been advantages of children not being in schools, in that we were able to move around a little more freely than we would normally.*

But hand in hand with that, we've had to kind of operate around our supply chain, and the issues that they've had in terms of responding to getting certain materials that we've ordered from them, on to our sites. Some of them would have been working remotely, or in lockdown, they wouldn't be fully operational because of them being affected by not being supplying construction work in other sectors, but because of our sector and our work being operational, we still wanted them to respond as if it was normal times (laughs). So yeah, that was a challenge, just ensuring that we were able to act in terms of managing and scheduling materials to site, and ensuring that, you know, lead times were met and things like that.

A: Would you say that over the pandemic, workload increased? Decreased? Or would you say that it remained relatively steady?

M: *We had in 2020, we had a record year; so what we saw amongst our competitors and our business is that some of those were really finding it tough. However, what we managed to do through the first lockdown, was to secure two or three really quite sizeable projects, so we knew that they were in the bag so to speak, so that kind showed us there was no risk element of us folding overnight as we had enough workloads and sustain us for 8 or 9 months.*

But what we found then, is that we added to those, so if anything we were getting more and more enquiries, because schools were thinking "Oh God, we've got to rework our space and now's the time perhaps to do something about it". So our order books through 2020 just started to fill, and as I say we had a record year, which has also gone on to sustain us for this year. So albeit it's been a bit of a slower start to this year, particularly as we do a lot of engagements on the sale side of things at events, exhibitions, conferences and so on, so we haven't been able to get out and meet customers face-to-face. So we are aware that's gonna have a trickle-down effect on the business, but we've managed to kind of change things and build on existing relationships with past clients; so what we're seeing is that we're completing a project for them on one site, and they're already starting to talk to us about projects on another site, which is what as a business you want.

So yeah, we've seen competitors fall by the wayside because of COVID-19, or at least they blame COVID. There's one company that was really kind of top heavy, in terms of their

financial commitments and exposure; so they got a lot of various financial backers propping up the company, and we were crossing swords with them for tenders. And anyway, then we heard that they were not able to fulfil a particular project, we looked more into it and then they were going into liquidation. So we moved in and actually acquired that company and we also took their work so there's a bit of that that went on... that's actually another thing that's kind of secured us as well, because we've acquired the pipeline of their clients looking after their projects, and using their website to get enquiries through. So that's kind of helped as well really.

A: So I suppose by being very proactive and almost planning strategically you've been able to spin the pandemic to your benefit.

M: *Yeah, yes, very much so.*

A: And in regards of the responses you've made over the COVID pandemic, whether that be through strategic planning, business continuity, and so on, but also things like working from home and improving on existing relationships, if let's say covid-19 finished today and then in another years' time as a similar event such as a pandemic or crisis were to strike, do you think you'll be able to fall back into the same pattern of proactivity and responding well to the crisis event or pandemic or whatever it could be?

M: *Well yeah I think so because you know what has kind of come out of this with schools, is that online working doesn't tend to work very well for education, and is very hard to control and there is a definite need for social interaction for children in schools so they are always going to need to have schooling in a physical way, with teachers. And a lot of schools in and around that would kind of need to manage their premises accordingly, so that for us is quite good.*

The other option is, I guess that COVID-19 has brought to us that we wouldn't have had before, is that we started getting enquiries with our sales guys in and around care homes and things like that; so they were looking to obviously manage their residents and all the people that they cared for, in terms of reworking their settings so there was less mixing of residents in some of these kind of high dependency care homes, whether it be people who have got mentally challenging needs, or the elderly or what have you. So it was kind of broadening their settings out, so we had enquiries where they've been looking for self-contained units in and around the home which would kind of free up beds in the home to free up space for spacing people out a lot better.

So perhaps we wouldn't have had that, so that's a new one area that we can see about if there was a repeat pandemic, god forbid, that we could develop into.

A: And more internally to [REDACTED] I assume that you've had people working from home, so have people had to sort of adjust their working approach and style into being proactive in the face of COVID and the challenging issues that it presents?

M: *Very much so, I must admit it that we've got a very kind of open culture anyway, and even before COVID came along a lot of our operational staff and office support staff and marketing department and the sales guys and even the design team; they have had a balance of working remotely and coming into the office. So that kind of worked, it obviously*

intensified and there were more and more people working from home, and if they needed to come into the office then that was managed, and we obviously changed the settings to make things COVID safe. We've been very proactive on that, so it was a managed-as-needed basis if you had to come into the office.

The key thing that you miss is the general buzz and productivity of people being in earshot of each other, and being able to contribute. You can't get that on a zoom call and you can't get that on an email, do you know what I mean? So to have that open plan office where you've got all the functions; you know the engineer, the architect, the designer, the sales team, the operational team, the project management team all within earshot of each other, and being able to call them in for different meetings on different projects and things... I think that's the only thing that was missed.

I don't think it's really had a major effect on the business though, it's just something that we know would be best practice if we could do that as soon as we can, but yeah I think in general the majority of staff have reacted really positively to it. We've had no issues about people working remotely.

A: Do you think that maybe that open culture that you've referred to, owes itself to the business being an SME?

M: *Yeah, it would be harder to do that within a larger corporate sort of Construction Company, definitely. Albeit they'll probably have their various different regional offices and so on.*

A: You get that sort of 'silo' mentality don't you?

M: *Yeah, yeah, you definitely do [REDACTED], you do get that (laughs). So yes it certainly helps but we're a very supportive culture you know, if one area needs help then we'll all sort of step in and wear different hats at different times you know, to be able to prioritise as a group and support people individually. So that's very much the kind of culture that this business has.*

A: *OK, so final question as I'm aware of the time; are there any other aspects of managing crises or responses to COVID-19, or anything within the scope of this research project that you would like to bring up?*

M: *Yeah, I think definitely the big thing that's kind of hitting us now, it's only just kind of becoming prevalent throughout the industry if you like over the last couple of months, is the material shortages that are going on and the cost of materials within that. So those are all major kinds of construction materials. So you know its plaster, plasterboard, steel, timber, all of the plastics that make up the polymer supplies, and drainage materials, all of that sort of thing, is starting to really have a big impact.*

A: Have supply issues been an issue historically, or is it really more prevalent now?

M: *I must admit, no. We haven't really had problems in the past we've been able to sort of cherry-pick and get best market choice and prices and what have you, but now we're finding that, obviously as an SME without the major big buying power, that we can be at the back of the queue to a certain extent. However, again it's just about being proactive and building relationships with the key suppliers and getting them where we can, getting all the planned*

materials you know; buying bulk and arranging materials on a call-off basis, which is a big thing we're doing.

Yeah I'm hoping as countries start to open up more, that it will be a short term effect, but at the moment it is starting to become a problem. The key things in terms of costing a project now is that we have to really "dot the i's" and "cross the t's" in terms of looking at all the fine details, in terms of what cost we've got in the ground, making sure there's no surprises as I said previously, and really going through minute details on each of the components and the knock-on effects of any issues and flagging them up if anything that's going to be of a shortage or a cost, because if that's not carefully managed that could have a drastic effect on the profits and the bottom line of the project.

A: And the supply issues; are they stemming from COVID slowing down production and slowing down international trade and so on? Or due to projects restarting as the economy opens up again?

M: *No, it's global. It's nothing down to us in terms of our operations. We are able to sort of fulfil all our commitments up until now, and all of our projects have come on schedule and we've got more projects than ever before. So for now we are ok. But we're just thinking as if this worsens, then we need to really be ahead of the game in terms of looking at all sorts of different ways of getting the key components and supplies in.*

I think it may well be having a more drastic effect on the larger construction companies because they want that bulk-buy and they're not able to get it, whereas we're doing lower value projects between £250,000 and £3,000,000. So you know our needs aren't as big as the big boys' are.

So just to give you an idea [REDACTED], in America who are obviously the number one exporter of timber and wood in all sorts of different guises, because of the shortage over there, they are now looking to import from Europe! Which is just unheard of you know, it's never happened before.

A: Ok so fantastic thank you very much

M: *Does that help you at all? I hope I've answered all your questions ok, and if there's any more I can help with, just give us a call, that's fine.*

A: There's some really interesting dynamics that you've brought up, such as increasing your workload over the pandemic, which does differ from other SMEs who have been hit really hard and found it tough. So it's been really good to hear that you've been able to keep working, and work more than ever

M: *Yeah I think we're just really lucky with the sectors that we're working in at the moment, and that there's a demand for this kind of thing.*

A: Ok I won't keep you any longer thank you very much! Cheers, enjoy the rest of your day!

M: *You too mate, cheers, goodbye!*

Interview #2

All non-italicised text is representative of the interviewer's speech.

All italicised text is representative of the interviewee's speech.

Blue text represents each interview question being asked.

A: Can you please confirm your name, your role within your organisation, what your organisation does, and that your organisation satisfies the criteria for being an SME?

L: *Okay, yeah my name is [REDACTED], I'm technical director of [REDACTED], and we are an SME.*

A: Okay, and generally, just sort of like an overview of your role within the organisation, and a description of generally what the company sort of does day to day; the types of projects you take on and the business areas you work in, etc.

L: *Okay, well for me, a large part of my job is estimating and bidding for new work, there's a high turnover of work at work in scaffolding and constantly having to look for new work. It's not like we can get a big project in and it will occupy us for a good long length of time, its continuous work, so bidding for new work is a large part of my job.*

Estimating the length of labour time, and material costs, and things like that. Secondary to that; contract management, so once we've won the work, not like the project management level, but probably the commercial management level; making sure payments are going through okay and things like that, and then I do a portion of design work, for some of the larger scaffolds we do, or more complicated ones need a design to be done, and I'll work on the outline and concept design of that.

The main types of work we go for are all commercial, and industrial sectors really. So no domestic work, it's more new build, or refurbishment of commercial properties, retail, factories, and automotive plants. We're getting quite involved with some civil engineering work, so works on infrastructure, new road layouts if they've got any bridges and things like that, and need some scaffolding. Do quite a lot of work on heritage conservation works, so churches, bridges that have been knocked over, old stone bridges.

So yeah, that's a general overview, but we, it's far reaching really. Apart from the general rule we don't really do any domestic work. Apart from that, we generally pretty much do everything, unless there's some sectors like the rail industry, for working on the track needs specific training, so we don't have any rail-track trained scaffolders as such.

Sectors like that we won't work in. Oil and gas as well, that's not really a sector we work in, probably partly due to our location as well, being in the middle of the country, there's not really any petrochemical plants around here, or offshore work. But other than that, generally a whole range of work; government buildings and things like that too. So, okay?

A: Yeah okay, I had a quick look at some case studies on the website, and thought the temporary roof at the Porsche facility was quite an interesting one.

L: *Oh yes, yes (laughs), it was.*

A: OK, so next question is again, it's a bit of a SME specific question; so how would you identify that your organisation as an SME sort of differs from larger organisations like tier 1 contractors etc, and that can be in any way, you know; relating to crisis management, generally in terms of assets, capabilities, scope of the type of projects, etc.

L: *Yes sure, well I had a bit of a think about this earlier and we've got a much smaller team of people as you can imagine than a larger company, so You'll find that one person here may, for example, carry out various different roles. So I'm estimating but I'm also managing contracts doing some design work if we're low so on our project managers if they're out. I'll pick up some project management as well.*

It's that each person does a number of different jobs. We haven't got any separate departments for you know, human resources or finance or PR for example. So I've worked in very large companies before and there is an office for all of them different roles, whereas like HR finance and PR are pretty much taken up by one person here, so that's a big difference in SMEs compared to larger organisations.

A: I suppose as you say with one team one business sort of approach would you say there is a lot more of interoperability, in that everyone may weigh in in different capacities, dependent on the project that is going on at the time, depending on specific circumstances at the time, as you said if you've got people off, and things are less compartmentalised.

