

Report Summary: Perceptions of sustainability in the construction industry

Tercia Jansen van Vuuren, April – August 2016

Overview: Investigating the attitudes and perceptions of individuals across the project hierarchy to sustainability, using a construction site in Cambridge as a case-study.

Aims: To investigate how individuals understand sustainability, how they perceive their ability to influence and implement sustainability, and to explore if there are differences across the hierarchy.

Process/methodology: Qualitative research using semi-structured interviews with tradesmen, project staff and managers from the various companies involved with the project (client, main contractor, sub-contractors). Emergent themes were identified and arranged in a thematic network which was explored to determine patterns and hypotheses.

Results: The understanding of sustainability varied greatly both across and down the project hierarchy. Most of the interviewees did not have a holistic understanding of the concept and focused on the environmental aspect, demonstrating familiarity with issues such as materials and waste. Most interviewees believed that they could not influence sustainability and felt constrained by prior decisions made by others. It is evident that sustainability is led by legal and contractual requirements rather than a commitment to the principles of sustainable development. Transformation requires redefining the industry culture and restructuring the way it operates, especially the evaluation and reward system, to ensure that sustainability is integrated at all levels of the project delivery.

Conclusions: This research project was a successful investigation into how individuals involved with on-site construction activities engage with sustainability and what drives the implementation of sustainability on site. Given the traditional focus on cost, it is necessary to change the system factors so that the most expensive choice is being unsustainable. Furthermore, there is a need to know how to create a culture of voluntary industry action that goes beyond mere compliance. As a major client, the University has the opportunity to drive this process by prioritising sustainability and incentivising contractors accordingly.

Next steps: Whilst this particular research project is complete, it has demonstrated the value in understanding attitudes and perceptions which is useful in investigating how best to implement sustainability.

Further information: This dissertation has been submitted for the degree of Master of Philosophy and will shortly be available at the Centre for Sustainable Development.

About you: *Tercia Jansen van Vuuren, MPhil Engineering for Sustainable Development, I have an identical twin who is doing a PhD in Engineering at Cambridge.*



Motivation: *I worked as a structural engineer in South Africa for over 5 years after graduating as a Civil Engineer and particularly enjoyed the construction aspect of my work. I realised that whilst there is a plethora of information about sustainable construction, this wasn't translating into action on the construction site so I wanted to research how the people involved in construction perceived sustainability.*

Personal outcomes from project: *I learnt a lot about social sciences and qualitative research as coming from a technical background, this was all new to me. I enjoyed the discussions and conversations with all the people about their involvement on the project and opinions about sustainability.*

Vision: *The opportunity that the University has to create change by driving it from the top should not be underestimated. I hope that in some way, this research project can motivate the University to recognise this opportunity and integrate sustainability into decision-making instead of seeing it as a competing element of project considerations.*

What's next?: *I am working for a sustainability consultant in London where I will be able to put what I have learnt in the course of the year here in Cambridge into practice.*

On a scale of 1-5 how motivated are you to do further work on environmental sustainability?:
5!