

THE CRITICAL SUCCESS FACTORS FOR STAKEHOLDER MANAGEMENT IN THE RESTORATION OF BUILT HERITAGE ASSETS IN THE UK

Abstract

Purpose – Built heritage or historic assets (BHAs) constructed in the pre-nineteenth century in the UK are perceived to have certain characteristics which instil cultural significance in them and have seen them become valuable to the economy of the country. The heritage sector makes significant contributions to the UK economy through provision of tourist attractive sites, construction and servicing of heritage assets, heritage conservation, research, and commercial activities carried out within and around heritage assets. These benefits have seen them draw considerable interests from diverse stakeholders within and outside the heritage sector. Hence, a lot of attention is drawn towards restoration of such assets, from stakeholders of different interests, ranging from advocacies for no alteration to complete alteration of the heritage assets. As with construction projects, conflict of interests amongst stakeholder affect the outcome of restoration projects and the purpose of this paper is to examine the critical success factors (CSFs) for managing the stakeholders to achieve the projects' objectives.

Design/methodology/approach – This paper examines the views and experiences of practitioners in the heritage sector who have been involved with BHA restoration projects. A total of 32 CSFs for stakeholder management, obtained through rigorous reviews of literature, were subjected to a severe scrutiny with eight restoration experts to determine the importance of the CSFs in restoration projects. The outcome of the exercise was a modified list of 20 CSFs which were further tested on 52 restoration practitioners in the United Kingdom (UK) using a structured questionnaire to determine the degree of importance of each of the CSFs in restoration projects and their relationships as perceived by the practitioners.

Findings – The results of the analyses performed on the data show that most of the CSFs were perceived by restoration practitioners as truly critical and vital for successful management of stakeholders in restoration of BHAs. The results also indicate that there is a strong consensus amongst a vast majority of practitioners on rankings of the CSFs.

Practical implications -The identified CSFs could be used by the restoration practitioners as a “road map” for the development of appropriate solutions for successfully managing stakeholders associated with the promotion and BHAs restoration assets.

Originality/value – Although CSFs for stakeholder management in construction have been studied by many scholars, no specific research could be identified prior to this study to have been done in defining the CSFs for stakeholder management in restoration projects. In this project, the authors have explored BHAs to identify and rank the CSFs for stakeholder management in restoration projects.

Keywords: Built Heritage Assets, Stakeholder Management, Critical Success Factors, Restoration Projects, United Kingdom.

Introduction

In his book, *Understanding Historic Building Conservation*, Michael Forsyth (2008) recounted the pre-history of English architectural history. According to him, the development of architecture in the UK can be traced back to the prehistoric Britain, about 3500 B.C., where ancient monuments - barrows, stone circles, henges etc. – were built mostly around ditches, forming enclosures used probably as multi-purpose gathering places, combining the functions of livestock pen, trading centre, church, feasting area, and ceremonial arena. Roman invasion in the first century imposed the Mediterranean style of architecture which was followed by the Saxon buildings and the medieval age buildings of the fifth century comprised mainly of Churches. However, a massive adoption of Gothic architecture by Churches in Britain between the 12th to the 16th century led to the replacement of most medieval buildings. The Tudor and the Elizabethan architecture led the 17th and 18th centuries while the 19th century saw the revival of the Gothic architecture referred to as the Victorian Art and Architecture (Ross, n.d.). Different people perceive the architectural aspect of their past in different ways. An illustration of this situation is seen in the play authored by John Steinbeck. In an excerpt of the play, two women who were being evacuated from their abode, and were disallowed from taking along their artefact, lamented: “how can we live without our lives? How will we know it's us without our past?”, and the evacuators replied “No. Leave it. Burn it” (Steinbeck, 2006, p.111). Byatt (1990, p.116) argues that the life of the ‘past’ is “the business of every thinking man and woman”. Moreover, David Lowenthal (1997, p.38-52) outlined the benefits of the past to include familiarity, reaffirmation and validation, identity, guidance, enrichment and escape. This study focuses on the architectural aspect of our past, sometimes referred to as *heritage assets*.

A heritage asset is “a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest” (DCLG, 2012, p.52). Many of such assets suffer from dilapidation as a result of negligence, natural disasters and anthropogenic activities. Bullen and Love (2011), in their study on adaptive reuse of heritage buildings, identified the conflict of opinion amongst architects, developers and building managers as to whether heritage buildings are icons that should be conserved or whether they are eyesores and unviable for adaptive reuse. Adaptive reuse of such dilapidated heritage assets for beneficial purposes requires restoration. According to the Historic England (2008, p.72), the purpose of restoration is “to return a place to a known earlier state, on the basis of compelling evidence, without conjecture”. Forsyth (2008, p.7) noted that “minimum intervention” must be ensured when working on heritage assets in order to preserve their values. Maintaining minimum intervention makes restoration projects highly challenging and sensitive, and often determines the position of stakeholders involved in the projects. While some stakeholders want no alteration in the heritage assets, others want flexibility in their design to meet their needs, an example of which can be found in a study by Shipley, Utz, and Parsons (2006) in Toronto. In the UK, different Acts and policies are being enforced to ensure the protection of heritage assets. The first of such Acts was the 1882 Ancient Monuments Protection Act which was followed by the formation of the Society for the Protection of Ancient Buildings (SPAB) in 1887 (Forsyth, 2008). There has been series of reviews of the heritage protection Acts which could partly be as a result of the different ways interest groups define heritage assets in a bid to achieve their interests. These interest are attracted by the perceived cultural, aesthetic, social, economic, political, educational values, and other values in heritage assets (Feilden & Jokilehto, 1993; English Heritage, 1997; Riegl, 1902; Roders, 2007; Throsby, 2006; UNESCO, 1995, 2008).

Although the onus lies with the UK government agencies to provide policies and laws governing the use and maintenance of these assets, a pragmatic approach to managing the stakeholders’ conflicting interests is required (Bourne, 2005; Cleland, 1999; Historic England, 2016; Freeman, Harrison, &

Wicks, 2007; Friedman & Miles, 2002; Olander, 2006). Many scholars have researched on the management of stakeholders in construction (e.g., Chinyio & Akintoye, 2008; Chinyio & Olomolaiye, 2010; Cleland, 1999). While this research tries not to discredit the effort of these authors, it presents an argument that limited or no research has been carried out in the aspect of stakeholder management in restoration projects in specific. The specialized nature of the heritage sector highlights the need for in-depth studies to be carried out on stakeholder management in restoration projects. However, there are some similarities between stakeholder management in construction and in restoration which will be discussed further in the next section.

The primary aim of this research is to establish the CSFs for successfully managing stakeholders in the restoration of BHAs and the ranking of the CSFs. This has been achieved through a rigorous review of literatures to determine the constructs grouped under political, economic, social, technological, legal, environmental (PESTLE) and other factors. Based on consensus among a few selected experts with extensive experience in restoration, these constructs were narrowed down to establish the likely CSFs which were then studied by ascertaining the extent to which restoration practitioners in the UK agree to each of them. Further attempts were made to rank these CSFs and to study the relationships among the different responses provided by defined respondent groups.

Literature Review

Attributes of Heritage Assets

Two important attributes that calls to mind when referring to heritage assets are *significance* and *setting*. The *significance* of a heritage asset is its value to the present and the future generations because of its heritage interest which may be archaeological, architectural, artistic or historic (DCLG, 2012). Before carrying out any operation on a heritage asset, it is considered a good practice under the section *Managing Significance in Decision Taking in the Historic Environment* (HEGPAP 2), to, first of all, establish the *significance* of the asset (Historic England, 2015). This can be classified into: understanding the nature of the significance (knowing the best means of conserving it), the extent of the significance (understanding its adaptability and improving its viability and chances for long term conservation), and the level of the significance (providing guide to how the necessary policies should be applied) (Historic England, 2015). The British Standard, BS7913:2013 (Part 4): Guide to the Conservation of Historic Buildings, covers the *assessment of significance* of heritage assets in the UK. The *setting* of a heritage asset, on the other hand, refers to the surroundings in which it is experienced (DCLG, 2012). A description of a heritage asset is incomplete without its *setting* as both make up its *character* (the sum of its attributes which includes its evolving relationship with people, visual features, materials, spaces, original configuration and subsequent changes that have occurred over time) (Historic England, 2015b). The *Setting* of a heritage asset changes over time and these make negative or positive contribution to the *significance* of a heritage asset. Therefore, understanding the history of the changes could provide an indication of the impact further operations within the *setting* could have on the *significance* of the asset. So, the Historic England (2015, p.2) argued that heritage assets may be affected either by “direct physical change” or by “changing their *setting*” since the two attributes are used to identify a heritage asset.