L: *Exactly yeah, like even our managing director will do project management if he has to if there is no one available to take it on, and he also does a lot of estimating himself, so you know he does lots of different roles here. I think compared to the larger companies we have a much closer relationship with our customers, so we know them by first name, you know we see them on job after job, whereas for a larger company the workers are a lot more distanced from the personnel in the clients team so that's a difference that I've noticed certainly coming from where I have worked before, to here.*

Another thing; we've got a limited capital resource. We can't just go buying everything we want and spending money as we please, so we've got to think a bit more carefully about what we're investing in and that also means you've got to be a lot more careful in the jobs that we select. So we can't just go around doing all the big jobs because we'd have no gear left, so there's a balance to be struck there, whereas a very large company wouldn't have those constraints, at least not at the same level. They have an advantage over us on the large jobs because they can just throw lots of materials at it, whereas we've got to be careful around materials. Then on the other foot, we've got an advantage over them on the smaller jobs because our overheads are a lot smaller than theirs.

A: Yeah of course. I suppose in a way being a little bit smaller than large organisations you might be a bit more, not necessarily more conservative in your approach of the projects, but you might have maybe a bit more of a focus on ensuring that things go to plan; so you know that estimations are done accurately and you know that the project management of actually getting these jobs done is handled quite closely rather than from a distance, because you do find that in larger organisations, you can get teams within teams within teams, and there is a

lot, of not necessarily politics, but a chain of command so to speak and maybe you can't progress certain things or focus on certain things without it being approved from "up above".

L: Yeah, yeah, I think that with it being such a small team, the managing director and I can have a much tighter grip on what's going on the few tiers below, if you know what I mean. Whereas if we wanted to expand, the managing director is going to have to let go of some things and concentrate on just managing a small team of people that manage everyone below them. So the structure is different, which has its ups and downs but trying to focus on growing... it is difficult sometimes because everyone in the top tier is involved in all the work. It's hard to work on expanding your business because you're actually doing the job.

A: Right OK, in regards to some of that close focus on actually managing the projects and issues that come up, would you say that generally speaking from being a smaller team, that maybe there is far closer focus, and it is a lot more intimate and personal with the clients, and that there might be more of a focus on, not to say that large organisations wouldn't focus on getting things done right, but when you are an SME, reputation is a big part of ongoing business and as you say, growing.

OK, right the next question; can you describe in relation to your business and sort of the general projects actually carried out, what could constitute a crisis. Whilst "crisis" is a bit of a difficult word, and it does mean different things to different people, I suppose the focus of the question is what sort of issues and challenges can arise specifically in relation to scaffolding. Any sort of examples or context would be much appreciated.

L: Yeah when I flipped through your questions, I did think "we haven't really got any crisis management here". So what constitutes a crisis here? I mean a fire on our premises would be a crisis, because it would mean our normal business would have to stop whilst it was sorted out. Is that what you mean by crisis? Any large profound event that stops normal business operations continuing?

A: See it's a, as I said it sort of means different things in different circumstances, so this question focuses on getting an SME specific viewpoint of what constitutes crisis, and then you saying that you don't actually have any real crises that occur it is quite valuable in the context of the research. Obviously it is important to classify these differences between SME and large organisations. Large organisations might have far more complex, multi-stakeholder projects going on, where one break in the chain could bring a project to its knees.

But in you saying that maybe something like a fire would be a crisis; generally speaking you know that would be a general assumption in any business. So obviously yeah, anything that might interrupt business continuity is potentially a crisis, but also in terms of, do you ever experience supply issues on site? Maybe a survey comes in a little late, and the site is unsuitable, something like that... anything you can think of really.

L: Scaffolding is quite forgiving of site conditions, and we can generally get around anything. A crisis on site would generally be if an accident occurred, because an accident would be very bad for the company, for its reputation, could be financially bad may even result in death or a significant injury to someone that works for us, or a third party. So we

do focus a lot on ensuring that, as far as is reasonably practicable, that accidents don't happen; so an accident on site would be a crisis depending on, you know, its magnitude.

A lack of availability of materials could be a crisis. Recently, as you know with Brexit, quite a lot of our material comes from overseas. If we were looking to buy new gear, or we needed to buy new gear for a new big job, if that material wasn't available to us, that would be a crisis. Because you know we've signed contracts to put a scaffold up by a particular date, and then for whatever reason we can't fulfil that contract, that can cause very serious financial implications to us.

A: And have any sort of material supply issues actually formed recently, and when I say recently I mean at any time throughout history of you being there. So it could be a crisis, but is it actually an issue that you have to specifically plan for, and actively approach.

L: *No, honestly I can't see any situation where it would happen. A lot of the jobs we do use only a small fraction of the materials we own, so it's rare that we put up a job that takes 50% of our gear. All the jobs are relatively small, so we've always got gear available. And if we have put a very large job up and it's used all of our materials, and then another job comes along that needs more materials, we can hire it; we can cross hire all the gear, although we won't much money off of it because we are having to pay out to hire the gear, but it's still an option.*

We're quite protected against any availability of material issues. The problem would come if there's a lot of big construction going on in the area, and our suppliers have hired out all their gear, so we couldn't get any more. And I did feel that was starting to happen last year or the year before, the year before last, as there was a lot of work going on in Coventry, in Birmingham, and in some of the surrounding cities and a particular system scaffold was becoming difficult to get a hold of, because it's all being used. So that was a bit of a worry, we could always turn to traditional tube and fitting scaffold, but it takes a lot longer to put up, and if the job's been priced on using the system scaffold and then the system scaffold is not available it creates big problems.

A: The next couple of questions I have lined up are in relation to crisis management and then also crisis preparation, but as you've said, typically crises are a bit uncommon and when they do occur, there are established methods of manoeuvring around them. So you pointed out that health and safety, and accidents are an issue, but obviously I'm assuming that you'll have quite well established frameworks for approaching your health and safety on site. Whether that's through training, through on-site means of reducing the chances of accidents; I'm not too familiar with scaffolding specifically but that may include you know, tethering and things like that or just generally the training is a big part of offsetting that?

L: *Yeah training is everything really, we are a member of the National Access and Scaffolding Confederation (NASC), and they provide a lot of technical and safety guidance that we have to follow, and they carry out audits of our business and operations, so I feel we do all we can to minimise safety risks.*

A: You pointed out that fire could be a crisis, but I suppose that would be offset by the same means that any business owners or homeowners might employ to offset risk of fire; such as fire detection, fire suppression, and things like that.

L: *Yeah, IT systems are all backed up off of premises, and everyone's generally using laptops, so they take their laptops home with them so they're not all going to go up in flames overnight and things like that.*

A: And with the last sort of year as well, I suppose that (we will move on to this in a moment) but with the COVID-19 pandemic, has the business become more flexible in terms of how you work? So more people are working from home, rather than in an office environment... I understand that it is essential work.

L: *I mean none of our scaffolders can work from home obviously, project managers are on the road a lot; they're driving in their own cars and they have to visit sites to sort of supervise what our scaffolders are doing, so there isn't much opportunity for them to work from home anyway. I did work from home for quite a long time because I could, because my role is desk based, so I did work from home and yeah I have been doing that more often than I ever have done before, since COVID came in.*

A: So generally speaking you would sort identify that the way the business works and the sort of, I don't want to say crisis management methods because that would imply a level of formalisation within your organisation, but obviously having these risk identification strategies like health and safety training, typical means of mitigating data loss, premises loss, and so on, would you say that the company is well prepared for crises as you have identified as being typical for business operations?

L: *Yeah yeah yeah, and I'm sure we'll get on to it in the later questions, but going through the COVID-19 crisis, we have done pretty well through it which just shows, and I don't know if it's the industry as a whole, but our business has been, and I wouldn't say prepared because I don't see how we could have been prepared for it, but our business has been a bit immune to it really.*

As well as the materials issue, labour could be another crisis for us, if we had no labour available. But in the same way that we can hire materials, we can subcontract labour in, so that is also a problem that can easily be overcome. So yes I feel quite safe really.

A: So the next question, the final one before focusing on COVID, in my research project and within my literature review, I've been finding more and more specifically in recent years that there has been a higher occurrence rate of what's generally referred to as "Black Swan" events, with black swans being extremely rare and unidentifiable crises that can occur without much pre warning, and without an established path of events that might occur. So obviously COVID could be a black swan event, but aside from COVID do you feel that there are crises that might be so enormous, and so unidentifiable beforehand, that might impact the business. So another example might be the 2008 global financial crisis which impacted a lot of businesses and a lot of building work, so anything in that sort of scope?

L: *I mean I wasn't here during 2008, but I know it was the most difficult time that this business ever faced and from what I hear, work completely dried up and rather than laying off our workforce, we kept them on doing little jobs in our yard and things like that. So we kept paying out but we had no work coming in, and yeah it got extremely difficult and came down to about the last week apparently, where we were able to continue.*

So we have changed our view on what we can do if that happened again, and that is to shrink down as quickly as we can and weather the storm, rather than trying to keep everyone employed and I know that doesn't sound like a very nice thing to say about all our employees, but we have to keep our business alive.

A: Of course and I suppose in a way, being an SME, you can be a bit more fluid and a bit more dynamic in responding to these events. You know if you've got a smaller workforce or a smaller capital base, you can sort of adjust that quite quickly compared to a Tier 1 contractor with thousands of employees, hundreds of departments, hundreds of teams and so on.

L: *Yeah, yeah.*

A: Right OK, and now sort of moving onto the final questions relating to COVID, the COVID-19 pandemic was something that was unexpected globally, even though in the past we have had SARS, MERS or Swine Flu 10 years ago roughly, but specifically to COVID-19 were there any sort of expected or unexpected consequences of this type of event that struck the business?

L: *Well we could see the COVID-19 pandemic coming in the news, but we didn't really think that it was gonna have an effect, but then some of our major sites started shutting down, so yeah we had no work for our men, then having to lay people off. And not only with the sites shutting down, they were asking for us to pause hire on all of our materials, they didn't want to pay for any materials that were on hire during their shutdowns, which we did agree to. So yeah the money coming in dried up quickly, but there were some sites that carried on; maintenance work at factories continued, airport maintenance work continued, civil engineering works and infrastructure works continued generally.*

So it wasn't too bad, we did shrink our workforce a lot and we actually shrunk it down to 1 gang for a couple of months just during the first lockdown which was when a lot of construction did stop, because they didn't really know if they were supposed to be open or not, because the messages from government weren't very clear, I don't think.

A: I suppose particularly, as you just said with people not knowing if they were actually supposed to be working or not; I would agree with you but there was definitely a lack of clarity and a lack of guidance, especially in the early months of 2020 and the early months of lockdown, it was quite unclear as to what could continue and what couldn't. And in a way, that was quite damaging because if a lot of these sites that were forced to close down had been issued guidance or information that maybe they could have continued working with minor adjustments to how the sites are operating in regards to the social distancing and so on, then maybe work could have continued, and the effects of work drying up and having to reduce your workforce down wouldn't have manifested.

Right OK, and in response to, and there is probably a bit of an overlap with the last question, what sort of responses did the business employ in response to the challenges introduced by COVID? That could be in terms of work continuity, adjustments to working practice, and so on.

L: *Well project managers; because our workload did reduce quite a lot, and the furlough scheme was available, we were able to furlough our project managers and do the project management carried out by the managing director, or I was even furloughed for quite a while. Our project managers were furloughed for quite a while because we had so few scaffolding teams out, and we were able to do the project management type things in the upper tiers of the organisation structure, and we reduced our workforce as far as we could...*

A: It sounds like maybe there was a bit of a blend between being proactive and adjusting the workforce and adjusting the management structure in a way in that a lot of the project management was done by the managing director, but at the same time it sounds like there were passive approaches in taking advantage of the furlough scheme in the absence of having that work to do, which was the point of the furlough scheme.

However with the close of the first lockdown as we pulled into the summer last year, a lot of sites were starting to reopen. So how did that progress over time? From the early stages of reducing the workforce, reacting to the situation, and how that sort of progress into responding to the situation and through into the back end of last year and into this year?

