EXTERNAL STAKEHOLDERS IN URBAN CONSTRUCTION DEVELOPMENT PROJECTS: WHO ARE THEY AND HOW ARE THEY ENGAGED?

Michael Curran[1], John Spillane[2] and Daniel Clarke-Hagan[3]

[1&3] *School of Natural and Built Environment, David Keir Building, Queen's University Belfast, Stranmillis Road, Belfast, BT9 5AG, UK*

[2] *School of Engineering, Schrodinger Building, University of Limerick, Castletroy, Limerick, V94 T9PX, Ireland*

The construction industry is renowned as being fragmented and complex, with a higher risk element in urban development projects, where construction sites are a common feature. Many stakeholders are involved in urban development projects, making effective integration and collaboration difficult. Moreover, the identification and engagement of external stakeholders involved in the project must be given further consideration, as they can influence project implementation, although they have no contractual relationship. Therefore, this paper aims to identify and document who the external stakeholders are in urban development projects, and how they are engaged by on-site project managers. This pilot study is at the beginning of an initial investigation, providing the basis of an ongoing PhD research project. The research method undertaken is qualitatively based, encompassing four case study interviews with four construction professionals on urban development projects located in London, England. The data accumulated is qualitatively assessed using mind mapping software, and cognitively summarised. The Local Authority, Residents and Local Businesses emerged as the three main external stakeholders, from a list of seventeen. From ten different strategies documented, Face-to-Face Meetings and Newsletters were identified as the two main strategies used to engage external stakeholders. The key contribution of this work illustrates to on-site management that the Local Authority, Residents and Local Businesses are the main external stakeholders to consider amongst others. Also, Face-to-Face Meetings and Newsletters are the more beneficial of the various wide-ranging engagement strategies identified, to manage and engage external stakeholders on urban development construction projects.

Keywords: community engagement, stakeholder management, urban development

INTRODUCTION

The global urban population is estimated to reach 67% by 2050 (Yang *et al*., 2017), and this rapid urbanisation has seen construction projects grow in increased size and complexity (Luo *et al*., 2017). Despite this growth, the construction industry remains highly fragmented, eschewing collaboration and strategic vision (Alwan *et al*., 2017). Bhatija *et al*., (2017) assert that the fragmented nature of the construction field

[1] mcurran23@qub.ac.uk

Curran, M, Spillane, J and Clarke-Hagan, D (2018) External Stakeholders in Urban Construction Development Projects: Who Are They and How Are They Engaged? *In:* Gorse, C and Neilson, C J (Eds) *Proceeding of the 34th Annual ARCOM Conference,* 3-5 September 2018, Belfast, UK, Association of Researchers in Construction Management, 139-148.

involves various stakeholders with different views and opinions. As our urban centres continue to flourish, the demand for stakeholder involvement in the decisions being made during the construction of these developments will also require attention (Isaacs *et al*., 2010). A large number of stakeholders are involved in major urban development projects (Gilmour *et al*., 2010), and if a project is to be completed successfully, a high level of integration and coordination amongst these stakeholders is required (Malkat and Byung-GYOO 2012). Furthermore, Nash *et al*., (2010) state that special consideration must be given to the management and engagement of the numerous external stakeholders that can have either a positive or negative effect on the overall success of a construction project. Olander and Landin (2008) concur that there is a growing tendency for external stakeholders to influence the implementation of development projects. On review, the vast majority of previous research works fail to acknowledge and highlight the integration of both who the external stakeholders are, and how they are effectively engaged, but in particular, on urban construction sites.

Therefore, considering construction projects in urban areas, it is necessary to identify who these external stakeholders are, more importantly, how they are managed and engaged, and what relevance, if any, they have to the project. To address these issues and to fulfil a concise but established topic in the research area, it is paramount to acknowledge and generate results based on actual events that emerge, when constructing in these inherently complex environments. Concentrating on this relevant facet of interest, this pilot study aims to identify and document who the external stakeholders are in urban development construction projects, and how they are managed and engaged by on-site project managers. This is achieved by undertaking a sequential mixed method approach, incorporating a combination of qualitative techniques for analysis, including a literature review and semi-structured interviews, and using mind mapping software, which can be cognitively summarised. In addressing the aim, it is anticipated that this study will assist and aid project managers in identifying and adopting engagement strategies considering external stakeholders on urban development projects.

