

# **Sustainable Regeneration project delivery in the UK: A qualitative analysis of practitioners' engagement**

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## **Abstract**

**Purpose:** The aim of this paper is to explore the key practitioner's level of involvement in the delivery of sustainable regeneration projects in the UK. Practitioners' level of involvement is a major factor which has, and continues to determine the delivery of sustainability outcomes of regeneration projects.

**Design/methodology/approach:** The paper adopted a qualitative study which obtained data from 21 key practitioners' through semi-structured interviews in exploring practitioners' level of involvement in the delivery of sustainable regeneration projects in the UK. The semi-structured interviews are conducted with seven practitioners' each from the three construction organisations selected through a purposive sampling approach for the study.

**Findings:** The findings identify varied levels of involvement of the key practitioners' at the three delivery stages - early, construction and post construction of the projects. The findings further reveal that clients' representatives, commercial managers and architects are the most frequently involved practitioners during the early stages of the projects. The findings also indicate that practitioners who have sustainability assigned to their roles and their responsibilities, such as sustainability managers etc. are the least involved in all the three delivery stages of the projects.

**Research limitations:** The study involves interview with 21 practitioners from three organisations delivering sustainable regeneration projects; hence this could limit the generalization of the research findings. However, the findings of this study could serve as a useful source of information for future further study in this area.

**Originality/value:** Although some studies have been carried out on practitioner's engagement in the delivery of 'normal' construction projects, none has focused on practitioner's levels of involvement in sustainable regeneration projects. Hence, this study has brought to the fore how the key practitioners' tasked with the responsibilities of delivering sustainability benefits of regeneration projects have been involved (at various levels of the project lifecycle) in the delivery of these projects.

**Keywords:** Sustainable regeneration, project team, Key Practitioners, Level of involvement

## **1. Introduction**

In the context of regeneration, the involvement of the key players in a project is fundamental to the delivery of the project outcomes. It is important to establish the roles and the levels of involvement of the key actors as this is crucial to the promotion, implementation and attainment of sustainability of the sustainable regeneration projects. Conventionally, the interactions and linkages between the key players ultimately influence and determine the overall performance of the projects (Takim 2009). A study by Clapham (2014) acknowledged this point by indicating that attempts to evaluate the impact of sustainable regeneration have been complicated by the absence of clearly specified sustainability objectives and outcomes. Although there have been some evaluation frameworks developed to evaluate regeneration programmes, yet each one of these frameworks has been deficient in an attempt to measure the social and economic sustainability impacts of the programmes. According to Brandon and Lombardi (2011), several research works undertaken on sustainable regeneration showed that they remained fragmented and also lack a conceptual clarity related to the delivery of sustainability of the projects. They identified sustainable regeneration as an evolving domain and suggested the need for further study as there has not been a well-defined research or evaluation framework that has been able to deal with the issues of socio-economic sustainability benefits evaluation in a comprehensive and a decisive manner. Consequently, in

view of this, it is apparent that for sustainable regeneration projects to fully deliver their required socio-economic sustainability benefits, there is a need for exploration of new ways of evaluating sustainable regeneration projects in the UK.

Adopting and implementing sustainability on regeneration projects can be influenced by key practitioners involved in the delivery of the project. It has also been argued that, engaging appropriately key participants in a project delivery process can help to deliver a wide range of project outcomes (Mathur *et al.* 2008). The aim of this paper is to explore the key practitioner's levels of involvement in the delivery of sustainable regeneration projects in the UK. To achieve this, the paper begins by providing the background literature on the impacts and importance of the key practitioners' involvement in the sustainable regeneration projects delivery process, and goes on to present the findings and analyses of a qualitative data obtained through semi-structured interviews from 21 key practitioners who participated in the study.