L: *It was quite easy to just bring scaffolders back off of the furlough scheme as and when we needed them, and even then just to put them back on it when there wasn't continuation of work. It was only recently that we've got everyone back, and even now the furlough scheme is still being used when we haven't got work for everyone. It's been very helpful, yeah, it was quite easy to respond to it opening back up again and just bringing our workforce back to work.*

A: I suppose there is always a need for scaffolding in construction as well, so when sites were reopening, businesses were reopening and getting back to carrying out new works on their facilities, particularly in the Industrial sector as you mentioned, it was just sort of a return to normal in a way. Things just started back up again with the economy opening and with lockdown easing.

L: *Yes, yeah, yeah.*

A: And in specific relation to workload, I've spoken to some SMEs that have actually prospered throughout lockdown, in taking on more work than ever, because their specific circumstances facilitated that. So how did that sort of work in relation to scaffolding? Obviously as you've already said, work did dry up to an extent...

L: *Yeah I mean we are quoting lots of work, we are estimating a lot, but we are waiting for it to happen. Nobody is making decisions and going ahead with work, especially any big work. I mean it would be an ideal time to do work that was based on high streets and in town centres because there is nobody on the streets, but people are just not going ahead with the projects. I mean we had a new hotel that was being built and we were going to get that work, then who wants to build a hotel at this time? So that was a challenge.*

Refurbishment works too, retail blocks you know, we were looking at some big projects that were going to come off, and then all of a sudden no one is going to the high street anymore! So who wants to spend millions and millions of pounds refurbishing their retail blocks when they can't even get any tenants? And that's still going on today.

A: Right OK, and then looking forward to the future, with a lot of retail it isn't certain currently how things will ever go back to normal, and I suppose that's also quite similar with a lot of hospitality such as hotels for example. Obviously these Industries will sort of continue, because there's always going to be that sort of demand for those services, but how much demand there is going to be is still unclear.

So people might be, and when I say people I mean organisations, be hesitant towards doing any more work because it's unclear how things are going to change. Would you see that maybe being a challenge as COVID trails off? Or do you think specifically in relation to the business you're working in having that multifaceted approach to industrial, some commercial work, etc, that might actually not be as much of a problem as time progresses?

L: *Yeah I think we'll be OK. There's lots of different sectors that we work in, it's really quite forgiving as an industry really. There's lots of work out there in different sectors, and compare that with an SME that supplies Jaguar Land Rover for example, and that may be the main contract they have, and then JLR shuts their factories down and that's a massive issue that they will... I mean I don't know how they'd get over that. But with us, we can look to scaffold some other sectors that are still running, so it's really quite comfortable as an industry in that respect.*

A: OK, you pointed out right at the very beginning that most of the work, well almost all of the work you do excludes certain sectors such as energy, residential and so on. Do you think that maybe responding to a lack of demand for work in your main sectors may induce you to branch off into those sectors (energy, residential, etc) or do you think as it's your specialism to focus on the commercial and the industrial, that they will probably remain your main focus?

L: *Yeah I mean, commercial and industrial cover such a wide range of areas that I don't... there's not really going to be a call to take on residential work because the commercial and industrial sectors are absolutely huge. There's all different types of work involved in those, and yeah I don't see the need for us to do that really.*

A: OK and second to last question now, with the covid-19 pandemic adjusting the way that work is done to an extent, in approaching the procurement of new work, business continuity and so on, would you identify that maybe if COVID was too completely wrap up tomorrow and things returned back to normal, that in years' time if a similar event occurs; not necessarily pandemic but an event that has similar effects in terms of certain sectors almost completely closing down, do you think that having this experience of reacting to COVID in 2020 and 2021 has increased the resilience of the company in certain respects or do you think it'll be a process of reacting specifically and making sense of the situation then.

L: *It really depends on what it is, I mean if it was an almost identical situation; then yes we're much better prepared. We know what we're allowed to do, and what we're not allowed to do. What extra procedures need to be put in place for work, but all those procedures and the wearing a face mask around the office and that... I can't see that changing for quite a while. So yeah, yeah, if it was a similar event then yes we would be more ready for it, but it would still be just as painful, but in getting there and getting through it at least we would know what to expect.*

A: I think that's also part of the challenge with the sort of black swan events occurring. If we were maybe to go back to the financial crisis of 2008; in a way there is really just no preparing for that because at a certain scale with types of consequences that might occur from a crisis, it does become unmanageable in a way.

L: *Yes, yeah yeah.*

A: OK, and the final question is very general. From all of the topics we've discussed, are there any other areas that you might identify personally or any areas that are specific to your business that you might deem relevant in the context of this research project?

L: *I think one thing that would affect us because it's such a small team, if numerous members of our "top team" so to speak, were to fall ill or were to have to isolate or actually caught COVID... that would be very difficult for the business to continue. Alright if one of us is off someone else can pick up that slack even if two or three are off but if it was five or six, I don't think we'll be able to open our doors. So I am thinking about training certain people in doing certain roles to provide a bit of redundancy in the business for that.*

I mean I caught COVID myself and I couldn't even work from home; it was really horrible. It wasn't just like I'd stay at home and work from home, I couldn't work! I had to stay in bed. I couldn't concentrate on anything, so if that would happen to me, the managing director, our logistics manager and two of our project managers, we would be absolutely screwed to be honest. I don't think we'd be able to open our doors because our scaffolders wouldn't know what to do.

A: That is sort of an issue that would strike any business because in any business I sort of identify there being top-level jobs, and everything comes from the top down. There needs to be that procuring of new work, there needs to be the project management. There needs to be really quite simple things such as getting people paid and making sure that people are actually doing the right things; whether that's for quality checks and so on. The primary focus of a lot of businesses is not actually doing their work... It's facilitating their work to continue. Because as you know in scaffolding, for example, you can't just have someone rock up any old site, know exactly what to do, where to get materials on a whim... everything needs to be sort of constructed as a project. That's definitely an area that could be quite problematic.

L: *I remember the last company I worked for, a very large company, they had procedures and rules in place that if we were travelling to international projects that no more (if you were on a top-tier project team) No more than two of you could be on the same plane and if you were in a lower management team no more than 4 of you could be on the same plane as I suppose that was sort of keep that redundancy.*

A: Very interesting that they had to take that level of consideration, I suppose maybe that's not so much of an issue for SMEs, as in that sort of event it would be more of a personal tragedy than an organisational crisis. It would be a bit more of a focus on personal well-being in that circumstance. Right ok I've covered everything that I sort of had listed out as being the focus of the research interview so if there are no other areas that you can sort of identify that you think you might want to talk about then I suppose we can wrap this up.

L: *No I don't think so, but yeah please feel free to call me at any other time if you want to discuss anything, or if I can help you in any other way.*

A: Perfect, thank you very much [REDACTED], everything has been really helpful, so thank you very much! I hope everything is going well, and that you enjoy the rest of your day

L: *Yep cheers, thank you! Goodbye!*

A: Thanks goodbye!

Interview #3

All non-italicised text is representative of the interviewer's speech.

All italicised text is representative of the interviewee's speech.

Blue text represents each interview question being asked.

A: Ok [REDACTED] so could you please confirm your name, what it is you do in relation to construction, and that as I've described to you, what you do is considered to be the small and medium scale of construction.

J: *Ok, it's [REDACTED], I'm a company director for a property developer and a property rental company. I cover all aspects of the work from supervision, sort of hands-on as well, so collecting materials you know everything, that's involved in keeping it running day to day.*

A: So you'll do a bit of everything as is needed?

J: *A bit of everything, yeah, yeah.*

A: Ok so can you provide, I suppose you've already done this to an extent, provide an overview of your role and everything you do, and if you could cover some of the typical project types and business areas that you operate within?

J: *Ok, so my initial role; I will look at a development, I will put the best plan that we can think to make it work you know, I just completed flats; 18 flat and initially the architect only wanted 14, re-jiggered and now we've got 18. That's where I get involved, and so we move onto the construction of those and I get involved in every part of that really. Because we're only a small company and we only employ a few directly, and others are brought in. So every part of supervision and the day-to-day running, even collecting materials even, everything that's required.*

A: OK, and some of the typical project types?

J: *Generally they are all domestic construction, or commercial, you know it'll be hotels and stuff, refurbishing hotels and things like that.*

A: And you sort of do private development, where you know, you buy in to something to rejuvenate it, do it up, and then sell it on?

J: *We never sell it on, we buy it and then we rent. I can't think of the last time we sold anything really? Everything's either rented or leased.*

A: OK, and is that sort of to ensure continued income off of that?

J: *Yeah, I mean we look at a long-term plan of investment, and that there's continued income for years to come.*

A: OK, and how would you identify that your organisation as an SME differs from larger organisations, such as Tier 1 contractors?

J: *I suppose that the difference is that we are totally involved at every level you see, you know you can be the director but also doing other work. Within a larger organisation there will be tiers to cover all of that, so we're completely hands-on. And the other thing is that we're financially more aware, really a lot more aware of every cost involved. It has to work from that point of view on every element, not just an overall scheme; we have to make every element of it pay really.*

A: And you mentioned before that you employ very few directly and then everyone else is contracted in?

J: *Yep, that's right. At one time, we used to employ everybody directly but that's changed slightly over the years.*

A: And in terms of the capabilities that you have that large organisations may or may not have; in my research I found that a lot of SMEs can be a lot more agile and flexible in responding to situations, and that they don't have this corporate bureaucracy that larger organisations may have, where there's a million different stakeholders to talk to and get approval before taking any actions. Do you find that you can be a bit more agile, and fluid?

J: *Definitely so, because we have it so that one member of staff can cover quite a few different disciplines. There's not just one particular trade we need, we need everyone to cover everything.*

A: Like you said, when it is needed you personally can even go out and collect materials.

J: *Whatever it takes to keep it all running.*

A: Ok so this question now starts to develop into the whole field of crisis management, so personally, and then in relation to your business, can you describe what constitutes a crisis? Examples and context would be welcome now; in particular specific types of crises your team might encounter.

J: *I suppose we don't really get crises as such. The biggest problems that we encounter is lack of materials at times, and shortages of that if we haven't planned far enough ahead. And of course we can't buy that stock, it's not viable for us to overstock things so we tend to be on a weekly basis for a lot of materials, rather than having things on a huge scale you know.*

You pay expensively to get those materials, and you can't carry and store that stock and a lot of times you'll be moving it around and...That's not viable. It could become a crisis if you find out materials are in short supply though. Labour can be a crisis for us at times, especially now the demand for labour everywhere is much higher, Because it's all around the government as well any label we use comes out our pocket because what we use is what we pay for; it's not like we can charge it on, there's no inflationary measures for us to claim anything back.

That's mainly the type of crisis we encounter I suppose, especially labour is a type of crisis we can encounter.

A: Would you say that those are a crisis? Or are they just typical problems you might come up against as part and parcel of being in construction?

J: *I don't think they are a crisis, they are just part and parcel of being in construction, we seldom... I can't think of any crises that we get really. I can't think of any.*

A: So do you think that maybe the word “crisis” is a bit unsuitable for describing what problems you might encounter at the smaller scale?

J: *I don't think that small companies get crises really, I can't imagine how you would get a crisis...*

A: So these are just normal problems that come up as part of being in the business then, I suppose?

J: *Yeah those things never change whether there's COVID or whatever you know, they never change. It's always been the same; you've always either had a shortage of labour, or when you have got labour there is a shortage of work around to do, so one way or another... (laughs).*

A: So, without getting too detailed in regards to the finance side of things, one company I've spoken to found that when they were working on a project, if unforeseen problems came up then they would drain their accounts quite quickly and that became a problem. Do you just sort of approach that by being quite careful and considerate? With how you mentioned before; there can't be any wastage, and there has to be money in everything.