Urban Development and External Stakeholder Management

The United Kingdom (UK) construction industry is widely fragmented and diverse, due to its project based nature (Elmualim 2010), with a higher element of complexity and uncertainty compared to other manufacturing industries (Adriaanse 2007). Jung *et al*., (2015) suggest that the element of risk is greater in urban projects, as construction sites in urban areas are constantly emerging (Hendrickson 1998). Stakeholders in urban development projects are individuals or organisations who can affect or be affected by the achievement of a project (Yang 2014), and their involvement can make effective and efficient collaboration difficult (Marshall-Ponting and Aouad 2005). Internal stakeholders are those who are formally members of the project coalition and hence usually support the project (Beringer *et al*., 2012), while external stakeholders are those who are not formally members but can affect or be affected by the project in a significant way (Aarseth *et al*., 2014).

Chan and Oppong (2017) argue that the expectations of external stakeholders are comparatively more pressing and critical than their internal counterparts, even though they have no contractual relationship with the project (Elmahroug *et al*., 2014). Sallinen *et al*., (2013) further this premise, highlighting that large projects are influenced by their external environment, where the social environment and planning

processes create uncertainty in complex urban projects (Abbott 2005). Failure to accommodate external stakeholder concerns in large construction projects can lead to severe resistance (Li *et al*., 2013), and Xue *et al*., (2015) corroborate that there is an urgency for developing more rational construction programs, to minimise the negative impact on their daily lives in urban developments. Yang (2014) supports that stakeholder engagement is unbalanced in urban development projects, where democracy is more often rhetoric than realistic in practice. Thus, a structured process of stakeholder engagement is an integral part of the construction process (Widén *et al*., 2013), and complex urban projects must be open to change to achieve inclusionary goals (Van Der Veen and Korthals Altes 2012). Furthermore, Yang and Shen (2015) postulate that engaging stakeholders in the construction sector is an important consideration for stakeholder management.

RESEARCH METHOD

This pilot study is at the beginning of an initial investigation within a PhD, which aims to contribute to both academia and industry. Considering the theoretical position this paper and subsequent research is founded upon, a critical realism approach is considered and adopted. As the nature of this study primarily deals with the opinions of human participants, a subjectivist approach is applied to the ontology, which provides a basis for the case study methodology. On completion of an informative literature review, the research method adopted consists of four exploratory case study interviews with four construction professionals based on large urban development projects in London, England. The selection of the four case studies was based on a convenience sampling strategy, and four interviews were undertaken by the researcher during a postgraduate student fieldtrip to London, organised by the construction management department at the researcher's university. The unit of study incorporates both individuals and groups, so the research problem can be approached from a variety of angles (De Vaus 2002). The case study approach is chosen as it is the most suitable for the 'how' and 'why' research questions (Yin 2014), and it is beneficial because it facilitates the investigation of a phenomenon in its real-life context (Rowley 2004). Also, a semi-structured interview format is chosen as this uses an open and closed ended form of questioning, and moreover, questions are asked in no specific order or schedule (Naoum 2007). This method allows questions to lead from one to another, enabling the interviewee to provide as much information as possible.

The four participating interviewees were identified and selected based on their availability at the time of each site visit, and taking ethical issues into consideration, each participant was informed of the nature of the research, its purpose, and what the resultant data will be used for. The identities of those involved will remain anonymous and confidential information (such as company names, addresses, client details etc.) is not disclosed. Case A consists of a new £18 million secondary school scheme catering for over 1,100 students, and the interviewee is a Site Manager with 15 years' industry experience. Case B is the construction of a new £8 million 137 bedroom hotel, and the interviewee is a Project Manager with 12 years' experience. Case C is a new £34 million residential development scheme including 152 apartments, and the interviewee is a Senior Project Manager with over 30 years' experience. Finally, Case D is the £4.2 billion construction of a new sewerage tunnel system spanning 25km, and the interviewee is a Senior Quantity Surveyor with 8 years' experience. The four case studies are a combination of both live and recently completed urban development projects, located throughout London. All four interviews were recorded in handwritten note format, and the interviews with the Site

and Project Managers were carried out during walking tours of each site, whereas the interview with the Senior Quantity Surveyor took place in a meeting room at the site office.