Whereas the *significance* of a heritage asset is its value (DCLG, 2012), identification and assessment of the components –social, economic and cultural values – that make up the overall value of the heritage asset remain subject to debate among heritage experts because of their complexity (Worthing & Bond, 2008). Some authors have described heritage value as the negotiated outcome of an encounter among people and places (Cresswell & Hoskins, 2008; Crouch, 2010; Poria, 2010). However, these negotiated outcomes are not explicitly stated and can be subject to multiple

interpretations by different parties. Worthing and Bond (2008) suggested that a value categorization or typology is essential in identifying the range of values of a heritage asset so that the interests of all stakeholders are considered and the categories of value are given equal priority. An example of some value typologies is shown in Table 1. Since these values, which are a function *significance*, define the *character* of a heritage asset, they impose some degree of rigidity on the ability to alter the physical features of such an asset and concerted efforts are made to care, protect and preserve their values (Kamal & Harun, 2002) by maintaining *minimal intervention*. The principle of *minimal intervention* states that “the total fabric and structure of historic buildings, not merely the surface appearance, is integral to their character” (Forsyth, 2008, p.7), and so, it is important not to alter the original structural behaviour of such buildings.

Table 1 Examples of Heritage Assets Value Typologies (Adapted from Worthing and Bond (2008))

Riegl (1902)	Feilden and Jokilehto (1993)	English Heritage (1997)	UNESCO (1995, 2008)
<ul style="list-style-type: none"> • Age • Commemorative • Use • Newness 	Cultural Values: <ul style="list-style-type: none"> • Relative artistic or technical • Rarity • Contemporary Sociocultural values: <ul style="list-style-type: none"> • Economic • Functional • Educational • Social • Political 	<ul style="list-style-type: none"> • Cultural • Aesthetic • Recreational • Resource • Economic importance 	<ul style="list-style-type: none"> • Historic • Aesthetic • Scientific • Social
Randall Mason (2002, p.10)	Feilden (2003, p.6)	Throsby (2006, p.43)	Roders (2007)
Sociocultural value: <ul style="list-style-type: none"> • Historical • Cultural/Symbolic • Social • Spiritual/Religious • Aesthetic Economic values: <ul style="list-style-type: none"> • Use (market) value • Non-use (non-market) values: <ul style="list-style-type: none"> - Existence - Option - Bequest 	<ul style="list-style-type: none"> • Emotional • Cultural • Use 	<ul style="list-style-type: none"> • Aesthetic • Spiritual • Social • Historical • Symbolic • Authenticity 	<ul style="list-style-type: none"> • Social • Economic • Political • Historic • Aesthetic • Scientific • Age • Ecological

Restoration of Heritage Assets

A major issue heritage assets face is deterioration or dilapidation as a result of negligence. The need for routine preventive maintenance to be carried out on heritage assets has been emphasized by Forsyth (2008) who argues that such an exercise is central to protecting the cultural significance or value of heritage assets, like historic buildings, as it is the least destructive of all the interventions which inevitably occur in the process of conserving such assets. However, the author noted that the

short term economic and financial commitment involved in maintenance of heritage assets as well as the perception that maintenance does not provide anything new to the owner of the assets are some of the factors which discourage owners from investing in maintaining heritage assets. Other factors he identified include: owners taking maintenance as a low-status professional and vocational activity which attracts lesser praise than major restoration; maintenance requiring many small long-term costs that are difficult to administer; and poor leadership in the conservation sector which hinders promotion and development of maintenance strategy. Consequently, heritage assets face deterioration as a result of absence of routine maintenance practice and this makes restoration inevitable to return them to their earlier good states without damage to their *significance* and *settings*.

Stakeholder Management in Restoration Projects

The process of engaging stakeholders includes identifying and categorizing them; obtaining more information about them; recognizing their missions in a project; defining their strengths and weaknesses; identifying their strategies; forecasting their behaviour as well as developing and effecting a strategy for managing them (Cleland, 2002, cited in Chinyio & Olomolaiye, 2010). Stakeholders' engagement and management have been very well emphasized in construction projects (Abdullah, Rahman, Harun, Alashwal, & Beksin, 2010; El-Diraby, Osman, & El-Gohary, 2006; Landin & Olander, 2005; Newcombe, 2003; Thomas, Skulmoski, Williamson, & Jergeas, 2000).

The diversity of interests among different stakeholders (Karlsen, 2002; Cheung, Ng, Chong, & Leung, 2004), results in their attempt to influence the project in a direction that best assuage their individual interests, and the impact of these varying influences must be managed to achieve project objectives and maximize benefits (El-Diraby et al., 2006; Landin & Olander, 2008). An effort by management to consolidate the relationship between the organization (or project team) and the stakeholder groups, and to stimulate and sustain their supports by balancing their relevant interests is necessary (Goodpaster, 1991; Wood & Logsdon, 2000; Freeman, 1994). Moreover, conflicts can be generated amongst stakeholders in a project as a result of differing stakes (Chinyio & Olomolaiye, 2010). Donaldson and Preston (1995) claims that these stakes are either benefits or harm perceived or actually experienced which are caused by organizational activities, such as projects. Also, studies on stakeholder management have shown that stakeholder attributes are not static, but dynamic, and change from one level of salience to another from issue to issue (Chinyio & Olomolaiye, 2010; Mitchell, Agle, & Wood, 1997). This implies that managers should regularly assess the stakeholders to ensure that appropriate level of attention, or urgency, are given to the stakeholders possessing corresponding power and legitimacy at any point in time. Knowing the level of salience of each stakeholder would help the manager in choosing the best approach for engaging them and to compromise when the differing stakeholder expectations cannot be met at the same time (Johnson, Scholes, & Whittington, 2005; Thompson, 2002).

Identification of Critical Success Factors (CSFs) for Stakeholder Management

The CSF methodology helps to make explicit the few areas that determine managerial or organizational success (Boynton & Zmud, 1984, p.17). A comprehensive, theoretical review of key literatures relating to heritage built assets and management of stakeholders in construction was carried out to identify a gap in existing theories (Fink, 2005), and also to suggest the likely CSFs which may be required for stakeholder management in restoration projects.

A vast array of literatures were reviewed in this research on the CSFs to be considered in managing stakeholders in restoration, and these have been summarized in this paper. For instance, Mitchell et al. (1997) noted that the three attributes possessed by stakeholders – power, legitimacy and urgency

– are not static but are continuously changing in a manager-stakeholder relationship. Although their study did not describe the dynamics of this relationship, a host of authors agree that an assessment of these stakeholder attributes is important in effectively managing the stakeholders in a project (Friedman & Miles, 2002; Young, 2006; Jepsen & Eskerod, 2009; Bourne, 2005; Bourne & Walker, 2006; Walker, Bourne, & Rowlinson, 2008). There is also a strong consensus amongst scholars that understanding the need of each stakeholder in a project would help in resolving conflict of interests which characterize construction projects (Bakens, Jasuja, & Foliente, 2005; Bourne, 2005; Cleland, 1999; Historic England, 2016; Freeman et al., 2007; Friedman & Miles, 2002; Leung et al., 2004; Olander, 2006). Restoration projects are challenged by the issue of conflict of interests as a wider range of stakeholders are involved. As a result, Historic England (2016) advises that heritage project teams should seek professional advice from heritage experts irrespective of the scale of the project they are undertaking and that effort should be made to balance the various objectives or needs of all stakeholders, both as individuals and as groups. They, however, emphasized that such objectives should be realistic to avoid delays or stalemates in moving the project forward.

Some studies that have been carried out (AMION and Locum Consulting, 2010; Colliers, 2011; Fund, 2013; England, 2016; Zoopla, 2015) reveal the economic benefits of heritage assets. However, developers seem reluctant to cope with the unacceptable level of risk posed by such assets; consequently, ‘funding cocktails’ or multi-source funding is favoured over single-source funding for restoration projects (English Heritage, 2013). Some sources in ‘funding cocktails’ are local authority funding, lottery funding, central government funds, European funding, loans and grants from interest groups. However, the challenge with funding cocktail is getting a lead funder who is willing to ‘dip their toe in the water first’ (English Heritage, 2013, p.21). Therefore, a strong economic case is required to secure the initial funding in order to boost the chances of attracting subsequent funding from other stakeholders.

One of the social factors to be taken into consideration in managing stakeholders in BHA restoration projects is to have an understanding of the *significance* of the BHA to the concerned stakeholders. *Significance* of a BHA has been defined as “the value of a heritage asset to the present and future generations because of its heritage interest” (DCLG, 2012, p.56). Understanding the nature, extent and level of the *significance* will help to devise the best conservation strategy, understand its adaptability, improve its viability for long-term conservation, and know the policies that apply to the particular project (Historic England, 2015). Moreover, knowing everything that went behind a BHA to be restored can enhance the way its *significance* is perceived by the stakeholders. This is because the ‘memory of place’ is physical, cultural and social, and is required mainly by the design team to ensure that the design concepts “speaks for what the space was” and work with the “bones and memories” (Baharuddin et al., 2013, p.11). Also, the chances of influencing project success are seen to be best at the early stages because unnecessary changes during the later stages can be avoided when decisions are made early (Jari et al., 2011; Mottonen, Harkonen, Belt, Haapasalo, & Simila, 2009). Sharma (2008, in Baharuddin, Wilkinson, & Costello, 2013) argued that early engagement of stakeholders can help to counter any potential misunderstanding. Specifically in restoration projects, it is advisable to embark on an effective early consultation in order to establish good initial understanding of the project objectives, gather supports for the project, subdue any concerns, address any potential oppositions, and create opportunities for others to get involved (English Heritage, 2013; Baharuddin et al., 2013).