## **2. The Concept of Sustainable Regeneration**

The objective of the sustainable regeneration concept is to transform society by creating sustainable places where people want to live, work and feel secure (CLG 2009; Glossop 2008; SDC 2003). It also means meeting the sustainable development needs of the people in a way which delivers social progress, economic growth, environment protection, and a better quality of life (Erbey and Erbas, 2017; OGC 2011; SDC 2003). In more recent times, there has been a number of research works which sought to study and analyse how the UK built environment was responding to the challenges of integrating sustainability into regeneration projects (Dixon 2006). The Sustainable Development Commission (SDC 2003), for example, suggested that the development and delivery of regeneration projects has proved to be a testing and on-going challenge for government agencies, construction industry practitioners and communities in which regeneration projects have been sited. In their seminal work, Jones *et al.* (2003) argued that achieving successful sustainable regeneration has proved to be elusive and difficult to

deliver due to lack of understanding and over generalisation of sustainability factors. Winston (2009) for instance, identified many such problems associated with the successful delivery of sustainable regeneration initiatives to be of a social and economic nature rather than the environmental aspects of the projects. The Audit Commission Report (2007) has revealed that many sustainable regeneration projects are yet to have a consistent and positive impact on the most deprived localities in which the projects have been implemented. For example, the report indicated that the level of long-term unemployment in such 'so called regenerated' communities has remained static and targeted work to develop skills and access to sustainable jobs and employment for these communities has remained under developed.

According to Afacan (2015) and Brandon and Lombardi (2011), previous works undertaken on sustainable regeneration have shown that they lack a conceptual clarity related to the evaluation of sustainability outcomes of the projects. They argued that most of the existing evaluation methods designed for regeneration projects were based on environmental indicators that were derived from ideas and assumptions of individual practitioners. Numerous attempts aimed at delivering sustainable regeneration have primarily been limited to the environmental performance of the projects (Abdel-Raheem and Ramsbottom 2016; Reyes *et al.* 2014). Although a number of evaluation systems have been developed over the period, their focus and considerations have largely remained limited to evaluating the environmental impacts of the projects. Many of the earlier regeneration initiatives that were meant to address socio-economic disparities have focused on improving the environmental aspects of regeneration. This has resulted in many sustainable regeneration projects' inability to deliver their required sustainability objectives.

However, it has been suggested that improving the socio-economic sustainability aspects of regeneration projects can potentially enable sustainable regeneration projects to deliver better sustainability outcomes to address the socio-economic disparities that were entrenched in the

communities (Haran *et al.* 2011; Adamson 2010; CLG 2008; SDC 2003). In this regard, Abdel-Raheem and Ramsbottom (2016) and Smith (2006) argued that sustainability projects should not only focus on addressing environmental aspects, but should also consider the broader issues of social and economic sustainability factors of the projects as well. Similarly it is also suggested that sustainable regeneration projects can reinforce a sense of community confidence, make an important contribution to the local economy and act as a catalyst for improving the wider area (Afacan 2015; ODPM 2005), if the social and economic sustainability deliverables are well incorporated and delivered as an outcome of the projects. However, this will require innovative practices and evaluation systems that are capable of embracing other dimensions beyond the current consideration of sustainability, and not the one that just focuses only on environmental dimension (Abdel-Raheem and Ramsbottom, 2016; Dixon 2006; SDC 2003). In this regard the built environment practitioners also have a key role to play in ensuring that sustainable regeneration projects deliver their required socio-economic sustainability benefits.

### **3. Involvement of key players (Practitioners) in Sustainable Regeneration Projects**

In the context of sustainable regeneration, the involvement of key players in the delivery of projects is fundamental to the projects' sustainability outcomes. Afacan (2015: 222) noted that, often times, "regeneration processes are undertaken with inadequate involvement of relevant stakeholders and without planning for all sustainability issues". It is important to establish the roles and the level of involvement of practitioners, as these are crucial towards the adoption and implementation of sustainability features in regeneration projects. Conventionally, the interactions and linkages between these key players ultimately influence and determine the overall performance of the projects (Takim 2009). It has also been argued that engaging key practitioners appropriately in the project delivery processes can help to influence efforts

towards the adoption and implementation of a wide range of sustainability deliverables for the projects (Mathur *et al.* 2008).