QUALITATIVE ANALYSIS AND RESULTS

The interviews commenced by gaining general background information about each participant and the respective case study, followed by an identification of the main external stakeholders relevant to the project. Emerging issues from these external stakeholders were discussed, followed by engagement strategies used to mitigate the issues identified, and any other comments regarding external stakeholder engagement and management on the project. The external stakeholders identified in each project are illustrated in Table 1. The data gathered from the case study interviews was then qualitatively assessed and cognitively summarised using mind mapping software. A qualitative mapping software application called Banxia Decision Explorer® is used for this research, which builds a visual representation of ideas and can provide a focus for debate, reflection and progression. It clarifies thinking and can be used to map thoughts and ideas gathered from interviews, acting as an effective stimulus to focus on paramount issues (Brightman 2002). Decision Explorer® can undertake many forms of analysis, but for the purposes of this study, Central and Domain Analysis is used. The analysis logically expresses how each factor or 'concept' is linked and interpreted, and each concept was discussed in some form by all the interviewees.

Table 1: External Stakeholder Identification

	Case A	Case B	Case C	Case D
Residents	x		x	x
Local Businesses	x	x	x	x
Road Users	x	x	x	
Pedestrians	x	x	x	
General Public	x			
Local Authority	x	x	x	x
Students (Local School)	x			
Bus Authority		x		
Rail Authority		x		
Highways Agency			x	x
Heritage / Conservation Agency			x	
Environmental Agency			x	x
Health and Safety Executive			x	
Neighbouring Local Authorities				x
Water Agency				x
Utilities Agencies				x
Marine / Port Authorities				x

Central Analysis calculates a score to identify which concepts have the greatest effect or impact on the mapped model, and the higher the score, the higher the effect that concept has on the map. Domain Analysis shows concepts which have many links, and can highlight concepts that the interviewees found interesting or discussed more. Combining the data from all four interviews, the top five concepts in the Central Analysis emerged and, in order of significance, were; 'Local Authority'; 'Residents'; 'Constant communication is necessary to keep project on schedule'; 'Face-to-Face

conversations with external stakeholders are best'; and 'Noise generated from site works'. The top five concepts in the Domain Analysis were; 'Residents'; 'Noise generated from site works'; 'Local Businesses'; 'Face-to-Face conversations with external stakeholders are best'; and 'Engagement with stakeholders is paramount at all times'. Due to space limitations, the remainder of the concept analysis results have been omitted, however, Table 2 illustrates a concise list of all the engagement strategies and general comments regarding external stakeholder engagement that were identified by all the interviewees in each case study. It is worth noting that the findings are from four interviews and are case study specific; thus, not a generalised view. Nevertheless, this pilot study provides a foundation to advance and expand into more detailed research, and supports continuous examination in external stakeholder engagement.

Table 2: External Stakeholder Engagement Strategies and Comments

Strategies	Case A	Case B	Case C	Case D
Issues can be reported to Gateman at site entrance	x			
Emergency hotline available to report any issues	x		x	
Site Manager contact details available on hoarding	x			
Inform Flyers distributed with site updates	x			
Newsletters sent out to all local residents	x		x	
Phone Calls to different agencies			x	
Emails to different agencies			x	
Regular Meetings with agencies			x	
Face-to-Face Discussions		x	x	x
Public Consultations				x
Comments	**Case A**	**Case B**	**Case C**	**Case D**
Engagement paramount at all times	x			
Critical that stakeholders are kept informed	x	x		
Open days and site visits planned	x			x
Site is CCS registered	x	x	x	
Approachable site manager helps communication	x		x	
Notify stakeholders prior to work being carried out	x			
Constant communication necessary		x	x	
Face-to-face conversation is the best strategy		x		
Liaising with Rail Authority on a regular basis		x		
Liaising with Local Authority on a regular basis		x	x	
Community Relations Manager appointed				x
Weekly Community Meetings (face-to-face)				x
Visitor Centre established				x
Public Consultations are held for residents				x
Early communication very important				x