Since there are statutory restrictions to alterations in heritage assets, English Heritage (2013, p.16) encourages conservation professionals to “understand the heritage asset and its ability to accommodate change...” from the outset of any operation on such assets. However, some technologies are encouraged to be incorporated in restoration or conservation projects for the

purpose of engaging and communicating with stakeholders regularly and effectively. Scholars suggest that communication is important in managing stakeholders in construction (Bakens et al., 2005; Bourne, 2005; Cova & Salle, 2006; El-Diraby et al., 2006; Friedman & Miles, 2002; Karlsen, 2002; Landin & Olander, 2008; Leung et al., 2004; Olander, 2006; Walker et al., 2008; Young, 2006). The technologies required in restoration projects are called 'digital outputs' and they include generative, preservation, interpretative and administrative technologies (HLF, 2012, p.5). However, they must be 'fit-for-purpose' before they are permitted in restoration projects (HLF, 2012, p.6).

Some of the legal issues to consider when planning to carry out any work on a BHA are the status of the asset and the consent regime the project must comply with, the extent of alterations permitted by both the national and local planning policies, the decision-making process for consent, the acceptability of enabling development and the information and materials needed for planning application (English Heritage, 2013). Granting a consent for a restoration project is dependent on its ability to meet the policy requirements. However, the bulk of the decisions on granting this consent is vested on the local authorities, though they are guided by the National Planning Policy Framework (NPPF) as stated in paragraphs 126 - 141 (DCLG, 2012).

On the environmental front, significant heritage sites have come under severe threat as a result of the increased, but unavoidable, rate of development and redevelopment in many cities of the world (Rypkema, 1990, in Perovic, Coffey, Kajewski, & Madan, 2016). Therefore, Paragraphs 109 to 125 of the NPPF (DCLG, 2012) contains the planning guidance for the conservation and enhancement of the natural environment. Paragraph 109 clearly mentions that the plan must consider "protecting and enhancing valued landscapes, geological conservation interests and soils". Moreover, paragraph 117 of the NPPF also outlines the requirements of planning policies in order to minimise the impact of projects on biodiversity and geodiversity of the environment in which a project is taking place. Noise, air pollution, hazardous substances, water and land contaminations, as well as destruction or disturbance of organisms' habitats were cited in the NPPF as areas of concentration during the planning of any project.

Another CSF which may be considered in managing stakeholders in restoration projects include formulating a clear statement of project mission (Cleland, 1999; Freeman et al., 2007; Historic England & MacDonald, 2015; Jergeas et al., 2000; Leung et al., 2004). Also, balancing the multiple, conflicting goals and priorities of stakeholders to achieve project objectives (Barlow, 2000) through the establishment of a formal stakeholder management plan which would define who needs what information, and when, especially in a situation where *funding cocktail* is used in restoration (English Heritage, 2013). Moreover, the power and interest of stakeholders change from one level of salience to another (Chinyio & Olomolaiye, 2010; Mitchell et al., 1997) based on their expectations at different points in a project. Analysing and categorizing stakeholders are important to ensure project success; but, of more importance is a continuous assessment of the importance of stakeholder expectations by monitoring and analysing the changes in their attributes as the project progresses (Bourne, 2005; Bourne & Walker, 2006; Cleland, 1999; Elias, Cavana, & Jackson, 2002; Friedman & Miles, 2002; Froome, 1999; Jepsen & Eskerod, 2009; Landin & Olander, 2008; Mitchell et al., 1997; Newcombe, 2003; Olander, 2006; Walker et al., 2008; Young, 2006).

According to Yang et al. (2009), the shortage of comparative studies on CSF preference causes difficulties for project managers aiming to identify the working priorities for effectively managing stakeholders. Although their study focused on construction projects, a worse situation faces the restoration sector due to the absence of articulated, tested CSFs for stakeholder management in restoration projects to ensure success. This study aims at filling this gap by establishing the CSFs for stakeholder management in restoration projects and to ascertain if there are differences in the

opinion of various restoration practitioner groups regarding the CSFs. From the review of relevant literature on stakeholder management in construction and in heritage-related projects, 32 likely CSFs were compiled and synthesized for this study as listed below. These CSFs were categorized under political, economic, social, technological, legal and environmental factors (PESTLE), whereas the ones that did not fit into any of the categories were classified as 'Others'. The 32 CSFs were listed for completeness and representativeness by subjecting them to expert reviews through a semi-structured questionnaire (discussed in detail in the methodology section). Table 2 shows the literature sources of the 32 CSFs identified. Some of the CSFs were explicitly stated in the literature; however, a few others (with single asterisk in Table 2) were derived from illustrated case studies in publications where they were cited as important factors in managing stakeholders in restoration projects. The 32 CSFs identified are listed below:

Category	Code	Likely CSF
Political	C1	Arbitrating conflicts among stakeholders effectively
	C2	Understanding stakeholders' needs and constraints to projects
	C3	Accurately forecasting the influence of stakeholders on the project
	C4	Analysing conflicts and coalitions among stakeholders effectively
	C5	Assessing the attributes (power, urgency and proximity) of stakeholders
Economic	C6	Providing cost certainty for sponsors
	C7	Emphasizing the economic benefits of restoring or renovating a heritage asset to encourage financing
	C8	Providing on-site jobs for local construction tradesmen with the right skills
	C9	Training local stakeholders and/or end users in decision making and leadership in restoration projects
Social	C10	Early consultation with interest groups in the restoration or renovation project
	C11	Understanding the cultural significance of the heritage built asset to the stakeholders
	C12	Creating opportunities for knowledge and skills transfer
	C13	Considering the overall interest of the wider community where the heritage asset is located
	C14	Appreciating memories of the place the heritage asset is located
	C15	Using story-telling about the historical background of the heritage asset to engage local stakeholders
	C16	Preventing negative impact on the social capital (networks of relationship) amongst members of the host community
	C17	Keeping and promoting a good relationship with stakeholders
Technological	C18	Determining the extent of technological changes permitted by regulatory bodies on the heritage asset
	C19	Re-skilling the property staff or end users on the use of newly installed technologies after restoration or renovation.
Legal	C20	Communicating and engaging with stakeholders properly and regularly
	C21	Understanding statutory requirements for the specific restoration or renovation project
	C22	Obtaining necessary permits from statutory bodies and local council

Environmental	C23	Retaining the landmark, streetscape and views of the area where the heritage asset is located
	C24	Avoiding damage to the environment or ecosystem due restoration or renovation
Others	C25	Re-using the same set of experienced skilled workers in other restoration or renovation works to sustain skill Creating the right partnership amongst stakeholders
	C26	Formulating a clear statement of project missions
	C27	Creating a sense of personal reward amongst stakeholders
	C28	Balancing multiple (stakeholders') priorities
	C29	Collaboratively working with other stakeholders at every stage of the restoration or renovation project
	C30	Formulating appropriate strategies to manage stakeholders
	C31	Predicting stakeholders' reaction towards implementing stakeholder management strategies
	C32	Analysing the change of stakeholders' influence and relationships as project progresses (during the project process)

Table 2 Literature Identifying CSFs for Stakeholder Management (Continues in the next page)

Authors	CSFs	Authors	CSFs
<i>Baharuddin et al. (2013)</i>	C10, C14, C15	<i>Freeman et al. (2007)</i>	C1, C3, C4, C26, C30, C31
<i>Bakens et al. (2005)</i>	C1, C20	<i>Friedman & Miles (2002)</i>	C1,, C3, C4, C5, C20, C32
<i>Barlow (2000)</i>	C28	<i>Frooman (1999)</i>	C2, C3, C4, C30
<i>Barnes (2013)</i>	C9	<i>Geist & Galatowitsch (1999)</i>	C9, C27, C29
<i>BetterTogether (2000)</i>	C16	<i>Historic England (2015)</i>	C11
<i>Bourne (2005)</i>	C1, C4, C5, C20, C30, C32	<i>Historic England (2016)</i>	C1
<i>Bourne & Walker (2006)</i>	C4, C5, C17, C20, C30, C32	<i>Historic England (n.d.)</i>	C22
<i>DEFRA (2013)**</i>	C12	<i>Historic England & MacDonald, (2015)</i>	C6, C26
<i>Chinyio & Olomolaiye (2010)</i>	C32	<i>HLF (2012)**</i>	C19, C20
<i>Cleland (1999)</i>	C1, C2, C3, C4, C17, C26, C30	<i>Hyland (2008)*</i>	C9
<i>Cova & Salle (2006)</i>	C3, C20	<i>Jari et al. (2011)</i>	C10
<i>DCLG (2012)**</i>	C22, C23, C24	<i>Jepsen & Eskerod (2009)</i>	C5, C30
<i>Dent (2014)*</i>	C7	<i>Jergeas et al. (2000)</i>	C26
<i>Dyson et al. (2016)</i>	C6	<i>Karlsen (2002)</i>	C20, C30, C31, C32
<i>El-Diraby et al. (2006)</i>	C20	<i>Landin & Olander (2008)</i>	C2, C17, C20, C30
<i>Elias et al. (2002)</i>	C21, C32	<i>Leung et al. (2004)</i>	C1, C20, C26

English (2013)	Heritage C7, C8, C10, C13, C18, C25, C29	
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Notes: * Author illustrated the corresponding CSFs in a case study or an example.