Sustainable construction projects, and in particular regeneration projects, consists of a number of complex and interactive activities which require a number of practitioners to deliver them. It has been said that sustainability features in regeneration projects are multifaceted and often subjected to different processes and interpretations during different stages of the project, and therefore require a collective approach to drive the sustainability processes of the projects. Missimer; *et al.*, (2017) and Feige *et al.* (2011) pointed out that the sustainability concept in itself causes various forms of challenges to different groups of practitioners and stakeholders. According to Mathur *et al.* (2008), the contesting nature of sustainability issues and the benefits associated with the delivery of sustainability projects, provide a compelling case to effectively engage key players in their delivery processes. The processes and activities involved in delivering sustainable regeneration projects are often considered as complicated (Jung *et al.*, 2015). Such complexities have also been cited as one of the reasons for many practitioners' inability to adopt and implement sustainability features on their projects in practical terms (Tippett *et al* 2007).

The complexity and the multifaceted nature of sustainable regeneration projects, coupled with the implications and impacts of sustainability, make it even more crucial to engage key players in the delivery of sustainable regeneration projects. Hence, the requirement to adopt and implement sustainability features in regeneration projects, taking into account the multi-dimensional issues and impacts, calls for a "multi-scale, trans-disciplinary and pluralistic approach that is able to integrate and synthesise the many different perspectives" for the project (Lombardi 2009: 179). In that way, many sustainability challenges associated with the execution of such complex activities and processes can well be dealt with. It is only then that such a project's sustainability deliverables can be addressed collectively. The performance and

achievement of the projects' sustainability outcomes largely depends on the inputs from these players. It is believed that sustainability features would be best executed when key players are actively represented in such regeneration delivery processes (Jung *et al.*, 2015). Adequate involvement of key players will also ensure effective collaboration to overcome any possible difficulties and divisions, which are likely to undermine the projects' success. Active and effective involvement, particularly at the conception stages of the projects, is considered as fundamental towards the adoption and implementation of sustainability factors in regeneration projects.

It is suggested that focusing attention on the selection and formation of the main project team early in the planning stages is fundamental in achieving the successful delivery of a project's objectives (DBIS 2013; Rowlinson *et al.* 2008). It is believed that a project team, if well-formulated, with individual practitioners well represented in the team formation process, would enable such practitioners to understand what is required to be achieved in terms of sustainability (Mathur *et al.* 2008). Apparently, such an approach will also help to foster a strong spirit of corporation among practitioners, overcome divisions and oppositions to new ideas and build consensus.

Delivering sustainable regeneration projects is about the responsibility of all the key practitioners to contribute to the planning and preparation activities of the projects. Practitioners such as project managers and others with sustainability responsibilities are crucial. A study carried out by Ali, et al. (2008), and Hussin (2009) identified the early stage of the project delivery as the domain for architects and clients' representatives, in which the two practitioners were heavily involved in planning and preparation activities of the projects. For most clients and construction organisations, the early involvement of commercial managers provides the opportunity for them to seek early advice about the cost implications of adopting and implementing sustainability features on their projects. The key practitioners who were

highly involved in discharging their responsibilities at the construction stage of the sustainable regeneration project delivery were the architects, clients, project managers and commercial managers (Ali et al., 2008; Trigunarsyah, 2004). At the post construction stage, clients and architects were predominantly more highly involved than the other key practitioners in undertaking post project monitoring and evaluation activities of the completed projects (Williams et al., 2013).

#### **4. Research Methodology and Approach**

In the context of this study, the roles of practitioners refer to their professional background (i.e. architect etc.), while the responsibilities refer to the core duties (i.e. preparing drawings, designing etc.) they perform in the delivery of the projects. Also, for the purpose of this study, the practitioners identified to be mainly involved in the delivery of regeneration projects, who participated in the study, are referred to as key practitioners. These key practitioners were identified from the three construction organisations (selected through a purposive sampling approach) as the practitioners who were assigned with the responsibilities of delivering their regeneration projects. Below are the identified key practitioners, their roles and responsibilities in the delivery of sustainable regeneration projects:

- *Architect*: is the practitioner tasked with the responsibility of producing the drawings and design solutions of the project to meet the client's needs/requirements.
- *The client's representative*: For the purpose of this research, the client representative is any practitioner representing the client's interests on the project. The greatest responsibility for achieving the client's requirements lies with the client's representative, who is one of the most influential practitioners in the construction project delivery processes.