DISCUSSION

External Stakeholder Identification

Combining the four case study interviews, a total of seventeen external stakeholders are identified. The qualitative analysis identified the 'Local Authority', 'Local Businesses' and 'Residents' as the main external stakeholders. They were frequently

discussed by all interviewees, which corroborates with a wide range of studies including Aaltonen (2010), who commonly identify these three as external stakeholders. Whilst maybe not a surprising revelation, it is interesting to note that the Local Authority emerged as the main external stakeholder ahead of Residents. The Senior Project Manager on the residential development scheme stressed the importance of maintaining regular contact with the Local Authority, as Wallbaum *et al*., (2010) argue that they can play both a strategic and normative role. Aapaoja and Haapasalo (2014) agree that local (or public) authorities have power, but no personal interest in a project, provided that all regulations are followed. The Site Manager on the secondary school scheme also supported that the Local Authority may not be affected by the project on a day-to-day basis, but is nonetheless the most powerful external stakeholder, who have the capacity to close down the site if necessary. Regarding 'Residents' and 'Local Businesses', all the interviewees identified the usual construction site issues, such as noise, dust and traffic, which can have a negative effect on these stakeholders. Sun *et al*., (2016) concur that urban construction projects have a negative impact on the surrounding environment which threaten the interests of the residents, while Ferguson (2012) further acknowledges that construction projects in urban areas are a source of serious nuisance to adjacent residents and businesses. The Senior Project Manager added that the local residents and surrounding businesses are a core priority, particularly during the construction phase, and the site team endeavour to cause as little disruption as possible to the people and their surrounding environment.

External Stakeholder Engagement Strategies

Collectively, ten wide ranging engagement strategies were identified and discussed by the four interviewees; 'Reporting issues to Gateman at site entrance'; 'Emergency Hotline available', 'Site Manager's Contact Details available on the site hoarding'; 'Inform Flyers'; 'Newsletters'; 'Meetings'; 'Phone Calls'; 'Emails'; 'Face-to-Face Discussions'; and 'Public Consultations'. Chinyio and Olomolaiye (2010) concur that stakeholders can be engaged through different avenues, and channels of communication can be exploited as newsletters, flyers, emails and posters. According to Ballan (2011), using a telephone is a channel of communication that will never be replaced in the construction industry, because it is heavily relied upon for peer to peer communication and immediate responses. Yang *et al*., (2011) in their typology of approaches identify newsletters to engage stakeholders in construction, and Enserink and Koppenjan (2007) opine that public consultations allow stakeholders to express their concerns, issues and ideas as part of a meaningful, participatory process. The Project Manager on the hotel scheme suggested that face-to-face conversations are the best strategy for engaging external stakeholders, while the Senior Quantity Surveyor also remarked that weekly face-to-face community meetings are held on that project. The Tasmanian Government (2005) ratify that face-to-face meetings are the best way to communicate with construction project stakeholders, and Opoku *et al*., (2014) affirm that one-to-one meetings are a commonly used method of stakeholder engagement. It is interesting to highlight that no one strategy was reflected in all four cases, but face-to-face discussions featured in three cases. However, due to the dynamic nature of the construction process, Molwus *et al*., (2017) observe that different strategies should be used for managing and engaging stakeholders at different stages of the project, depending on the prevailing circumstances. The Project Manager discussed how he would regular use emails, meetings and face-to-face discussions when engaging with the Local Authority on immediate matters, whereas

newsletters and inform flyers were his preferred action to engage with residents and other concerned stakeholders, to inform them of less urgent matters such as site updates and future activities happening on the project.