** HLF (Heritage Lottery Fund); DCLG (Department for Communities and Local Government); DEFRA (Department for Environment, Food and Rural Affairs).

Methodology

Research Epistemology and Approach

Crotty (1998) contends that the type of data sought by a researcher influences the choices of ontological and epistemological paradigm which in turn determines the methodology and the methods for data collection. The ontology of *being*, as opposed to *becoming*, suggests that there is an existing, unchanging reality which a research is aimed at discovering and/or measuring, and this reality is independent of human consciousness (Crotty, 1998; Gray, 2004). Since the research aims at discovering CSFs and measuring the degrees of their acceptability as critical by restoration practitioners, an objectivist epistemology based on the *being* ontology was adopted. Subjectivism and constructionism were considered unsuitable for this research since both disagrees with the existence of an objective reality which can be measured (Gray, 2004); hence, could not support the research aim.

Moreover, the research was conducted in two phases. The first phase, which began with the review of literature discussed in the previous section, was completed by carrying out a pre-test using experts who are experienced in restoration projects to determine the factors which are complete and critical out of the 32 likely CSFs derived from the literature review. This phase, therefore, involved an inductive approach designed to discover a theory. On the other hand, the second phase was designed to proof the theory generated in the first phase through the use of statistical methods to determine if the theory would be accepted, rejected or modified (Dewey, 1933). Gray (2004) also added that using following up an inductive approach with a deductive approach in a research is useful to further examine certain factors that could impact the variables used in formulating the theory obtained through induction, in which case a 'working hypothesis' will be developed and tested to determine if the hypothesis can be accepted or rejected in relation to the theory. Therefore, a combined inductive-deductive approach was implemented using "Concurrent nested design" whereby a secondary method (that is, the literature review) was nested with a primary method (Robson, 2011, p.165).

Research Design and Strategy

Quantitative research design was used in the research. McGregor and Murnane (2010) have contended that a quantitative research is primarily used for gathering statistical and factual data that are not easily refuted or changed subject to the observation of the interpreter or researcher. Besides, this design allows for large sample sizes which helps to increase the scope and generalizability of the research findings (Suri, 2011). A higher generalizability ratio makes a research finding beneficial to increased number of users from a dispersed geographic region and demographic (Creswell, 2012). Although qualitative design helps in obtaining in-depth information which can provide justification to intangible factors which are difficult to quantify, this design was deemed unnecessary since the CSFs obtained from the literature were pre-tested with very experienced experts from the heritage sector for completeness and representativeness. Besides, the short timescale available for the research also informed the use of "snapshot" approach to quantitative data collection at one point in time, rather than a longitudinal approach which is used for studying change and development over time (Gray, 2004, p.31).

Robson (1993) distinguished the three main research strategies – experiment, surveys and case studies – based on the nature of the research question. The research was designed to address the questions of *what* the CSFs are, *how* critical are these factors in stakeholder management in restoration projects, and by *‘how much’* does project practitioners agree or disagree with the CSFs as regards to managing stakeholders. Such questions as these are best answered using the survey strategy (Yin, 2013). The author argues that case studies suffers from non-generalizability of findings and that made the strategy unsuitable for the research. Also, experiments require control over behavioural events which was not feasible for the research as no control group was required.

Data Collection

Literature review was the secondary data sourcing used in the research and this culminated in identifying 32 CSFs for stakeholder management. It also helped in building up the framework for the research (Kumar, 2005; Sekaran, 2006). Moreover, a questionnaire survey method was used for collecting primary data for the research. The choice of this method was influenced by its advantage of collecting a large amount of data in relatively lesser timeframe and cost, in addition to the ability to self-administer it thereby reaching out to a wider audience (Gray, 2004; Hennink, Hutter, & Bailey, 2010; Robson, 1993).

In the first phase of the research, a semi-structured questionnaire was designed for pre-testing the 32 CSFs for completeness and representativeness. Participants were asked to identify the *Likely CSFs* that are ‘Very Important’ and the ones that are ‘Less Important’ since all the factors were deemed critical. Also, they were asked to contribute additional CSFs or modify the ones in the questionnaire to reflect the realities of stakeholder management in the heritage sector. Also, some demographic questions, such as their employer type, professional designation, years of experience, etc., were included in the survey to highlight the quality of the data and sampling. Hence, the outcome of the survey was considered the *True CSFs* which formed the input for the second phase. Before carrying out the actual survey, the questionnaire was piloted with two professionals experienced in project stakeholder management to ensure that the *Likely CSFs* were well stated and to avoid “misleading” questions (Gray, 2004, p.189). A ‘criterion’ sampling technique (Gray, 2004, p.325) was used to select eight practitioners who are well experienced in the heritage sector and so were deemed adequate in determining the perception of industry experts on the completeness and representativeness of the 32 CSFs. The participants cut across diverse roles in the industry and have an average work experience of approximately 17 years in complex heritage asset restoration projects ranging from £4.5 to £85 million; hence, they can be considered as experts. Table 3 shows the profile of the experts who participated in the survey. A consensus approach was used to select the CSFs that are truly critical after the first survey. In this approach, a simple counting of the number of participants who considered each of the CSFs as ‘very important’ was employed and the CSFs which got majority consensus were selected for the second phase of the research. Only 19 out of the 32 *Likely CSFs* met the ‘majority consensus’ criterion. However, the participants suggested some modifications in the *Likely CSFs* and also a few additional CSFs. An example of such modifications is that C20, *communicating and engaging with stakeholders properly and regularly*, was modified to *Communicating and engaging with stakeholders properly and regularly using the right means of communication*. Furthermore, the following four additional factors were suggested by the participants:

- i. Engaging the support of local businesses and communities to whom benefits arising from the project do not relate to heritage/conservation matters.
- ii. Emphasizing the link with Historic England and National Trust as key stakeholders in the process (though this can be part of communication with stakeholders).

- iii. Ensuring affordability is kept high on the agenda.
- iv. Demonstrating commercial viability. Identifying and capitalizing upon opportunities to add value.

Table 3 Profile of Participants in the Pre-testing of the CSFs

Participant	Designation	Employer Type	Position	Experience in Heritage Sector (Years)	Largest Heritage-related Project Involved (in Million GBP)
A	Chartered BS*/BC*	Consultant	Associate	20	6
B	PM*/AC*	Consultant	Project Manager	17	18
C	Chartered BS*	Client	Head of Operations	5	15
D	Chartered Architect	Consultant	Architect Director	18	85
E	Architect	Consultant	Associate Director, Architect, Lead Consultant to Projects	20+	34.5
F	Chartered Quantity Surveyor	Client	University Building Surveyor	25	6.2
G	CBFM*	Client	Associate Director of Estates	10	5
H	Planning Officer	Client	Heritage at Risk Project Officer	20	4.5

Notes: *BC – Building Conservator; BS – Building Surveyor; PM – Project Manager; AC – Accredited Conservator; CBFM - Chartered British Facility Manager.

Suggestions (ii) and (iv) were considered to be similar to C7 and C17, and were not added as new *Likely CSFs*, rather they were used to modify the two. Although suggestion (iii) is a CSF in construction projects, it was not considered to be closely associated to stakeholder management. Meanwhile, suggestion (i) was included as an important economic CSF thereby making the outcome of phase one 20 CSFs (hereafter referred to as the *true CSFs*). These *True CSFs* are shown in Table 4. In order to distinguish the 20 *True CSFs* from the 32 *Likely CSFs*, the code 'tC' was adopted for the *True CSFs* and these were renumbered sequentially for the purpose of clarity of analyses and discussions.

Table 4 Selected True CSFs after Pretesting with Industry Experts

Category	Old Code	New Code	True CSFs
<i>Political</i>	C1*	tC1	Intervening to resolve conflicts among stakeholders effectively
	C2	tC2	Understanding stakeholders' needs and constraints to projects
	C5*	tC3	Assessing stakeholders' attributes (power, urgency and proximity)
<i>Economic</i>	C6	tC4	Providing cost certainty for sponsors
	C7	tC5	Emphasizing the economic benefits of restoring a heritage asset to encourage financing
	**	tC6	Engaging the support of local businesses and communities to whom benefits arising from the project do not relate to heritage/conservation matters
<i>Social</i>	C10	tC7	Early consultation with interest groups in the restoration or renovation project
	C11	tC8	Understanding the cultural significance of the heritage built asset to the stakeholders
	C13	tC9	Considering the overall interest of the wider community where the heritage asset is located
	C17*	tC10	Keeping and promoting good relationships with all stakeholders
<i>Technological</i>	C18	tC11	Determining the extent of technological changes permitted by regulatory bodies on the heritage asset
	C20*	tC12	Communicating and engaging with stakeholders properly and regularly using the right means of communication
<i>Legal</i>	C21*	tC13	Understanding statutory requirements to be considered for a specific restoration project
	C22	tC14	Obtaining necessary permits from statutory bodies and local council
<i>Environmental</i>	C23*	tC15	Retaining the landmark, streetscape and views of the area where the heritage asset is located
	C24*	tC16	Avoiding damage to the environs or ecosystem (plant and animal habitats) during restoration activities
<i>Other</i>	C26	tC17	Formulating a clear statement of project missions
	C28*	tC18	Balancing multiple stakeholders' priorities
	C29*	tC19	Collaborating with stakeholders at every stage of the restoration project
	C30	tC20	Developing appropriate strategies for managing stakeholders in the restoration project