J: *Yeah, we look at every element; we know what it's going to cost and should cost, and if it does cost us more than we have to cut back elsewhere because there's a bottom line and it's going to cost us otherwise, and the return is not there for us. So one way or another, it's balanced out; if it means having to use cheaper wall tiles then so be it. That's what it is.*

A: Are those crisis events? Or are those just typical parts of running a construction business?

J: *I think they're a typical part of running a business.*

A: *Ok very good, so this question; you can just say if there aren't any, can you please outline any crisis management methodologies you might employ, if any, or is it just careful business planning?*

J: *(chuckles) we don't really have any, and it'll just be handled on a day-to-day basis. You can't just go 'carte blanche' with it, you just have to handle it in a certain way as every item is different really isn't it.*

A: And I suppose, with being a smaller organisation, as I mentioned before there's that sort of dynamism and fluidity. So you can approach different problems differently, which sort of aids things if you do have to make changes to materials, when it's just done on an as needed

basis, rather than having to go through a million different departments to get it re-budgeted and approved.

J: *Yeah, I suppose the thing is because we're generally the end-user, you know we're renting the properties out or leasing them out, whichever that way they go, it's down to us what we spend and how we do it and how we achieve that.*

A: Yeah, that ties into the overall business case I suppose?

J: *There's only us. We only answer to ourselves, the only knock on effect of changes we've done is achieving the same rental value as we could have; depending on the quality or whatever, all the layout, it's all down to the cost of it as well.*

A: And in regards to these crises, and we'll use the word crisis for the legibility of the recording, do you feel that generally speaking that your organisation is well prepared for these crises that you've identified as being typical? In regards to materials, labour, and so on?

J: *It's fortunate for us, as we set our end dates, and then if things have to go out at a later date because we haven't got materials, then we can accept that; we're not working to a completion date for a client. We are the client. So it's fortunate that way.*

A: And in regards to materials and so on; if you do come up against a shortage, how might you sort of respond to that?

J: *Varying ways we'll look at it, you know. We might look at alternative material. You know a few years ago, we took to using more timber frames; a lot more timber. And now we'll probably go back from timber again, back to masonry again, because it looks like we can sort of source masonry a lot easier than we can timber.*

A: I've actually found from another interview where individual stated that, particularly over COVID, there's been a bit of a shortage of different types of materials, particularly hardwood and timber, they mentioned are particularly difficult to come by.

J: *I think there's a shortage of just about everything right now. I don't know whether it's quite COVID, or if it's Brexit; you know Brexit made a big difference, and then now obviously delivery is different as well. The merchants are waiting for materials to come in, because they haven't got any drivers to deliver them. So that's made a difference, COVID has made a difference obviously, but a lot of our materials are coming from Europe anyway so...*

A: OK, so the next questions move on to be more COVID oriented. So, was the COVID-19 pandemic something that affected your organisation significantly? You know in terms of effects and consequences. It wasn't very clear in the beginning whether a lot of building work could continue, if the sites could be open... This whole thing of working from home; you can't do that if you're in construction. So what sort of effects did you experience during the COVID pandemic?

J: *The initial effect was that we stopped any construction work we were doing. We were purely on maintenance, and we closed the hotels that were running, but then we closed off access to anyone else except maintenance staff. We formed our own bubble and carried on*

maintenance works, and then probably within 6-weeks we realised that we could open up the construction more, so we then took on a project which carried on with you know. We kept it as a bubble; we kept only our own staff on. It was self-contained really.

A: Did you find that during COVID, and this is a bit of a complex one as you sort of already identified that you set your own projects, your timescales, and so on. While some other organisations I've spoken to expanded their business operations significantly during COVID, did you find that workload increased? Decreased? Or stayed the same.

J: *No, we carried on as normal really. The only thing is that we had slight pressure to get open within time for COVID lockdown lifting, you know, for when things opened up there was pressure on us there, which was quite unusual for us to be under, but we wanted to get open, so...*

A: And is that potentially not necessarily a bad thing? Because you know, you've got this development, whether it be a hotel or so on, and you know that after a certain date they can resume business. You're not really too uncertain about the future because you could continue doing your maintenance and other developments in preparation for lockdown easing.

J: *Good thing for us, there was quite a demand for when things opened up, there was a high demand for hotels, and so the bit of extra effort we put in paid off well really.*

A: And that demand was from..?

J: *The public.*

A: OK very good, so what responses did your organisation employ responding to the COVID-19 pandemic?

J: *I suppose we formed a bubble; really we didn't even know what a bubble was you know, it just happened. It was that way of working that we had been. We tended to recycle a lot of materials as well, we did recycle more than we would normally so that helped with costs. Yeah, and planning for the materials and collecting the materials was slightly more difficult, but it all worked.*

A: But again; nothing that you identify as being a crisis? These weren't massive departures from your normal issues?

J: *No, no.*

A: Linking into that question, did you think that in the beginning of COVID, you know the first lockdowns and so on, that the guidance from the government was a bit vague in regards to what could and couldn't go on? There was this whole thing of sites having to close; some sites closing in March and not opening again until the summer. Within 6 weeks, you said you were open again doing bits and bobs.

J: *Yeah, we weren't really sure which way it was going, it didn't seem clear that construction could go on at the time.*

A: So do you think that better guidance from the government would have actually helped, because you wouldn't have had to take that 6-week break potentially?

J: *It was certainly poor guidance from them that's for sure. You know, I don't think there's anything definitive then, even after that period. I don't think there is now you know, I think it's all a bit touch and you go. You don't know what you can and can't do nowadays*

A: OK, so this is the second to last question. Do you think that the COVID-19 pandemic has better prepared you for better crisis level events? I suppose in a way covid globally has been a major crisis; things like that could come up in the future, you know other pandemics or other large events could happen. Do you think that this has sort of proven to yourself, or your organisation that you can continue working through these difficult times?

J: *Yeah, I think generally small companies always will anyway. They don't have the same resources as larger companies that can stand back and make an edict that people can or can't work. In a small company you have to keep going, you'll have to find a way to get around it. Generally that's what happens; small builders will always find a way around.*

A: Yeah well I'd say that's a very good thing. Ok so final question; are there any other areas that you can think of being relevant to the areas we've discussed relating to crisis, crisis management or COVID-19 that I haven't asked you about? Anything that you might think be helpful in the context of the research project?

J: *I can't think of anything to contribute to that really. We just gotta bumble along really, you know, it's the way things are.*

A: OK, very good. I will now end the recording, thank you.

Interview #4

All non-italicised text is representative of the interviewer's speech.

All italicised text is representative of the interviewee's speech.

Blue text represents each interview question being asked.

A: Can you please confirm your name, your role within your organisation, and that your organisation satisfies criteria for being an SME?

D: *Indeed, my name is [REDACTED], and I am the owner/sole director of [REDACTED], which is an SME construction company/development company.*

A: And now if you could just provide an overview of your role, and a description of what it is, in terms of typical project types and business areas in which your organisation operates?

D: *Yeah we do a mixture of development and acting as main contractors, mainly for self-builders, we try to focus mainly on the development side of things. We tend to buy developments and do those actually in SPV (special purpose vehicle) limited companies. So I have a number of other companies which will set up for a particular project, and in terms of scale of those sorts of things we tend to be up to a gross development value of probably about £2,500,000.*

We're just doing one now actually at the moment which is two houses out near [REDACTED] with a GDV (gross development value) of about £1.9 million, and that's sort of the classic type of project that we would undertake.

A: OK, brilliant. So how would you identify that your organisation as an SME sort of differs from, you know, larger organisations such as your [REDACTED] and so on, you know, Tier 1 contractors?

D: *To be honest, I actually haven't got a clue how they would work or how they would go around doing what they do. I guess the product that we are ending up creating is a more personal, bespoke type product; higher quality than probably a big housebuilders'. So I guess the difference is probably that the end result is going to be a high quality product.*

A: OK, I'll bring up a couple of characteristics that I found to be typical of SMEs in my research and just see if there's also apply to you. So typically project teams are much smaller you know, people might have more multidimensional roles; so you might be able to take on planning, or estimating, or the project management side of things. You usually find in SMEs that you can usually be quite flexible and dynamic in how you approach projects, because as I said there might be a smaller project team, and as you've mentioned there's a much more intimate and personal relationship between contractor and client. Would you agree with any of those?

D: *Yeah 100%. As I say I don't have any experience of ever working in a Tier 1 type contractors company, but yes common sense would say that obviously the scale of what they do, they have people for lots of roles, as in any big industry across different sectors, doing*

different things. Whereas actually my role is to do absolutely everything you've just mentioned. So a good example is this project we are doing at the minute; my role was to source the land, to get the planning uplift and the planning permission needed, to raise the finance, and now we start the actual build.

I'm in charge of the build procurement, quality. Absolutely everything that's involved in a project is my role; I don't have a team underneath me that does everything. So basically I have and employ a team of subcontractors, bona fide subcontractors to build, and obviously professional services; architects, structural, engineers, solicitors, etc.

They're all on a kind of sub basis as well, so yes exactly that; my role is everything. I don't have anyone else that does anything for me in that respect

A: Also SMEs, I've found, tend to be quite flexible and agile in how they approach working. You know, what you've described sounds more typical of design and build, and that side of things, and obviously within that you're taking on a more involved role than just say a subcontractor may on another development. Do you find that when you're managing all these different aspects of the business, you have to be quite agile and a lot more focused?

D: *Yeah, flexibility absolutely. It's interesting, obviously, in terms of what this interview is about in terms of crisis management. You know, I don't have a crisis management plan. That's not a word I ever used within my business, but actually inherently on a day-to-day basis things change rapidly; people let you down, materials get delayed, whatever it may be, and you'll have to think on your feet in that moment. The main role probably when you start building and throughout the whole thing is exactly that; thinking on your feet. And the Plan A that you had at 8 in the morning, often turns into a Plan B, C, or D by 2 in the afternoon, and keep the cogs of the business moving, and to accept that's totally normal, and just move along with those decisions.*

So yeah, responsibility, and also once we start building, even to the greatest architect's plans, there are things that actually don't quite work for whatever reason it may be. Maybe there's certain services, or pipework, whatever it is won't quite work. And again we have to be completely flexible and make decisions there and then and make it work in effect. So again, I have no comparison against the bigger companies because I've never worked for one, so I don't know how flexible they are, but I imagine it's a different ball game. But yeah we're 100% flexible and agile.

A: OK, brilliant. So could you please describe what you would consider to constitute a crisis specifically relating to your organisation and your general business operations? Examples and context would be welcome, specific particular types of crises you encounter?

And I'll just provide a short clarification as well; I found the term "crisis" to be quite problematic in the context of the research, because what I consider to be a crisis might be completely different to what you consider to be a crisis. You do find it in construction what could be considered crises can just be part and parcel of running any small construction enterprise... you sort of mentioned it then; people let you down, there will be supply issues, and so on...

D: *Yeah, yeah totally. It's interesting again, because crisis is not a word I would use ever actually, I would say it's too dramatic of a word, because everything that you encounter on a day-to-day basis is absolutely normal, and it's part and parcel of doing what we do.*

So my main, i suppose, from my day today working, my main concerns would always be finance. So for example, the project that we're doing at the moment, if I'm going to one of the high street banks like ██████ Bank, which is very good, and they will lend 60% of the gross development value. If you're not dealing with someone like ██████ and there's an array of private lenders in the market, they will loan probably about 70% of the gross development value.

So raising the correct finance, with the correct finance partner is probably the most crucial thing I do. And then once you have that, you've signed on the dotted line and you're taking the finance, just making sure that the cash flow is coming in when they say it will. Generally they're very good at it actually but that is probably, out of everything I do, probably the biggest thing that would be on my mind to make sure everything is working.