- *Project manager*: is the practitioner responsible for managing and coordinating processes, resources (including other practitioners on a daily basis), and facilitating effective delivery of all the projects' deliverables, to meet all the requirements of the projects, and also provides other construction information on progress and variations. A key practitioner for the adoption and implementation of decisions etc., for the project.
- *Commercial manager*: is the practitioner responsible for managing and controlling the cost aspects of the project.
- *Sustainability manager*: is the practitioner responsible for the sustainability aspects, including the environmental aspects of the project. They are responsible for ensuring that all other practitioners, including the client's representative, are aware of their sustainability responsibilities in relation to sustainable construction projects.
- *Regeneration manager*: is the practitioner responsible for developing regeneration strategies for the project and ensuring that sustainable regeneration features are incorporated into the project, to deliver a wide range of regeneration outcomes for stakeholders, including the local community. They provide advice on sustainable regeneration deliverables to the project team/practitioners.
- *Training/corporate social responsibility (CSR) manager*: is the practitioner responsible for ensuring that the local content is incorporated in the project. This includes recruitment and procurement of local labour and materials, and training and apprenticeships and work placements etc., for local people on the project.

The involvement of the above key practitioners for the purpose of this study means engaging them as participants in the discharge of their responsibilities in the delivery of regeneration projects. In this regard, the words 'involvement' and 'engagement' are used interchangeably to mean the same thing.

The study adopted qualitative research approach using semi-structured interviews to collect data from twenty-one (21) key practitioners identified to be involved in the delivery of sustainable regeneration projects within their construction organisations to ascertain their level of involvement in the delivery of sustainable regeneration projects at the three main delivery stages (early, construction and post-construction). All the twenty-one (21) interviewees (key practitioners) were asked questions about their level of involvement in the delivery of sustainable regeneration projects at these three main stages of the sustainable regeneration projects' delivery in undertaking the following activities:

- Planning and preparation (PP)
- Adoption and implementation (AI)
- Coordination and supervision (CS)
- Monitoring and evaluation (ME)

The Royal Institute of British Architects' (RIBA) outline plan of work (2013) forms the basis for the definition of the projects' main delivery stages - early, construction and post construction. At the early stage of the projects' delivery, the main activities that are performed by the key practitioners are planning and preparation. Although planning and preparation are two separate words, they are employed in this study to refer to all the activities that are required to be undertaken before the commencement of the construction stage of the project. These include feasibility, goal setting, design, tendering etc. Planning and preparation could be useful to ensure a greater buy-in from all the key practitioners, to achieve a common objective for the project. Undertaking planning and preparation activities would help to set out performance targets for other activities (i.e. AI, CS, and ME).

At the construction stage of a projects' delivery, the main activities that are to be undertaken include adoption and implementation, and coordination and supervision. Adoption refers to the embracement of activities from the early stage, while implementation is concerned with

implementing the adopted activities. In other words, putting the ‘adopted’ activities into practice. Coordination activities entail the interaction and integration of work and resources, while supervision activities on the other hand are concerned with overseeing the performance of works and resources. At the post construction stage of the projects’ delivery, the activities that are required to be carried out in the context of this study include monitoring and evaluation. Even though the words ‘monitoring’ and ‘evaluation’ are two separate words, they are used in this context to mean the tracking of performance towards the specified targets set out at the early and construction stages of the projects’ delivery processes.

#### *4.1 Data Collection Approach*

The key practitioners (participants) for the study were selected through a purposive sample technique from a list of top construction organisations in the UK, with the experience and knowledge of delivering sustainable regeneration projects across the UK. Originally, fifteen (15) leading construction organisations in the UK were selected and contacted through formal letters and proposal, explaining the purpose of the study to them. Follow up telephone calls were made to these construction organisations to further explain the purpose of the study. However, in all three (3) out of the fifteen (15) construction organisations agreed to participate in the study. Face-to-face in-depth semi-structured interviews were then conducted with the 21 practitioners, made up of seven (7) practitioners from each of the three agreed construction organisations, with each interview lasting for about an hour. Each of the three agreed construction organisation was made up of seven (7) key practitioners: architect, client’s representatives, project manager, commercial manager, sustainability manager, regeneration manager and training/CSR managers as shown in Table 1. The interviews were conducted in an interactive and open manner with a minimum interview structure in an attempt to obtain

more detailed information and also to gain a deeper appreciation of the issues with the key practitioners (Denzin and Lincoln 2008).