Notes: *CSFs modified after Phase I Survey **Suggested by experts

In phase two, the selected 20 CSFs formed the construct for the study and were, therefore, used to design a structured questionnaire for further survey with a larger sample size. The respondents were asked to provide demographic information such as type and size of organization they work with, their professional designation and roles in the organization, and some information about a restoration

project they would use as a reference in responding to the survey. These information were sought to provide basis for classification and for explaining the research findings, an approach used by Yang et al. (2009) for a similar study. The main part of the questionnaire contained the 20 CSFs where respondents were asked to rate their extent of their agreement against each of the CSFs based on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The full-scale survey was conducted in April 2017, and its respondents were project managers and directors, heritage consultants, architects, structural engineers, building surveyors, etc. A 'convenience' sampling technique, which involves continuously "choosing the nearest and most convenient persons to act as respondents" until the required sample size is reached (Robson, 2011, p.275), was used to select the participants. The author, however, contends that there is no certainty that the findings of a research conducted using convenient sampling are representative findings. Although probability sampling is preferred especially for the benefit of generalizing a research finding, researchers make do with non-probabilistic sampling for 'practical' or other reasons (Gray, 2004, p.87). Such practical reasons as short timescale and insufficient available resources informed the decision to adopt convenience sampling in the study as recommended for overcoming such impediments (Gray, 2004; Robson, 2011). The organisations the respondents work with were identified from the directories of professionals on Buildingconservation.co.uk, Projectbook.co.uk and the RIBA register for British Architects. A request to participate in the survey and the link to the online survey questions were emailed to the organizations and telephone calls were used to follow up on them. Approximately 180 online questionnaires were sent out to organizations and eligible professionals in those organizations responded to the survey. The survey was completed in about three weeks with 52 responses representing a response rate of 28% which was considered fairly satisfactory by Gillham (2005) and consistent with the norm of 20-30% with most questionnaire surveys in construction (Akintoye, 2000).

Data Analysis

Sample Characterization

Pallant (2010) suggested that frequencies could be used in describing categorical variables. This has been used to characterize the respondents, expressed in percentages of the total responses as shown in Table 5. A majority of the respondents were architects (19.2%) followed by project directors (15.4%). Both project managers and building surveyor contributed 13.5% each, while heritage consultants made up 11.5% of the responses. The remaining 26.9% of respondents comprised of structural engineers, quantity surveyors, conservators, a planning officer, a facility manager, and a general manager. Moreover, majority of the respondents have over 20 years' experience in restoration of heritage assets, and this increased the confidence on the quality of the data obtained from the survey. It was also observed, based on the responses, that most employers in the heritage sector employ fewer than 25 people. This may be due to the highly specialized nature of the heritage sector. Skill-gap and skill shortage might also be a direct consequence of the highly specialized nature of the heritage sector (CCSE, 2013). Additionally, a majority of the respondents referenced restoration of listed buildings (90.6%) more than other heritage assets. This dominance could be linked to different factors such as more funding availability in building restoration than in any other type of restoration. However, there is a need for further studies to determine the extent to which non-building heritage assets are funded in the UK compared to building assets. The data collected also show that private clients (71.2%) seem to invest more in restoration projects in the UK than the public client (28.8%); however, a larger sample size than the one used in this research may be required to draw such a conclusion.

Table 5 Participants' Grouped Responses for Analyses

Respondent Category	Code	Frequency	Valid Percent	Cumulative Percent
Employer Specialty				
Consultant	ET01	21	40.4	40.4
Contractor	ET02	6	11.5	51.9
Architect	ET03	20	38.5	90.4
Others	ET04	5	9.6	100.0
Total		52	100.0	
Employer Size				
1 - 25 employees	ES01	38	73.1	73.1
26 - 50 employees	ES02	7	13.5	86.5
More than 50 employees	ES03	7	13.5	100.0
Total		52	100.0	
Respondent's Role				
Project Manager	RO01	7	13.5	13.5
Project Director	RO02	8	15.4	28.8
Architect	RO03	10	19.2	48.1
Building Surveyor	RO04	7	13.5	61.5
Heritage Consultant	RO05	6	11.5	73.1
Other roles	RO06	14	26.9	100.0
Total		52	100.0	
Respondent's Experience				
0 - 5 years	EX01	11	21.2	21.2
6 - 10 years	EX02	11	21.2	42.3
11 - 15 years	EX03	7	13.5	55.8
16 - 20 years	EX04	7	13.5	69.2
More than 20 years	EX05	16	30.8	100.0
Total		52	100.0	
Project Type				
Restoration of Listed Building	PN01	47	90.4	90.4
Restoration of other BHAs	PN02	5	9.6	100.0
Total		52	100.0	
Project Cost				
£1,000 - £1 M	PC01	23	44.2	44.2
£1.1 M - £10 M	PC02	22	42.3	86.5
Over £10 M	PC03	7	13.5	100.0
Total		52	100.0	
Client Type				
Public	PO01	15	28.8	28.8
Private	PO02	37	71.2	100.0
Total		52	100.0	

Reliability of the Critical Success Factors

Reliability is the internal consistency of the items that make up the scale used in a study, to ascertain if they are measuring the same construct (Pallant, 2010). Cronbach's alpha coefficient was used to compute the reliability of the CSFs. DeVellis (2003) suggests that Cronbach's coefficient of a scale should be above 0.7. The Cronbach's coefficient obtained for each of the CSFs in this study is approximately 0.7 (Table 6), and this provides confidence that the scale used for the study are measuring the same constructs.

Table 6 Cronbach's Coefficient for the CSFs

tC1	tC2	tC3	tC4	tC5	tC6	tC7	tC8	tC9	tC10
0.658	0.681	0.687	0.698	0.691	0.701	0.702	0.706	0.681	0.675

tC11	tC12	tC13	tC14	tC15	tC16	tC17	tC18	tC19	tC20
0.696	0.701	0.712	0.695	0.704	0.691	0.684	0.674	0.676	0.662

Comparative Analyses of the CSFs across Group Types

In order to ascertain whether there were any differences in the ranking of the CSFs across the different groupings of the respondents, the relationships within and across the group types were examined. These group types and the corresponding codes for identifying them are shown in Table 5. Appropriate statistical techniques were used to answer the following research questions:

- Q1. What are the rankings of the CSFs in the different response groups?
- Q2. Are there agreements on the rankings of the CSFs across the various response groups?

Rankings of the Critical Success Factors (CSFs)

The mean values of the CSFs were used for ranking them: the higher the mean value of a CSF, the higher its rank in the series (Table 7-9). An equality sign beside a rank signifies that the corresponding CSF shares the rank with one or more CSFs. Yang et al. (2009) had used a mean value of 3.0 as a benchmark to determine CSFs in managing stakeholders in construction in Hong Kong; therefore, the same benchmark was used in this study. It was observed from analysis that all, but one (tC6), of the CSFs have mean values greater than 3, which implies that, irrespective of the respondent group type, all the respondents regarded 19 out of the 20 CSFs as truly critical for successful stakeholder management in restoration projects. A majority of respondents, however, did not seem to have a consensus on tC6 "Engaging the support of local businesses and communities to whom benefits arising from the project do not relate to heritage/conservation matters" as a critical factor and so it ranked behind other CSFs (20th position) in 13 of the 25 respondent sub-groups. This is no surprise because tC6 was not among the initial 32 *Likely CSFs* pretested in the first phase of the research; rather, it was suggested by one of the participants and was obviously not an opinion shared by most practitioners. This provides confidence that the first phase was thorough and the outcome was valid.

Moreover, tC14 "Obtaining necessary permits from statutory bodies and local council" was ranked highest in 19 out of the 25 sub-groups and next to the highest in 5 sub-groups out of the 19 sub-groups. This implies that most practitioners in heritage sector consider obtaining permits from

statutory bodies as very important in restoration projects. A further evidence to this is the relatively high ranking of tC13 “Understanding statutory requirements to be considered for a specific restoration project”, a co-legal CSF of tC14, in most of the groups. These two findings could mean that practitioners in the heritage sector are more obliged to consider legal factors in managing stakeholders than other factors, and this could imply their readiness to accept the recommendations of the English Heritage and the DCLG on the need to consider the consent regime in the planning of projects related to heritage assets (English Heritage, 2013).

It is also noticed that respondents across the groups have highly ranked the three social factors, tC7 “Early consultation with interest groups in the restoration or renovation project”, tC8 “Understanding the cultural significance of the heritage built asset to the stakeholders”, and tC10 “Keeping and promoting a good relationship with stakeholders” (Table 7-10). The rankings of tC7 support the argument by many scholars that early consultation of stakeholders in projects helps to avert potential issues that may affect the success of the project (Jari et al., 2011; Mottonen, Harkonen, Belt, Haapasalo, & Simila, 2009; Sharma, in Baharuddin, Wilkinson, & Costello, 2013). Likewise, the relatively high rankings of tC10 “Early consultation with interest groups in the restoration or renovation project” are in tandem with the views of scholars on the need for a sustained relationship with stakeholders throughout the project (Bourne & Walker, 2006; Cleland, 1999; Covsa & Salle, 2006; Landin & Olander, 2008; Olander, 2006; Walker et al., 2008).