General Comments from Interviewees

As the interviews concluded, the remaining comments made by the four case study participants centralised around the importance of stakeholder engagement and communication as a whole. The Site Manager and the Senior Project Manager felt that an approachable and personable site / project manager aids the communication process, supporting Weaver's (2007) view that project managers should be highly skilled negotiators and communicators. Newcombe (2003) concurs that being sensitive and responsive to stakeholder expectations is a skill project managers need to apply when managing construction projects in the 21st Century. However, the Site Manager emphasised that these skills are not taught, but develop through career experience, and most engagement with stakeholders is done in an ad hoc manner based on their own intuition. Similarly to the identified strategies, no one comment is reflected in all four cases, which compounds that site and project managers have no set formula, but use their own initiative when dealing with external stakeholders. Nevertheless, three of the interviewees noted that their sites were registered with the Considerate Constructors Scheme (CCS), which is an organisation that seeks to improve the image of the construction industry, and encourages active engagement with stakeholders and the local community (CCS 2018). The interviewees reiterated that effective communication is paramount, compounding Yang's (2010) findings that the key to good stakeholder management and engagement is effective communication.

CONCLUSION AND RECOMMENDATIONS

Essentially, this pilot study focuses on the identification of external stakeholders and the strategies used to engage them on urban development construction projects. Urban construction projects are fragmented in nature, requiring integration and communication amongst all stakeholders. Therefore, site and project managers in these complex environments are tasked with ensuring that the identification and engagement of external stakeholders is carried out accordingly, through appropriate strategies and methods. Considering the results captured from the four case study interviews and data analysis, the Local Authority, Residents and Local Businesses emerged as the three main external stakeholders, from a list of seventeen. Face-to-Face Meetings and Newsletters were identified as the two main strategies from ten different strategies, used to engage the external stakeholders.

However, the findings established from the interviews and data analysis are case study specific, and only a concise, subjective view of the topic is produced; not a generalised view. The external stakeholders and strategies identified are important in any type of construction project, but are particularly relevant to urban development projects due to their complex and dynamic characteristics. Nevertheless, this pilot study provides a foundation to advance and expand into more detailed research, and supports continuous research in external stakeholder engagement. The findings in this paper can be developed further, and it is anticipated that a broader analytical context will be addressed in a subsequent journal publication, where additional theoretical points of departure can be articulated. It is recommended that further case studies are considered for qualitative analysis, and a sequential selection strategy is incorporated using criterion selection, such as quota and random sampling. This therefore provides the basis for informing and verifying the validity and necessity of the research and

subsequent PhD going forward. Also, additional case studies that are considered for qualitative analysis can be developed quantitatively through the use of questionnaire surveys, introducing another dimension to the area of research. This pilot study illustrates to site and project managers that the Local Authority, Residents and Local Businesses are three important external stakeholders to consider amongst a plethora of others, and Face-to-Face Meetings and Newsletters are some of the wide-ranging engagement strategies identified to manage and engage external stakeholders on urban development construction projects.

REFERENCES

Aaltonen, K (2010) *Stakeholder Management in International Projects*. Department of Industrial Engineering and Management, Aalto University, Finland.

Aapaoja, A and Haapasalo, H (2014) A framework for stakeholder identification and classification in construction projects. Open Journal of Business and Management, 2(**1**), 43.

Aarseth, W, Rolstadås, A and Andersen, B (2013) Managing organizational challenges in global projects. *International Journal of Managing Projects in Business*, 7(**1**), 103.

Abbott, J (2005) Understanding and managing the unknown: The nature of uncertainty in planning. *Journal of Planning Education and Research*, 24(**3**), 237-251.

Adriaanse, A M (2007) *The Use of Interorganisational ICT in Construction Projects: A Critical Perspective*. PhD Thesis, Universiteit Twente, Netherlands.

Alwan, Z, Jones, P and Holgate, P (2017) Strategic sustainable development in the UK construction industry, through the framework for strategic sustainable development, using building information modelling. *Journal of Cleaner Production*, 140, 349-358.