Table 1: Profiles of key practitioners interviewed

Construction Organisation	Organisation 1	Organisation 2	Organisation 3
Practitioners Role	Architect (AR1)	Architect (AR2)	Architect (AR3)
	Client representative (CR1)	Client representative (CR2)	Client representative (CR3)
	Project manager (PM1)	Project manager (PM2)	Project manager (PM3)
	Commercial manager (CM1)	Commercial manager (CM2)	Commercial manager (CM3)
	Sustainability manager (SM1)	Sustainability manager (SM2)	Sustainability manager (SM3)
	Regeneration manager (RM1)	Regeneration manager (RM2)	Regeneration manager (RM3)
	Training/CSR manager (TM/CSRM 1)	Training/CSR manager (TM/CSRM 2)	Training/CSR manager (TM/CSRM 3)

The semi-structured interview results obtained from practitioners who participated in the study are presented in Table 2 below. From the initial analysis of the interviews data, it was revealed that there were primarily two main categories/levels of practitioners' involvement (high and low levels of involvement) in the projects' delivery stages as shown in Table 2.

Table 2: Practitioners' level of involvement in the three main stages of sustainable regeneration projects

	Early Stage	Construction Stage	Post Construction Stage

Practitioners	High of involvement	Low level of involvement	High of involvement		Low level of involvement		High of involvement	Low level of involvement
	<i>PP</i>	<i>PP</i>	<i>AI</i>	<i>CS</i>	<i>AI</i>	<i>CS</i>	<i>ME</i>	<i>ME</i>
Architect	3	-	3	3	-	-	1	2
Client representative	3	-	3	2	-	1	3	-
Project manager	-	3	3	3	-	-	1	2
Commercial manager	-	3	3	3	-	-	-	3
Sustainability manager	-	3	2	2	1	1	-	3
Regeneration manager	-	3	2	2	1	1	-	3
Training and CSR manager	-	3	2	2	1	1	-	3
<b>Total</b>	<b>6</b>	<b>15</b>	<b>18</b>	<b>17</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>16</b>

## 5. ANALYSIS OF RESULTS

The results from the analysis of the interviews, have shown that all the 21 key practitioners who participated in the interviews, were involved at the three main stages of the sustainable regeneration projects' delivery. At the early stages, the results revealed that 6 practitioners were highly involved in carrying out planning and preparation activities for the projects, while 15 practitioners, representing over 71% have had low level of involvement in the aforementioned activities at this stage of the projects' delivery. A closer observation of the results in Table 2 further revealed that two categories of key practitioners; 3 clients' representatives and 3 architects were the most involved during the early stages of the projects. At the early stage of any project development, the client is expected to assemble a team to carry out his/her vision. Conventionally, at the early stage of a project's delivery, where planning and preparation

activities are carried out, is considered the domain for clients or clients' representatives and architects and in some instances, commercial managers. It is suggested that the early stage of every project's development is crucial because any decision made at this stage has far-reaching implications for the project's overall outcomes. This is because once the project kicks off, the opportunity to introduce and maximise the sustainability potential benefits for instance, is reduced to a minimum and in most cases, missed out.

The high level of involvement of clients or clients' representatives at the early stage as per the above findings, could also be due to the fact that clients will always want to ensure that their projects are planned and designed to meet the time, cost and quality requirements. However, it is asserted that plans and strategies carried out at this stage of regeneration project development have an impact and implications not only on the cost, time and quality aspects of the projects, but also on the performance of sustainability functions of the projects (Pitt, *et al.*, 2009). Hence, clients or their representatives need to be aware of that, particularly when they are engaging practitioners' services at this stage to deliver their sustainable regeneration projects. Similarly, clients are also very particular about the quality of their projects, hence their desire to always engage competent architects at the very early stages of their projects' development to provide them with the design solutions that will meet their needs. This point was affirmed by one client representative who indicated that he needed to get a competent architect involved as soon as possible, for them to drive the design process forward;