Table 7 Ranking of the CSFs according to Employer Type

CSF	Employer Specialty								Employer Size							
	ET01		ET02		ET03		ET04		ES01		ES02		ES03			
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
tC1	3.90	13	4.00	12=	3.85	15	4.00	12=	3.82	14	4.14	9=	4.14	12=		
tC2	4.43	4	4.50	3=	4.55	4	4.80	3	4.47	4	4.57	3	4.71	4		
tC3	3.29	19	3.50	19=	3.75	17	3.80	14=	3.42	19	3.86	16	3.86	17=		
tC4	4.00	12	3.83	15	4.10	11	4.60	4=	4.00	11=	4.29	6=	4.29	10=		
tC5	3.67	17	4.17	9=	3.45	19	3.60	17=	3.55	18	4.14	9=	3.57	19		
tC6	3.19	20	3.67	17=	2.75	20	2.40	20	2.97	20	3.00	20	3.14	20		
tC7	4.14	6=	4.33	5=	4.45	5	4.20	7=	4.32	5	4.29	8	4.14	12=		
tC8	4.52	3	4.33	5=	4.75	2	4.20	7=	4.58	3	4.71	1=	4.29	7=		
tC9	3.67	18	4.33	5=	4.25	7	3.80	14=	4.00	11=	4.00	14=	3.86	17=		
tC10	4.05	11	4.50	3=	4.20	9	4.60	4=	4.11	8=	4.14	9=	4.86	1=		
tC11	4.10	9=	4.17	9=	3.80	16	4.40	6	4.03	10	3.71	18	4.29	10=		
tC12	4.14	8	4.67	1=	4.25	8	4.20	7=	4.26	6	4.14	9=	4.29	7=		
tC13	4.81	2	4.00	12=	4.75	3	5.00	1=	4.74	2	4.43	4=	4.86	1=		
tC14	4.86	1	4.17	9=	4.80	1	5.00	1=	4.76	1	4.71	1=	4.86	1=		
tC15	4.24	5	3.67	17=	4.30	6	3.40	19	4.11	8=	4.29	6=	4.00	15=		
tC16	4.10	9=	4.67	1=	4.15	10	4.20	7=	4.16	7	4.43	4=	4.14	12=		
tC17	4.14	6=	4.33	5=	3.55	18	4.20	7=	3.97	13	3.71	19	4.00	15=		
tC18	3.86	15	3.50	19=	3.95	12=	4.00	12=	3.74	16	4.00	14=	4.43	5=		
tC19	3.86	14	4.00	12=	3.90	14	3.60	17=	3.79	15	3.86	17	4.29	7=		
tC20	3.81	16	3.83	16	3.95	12=	3.80	14=	3.71	17	4.14	9=	4.43	5=		

Notes: *The values denoted in bold highlight the CSFs with the mean values less than or equal to the benchmark (i.e. ≤ 3.00)

Table 8 Ranking of the CSFs according to Respondent Role

CSF	Role of Respondents in Organization											
	RO01		RO02		RO03		RO04		RO05		RO06	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
tC1	4.00	12=	4.00	8=	3.50	18	4.29	9=	4.00	8=	3.86	14

tC2	4.71	1	4.38	4	4.40	5=	4.57	4=	4.50	5=	4.57	3
tC3	3.43	18=	3.50	19	3.90	13=	3.57	19	3.33	18	3.43	19
tC4	4.29	9=	4.38	5	3.90	13=	4.29	9=	3.67	15	4.00	12
tC5	3.43	18=	3.75	17=	3.40	19	3.71	18	3.83	12	3.71	16=
tC6	2.86	20	2.38	20	2.60	20	2.86	20	4.00	8=	3.36	20
tC7	3.57	17	4.25	6	4.50	4	4.29	6=	4.33	7	4.50	5
tC8	4.00	12=	4.50	3	4.60	2	4.71	3	5.00	1=	4.57	4
tC9	3.86	15=	3.88	11=	4.40	5=	3.86	16	4.50	5=	3.64	18
tC10	4.29	7=	4.00	8=	4.00	10=	4.57	4=	4.00	8=	4.36	7
tC11	3.86	15=	4.00	8=	3.90	13=	4.14	12=	4.00	8=	4.14	11
tC12	4.57	2=	4.13	7	4.30	7	4.29	9=	3.67	13=	4.36	8
tC13	4.57	2=	4.88	1=	4.50	3	4.86	1=	5.00	1=	4.64	2
tC14	4.57	2=	4.88	1=	4.70	1	4.86	1=	5.00	1=	4.71	1
tC15	4.29	9=	3.88	14=	4.10	9	3.71	17	4.67	4	4.14	9=
tC16	4.57	2=	3.88	14=	4.20	8	4.14	12=	3.67	13=	4.43	6
tC17	4.57	2=	3.88	11=	3.60	17	4.00	14=	3.33	17	4.14	9=
tC18	3.86	14	3.88	11=	4.00	10=	4.29	6=	3.50	16	3.71	16=
tC19	4.29	9=	3.88	14=	3.90	13=	4.00	14=	3.17	19	3.86	13
tC20	4.29	7=	3.75	17=	4.00	10=	4.29	6=	3.00	20	3.79	15

Notes: *The values denoted in bold highlight the CSFs with the mean values less than or equal to the benchmark (i.e. ≤ 3.00)

Table 9 Ranking of the CSFs according to Respondent Experience

Respondents' Years of Experience											
CSF	EX01		EX02		EX03		EX04		EX05		Rank
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	
tC1	3.45	16	3.73	15=	4.29	9=	3.71	17=	4.25	7	
tC2	4.27	5=	4.64	1	4.57	4=	4.14	8=	4.75	3	
tC3	3.09	19=	3.64	17	3.43	19	3.43	19	3.88	16=	
tC4	3.82	10=	4.00	11	4.14	11=	4.29	6=	4.19	9=	
tC5	3.27	17=	3.82	14	3.86	18	3.71	17=	3.63	19	
tC6	3.09	19=	3.18	20	3.29	20	3.00	20	2.69	20	
tC7	4.27	4	4.36	6	4.71	3	4.14	8=	4.13	12	
tC8	4.55	3	4.27	7	4.57	4=	4.71	1=	4.69	4	
tC9	3.82	9	4.36	5	4.14	11=	4.14	8=	3.69	18	
tC10	3.82	10=	4.55	2=	4.57	4=	3.86	14=	4.25	8	
tC11	3.82	12	3.73	15=	4.29	8	3.86	13	4.31	6	
tC12	4.27	5=	4.18	9	4.14	11=	4.00	11=	4.44	5	
tC13	4.73	2	4.45	4	4.86	1=	4.71	1=	4.81	2	
tC14	4.82	1	4.55	2=	4.86	1=	4.71	1=	4.88	1	
tC15	4.18	7	4.18	10	4.29	9=	3.86	14=	4.06	13	
tC16	3.91	8	4.27	8	4.43	7	4.29	6=	4.19	9=	
tC17	3.27	17=	3.91	12	4.14	11=	4.29	4=	4.19	11	
tC18	3.64	14	3.55	19	4.00	17	4.29	4=	4.00	14=	
tC19	3.64	15	3.91	13	4.14	11=	3.86	14=	3.88	16=	
tC20	3.73	13	3.55	18	4.14	11=	4.00	11=	4.00	14=	

Notes: *The values denoted in bold highlight the CSFs with the mean values less than or equal to the benchmark (i.e. ≤ 3.00)

Table 10 Ranking of the CSFs according to Project Type

CSF	Project Nature				Project Cost						Client Type			
	PN01		PN02		PC01		PC02		PC03		PO01		PO02	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
tC1	3.87	14=	4.20	8=	3.70	16=	3.95	14=	4.43	4=	3.93	16=	3.89	14
tC2	4.53	4	4.40	3=	4.61	2	4.45	4	4.43	4=	4.73	2	4.43	4

tC3	3.51	19	3.80	15=	3.61	18	3.50	19	3.43	20	3.67	19	3.49	19
tC4	4.09	9=	4.00	14	4.00	10	4.05	11=	4.43	4=	4.20	10=	4.03	10
tC5	3.62	18	3.80	15=	3.43	19	3.77	16	3.86	16	3.87	18	3.54	18
tC6	2.94	20	3.60	20	2.78	20	3.05	20	3.57	19	3.40	20	2.84	20
tC7	4.30	5	4.20	8=	4.26	7	4.32	5	4.29	11=	4.13	12	4.35	5
tC8	4.53	3	4.80	1	4.57	3	4.59	3	4.43	9=	4.67	3	4.51	3
tC9	3.94	13	4.40	3=	3.87	13=	3.95	14=	4.43	4=	4.20	7	3.89	13
tC10	4.19	8	4.40	3=	4.30	6	4.05	11=	4.43	4=	4.33	5	4.16	8
tC11	4.00	11	4.20	8=	4.04	9	4.14	9	3.57	18	4.20	8=	3.95	12
tC12	4.26	6	4.20	8=	4.39	5	4.18	8	4.00	15	4.27	6	4.24	6
tC13	4.74	2	4.40	3=	4.48	4	4.95	1=	4.71	1	4.40	4	4.84	1
tC14	4.79	1	4.60	2	4.65	1	4.95	1=	4.57	2=	4.73	1	4.78	2
tC15	4.09	9=	4.40	3=	3.87	13=	4.23	7	4.57	2=	4.07	13	4.14	9
tC16	4.19	7	4.20	8=	4.09	8	4.27	6	4.29	11=	4.20	10=	4.19	7
tC17	3.96	12	3.80	15=	3.87	12	4.09	10	3.71	17	3.93	16=	3.95	11
tC18	3.83	17	4.20	8=	3.70	16=	3.95	13	4.14	14	4.00	14=	3.81	15=
tC19	3.87	14=	3.80	15=	3.87	13=	3.68	18	4.43	9=	4.00	14=	3.81	15=
tC20	3.87	14=	3.80	15=	3.91	11	3.68	17	4.29	11=	4.20	8=	3.73	17