Ballan, B (2011) A Value map for communication systems in construction. *Journal of Information Technology in Construction (ITcon)*, 16(**44**), 745-760.

Beringer, C, Jonas, D and Georg Gemünden, H (2012) Establishing project portfolio management: An exploratory analysis of the influence of internal stakeholders' interactions. *Project Management Journal*, 43(**6**), 16-32.

Bhatija, V P, Nithin, T and Dawood, N (2017) A preliminary approach towards integrating knowledge management with building information modelling (KBIM) for the construction industry. *International Journal of Innovation, Management and Technology*, 8(**1**), 64.

Brightman, J R (2002) *An Introduction to Decision Explorer*. Cumbria: Banxia Software Ltd.

CCS *(Considerate Constructors Scheme)* (2018) *Code of Considerate Practice*. Available from https://www.ccscheme.org.uk/ccs-ltd/code-of-considerate-practice-2/ [Accessed 12th July 2018].

Chan, A P and Oppong, G D (2017) Managing the expectations of external stakeholders in construction projects. *Engineering, Construction and Architectural Management*, 24(**5**), 736-756.

Chinyio, E and Olomolaiye, P (2010) Introducing stakeholder management. *In:* E Chinyio and P Olomolaiye (Eds.) *Construction Stakeholder Management*. Oxford: Wiley-Blackwell.

De Vaus, D (2002) *Research Design in Social Research*. London: Sage Publications.

Elmahroug, M H, Tutesigensi, A and Brookes, N J (2014) Integrating external stakeholder identification and project initiation in civil engineering infrastructure projects. *In:* Raiden, A B and Aboagye-Nimo, E (Eds.), *30th Annual ARCOM Conference*, 1-3 September 2014, Portsmouth. Association of Researchers in Construction Management, 935-944.

Elmualim, A A (2010) Culture and leadership in stakeholder management. *In:* E Chinyio and P Olomolaiye (Eds.) *Construction Stakeholder Management*. Oxford: Wiley-Blackwell.

Enserink, B and Koppenjan, J (2007) Public participation in China: Sustainable urbanization and governance. *Management of Environmental Quality: An International Journal*, 18(**4**), 459-474.

Ferguson, A (2012) *Qualitative Evaluation of Transportation Construction Related Social Costs and Their Impacts on the Local Community*. MSc Thesis, University of Texas, USA.

Gilmour, D, Blackwood, D, Falconer, R and Isaacs, J (2010) Understanding decisions for sustainable development. *In:* Egbu, C (Ed.), *26th Annual ARCOM Conference*, 6-8 September 2010, Leeds. Association of Researchers in Construction Management, 859-867.

Hendrickson, C (1998) *Project Management for Construction*. New Jersey: Prentice Hall.

Isaacs, J, Falconer, R, Gilmour, D and Blackwood, D (2010) Modelling and visualizing sustainability assessment in urban environments. *In:* Egbu, C (Ed.), *26th Annual ARCOM Conference*, 6-8 September 2010, Leeds. Association of Researchers in Construction Management, 1477-1486.

Jung, T H, Lee, J, Yap, M H and Ineson, E M (2015) The role of stakeholder collaboration in culture-led urban regeneration: A case study of the Gwangju project, Korea. *Cities*, 44, 29-39.

Li, T H, Ng, S T and Skitmore, M (2013) Evaluating stakeholder satisfaction during public participation in major infrastructure and construction projects: A fuzzy approach. *Automation in Construction*, 29, 123-135.

Luo, L, He, Q, Jaselskis, E J and Xie, J (2017) Construction Project Complexity: Research Trends and Implications. *Journal of Construction Engineering and Management*, 143(**7**), 04017019.

Malkat, M and Byung-Gyoo, K (2012) An Investigation on the Stakeholders of Construction Projects in Dubai and Adjacent Regions. *International Proceedings of Economics and Development Research*, 45, 77-82.

Marshall-Ponting, A J and Aouad, G (2005) An nD modelling approach to improve communication processes for construction. *Automation in Construction*, 14(**3**), 311-321.