Everything else actually is simple decisions, when things go wrong, but obviously I need the money there to build the development. And second to that, is probably the safety of the guys on site and the welfare of them. It's interesting, we had our first ever accident on site a couple of months ago, where one of the guys fell and broke some ribs and his arm quite badly. So health and safety on site is a massive thing, and just making sure that everyone is communicating and aware of everything that should be going on site you know.

Other sorts of things that might constitute issues or a crisis in terms of the words we're using; supply issues, people letting you down...I wouldn't consider those as crises, because they are absolutely normal in a day's work.

Interestingly, another small example; I've just been on holiday for 2 weeks, and before I went I had to be very organised and on the ball in making sure all the supplies that I want have been ordered. We ordered a few big lintels, special one off lintels from a company I've used lots of times based down in London, with a promise of them being delivered on Tuesday. I went back to work on Tuesday and they've not been delivered. I rang up, and they've made a big mess of the order, and haven't ordered them, and now they're on a month's lead time, so invariably then what happens.... I guess you could view that as a crisis, but it is just normal. So then I have to go back to the office and spend an hour ringing round lots of other suppliers, and generally what happens, which is exactly what happened on Monday, is that within an hour you found what you want and someone said they can deliver it on Tuesday.

So that's the kind of stuff that is taking up a lot of my time I suppose, but it's fairly normal so I wouldn't deem that as a crisis. I would say the big concerns would be the health and safety of my guys, and making sure we get the money we need to build with.

A: OK, and I just want to delve into a subsection of what you talked a bit about there. At the beginning you brought up how you're the sole director, you have quite a small project team, and that you maintain quite an intense amount of control and responsibility throughout a project. Do you find that if you are going on holiday for a fortnight for example, or if you were to fall ill, or personal circumstances arose that made working more difficult, that these might be a challenge?

Something I've found is that people who work independently can actually have quite a risk averse attitude to their work, and as such will not necessarily have crisis management methodologies, but will have robust plans in place that if something does go wrong, they have a contingency plan for business continuity and so on. Is that something you tend to find?

D: *Yeah. Yeah I think ultimately the products that you're trying to produce, especially within these developments and whatever it is in the building world, has got to be absolutely A1 quality. The problem that you do find even with some of your best staff, is that they've got a little bit of an attitude of "oh well, that's ok", and one of the things I do on an absolute day-to-day basis when I'm on site is checking that everything's been done, and very politely pulling them up on a regular basis and saying "that needs redoing". So you can have the best guys ever, but sometimes their thought process, and it could just be accidental or they've not done something without understanding, doesn't work. So when you come back to me going away on holiday, there is always a thought because...*

A: I suppose 2 weeks can turn into 4 weeks of fixing things, if issues pile-up whilst you're away?

D: *Yeah if something goes wrong and it has a knock on effect there's always that danger. So in terms of the scale of the business; we have this development that we're doing you now, it's probably 9 months of work for us. And if we were in a position where we can actually run two or three of these projects, not quite side to side but slightly staggered across the course of a year, you'd probably be in £5 or £6 million turnover range, then absolutely what you would need is a right-hand man; you know you need a site project manager who is somebody who takes total responsibility for quality control and that you have total faith in them for that.*

So 2 weeks is fine and I'll get away with that but if anything went wrong with me, if it was illness or an accident or something, then yes that would be an issue and I would need to put in place somebody specifically with that job role. Not so much of procurement and making things are on site on time, because the lads could probably do that, but it's all about quality and it's absolutely wanting the perfect finish, and unfortunately I think a lot of subbies out there are just a little bit lazy in terms of finishing detail. Actually, "lazy" would be a bit of a rude way to consider it, they're just a bit set in their ways sometimes, or they have a different view on it.

Certainly if you're responsible for delivering finished projects then you've got to deliver that absolutely perfectly. So yes that could be an issue absolutely if that were to happen and for some reason you had a longer time off work.

A: Is that sort of contingency plan something that you have in place already? Or have you not experienced a need for it as of yet?

D: *No, I would only ever take two weeks off, which is going to be a normal holiday scenario, and that's fine. I will leave plans and get things sorted before I go, so that everyone knows what to do. And obviously in life you believe you won't fall ill do you. So should something like that happen, where you have to have 3 months, off 6-months off, it's not really a case of having contingency plans for, it's not in the scale of what I do, that you can really have*

contingency plans for. It would be a case you would have to have a very quick reaction to find somebody to take over that quality control definitely

A: Would it be a more reactive approach?

D: *Yeah, it would be. And again, obviously like I said if I was at a point where are you were in a £6,000,000 turnover rather than a £2,000,000 turnover; than yes, with that level of what's going on you would have to have a right-hand man in effect, to take over my role if I wasn't around. So it's about scaling I think, and I think I've got a scale where I can quite happily run all of that. But if I was doing a bit more than what I'm doing now, then the scalability of it would need other people involved.*

A: And is that sort of contingency plan something that you would consider bringing in your current scale or is it not of need

D: *No, right now I don't think it's applicable. I don't think I need it. It would only be... and I mean it would be nice to grow the business; so over the next five years and it would be good to take that GDV from £2,000,000 up to £5,000,000 or £6,000,000, and if that was the case then it would absolutely be about expanding and bringing other people involved at the management level to take responsibility of the finished product.*

A: OK, brilliant. So the next question is essentially asking you to outline any crisis management methodologies that you might already have in place. Would I be safe in saying that you don't really have any? It's just typical responses to typical problems, and as you've mentioned; a little bit of pre-planning and a little bit of, you know, being flexible and reactive to issues as they arise?

D: *Yeah I would say I don't really have any pre planned, you know, crisis management systems in place and it's a case of very simple things like, I have accounts and relationships with the three building merchants in Leamington Spa, So I'm not just tied to one of them. So if we all of a sudden need something, I've got options you know. So no, there's no real identifiable crisis management plan, and I think it is very much as you've said; being reactionary to daily issues.*

A: Is that tied into the size and scale of the work that you're undertaking?

D: *Yeah I think so totally actually we're at the size of where as you say I don't think I need those plans, but if you were bigger, then you would because your commitments would be bigger So what you're trying to deliver on a monthly, yearly, weekly basis. Funnily enough I say about the accident a few months ago that was one of right hand men carpenters, well he's self-employed and a subbie. Actually that had a real knock on effect in terms of my plans because he was with us basically full time. So we had to react quite quickly, you know it's common sense, but we had to react and find some other carpenters to take over whilst he's not around, very quickly which isn't perfect but yeah...*

A: A needs must, sort of thing?

D: *Yeah, exactly, yeah.*

A: OK, so do you feel that generally speaking, the business is well prepared for the crises you identified as being typical?

D: *Yeah, yeah. Because I think being prepared, and the business being prepared, is basically me being reactive to it, getting it done and getting it sorted, and resolving the issue that day. That is the scale of the business, and that's my role.*

A: Do you think it's important to have a robust end goal, and that may be in terms of project scope, quality, delivering on time within budget to an expected quality? And to be dynamic and flexible, in that whilst you have an end goal in sight, there may not be a straight path there, and you'll have to take diversions and so on to reach it?

D: *I think that is absolutely day-to-day living, whether it be a business or your life, and I think that's totally the way that if you are to run a business the way I do, then you can only do it with that mind-set totally. And you know everyone is different with how they deal with stress, and you always have a plan and I love having a plan. Funnily enough one of my catch lines with all the guys that I employ, that they take the piss out of me for, is that when they ask me a question the first thing I say is "go and look at the plan", because they're all pinned up on the wall and drawn up wherever we working, and then come and talk to me about it... so take responsibility a little bit for yourself guys and then come and talk to me if you've got an issue or if you've got to understand it as much as I do.*

So yeah, absolutely, and then as things change you've got to be able to, you know... Plan A will turn into Plan B, C, D or whatever; it may be the end result might be slightly different, but it will still be fab, and I think that's the way that we work in having an open and flexible view on things.

A: Fantastic. OK, so just got a couple of questions now linking into the COVID-19 pandemic. So was the COVID-19 pandemic something that took your organisation by surprise, in terms of effects and consequences? Obviously the pandemic was shot out of nowhere, but in terms of the effects and consequences that you've faced since March 2020 when we started having locked down and so on...

D: *The original lockdown had a big knock on effect for me, because we were just about to start a self-build, acting as a main contractor for a self-builder, and his business was badly affected so he pulled the plug on it. Again it comes down to the scalability of our business; something like that, which was probably about a year's work actually, it was quite a big house we were building for him, the first 6-months we would solely be working for him doing what we're doing. So basically we were out of work for 6 months, which obviously a lot of people were as well given the pandemic.*

So that did have a knock-on effect on us, but then actually when we are able to get back to it, because obviously the building world was one of the things that the government were encouraging, we did get back to it. And yes there were shortages of materials and things, but again with the fact that I've got lots of contacts in different merchants, and I spend a lot of my time pre-planning and pre-booking things weeks and weeks in advance, it wasn't a massive issue for me. Actually lots of the subbies that work for me, actually do work for themselves, and constantly moaning they couldn't get plaster, they couldn't get this, they

couldn't get that, that's because they were walking in in the mornings expecting to be able to buy whatever they wanted. So again, it's just about pre-planning everything.

Since then it's not been too bad, and then we all work outside most of the time, and I think a lot of it is about everyone feeling comfy with it, is that we're all outside; we're obviously adhering to all the protocols that have been put in place. So we would normally have a canteen on site you know, and we actually haven't done it on purpose because that would be the only environment where we would be sat in a room together. So people have tended to sit outside, or if the weather is bad we go to sit in our vans just to not be in that close contact.

So yeah it hasn't been bad after the initial effect of shutdown, but since then it hasn't really affected us you know, we're just abiding by a common sense approach, given the information we've been told we should be doing.

A: In the early days of the pandemic, I've sort of found a lot of construction organisations were a bit unclear as to what could and what couldn't happen, because guidance was relatively slow sort of roll out. So when you say you were shut down for 6-months...

D: *It was about 6-months we didn't do anything for, and that was so much because of the guidance or whatever, it was because the project that we've been doing, the client had to pull the plug on it, and it was a financial side of things, he was badly affected.*

But you are right actually, I'd forgotten about that. So when they first started saying that we could go back to work, there was the question of whether or not the building work we were doing could go on, and I suppose if you're a small residential builder; could you go into people's houses and that sort of stuff? There was a lot of confusion about that, but because of the scenario we were in, we sort of missed that actually and by the time we were back on it, I think there was enough information out there to say we could be back working. And everybody was keen to be back outside doing what they were supposed to be doing really, so everyone was up for being back at it.

A: Do you mind me asking how many in-house staff you have at [REDACTED]?

D: *We don't have any staff in-house at all. We do have a team of regular subcontractors, so I have an inner core of guys who basically do almost work me full time, and there are probably 6 of those guys. And then we obviously have the same subbies that we would go to, as in roofing contractors, plumbers, plasterers etc. So all in all this probably about another 10 or 12 guys that will come in, but the main six are with me most of the time, and these other guys might be there for 3 months of the year, or whatever it is at that point of the build.*

A: OK, and as you don't really have any in-house staff, apart from yourself, I'm assuming that you didn't have to fall on the furlough scheme to keep people going during this period?

D: *No, no, we didn't because nobody is staff, obviously that wouldn't be applicable to us. And again actually, I didn't claim any of the things that were claimable, obviously we had cash in the bank, and we could kind of see that we would be back working as soon as the client got going.*

A: Does that come from being fiscally responsible, and ensuring that there's a bit of a layover if works fall off?