*...the early engagement of architects is so important for us to help drive the design process forward.... with a project of such sustainability requirements, yes we always want their experience and inputs as soon as we are certain of what we want to achieve, ... their early involvement is obviously the case for our regeneration projects.*

For most clients and construction organisations, the early involvement of commercial managers provides the opportunity for them to seek early advice about the cost implications of adopting

and implementing sustainability features on their projects. It can also be observed that early involvement of architects, clients' representatives and commercial managers tends to be in line with the traditional approaches often adopted, to involve key practitioners in the planning and the preparation activities at the early stages of construction projects. Traditionally, the first port of call when clients want to procure practitioners' services for their proposed projects is the architects and other selected practitioners who they believe will help them achieve their objectives. However, the reliance on such limited practitioners' contributions and the traditional approach of involving practitioners in the planning and preparation activities at the early stage of the project's development has a number of problems, most especially when the projects are of a sustainability nature. Such an approach will largely limit the projects' success factors to cost, time and quality objectives and in the case of sustainable regeneration, relegates the sustainability aspects to the background. It is argued that the successful delivery of sustainable regeneration lies in adequate and early involvement of all the key practitioners, particularly at the early phase (OGC, 2011). Hence, the early and high level of involvement of all the key practitioners will inevitably enable greater planning and preparation of the projects' critical success factors beyond the current cost, time and quality objectives, to include the sustainability deliverables of the projects.

Surprisingly, a greater number of practitioners (Table 2), 15, made up of; 3- project managers, 3- commercial managers, 3- sustainability managers, 3- regeneration managers, and 3- training/CSR managers, have had low levels of involvement during the early stages of the projects' development in undertaking planning and preparation activities. A number of factors can be seen to have accounted for this. The obvious ones include practitioners' roles, (their professional background) demands from clients and the projects' requirements have played a major part in determining practitioners' level of involvement during the early stage of the projects' delivery. A view expressed by one of the interviewee's; a training/CSR manager,

during our discussions, related his low level of involvement to meeting such projects' and clients' requirements:

*"I sometimes get involved at the early stages of our projects, but that depends on what the client or the contract want us to deliver...It differs from project to project, and each client has his own views on how we should do that..."*

Practitioners such as project managers and others with sustainability responsibilities are crucial in the sense that their early and high level of involvement will enable them to understand clients' needs as well as the projects' requirements, to translate them into practice during the construction stage of the projects. However, it was surprising to observe that practitioners who have sustainability specifically assigned to their roles and responsibilities were the least involved at the planning and preparation activities during the early stages of the projects. Their low levels of involvement could also be due to the fact that the priorities and interests of most clients and construction organisations were/are driven by considerations other than the sustainability aspects of their projects. A prevailing situation identified with practitioners' during the interviews was that training/CSR managers were not very often involved in the planning and preparation activities of the projects. They were only brought in when their clients decided to bring in trainees. This point was made clear by one of the training/CSR managers who indicated that she was only brought in when their clients wanted trainees on the projects and in most cases, trainees were handed to her during the construction stages of the projects, to manage them.

A prevailing situation identified with practitioners' during the interviews was that training/CSR managers were not very often involved in the planning and preparation activities of the projects. They were only brought in when their clients decided to bring in trainees. This point was made clear by one of the training/CSR managers who indicated that she was only brought in when



their clients wanted trainees on the projects and in most cases, trainees were handed to her during the construction stages of the projects, to manage them.