Molwus, J J, Erdogan, B and Ogunlana, S (2017) Using structural equation modelling (SEM) To understand the relationships among critical success factors (CSFs) For stakeholder management in construction. *Engineering, Construction and Architectural Management*, 24(**3**), 426-450.

Naoum, S G (2007) *Dissertation Research and Writing for Construction Students 2nd Edition*. Oxford: Butterworth-Heinemann.

Nash, S, Chinyio, E, Gameson, R and Suresh, S (2010) The dynamism of stakeholders' power in construction projects. *In:* Egbu, C (Ed.), *26th Annual ARCOM Conference*, 6-8 September 2010, Leeds. Association of Researchers in Construction Management, 471-480.

Newcombe, R (2003) From client to project stakeholders: A stakeholder mapping approach. *Construction Management and Economics*, 22(**8**), 841-848.

Olander, S and Landin, A (2008) A comparative study of factors affecting the external stakeholder management process. *Construction Management and Economics*, 26(**6**), 553-561.

Opoku, A, Cruickshank, H, Guthrie, P and Georgiadou, M C (2014) Stakeholder engagement in research: The case of retrofit 2050 research project. *In:* Raiden, A B and Aboagye-Nimo, E (Eds.), *30th Annual ARCOM Conference*, 1-3 September 2014, Portsmouth. Association of Researchers in Construction Management, 237-246.

Rowley, J (2004) Researching people and organizations. *Library Management*, 25(**4**), 208-214.

Sallinen, L, Ruuska, I and Ahola, T (2013) How governmental stakeholders influence large projects: The case of nuclear power plant projects. *International Journal of Managing Projects in Business*, 6(**1**), 51-68.

Sun, L, Yung, E H, Chan, E H and Zhu, D (2016) Issues of NIMBY conflict management from the perspective of stakeholders: A case study in Shanghai. *Habitat International*, 53, 133-141.

Tasmanian Government (2005) *Stakeholder Management*. Australia: Tasmanian Government Project Management Guidelines Version 6 0.

Van Der Veen, M and Korthals Altes, W K (2012) Contracts and learning in complex urban projects. *International Journal of Urban and Regional Research*, 36(**5**), 1053-1075.

Wallbaum, H, Silva, L, Plessis, C, Cole, R, Hoballah, A and Krank, S (2010) Motivating stakeholders to deliver change. *In: 3rd International Holcim Forum for Sustainable Construction - Re-inventing Construction*, 14-17 April, Mexico City, Mexico: Universidad Iberoamericana.

Weaver, P (2007) Getting the 'soft stuff' right - Effective communication is the key to successful project outcomes. *In: PMI Global Congress (North America 2007)*, 6-9 October, Atlanta, Georgia, USA: Project Management Institute.

Widén, K, Olander, S and Atkin, B (2013) Links between successful innovation diffusion and stakeholder engagement. *Journal of Management in Engineering*, 30(**5**), 04014018.

Xue, X, Zhang, R, Zhang, X, Yang, R J and Li, H (2015) Environmental and social challenges for urban subway construction: An empirical study in China. *International Journal of Project Management*, 33(**3**), 576-588.

Yang, B, Xu, T and Shi, L (2017) Analysis on sustainable urban development levels and trends in China's cities. *Journal of Cleaner Production*, 141, 868-880.

Yang, J (2010) *A Framework for Stakeholder Management in Construction Projects*. Hong Kong Polytechnic University, Department of Building and Real Estate.

Yang, J, Shen, G Q, Bourne, L, Ho, C M F and Xue, X (2011) A typology of operational approaches for stakeholder analysis and engagement. *Construction Management and Economics*, 29(**2**), 145-162.

Yang, R J (2014) An investigation of stakeholder analysis in urban development projects: Empirical or rationalistic perspectives. *International Journal of Project Management*, 32(**5**), 838-849.

Yang, R J and Shen, G Q P (2015) Framework for stakeholder management in construction projects. *Journal of Management in Engineering*, 31(**4**).

Yin, R K (2014) *Case Study Research: Design and Methods 5th Edition*. Thousand Oaks, CA: Sage Publications.