D: *Yeah, I mean by default, if we make a profit I'm not looking to draw that profit and go spend it. I would leave money in the business absolutely, partly because we're always looking at developments, and that needs a lot of money as you need to go and buy the land before raising the finance. So in theory there's something there to be tied back to, and just to be sensible about it I think*

A: *OK, and the next question you have sort of covered it somewhat already, but I'll ask just in case there's any other areas you can identify as being relevant. So what sort of responses did you employ in responding to the challenges introduced by COVID-19?*

D: *We didn't really. I think the biggest concern when we first went back to work was "are there materials there for us", because all the factories were shut down, and there were lots of headlines about the lack of materials. So that was just a case of being very proactive and going back to the guys that I knew that were on the managerial level in all the merchants; just touching base with them very soon after we got back, and almost pre-ordering stuff that we knew we might want, and in a normal world we might not have been ordering at that point, and we would have ordered it until another month's time. So just to make sure that we had any materials that we might need; that was the main concern, actually just making sure we weren't going to run out of materials. There's been quite a lot of hefty price increases as well, but there's nothing you can do about that. You know timber, I'm sure you've heard, has more than doubled in price in the last year, but what can you do? You've got to carry on building, and unfortunately you've got to pay the extra money, so there's not a lot you can do about that one.*

So yeah, the main concern wasn't really so much about staff, because everyone was keen to get back at it, it was just making sure that we have the materials to build with when we needed.

A: *OK, and you mentioned a couple of other things about not having a canteen just to sort of enhance that's social distancing, and as you know you said common sense in regards to ensuring that everything is kept sanitary, in terms of hand washing, masks, and just ensuring the people aren't mingling.*

D: *Everyone was very good actually taking on board the handwashing... and not so much masks, because I say we were working outside starting developments, and so it's all outside or in buildings that have no rooms and windows and doors.*

But everyone was conscious about that, and normally for canteens we would hire in one of these porta-cabins for the site, which is a welfare unit. But having talks with all the guys, I took their view on it and we decided not to have it for this particular development and even now we don't have it, because at lunch time it means you've got actually 6 or 10 people sat in a 4m by 2m cube with no ventilation, and it did seem that if anyone was going to have COVID, it would be spread in there. But otherwise everyone is quite distanced on the site.

A: *And in regards to materials, I found that some SMEs, in addition to exploring alternative routes and potentially going further afield and looking at different materials they can use, there's often been an increase in the leanness of material usage, with less wastage, and rather than ordering in a long-term supply, it's ordering precisely what's needed for the job and ensuring that there's minimum wastage. Is that something you looked into?*

D: *It was sort of the opposite actually. I mean obviously we always want minimum wastage because one of my roles as financial director is that wastage of materials is a waste of money, so I'm always on that anyhow ensuring that we are careful about such things. I think you know the classic thing was plaster; that was in a real shortage, so actually we were ordering extra to ensure that we had surplus supply, and that we weren't getting caught short with it. Plaster boards as well were a bit of an issue.*

So no, not really from the point of view on cutting back on being more lean with it, because if you are building a house it needs "x" square metres of plasterboard and bags of plaster to do it you know, there isn't any cutting back you can do with it in that respect. Everything is spec'd as it is, and with what we're doing there's not really any materials that can be swapped with other materials you know, it's all generally been specified by the architect we've worked with.

A: *I suppose that ties into the specs, and you mention that the end product quality is something that's really important to you.*

D: *Yes that's everything really; the end quality of the product. Maybe the only thing you can look at swapping is roof tiles, or facing bricks; for example you know on this particular project we're doing, we're building it out of ICF (insulated concrete forms) you know, like massive LEGO bricks you fill with concrete. It's the first time we've used them, and we were going to use a facing brick on the outside, but the supplier's lead time for the bricks went from 6 weeks to 30 or 35 weeks, so getting on for a year, which is just ridiculous!*

So actually that made us really look at the actual specification for what we were doing and instead of using a normal brick, we're using a facing brick or a slip brick, sorry, with a tile that's going on the face of the system. So yeah that's a classic COVID knock on effect with the time, so actually we have changed specs and whilst the finished product will look exactly the same, it means we can crack on without losing any time.

A: *Actually it's interesting that you bring up ICF; I've been reading about it recently, because I was reading into material supply issues, and there has been a bit of a move towards them in the industry.*

D: *The reason we chose it for this development is that one of our USP's (unique selling points) is a low carbon product, and it's a funny one with ICF because they are made from petrochemicals because they are polystyrene on the outside, and then you are pouring concrete in the middle which doesn't have a good reputation for being low carbon. But CEMEX launched a lower slash low carbon form of concrete which is slightly more expensive, but we've used it in conjunction with the ICF, and we are selling the end products as, not as eco-homes, but as low carbon output homes once they've built.*

So there has to be a bit of compromise, but there's not really a perfect world at the moment for a low-carbon house, unless you go completely wild and build it out of straw bales or something, which yes would be amazing, but isn't practical for a developer. So the reason for the ICF was just that actually, you know a quick build, and we do use a lot of timber frames and we compared it to a timber frame building time and decided to go the ICF route, and have a product which won't need much heating when it's finished.

A: And was that done as business innovation, or in response to the COVID-19 pandemic?

D: *Yeah, no, that has nothing to do with COVID actually. That's purely my own personal interests, and what I want to be producing in building new houses.*

A: It shows though, that you're able to explore alternative methods and materials even in a time of "crisis".

D: *Yeah, absolutely and as I say these guys have had no supply issues actually with getting us ICF blocks and things, they had no issues. And again, funnily enough you'll hear lots of rumours in the building world, but we needed about 200 tons of hard-core when we first got on site, and I heard rumours that HS2 had all the hard-core available. But again with the right contacts, where we get our stuff from, they were able to do it. And then I heard that people couldn't get concrete because there was no cement around, but CEMEX had no issue. So I think as long as you've got the contacts and the working relationships, it seems to be ok I think.*

A: So, penultimate question: do you think or find that maybe the COVID-19 pandemic has better prepared you for potential future crises potentially? Or do you find that the way you've been going is the way you'll keep going?

D: *I think at our scale, it's just another daily issue that you have to deal with so no I don't think it will change anything for us. I don't think it'll make me feel better prepared for anything else. I think it just makes you realise that any moment around the corner something completely unexpected can not only blindside you, but also the whole world. But from my point of view; at the scale of what we are doing, it's more of a case of being reactionary and thinking on your feet as soon as that happens.*

A: OK, and the final question: Are there any other areas that you would identify as being relevant relating to crisis management or covid-19 that you would talk about? Or do you think that we covered everything quite well?

D: *I think we've probably covered everything actually; yeah I think we have. So no I don't think there is to be honest.*

A: OK, brilliant. Thank you very much for your participation in this research project, I will end the recording now.

Interview #5

All non-italicised text is representative of the interviewer's speech.

All italicised text is representative of the interviewee's speech.

Blue text represents each interview question being asked.

A: Can you please confirm your name, your role within your organisation, and that your organisation satisfies criteria for being an SME?

J: *Hi, my name is [REDACTED]. I run a small business building business within [REDACTED]. I guess I'm part boss of the business, there's two of us that sort of run it, so yeah I sort of overlook the day to day management and running of the business.*

A: And would you identify that the business is on the small and medium-sized scale of construction?

J: *It's definitely on a small scale of construction. More of the domestic side of things.*

A: Could you provide an overview of your role within the organisation, and a description of the typical project types and business areas of the business?

J: *Yeah, like I say, I sort of oversee the day to day affairs of the business, making sure that materials and stuff are on-site. And generally the types of jobs are anything from a small lean-to, lofts, wrap-arounds, new builds, rear extensions, front extensions, general domestic building and that sometimes links into the house, where they want more work such as interior work doing. It could be structural or just aesthetic.*

A: When you say your role focuses on the management side of things, what might that actually include on an average business day or week?

J: *Really just sort of making sure the materials are on site, making sure that the trades come when they say they're going to come. Running a small business as I said before is mainly managing the subbies that are coming in. Basically it's just we subcontract out a lot of the work, we do a lot of the work ourselves; I'm a carpenter by trade, so I'll put the roof on and all that stuff, but I'm not an electrician, I'm not a bricklayer. So it's making sure all the materials are on-site for the trades whoever is coming in, and making sure that everything is there. I make sure that they sort of turn up when they say they're going to turn up, which is very difficult.*

A: And how would your organisation as an SME differ from larger organisations, such as Tier 1 contractors?

J: I should imagine that a larger organisation would be more organised and would probably think they're more regimented with how stuff runs from day-to-day, you know with a diary. And that is very difficult, let's say with a company, a small company. The problem we have is managing the trades to come on when they say they are, because they're all subcontractors and they are also subcontracting to other people such as myself who manage extensions and

other works. When there's an issue down the line on one thing, it's a knock on effect on everything you know. I threw my diary away about 10 years ago; I couldn't use a diary, so I have an order of service. So yeah the difference between myself and a larger company? I can't run it like a big company. I've tried doing it, and it just doesn't work. So it's about managing people and managing the customers' expectations.

A: And in regards to the specific characteristics and capabilities of the business, whether that be in terms of size, the assets you'll have as a business in regards to certain specialisations...

J: *Do we specialise in a particular area?*

A: No, just generally, how would you also see yourself as being different from large organisations? Is it just size?

J: *Well I would say we put a personal touch on it, because with a larger company I think a personal touch goes by the wayside. The customer literally has my heart and soul on the line here, so when I say I'm going to do a particular project I want to see that through, and make sure everything is done perfectly. There are a lot of corners you can cut in building to make more money, but making money isn't always the way forward. So I would rather have a customer that's happy; because I don't advertise. I've never advertised, I've got nothing on the van, I don't put anything in the papers, but the building inspector recommends me. My architect recommended me; I've done all my architect best friends' places.*

So I would like to think what I give over a larger company is more of a personal touch. I'm quite passionate about what I do. So from the concept, the drawings, and even from the pre-concept stages sometimes, I can get involved in. I'm really passionate about what they're doing with it, you know if it's slightly different or whatever, I find it quite exciting. So I can see that through the whole job, from concept through to the finishing touch, because I'm a finisher. I'm a carpenter. So yes the decorator comes in after me, but I have to hand over this perfect canvas for them that's in a particular standard, and I have high standards in how I do my carpentry, and how that looks and how it's got to finish in the end. I would like to think when I hand over a job that what the client's expectations were, they've actually been surpassed.

A: I think because you're a smaller business, you can have that much more intimate relationship with the client?

J: *Yeah absolutely. You know, I've had a slightly bigger company, let's say, in the past... but yes that was quite difficult to manage as well, so I pulled out of that and made it slightly smaller. And I'm quite happy for that.*

A: And do you find that being smaller, you can be a lot more flexible and dynamic in the way you approach projects and work?

J: *Yeah without a doubt I think. So you know I'm looking for jobs and customers; I won't just work for any customer, I'm quite fussy about who I want to work for. It needs to be good. I'm quite highly strung, and I need quite a relaxed customer to get the best out of me. I don't need a customer who's stressed and highly strung, because that won't bring the best out of me. I'm not always the best at dealing with those sorts of people.*

A: So can you please describe what you would consider to constitute a crisis specifically relating to what it is your business generally does. Examples and context would be welcome now. And I'll just preface this; "crisis" is a bit of a difficult word, because to you it can mean something completely different to me.

J: *It means stress! I'm quite a stressy person! A crisis would be you know maybe one of the trades has become ill with COVID, or all of a sudden we're on a lockdown and that. Or let's say, when COVID first came [redacted] got COVID and he was ill for 5 weeks, and we got ill for quite a while as well. That's a crisis.*

Materials within the COVID period, and particularly the last part of the COVID period, there has been a lack of materials such as gypsum based products, road stone products, you know hard cores and stuff... and HS2 has sucked up all the aggregates, and those for me would be a crisis.

A: Are those crises though? Or are they just evolutions of existing problems that are part of construction, you know, there's always been concerns relating to materials...

J: *They are more of a crisis now (due to COVID). Timber for example, per cubic metre, has more than doubled in price. Steel has risen dramatically, and when you're having your steels engineered, they've just gone silly! So basically they can be part of a crisis, yes, for example if I've quoted a load of jobs 12 months ago and now I can't honour them, then yes that's a bit of a crisis. I don't have anyone in an office; it's me in the office, or [redacted] who I work with, and we will deal with that and the knock on effects, and have to deal with it.*

A: So what you identified there is that you might have personnel issues, so if people get sick, material issues, and so on. Are those crises in and of themselves? Or is it just that because we're in the midst of COVID, and due to the effects of Brexit, the situations are being enhanced into crises?