Notes: *The values denoted in bold highlight the CSFs with the mean values less than or equal to the benchmark (i.e. ≤ 3.00)

Moreover, tC8 “Understanding the significance of a BHA” has also been perceived by the respondents across the groups as an important CSF, perhaps because of its importance as an input during the design phase of restoration projects. As was discussed by Baharuddin *et al* (2013) in a case study, or it could be that it is perceived as a bureaucratic exercise by the respondents since it is contained in the National Planning Policy Framework (NPPF) (DCLG, 2012). A further study may be done to explore the true perception of restoration practitioners about the cultural significance of heritage assets.

Besides, it is observed, from Tables (7-9) that the four CSFs under the ‘Other’ category received relatively lower than average rankings across the groups, with only a few exceptions. These factors include tC17 “Formulating a clear statement of project missions”, tC18 “Balancing multiple stakeholders' priorities”, tC19 “Collaborating with stakeholders at every stage of the restoration project”, and tC20 “Developing appropriate strategies for managing stakeholders in the restoration project”. The low rankings of tC17 “Formulating a clear statement of project missions” and tC20 “Developing appropriate strategies for managing stakeholders in the restoration project” are almost consistent with their rankings in a similar study carried by Yang *et al.* (2009) on the CSFs for stakeholder management in construction in Hong Kong. Hence, it can be assumed from the data in this research that tC17 and tC20 were not perceived as very important to be considered in successfully managing stakeholders in restoration projects irrespective of been claimed by many authors as important in stakeholder management in construction projects (e.g. Cleland, 1999; Freeman *et al.*, 2007; Jergeas *et al.*, 2000; Leung *et al.*, 2004; Bourne, 2005; Bourne & Walker, 2006; Cleland, 1999; Freeman *et al.*, 2007; Frooman, 1999; Jepsen & Eskerod, 2009; Karlsen, 2002; Landin & Olander, 2008; Thomas *et al.*, 2000).

Notwithstanding the relatively low rankings of tC18 “Balancing multiple stakeholders' priorities” and tC19 “Collaborating with stakeholders at every stage of the restoration project”, it can be seen from Table 4-8 these CSFs were highly ranked by respondents working for large-size employers, employing over 50 employees (ES03). This could mean that small-size employers are less collaborative in restoration projects and also care less about balancing the needs of the stakeholders. Although scholars such as Jamal and Getz (1995) and Barlow (2000) have advocated the need for tC18 and tC19 respectively, the respondents in this study do not completely share their claims. Nevertheless, further

studies focusing on the relationships between employer sizes and these two CSFs respectively are recommended to verify the veracity of this research outcome.

Generally, it is noted that most CSFs in the study have been ranked differently by different defined respondent groups as shown in Tables 7-9. However, descriptive statistics alone cannot be used to discover whether there is any general consensus on the rankings of the CSFs among respondents across the groups; hence, the need to carry out correlation analysis in order to address the second question (Q2).

Similarity on the Rankings of CSFs

The second question the research addressed determining if there are consensus among the various rankings by the different respondent groups. Pallant (2010) suggested that Spearman's Rank Order Correlation (ρ) is used with ordinal data to determine the direction of the relationship between two variables. A negative coefficient implies a negative correlation between the two variables and vice versa. The results of the correlation analysis carried out between different pairs of categories of respondents (or items) in their groups are shown in Tables 11-13. The strength of the correlation between two variables depends on the value of r ; so, if r is significant at 5% confidence level (i.e., p -value = .005), then the two variables are considered to have a strong correlation (Yang et al., 2009). From the results of the analyses in Tables 11-13 containing different categories of respondent groups, r is positive for all the paired items in each group, hence, indicating a positive correlation; that is, there is a consensus in the rankings between the respondents in the paired categories (or items) within those groups. Hence, respondents ranked the CSFs similarly across each group irrespective of the category they fall under. For instance, respondents with 0 - 5 years' experience (EX01) and the ones with over 20 years' experience (ET05) ranked the CSFs similarly in the same direction (Table 9). Moreover, Cohen (1988, pp. 79-81) suggested the following guideline for r values:

- Small $r = .10$ to $.29$
- Medium $r = .30$ to $.49$
- Large $r = .50$ to 1.0

Applying Cohen's scale, it is observed that majority of the paired variables in each group shows medium to large values of r confirming their strong correlation at 5%, and even at 1% p values.

However, many scholars have argued that statistical significance can be influenced by sample size, especially in this research where the sample size is hard to come by. Therefore, Pallant (2001, in Yang et al., 2009, p.783) recommended using Coefficient of determination (r^2), instead of r , to measure "how far variation in one variable is accounted for by the other variable". An r^2 -value of 0.34 is considered reasonable. From Tables 11-13, majority of the r^2 values obtained in the analysis are higher than 0.34, indicating a consensus between the paired categories on the rankings of the CSFs in their respective groups. For instance, respondents working with employers employing 50 or less employees (ES01 and ES02) have a strong consensus on the rankings of the CSFs, but a weaker agreement exist between such employers and respondents from larger organizations (that is, ES01|ES03 and ES02|ES03 pairs), as shown in Table 11. Moreover, there is a strong consensus between Architects (RO03) and each of the other practitioners (r^2 values greater than 0.34) on the rankings of the CSFs, but not with Project Managers (RO01). Project Managers conversely have a very weak agreement with other practitioners on the rankings of the CSFs which is indicated by r^2 values being significantly less than 0.34 (Table 12).

Table 11 Spearman Rank Coefficient Matrices for Employer-type Respondent Groups

Group Name		Spearman's Rank Coefficient			
Employer Specialty					
		ET01	ET02	ET03	ET04
ET01	r	—	0.430	0.747**	0.694**
	r ²		0.185	0.558	0.482
ET02	r		—	0.374	0.470*
	r ²			0.140	0.221
ET03	r			—	0.561*
	r ²				0.315
ET04	-				-
Employer Size					
		ES01	ES02	ES03	
ES01	r	—	0.770**	0.576**	
	r ²		0.593	0.332	
ES02	r		—	0.485*	
	r ²			0.235	
ES03	-				-

Notes: **. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

It is also observed that respondents that worked on listed buildings (PN01) and the ones that worked on other heritage infrastructures (PN02) have a very strong consensus on the rankings of the CSFs as indicated by their r^2 values significantly greater than 0.34 (Table 13). In terms of project cost, it is observed that respondents who have been involved in projects worth £10 million or less (PC01|PC02 pair) have a very strong consensus ($r^2 = 0.856$ and 0.733) on the rankings of the CSFs; however, there is a significant fall in the values of r^2 to 0.232 and 0.266 for PC01|PC03 and PC02|PC03 respectively indicating a weaker consensus amongst respondents within each of the pairs involving PC03 (project costs higher than £10 million) category of respondents (Table 13). Also, both the respondents that worked for private clients (PO01) and those that worked for public clients (PO02) share the same view on the rankings of the CSFs indicated by their relatively high r^2 values (Table 13).

Table 12 Spearman Rank Coefficient Matrices for Respondent-type Respondent Groups

Group Name		Spearman's Rank Coefficient					
Respondent's Role							
		RO01	RO02	RO03	RO04	RO05	RO06
RO01	r	—	0.484*	0.445*	0.560*	0.089	0.702**
	r ²		0.234	0.198	0.314	0.008	0.493
RO02	r		—	0.670**	0.820**	0.606**	0.795**
	r ²			0.449	0.672	0.367	0.632
RO03	r			—	0.691**	0.615**	0.731**
	r ²				0.477	0.378	0.534
RO04	r				—	0.409	0.753**
	r ²					0.167	0.567
RO05	r					—	0.565**
	r ²						0.319
RO06	-						-

Respondent's Experience in Heritage

		EX01	EX02	EX03	EX04	EX05
EX01	r	—	0.801**	0.830**	0.664**	0.718**
	r ²		0.642	0.689	0.441	0.516
EX02	r		—	0.785**	0.495*	0.610**
	r ²			0.616	0.245	0.372
EX03	r			—	0.541*	0.799**
	r ²				0.293	0.638
EX04	r				—	0.572**
	r ²					0.327
EX05	—					—

Notes: **. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 13 Spearman Rank Coefficient Matrices for Project-type Respondent Groups

Group Name		Spearman's Rank Coefficient			
Project Nature					
		PN01	PN02		
PN01	r	—	0.774**		
	r ²		0.599		
PN02	—		—		
Project Cost					
		PC01	PC02	PC03	
PC01	r	—	0.856**	0.482*	
	r ²		0.733	0.232	
PC02	r		—	0.516*	
	r ²			0.266	
PC03	—			—	
Client Type					
			PO01	PO02	
PO01	r		—	0.805**	
	r ²			0.648	
PO02	-			-	

Notes: **. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Findings and Discussion

There is yet to be seen any academic work where stakeholder management with respect to restoration projects was specifically discussed. Hence, this research does not seek to directly challenge existing knowledge, but to present CSFs for stakeholder management which could be adapted in restoration projects. The CSFs identified through review of literature were categorized into seven groups using PESTLE technique. Although the collected data were not analysed under these categories, to explicitly demonstrate how the research findings support the theories from literature, the findings were discussed under the PESTLE categories.