*“...I rarely get involved at this stage of the project. ...Normally I get involved when our clients have confirmed those who are going to be the trainees on the project, which is normally at the construction stage of the project to help put the process in place to manage them”.*

Construction activities have limited duration, therefore early and high level of involvement of training/CSR managers for example, can enable them to identify the right calibre of people for training, to enable them to put in place the kind of training that can be offered within the projects' durations. The stage at which involvement of such key practitioners takes place has the potential to determine what and when certain sustainability features can be prepared and planned, adopted and implemented, and also monitored and evaluated on projects. From the perspective of sustainable regeneration, the requirement to achieve sustainability of regeneration projects calls for more integrated and proactive approaches to the early and high level of involvement of key practitioners in the planning and preparation activities of the projects. Similarly, since sustainability features have often being a subject of contention in construction projects and difficult to deal with in practice, such early and always involvement of all the key practitioners would enable different perspectives of sustainability features to be incorporated into the planning and preparation activities of projects in a proactive manner. It is suggested that the key to any successful regeneration project is about the practical involvement of all the key practitioners, particularly at the early stage of the project's development (Takim, 2009). Likewise, such 'early and high' level of involvement would not only provide an avenue for practitioners to pursue a common sustainability course, but would also provide an enabling environment to proactively respond to any potential issues that may undermine the planning and preparation activities of the projects.

One major implication for such ‘low levels of involvement’ of key practitioners in the planning and preparation activities at the early stage of the projects could be the lack of understanding and corporation among practitioners involved in the delivery of the projects. A point which was emphasised by one project manager:

*“I think there will not be a greater buy-in from us if we are not involved early in the process”.*

The low level of key practitioners’ involvement in contributing to the planning and preparation activities at such a crucial stage could also have serious cost implications if changes or corrective measures are to be made at the construction and post construction stages of the projects. Consequently, any act of inadequate involvement of all key practitioners, particularly those with sustainability responsibilities at the early stage of sustainable regeneration projects, could jeopardise the achievement of the projects’ sustainability outcomes. It can however be suggested that practitioners, if they are highly involved early in the planning and preparation activities, could be instrumental in advising many clients and construction organisations on the issues of sustainability for the adoption and implementation of such sustainability features in their projects at the construction stage.

At the construction stage, the involvement of practitioners is mainly concerned with the adoption and implementation of activities from the early stage, coordinating and supervising activities, including the workforce. During the construction stage of the projects’ delivery, the results from the interviews revealed that; 3- clients’ representatives, 3 -architects, 3- project managers and 3- commercial managers were seen to have been highly involved in the adoption and implementation, and also in the coordination and supervision activities for the projects.

This is also considered the domain for project managers, clients’ representatives, commercial managers and architects. The coordination and supervision activities are also greater at this stage of the project development. Hence, most clients’ representatives will be interested in the coordination and supervision activities as well as the adoption and implementation activities,

in line with their budget, quality and time requirements. On the other hand, the project managers' coordination and supervision activities are crucial at this stage in ensuring that the physical projects are delivered to meet the projects requirements. Likewise, commercial managers are also expected to supervise and coordinate the cost management processes of the projects. The involvement of architects is also fundamental here too, in making sure that they supervise and coordinate activities to deliver the projects according to the designs of the projects.

Again, Table 2 shows that at the construction phase of the projects, 2- sustainability managers, 2- regeneration managers and 2- training/CSR managers (with assigned sustainability roles and responsibilities) have had high levels of involvement in carrying out adoption, implementation, coordination and supervision activities on the projects. Although there seems to be an improvement in their level of involvement in comparison to their level of involvement at the early developmental stage of the projects, nonetheless, at least one from each of this group of practitioners (assigned sustainability roles and responsibilities) interviewed, has had low level of involvement at the construction stage of the projects. For this group of practitioners, it can be observed that because they are not seen as practitioners who primarily contribute to meeting the conventional projects' cost, time and quality objectives, their contributions at the construction stage could be ignored, especially, when clients and their construction organisations involved in the delivery of the projects are not inclined to sustainability issues. In this regard, most clients and construction organisations will tend to concentrate on their core business objectives, rather than pursuing and venturing into other new areas they consider will increase their expenditures.

At the post construction stage, which is obviously after the completion of the physical project, some of the main activities which are required to be undertaken involve performance monitoring and evaluation of the completed projects. Apparently, this is one of the stages of

the project's delivery where the activities carried out from the early stage through to the construction stage of the projects are required to be monitored and evaluated, to provide the opportunity to ascertain the performance of the completed projects. At the post construction stage of the project, it was noticed that of the 21 practitioners who were interviewed, only 3- clients' representatives, 1- architect and 1- project manager were highly involved in undertaking monitoring and evaluation of the completed regeneration projects. Conventionally, the involvement of practitioners in many construction projects has been concentrated on the construction stage. For most 'typical' construction projects, when the major physical works are completed and the projects are handed over, only a limited number of practitioners are needed to carry out certain corrective works. Hence, the low level of involvement at this stage of the project by the majority of practitioners as per the findings, typifies the practitioners' level of involvement in such 'typical' construction projects.