J: *You do get instances from time to time where you might get a slight shortage of a particular material, but generally as a rule, day to day as far as I can remember, generally things are ok. But yeah, certainly COVID has created some serious ripples, but I think equally Brexit has you know. I'm not a Brexiteer. I was a Remainer, and still am, for many reasons... but we'll not get political here... (Laughs)*

A: So following on from that; can you outline if you have any crisis management methodologies that your business employs in response to those issues?

J: *My methodology would be... well building work is as I explained earlier is all expectations management, in regards to customer expectations. There's nothing that's written down on paper. Everyday there are problems, and it's just another problem to deal with, and it's just managing it on a day-to-day basis or maybe a week to week basis. But certainly there is no hard outlined paperwork or approaches that if A, B, or C happened; we will follow these procedures. It's a very small business and we just don't have those things in place. So it is literally managing things on a day-to-day basis and working out the best way forward.*

A: So it's very much reactive, rather than proactive?

J: *Yeah, without a doubt! You know you have to be proactive as in... if you take for instance my house here that we're developing, we know there's going to be a shortage of VELUX windows; so I have to pre-order those by 3 months, whereas before I could get them within 5 days. So there's going to be a massive shortage of those because they are coming from Scandinavia or wherever it is. So that's proactive and we may have to have more forethought now and think ahead a little bit more, which you do to an extent being a small building firm. You'll have to sort of think about the whole job and how it's going to unfold.*

But on a day-to-day basis, COVID has thrown in a whole load of curveballs and the way you thought somebody might be coming in a couple of weeks' time or you'll get the materials in a couple of weeks, you're finding that they're not ringing me to tell me, that could be the builders merchants, and all the sudden you can't have that for a few weeks more so you are proactive to an extent, but you'll find that you are doing things on a day-to-day flexible and reactive basis.

A: *And do you feel that generally speaking, the business is well prepared for the crises you've identified. You know, that could be material and supply issues, labour issues, managing client expectations... Are you well prepared?*

J: *You know, as I say, on a day-to-day basis you're managing these expectations and people. It's just doing that on a larger scale in a way. And if you're of a more worrying demeanour like I am, and you worry about the job getting done properly and people passing my name on, I do worry about it more; then I do wake up at night, and I do have to write things down at night, or think about things and make lists... So yeah it's a mixture of reactive approaches and being proactive in pre-planning.*

A: *So in regards though, putting aside COVID and Brexit for one minute, I've found in some of my research that certain issues are potentially being enhanced by COVID and Brexit and so on, and just generally typical of the construction industry regardless. There have always been concerns relating to supplies and materials and there's always been concerns relating to labour and the expectations of clients. So in regards to those, putting aside COVID for just a moment, would you feel that you handle those quite well and that you're well prepared for those? What might you do if you experienced a material supply issue before COVID?*

J: *You know, I just ring around. You've got to go searching, but this is also a day-to-day thing, because I generally don't want to stick with one merchant. So on a day-to-day basis you're fighting for pricing, especially pre-COVID.*

I don't have any education like yourself, doing construction project management at university you know. I don't have a formal knowledge of these things. The only thing that I did, and I left that early, was carpentry and joinery at college, because I thought I was going to be doing something else and making money from that (mimes playing the piano and laughs).

Yeah, I think we deal with issues. We generally do feel prepared by being reactive.

A: *Moving on now to some COVID specific questions: the COVID-19 pandemic was something that took the whole world by surprise in terms of the effects and consequences.*

What sort of effects and consequences of the pandemic did you experience within your business?

J: *At first, we had 4 or 5 weeks off, because obviously we were on a lockdown and it was a mandatory lockdown. And then I think we were allowed to go back... I can't quite remember when, but we did have a 4 or 5 week period off. There was a site down the road that the customers were living in, but it was big enough for us to work on with social distancing, wearing gloves and masks. It was acceptable for us to go back, and then it really was just being mindful of the customer, where we were within the property.*

A: And in regards to other effects and consequences of the pandemic, so you know putting aside the responses you might have had to those for a moment... Did you experience an increase in material supply issues for example? An increase in business not being as frequent? Did people maybe want to spend less money on their houses, and so on?

J: *No, Christ it got worse! People wanted to spend more money. There was a massive increase because people were off work, and they took to doing their houses up. So what we had a massive shortfall of initially were gypsum based products, which was the first thing. The second thing was, that I noticed, were products for garden materials and anything to do with DIY etc. You know, I wanted certain fencing stuff or one particular thing we wanted was a coating for some fence panels or something; we couldn't get any for love nor money.*

People were at home bored needing something to do, so Screwfix for example, you couldn't buy certain DIY products, and fencing and decking products were prime things. We were heading towards spring and summer, and people started working on their homes, and off the back of that people were like "ok well if we're doing this we might as well do the rest of the house... "

A: And then they'd come to you?

J: *Oh yeah. Yeah. I mean I've had to knock back a quote today for a big job in Solihull. I'm booked for the next, well, for the foreseeable future.*

A: So it's been the good with the bad in a way; you had to respond to material supply issues, people got sick with COVID-19 within the business...

J: *Yeah, we had a lot of issues with the trades for example, where one particular trade on site doesn't want the COVID vaccines and they think that they're fit and healthy. I passed him the evidence from the scientific side of things the other day, and you know with a vaccine you're 3 times less likely to contract COVID... But he won't even listen to that.*

A: I suppose that could be a bit of a challenge and that may potentially limit the sort of work that can go on?

J: *Because potentially if he had been double jabbed, he wouldn't have contracted COVID-19, and actually he did contract COVID! That's been more of a recent thing, which then has a knock on the job.*

A: But yes as I say, has it been the good with the bad? Bad in terms of supply issues, the challenges of working on sites, and people getting ill and so on...But then on the flipside

you've actually experienced an uptick in the amount of work you've been undertaking. Would you say there's been a considerable increase?

J: *Yeah, everyone I speak to in the business has said that they've never been so busy. I spoke to a mate last night, and he's never been so busy.*

A: And within your business?

J: *Never, ever been so busy. But yeah tax increases are coming with National Insurance and so on...The bubble is definitely going to burst I think, because everyone's been having these handouts and grants, and it's got to be paid back somehow. So that's one thing, and now I think we're having a new local council tax increase for a period of a couple of years...So yeah the bubble will burst.*

A: With increased workload, at least you can make hay while the sun is shining, sort of thing?

J: *Yeah.*

A: Did the business employ any specific responses in responding to the challenges introduced by COVID?

J: *Yeah, health and safety wise, if that's what you're inferring?*

A: Well yeah, you know, in terms of health and safety, in terms of responding to supply issues and so on...Just anything that you introduced post-COVID because of any new challenges?

J: *Well we're just a bit more mindful really, in trying to order things in time and being more proactive like you said earlier. I'd say we are more proactive now. We'll probably contact more suppliers, going direct as well, so we're having to be more proactive in that way.*

And in terms of health and safety, and people coming on site, we have to be mindful in that way, because you know, one person coming on whilst infected can affect the whole team. And our customers at the minute have got responsible jobs within their sectors, and whilst they may work from home, if they do get it (COVID) they could not run their own businesses and so on. If I got COVID-19 and was talking to a client and I didn't know, then he may become ill and that could affect his business, so we're more mindful of that.

A: Focusing what you're saying there, would the focus of the responses you've taken in response to the COVID-19 pandemic be focused on the personal side of things? You're concerned about people getting ill, you're concerned about spreading the virus on these sites and so on. Is there less of a focus on materials being in short supply, because you can respond to that by being proactive and ordering alternative materials earlier? As well, being self-employed, if you were to fall ill, you potentially wouldn't be able to work.

J: *I think they go hand in hand, because they affect each other just as much, you know. A knock on spending 10 days in isolation, or having to wait 2 weeks for materials; they have just as much of a knock on as each other in terms of finishing the job, and the expectations of the customer.*

A: And this is the penultimate question: do you feel that the COVID-19 pandemic and the way you've weathered the storm thus far, as lot of small businesses fell by the wayside quite early on...So do you feel that experiencing the COVID-19 pandemic has better prepared you for potential future crisis events?

J: *Yeah it opens your eyes as to how it's unfolded yeah I guess, so learning to be more proactive is important, and trying to get everyone on board, let's say, you know with COVID-19; if someone doesn't want the vaccine, you'd like to think that people would be by pulling together as a team...but as trees are not all the same, people aren't the same, and the place would be boring if we all had the same opinion.*

A: So let's say that if COVID were to have finished today, and everything went back to normal, and then in a few years' time there's a new pandemic that comes about...do you think you'll be able to fall into the same patterns of being proactive and resilient to a new crisis?

J: *Oh without a doubt. I think yeah, we'd be much more proactive and prepared for that. I think you can become very complacent sometimes, in construction you can end up just ticking along, whereas throughout COVID you've had to learn to be snappy and proactive and reactive, because if you're not then the next builder down the road is going to have the materials you want, or you're going to end up having more time off if you're not mindful other people around you and your surroundings.*

A: OK, final question, and you don't have to answer if there isn't...are there any other areas that you can think of being relevant to the research project relating to crisis, crisis management, or COVID-19 that I haven't asked you about, that you think could be an interesting insight?

J: *Oh crumbs...I'll probably wake up at 3AM in the morning thinking "oh I need to tell [REDACTED] about that one..." It's probably one of those...I think we've covered a lot of it to be fair. Yeah as I said, we're a small business, and we're reasonably organised, but I just can't have a diary anymore or run it like a big business. Because you haven't got a whole team working for you, you know I don't have people on my books, everyone we have is a subcontractor so they pay their own tax etc, and that makes it more difficult for us to manage, because obviously I can't tell a subcontractor what to do as they work for themselves really. But you have to feed the monster and I'm not so sure I want that stressing life of being a bigger business*

A: So generally you feel that being small, flexible, and dynamic suits you?

J: *Yeah it suits me because I've not got the managerial skills and people skills, although I am quite good with people, it's a different ball game managing lots of expectations. Also when you've got a small business, it's quite like writing music these days; you've got to be the writer, the engineer, the producer, the management, you got to promote yourself, you've got to do it all. So in business now what I do, and I'm not physically doing everything, I'm still managing things directly, whereas in a bigger business you've got lots of people, on lots of desks managing those things. At the small-scale I manage all of those things.*

A: So in a way you take on more responsibility, then you actually relieve yourself of a lot of stress, because you only answer to yourself and you don't have to go chasing higher-ups?

J: *I answer to myself, but also I answer directly to the customer. At the end of the day they are spending their life's money with you, and when you're ripping the back of their house off you've got to be mindful, and not all builders are, but when you're ripping the back of their house off, you've got to manage that and make sure that these people are confident, because when they are spending a fair bit of money on you you've got to make sure they're happy.*

A: Brilliant, thank you, I'll end the interview recording now.

Interview #6

All non-italicised text is representative of the interviewer's speech.

All italicised text is representative of the interviewee's speech.

Blue text represents each interview question being asked.

A: Can you please confirm your name, your role within your organisation, what your organisation does, and that your organisation satisfies the criteria for being an SME?

S: *My name is [REDACTED]; Managing Director, Yes the company would satisfy as being an SME.*

A: Can you please provide an overview of your role within the organisation and then what it is that the business generally does in terms of day-to-day operations, and types of project you undertake?

S: *I oversee all of our management teams, from the site level all the way through to the office. I also oversee the pricing and structure within the company. We carry out some contract brickwork to all the major house builders in Great Britain; including Taylor Wimpey, Bovis Homes, Vistry Group, Crest Nicholson, Redrow...you know all the major house builders.*

A: And how would you identify that the organisation as an SME differs from larger organisations like Tier 1 contractors? That could be in terms of your approach to work, characteristics and capabilities of the business in comparison to these larger organisations, and generally how do you see yourself being different to larger companies?