Political factors

The research finding is in consistent with other studies which suggest that conflicting stakeholders' interests is a delicate issue facing the construction industry, and much more the heritage sector which involves a wider array of stakeholders. The three political factors tested in this research – arbitrating conflicts among stakeholders effectively (tC1), understanding stakeholders' needs and constraints to projects (tC2), and assessing the attributes (power, urgency and proximity) of stakeholders (tC3) – are directly related to conflict of interests. Each of these CSFs scored mean values greater than 3 which indicates that restoration professionals agree that these CSFs, perceived to be important in construction (Bourne, 2005; Bourne & Walker, 2006; Walker, Bourne, & Rowlinson, 2008; Mitchell et al., 1997), are also important in restoration projects. Nevertheless, assessing the attributes (power, urgency and proximity) of stakeholders (tC3) was perceived by respondents as being the most important of the three factors, indicated by its highest mean value across the groups (Tables 7-10). This reinforces the claims of Cleland (1999), Friedman and Miles (2002) and others cited in the literature review, on the need to analyse and predict the influence each stakeholder could have on the project. Achieving this would result in minimal resources being allocated to arbitrating conflicts (tC1).

Economic factors

The research findings also suggest that majority of restoration practitioners are inclined to providing cost certainty for the sponsors of restoration projects (tC4) more than emphasizing economic benefits to secure funding (tC5) (Tables 7-10). The later was averagely ranked by the respondents suggesting that the much emphasized "funding cocktail", perceived to be kindled by luring funders with promises of economic benefit (English Heritage, 2013, p.21), is actually perceived differently by the respondents. The respondents rather believe that what the client needs is an assurance that the cost of restoration will not go above their initial budget which is often the case in restoration projects as a result of the fluctuating scope (Historic England & MacDonald, 2015). Hence, the research finding agrees with Dyson et al. (2016) that it is more important to take the expensive route of doing a detailed survey and getting a firm price for the client.

Social factors

Although the four CSFs, tC7, tC8, tC9, tC10, under social factors were ranked between average and high in relation to the other factors. tC8 "understanding the cultural significance of the heritage built asset to the stakeholders", however, was significantly ranked higher than the other three factors (tC7, tC9, tC10). This is particularly interesting because it is the only CSF amongst the four social CSFs that is related particularly to heritage projects as the other three can also apply to new-build projects. Moreover, *significance* is the yardstick for measuring the value of a heritage asset (DCLG, 2012) (Zancheti et al., 2009), and understanding it prior to carrying out any work on such assets is considered a good practice in 'HEGPAP: 2' (Historic England, 2015).

Technological factors

The two technological factors, “determining the extent of technological changes permitted by regulatory bodies on the heritage asset” (tC11) and “communicating and engaging with stakeholders properly and regularly” (tC12) are perceived as important based on the findings of this research as they were ranked above average by the respondents (Tables 7-10), though tC12 received greater consensus from different respondent groups than tC11. This finding is in tandem with the advice by the English Heritage (2013, p.16) on understanding the ability of the heritage asset “to accommodate change”.

Legal factors

The UK heritage sector is setup in a way that no heritage-related work can be executed without following an established procedure guided by policies and frameworks. The process is often perceived as rigorous; hence, the advice of the English Heritage (2013) that a thorough understanding of the planning process, consent regime and planning risks is key at the planning stage. From the result of the analysis, the restoration practitioners take obtaining permits and consents very seriously and therefore, from the relatively high rankings of tC13 “Understanding statutory requirements for the specific restoration or renovation project” and tC14 “Obtaining necessary permits from statutory bodies and local council”. It is also found that these two factors have the overall highest ranking among the 20 CSFs examined; hence, indicating their importance in restoration projects.

Environmental factors

The perception of the surrounding of a heritage asset as being part of its *character* (Historic England, 2015b) suggests that environmental factors should be highly regarded by practitioners. However, the findings of the research show that the two environmental factors – tC15 “retaining the landmark, streetscape and views of the area where the heritage asset is located” and tC16 “avoiding damage to the environs or ecosystem (biological habitats) due restoration or renovation” (DCLG, 2012) – were ranked average by majority of the respondents. However, this may not imply that practitioners do not adhere to the environmental considerations stated in the National Planning Policy Framework (DCLG, 2012), rather, it could mean that practitioners handle the area surrounding heritage assets they restore the same way they handle project sites in new-builds. As many stakeholders are interested in the environmental impact of restoration, special attention is required to minimise the impact. Further research on comparing the perception of practitioners about the environment for traditional new-builds and restoration projects could reveal more facts to support this research finding.

Other

Most of the CSFs listed under ‘Other’ category were mainly derived from traditional new-build construction and included to see if the practitioners of restoration projects would perceive them as very important as well. Scholars have discussed the importance of tC17 “formulating a clear statement of project missions” (e.g., Cleland, 1999; Freeman et al., 2007; Frooman, 1999; Thomas et al., 2000), tC18 “balancing multiple stakeholder priorities” (Barlow, 2000, p.974), tC19 “collaboratively working with other stakeholders at every stage of the restoration” (Jamal & Getz, 1995), and tC20 “formulating appropriate strategies to manage stakeholders” (Cleland, 2002, in Chinyio & Akintoye, 2008). However, from the research findings, these factors are not considered in the restoration projects as they are considered in new-build projects where research have found them to be highly ranked, such as in Yang et al. (2009).

Conclusion

Since no significant research has been done to examine the CSFs for stakeholder management in restoration of built heritage assets (BHAs), this study provides a starting point towards what could become a major area of research interest in the near future by presenting the results of a questionnaire survey to investigate the perception of heritage sector practitioners in the UK on the CSFs for managing stakeholders in restoration projects. A total of 20 CSFs were synthesized in the research and were proven to be reliable using statistical method. Data were collected from restoration practitioners, including project managers, architects, heritage consultants, building surveyors, quantity surveyors, planning officers, engineers and facility managers, all practicing within the UK. Findings of the study show that all the CSFs are regarded as critical by most respondents for stakeholder management in restoration projects. In order to explore the relationships between the opinions of the respondents on the rankings for the CSFs, responses were grouped based on employer characteristics, employee (or respondent) characteristics and project characteristics (see Tables 11-13). It was found that, irrespective of the groupings, "Understanding statutory requirements for the specific restoration or renovation project" and "Obtaining necessary permits from statutory bodies and local council" are considered most important for stakeholder management. Respondents across the groups agree that "Understanding the cultural significance of the heritage built asset to the stakeholders" is also very important in managing stakeholders in restoration projects. On the other hand, respondents across the groups assigned relatively low rankings to "Engaging the support of local businesses and communities to whom benefits arising from the project do not relate to heritage or conservation matters". Likewise, the four social factors, "Formulating a clear statement of project missions", "Balancing multiple (stakeholders') priorities", "Collaboratively working with other stakeholders at every stage of the restoration or renovation project" and "Formulating appropriate strategies to manage stakeholders" received relatively low rankings across the groups.

An important aspect of the analysis was to explore relationships between the rankings in order to determine similarities in the rankings of respondents categorized into different variables within each group (see Tables 7-10). A notable result is that all the CSFs have positive correlations at 5% significant value. This implies that there is a consensus in the rankings between the respondents in the paired categories (or items) within those groups. Hence, respondents ranked the CSFs similarly across each group irrespective of the category they fall under. Also, based on Cohen's scale, it was observed that the correlations ranged from medium to large. Since the sample size is relatively small, it was necessary to also find the Coefficient of determination (r^2). The result shows that most of the paired categories in each group scored more than the required .034 r^2 -value, thus indicating that there is a strong consensus between the paired categories.

Generally, the results show that, though practitioners have their different opinions on the degree of importance of the CSFs for managing stakeholders reflected on the individual rankings of the CSFs, there is a commonality of perception evidenced by the positive, strong correlations of the rankings when examined in groups. The findings of this study should be interpreted in light of the following limitations: (1) The results are based on a study undertaken in one country (U.K), and consequently the results may not be generalized to other surrounding countries sharing similar economic conditions; and (2) The CSFs were categorized arbitrarily based on the PESTLE technique. Future studies could employ rigorous statistical analysis such as factor analysis to confirm the categorisation.

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