However, the situation can be seen to be different when it comes to sustainable regeneration projects. The sustainability performance requirements for regeneration projects go beyond the completion of the physical projects on site. The impact of sustainability aspects of regeneration projects, and in particular the socio-economic ones on the quality of life of society, extend far beyond the construction stage of the projects. As a result, several other issues which can impact on the sustainability performance of the projects will require attention after the practical completion of the projects. Likewise, the opportunity to monitor and undertake the evaluation of the sustainability performance of the completed projects to enable learning for future projects also becomes crucial at this stage of the projects' delivery.

Overall, it can be observed in Tables 2, that clients' representatives' were the most/highly involved practitioners among other six key practitioners who participated in the study. Their high level of involvement has been consistent throughout the three delivery stages (early,

construction and post construction) of the projects. Architects were the next most/highly involved practitioners, with their high level of involvement occurring at the early stage and construction stage of the projects' delivery. With commercial managers', their high levels of involvement was seen to be at the construction stage. The project managers' level of involvement was also seen to be highly involved at the construction stage, but with low level of involvement at the early and post construction stages of the projects' delivery. The findings also indicated that practitioners who have sustainability assigned to their roles and responsibilities (regeneration managers, sustainability managers, training/CSR managers) were the least involved in all the three stages of the projects.

## **6. Conclusion**

The results from the analysis of the interviews, have shown that all the 21 key practitioners who participated in the interviews, were involved at the three main stages of the sustainable regeneration projects' delivery. At the early stages, 6 practitioners were highly involved in carrying out planning and preparation activities for the projects, while over 71% have had low levels of involvement in the delivery of aforementioned activities at this stage of the projects. At the construction stages of the projects' delivery, 18 practitioners were highly involved in undertaking adoption and implementation activities for the projects, while only 3 practitioners have had low level of involvement in carrying out adoption and implementation activities at this stage of the projects' delivery. Additionally, 17 practitioners were highly involved in coordination and supervision of various activities for the projects, while only 4 practitioners have had low level of involvement in the coordination and supervision of activities for the projects. Lastly, at the post construction stage, it was observed that only 5 key practitioners were highly involved in the monitoring and evaluation activities for the projects. The majority of practitioners, 16, were only rarely involved in the monitoring and evaluation activities of the projects.

It can be observed from the findings that the levels at which practitioners, have been involved in the delivery of sustainable regeneration projects and also at different stages of the projects' delivery vary significantly. Various factors are said to have accounted for these varied levels of involvement. These include the projects requirements and the types of regeneration projects practitioners' organisations were involved in. These factors have played a major part in determining the key practitioners who were needed to help deliver those projects' requirements, although it can be observed from the findings that all the key practitioners have had some level of involvement in delivery of the sustainable regeneration projects. Furthermore, the findings revealed that clients' representatives, commercial managers and architects were the most involved practitioners during the early stages of the projects. The 'high and adequate' early involvement of clients' representatives, architects and commercial managers was attributed to their particular roles and responsibilities in making sure that planning and preparation of the projects achieves certain specific objectives for the clients. A further observation also made from the findings in relation to the early stage of involvement suggested that the delivery of many regeneration projects were/are still following the traditional projects' delivery and management methods in which architects and clients' representatives are largely seen as key practitioners and tend to play leading roles during a project's early delivery stages, as evident in the findings of this study. The findings also revealed that practitioners who have sustainability assigned to their roles and responsibilities (regeneration managers, sustainability managers, training/CSR managers) were the least involved in all the three delivery stages of the projects. Their low level of involvement was also consistent throughout the three main delivery stages of the projects and was assumed to be because sustainability issues were not seen as the main priorities and considerations for the projects by most of their clients and their construction organisations.

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