S: *I think we've got the ability to be able to be more flexible with the staff, obviously we can employ more if we need to and we can downscale as well. You know we don't feel as though we're tied into contracts, we can move our labour from one client to another, without feeling the need to be tied to anyone for the long term. So yeah, I mean with any small to medium business managing cash flow is imperative, but ultimately it's easier for me to manage because we're not constricted to certain 10 year contracts and so on.*

A: And in terms of size, what are the total numbers that you have?

S: *We turnover between £5,000,000 and £6,000,000, and we employ around 130 blokes. So it does take a bit of managing. It's not just back of a fag packet stuff. It's a reasonable sized business. And cash flow is imperative, but as I say as we're under £10,000,000. We're not really constricted, we have the ability to be flexible and move from one project to another opportunity where they're going to pay us more.*

A: So although the business is a pretty good size, you don't necessarily have that level of formality and corporate culture?

S: *Correct. That's what I don't really want, and try to steer away from.*

A: Great. Now, could you describe what you or the business would consider to be a crisis? And I understand the term “crisis” can be a bit difficult, because what you think is a crisis might be different to what I think is a crisis.

S: *Well I believe that the industry was in crisis in 2008. When the banks started to go bankrupt. Sites were shutting, overnight literally, sites would be closed up and mothballed, and we went from turning over...our turnover went down by 75% in 3 months. So that to me, is a crisis.*

A: Just in terms of the financial implications?

S: *In terms of everything really, we had some borrowings that we are committed to, whilst not huge, but we were developing some land at the time. The work dried up, and it dried up within months. It wasn't years. It was in months, it was very rapid, 5 or 6 weeks really. That to me was a crisis, because you know, when you're committed to paying mortgages and you've got plant, and then all of a sudden your turnover is down by 75%...do the figures. You go from earning 10 grand a week, to 2.5 grand a week. And yeah, that was pretty rough.*

A: And then in terms of lack of materials are lack of finance or a lack of labour? In some of my interviews I found that some interviewees don't identify those as crises, and just identify them as being part and parcel of being in the construction industry; issues that have been around for years.

S: *Of course. We've always faced challenges with materials and supply chains. That's always been the case. I mean especially if you've got stuff that's not off the shelf, you're relying on people to produce them in Ireland for example, or overseas. So there's always going to be problems in construction. I'm not quite affected by it because we just use bricks and blocks predominantly, and all our clients have contracts with the people that supply and make them, so we have first dibs really over the building merchants. So we don't really suffer too much with supply chain issues...*

A: What about labour?

S: *Labour is a bigger issue. If you ask me why we're not turning over £15 million a year, it's because we don't have the labour to do it, it's as simple as that. There's a massive labour shortage within the industry, which isn't really a crisis because obviously we take on work to suit our labour resources. I do think that could be deemed as, not much of a crisis, but as a big problem within the industry. People aren't coming into the industry, people don't want to learn trades anymore.*

So I don't know what a crisis is to me...a crisis is only really something that's life threatening. I don't see a shortage of labour being a crisis, but it is a big problem, and it's not going away. It's actually getting worse.

A: How about Brexit? You talk about materials...did you find that Brexit impacted on material supplies?

S: *No. I haven't found any issues with materials. We had our site stopped for a week or so, but because we've got 9 or 12 live sites, we move our labour around quite flexibly.*

COVID to me was not as much of a crisis as the 2008 financial crisis was. The Government gave us no help at all back then. Our interest rates were still 3% right through until 2010, when they started dropping interest rates, so we had no help at all. Our work literally stopped overnight and we had to go into some sort of private works, and there wasn't a lot of that around, because it was a recession; a double-dip recession.

COVID has been a bit of a laugh for me compared to the recession, because there's money washing around everywhere. People are buying houses. I've never built houses as fast as I am now.

A: I'll ask you more specifically about COVID in later questions. In my research I've also found that within SMEs, there is usually one particular bloke who will own the business and it's in his interest to keep it running, and if he were to fall ill or he were to take time off, and there's not that level of flexibility where someone else can pick up his work for him...

S: *What I've done carefully, we've planned this through the expansion we've gone through over the last five or six years, there's always been someone who can pick up the baton. Relating to what we talked about earlier on, I've got a good contracts manager and he's supported by good working foremen, and we've got people who can replace a working foreman. And then we've also got someone who can do the contracts role as well, so we never leave ourselves exposed like that. I go away a lot now and really there's nothing I can't do over the phone. So the infrastructure is there really to expand or contract as we need. So I never leave myself exposed by being reliant on one bloke.*

A: And that just comes from good leadership, proactive measures...

S: *It's experience isn't it. I started over 30 years ago so over those years I had come to rely on certain people, and they've let me down and consequently that's had a massive impact on the business short-term. So we've got things in place now that we don't rely on one person.*

A: So next question now; do you feel or identify that you have any crisis management methodologies within the business?

S: *Not particularly, no. We just deal with things as they come.*

A: So it's quite reactive in a way?

S: *Yeah it has to be doesn't it? That's how building has always been. A crisis could potentially be if the building burnt down. How do you deem a crisis?! Work will always fluctuate, you will always have problems with staff, and you'll always have problems with materials. What I see is a day-to-day problem in the construction industry; others might think it's a crisis.*

In this industry we always are going to have things that come up. It's the nature of it when you're building something by hand and you're relying on people skills, they can go off ill or whatever. You're always going to have labour shortages and material shortages, nothing is ever going to go straight forward. Things do change as well, you know if it's a design and build and the design gets changed, and you cope with it and get over it. That's it. I don't really see anything being a real crisis. If I did have to name a crisis, it would be years ago in 2008.

A: So generally speaking do you feel that the company and the business is well situated to respond to these problems that you've identified as being typical?

S: *Yeah, we haven't overstretched ourselves, we don't have lots of debt around us, yes we're in a position if we have to offload people we will. The lads want to be on the self-employed basis, so if work dried up, then we would simply let them go. We've got cash in the bank, and we're quite liquid. So it wouldn't really affect us.*

A: So some more COVID oriented questions now; the COVID-19 pandemic was something but took the world by surprise; you could see it coming in the news a bit, but to be still here nearly two years later, nobody really could have anticipated. Can you identify any effects, consequences or challenges of the COVID-19 pandemic for the business?

S: *There was some extra cost initially, with all the health and safety side of things, you know what we've got to put in place. We initially only had about a week off as well; there were 12 live sites of various sizes. Fortunately 3 of the biggest opened back up very quickly. The main challenge really was coming to grips with what they wanted from us regarding PPE etc.*

It was very much a hands-on approach. Things were changing from week to week, and a bit of common sense was required really. We were able to cope with it quite easily, and then looking back on it, it's all been quite laughable I think. I really do. It's an absolute joke!

We haven't stopped working, you know, some sites shut down but then we had some properties in the town that we decided to jump on and do a bit of refurb and modernisation to them. So some of the lads worked on those, but with the government grants that the lads received, they didn't seem too fussed about being off it. It was just business as normal for me, it really was.

A: Did you identify any sort of supply issues at first?

S: *No, not at all. There were one or two blokes that didn't want to come back to work, but there's very few who decided not to come back to work. Most came back to work and got on with things. You know, they're self-employed, and if they need the money, they'll do what they've got to do.*

So we were unaffected by it all.

A: I suppose that sort of answers the next question in a way, but what responses did the business employ in responding to the challenges of the COVID pandemic?

S: *We didn't change any aspect of our business at all really. We were asked by some housebuilders that thought sale rates were dropping and cancellation rates were going up, they did ask for a discount. We said we could work with that because obviously we pass it on to our lads and give the lads reduced rates.*

Very soon we were back to work, and when all the sites opened up three months later they realised that sales were going the other way actually, and that sales were taking off! We've had our busiest 2 years that we've ever had!

A: That was one of the next things I was going to ask next. Did you find that workload picked up?

S: *I can give you an instance. There was a meeting with the construction directors at Taylor Wimpey for their biggest region, the Mercia region. They told me in January 2020 before any of this had come to light, there were rumours in the news though, that on one particular site they wanted to reduce production by 15% or 20% and that was in January of 2020. It had been a busy site, but we thought you know that just happens; in certain areas sales slow down. They decided to take a few units out, then COVID came along in March. Their sites only shut for a few weeks and when we went back, not only had those units that had been taken out, been put back in, they actually wanted output to be increased by 25%. So we're actually now building 25% faster than what we were pre March 2020*

A: And why do you think that is? Do people just want to spend their money now?

S: *God only knows, [REDACTED]. I wish I had the answer to it but I really don't know; it would take a cleverer man than me. I can't tell you why, maybe people have thought to themselves that life is too short, they're not going to save, maybe they've thought that they don't want to live in council flats, they want to live in detached houses in the countryside...I don't know. I can't fathom it out.*

A: But regardless, it picked up?

S: *It's flying. On every site, we've been asked to increase production by 15% at least, so work it out. As I said to you earlier on, we could quite easily be turning over £9,000,000 here, if we could find the labour.*

A: So putting to one side any potential tragedy associated with the COVID pandemic, would you actually say it's been a bit of a blessing in disguise?

S: *It's a boom. And we honestly can't work out why or how.*

A: You're just making hay whilst the sun is shining?

S: *That's what we've decided to do. We're taking it whilst it's there.*

A: So second to last question now, do you think that the COVID pandemic has better prepared the business for future crises? So let's say COVID were over tomorrow, then in 5 years another event were to occur?

S: *Not so much on the COVID side of things, but after the 2008 financial crisis I decided that I'd always have better cash reserves for the business. And when this current poke reared its ugly head, there's nothing I've learnt from this really at all. I haven't seen this as being a crisis, I can't tell you a lie, and it hasn't been a crisis for me at all. As I said we've always believed in keeping a good cash reserve from what happened in 2008...so you know, we're not bothered.*

A: So in a way, you've sort of been prepared for this from an event that occurred 10-12 years prior?

S: Yeah.

A: And then, and I think you touched on this before, in the early days of the pandemic, guidance was a bit lacklustre in regards to what could and couldn't occur..

S: *Well they were firefighting weren't they? People were panicking. Some sites opened up and carried on straight away. The housebuilders were more reluctant to go back straight away which wasn't a problem because we do a lot of commercial work as well; commercial being things like schools and retirement villages, they're funded by pension schemes predominantly...student accommodation, that sort of stuff.*

A: And you mentioned before you only had about a week off here, and everyone was essentially back working.

S: *Yeah back at work everyone who wanted to come back; we had 50% of the lads back within 2 days.*

A: OK, and the final question now. You don't have to come up with anything if you can't think of anything, or don't want to. Are there any other areas relating to the topics we've discussed (crisis, crisis management, COVID-19) that you can think of that might be relevant, but I've not asked you about?

S: *I don't think so, no. Not at all.*

A: So, to sort of sum up then; from a lot of experience and time within the industry learning from lessons in the past, you've just got measures in place, you've got that good leadership that we touched on...

S: *Yeah, we've got a good chain of command I believe, we've got good lads around us. We haven't got any restrictions financially, so if things do go pear-shaped and a crisis or something that I can't control comes up like work drying up, hopefully we've got the money behind us to either wind-up or wind-up down.*

A: So you can sort of bolster down, and weather the storm?

S: *We've got no real overheads really, our overheads are minimal, and we don't want that. Our overheads are a very small percentage of what we turn over and we always try to keep it like that.*

A: Do you think that maybe that is a way that you're different from larger organisations?

S: *Well yeah because we're not open to things like maternity leave, paternity leave, big pension schemes, things like that. We don't have loads of company cars. We don't want that. That's something we stay away from.*

A: OK, very good. If you think that's everything, I'll wrap the recording up.