

## Case Study: Healthy Communities

### Wonder Learning Boxes – University of Strathclyde



*We aim to inform and inspire future engineers as part of our commitment to community benefits through our contract with University of Strathclyde.*

Where:  
University of Strathclyde, Glasgow

When:  
Friday 8<sup>th</sup> November 2019

Who:  
1<sup>st</sup> year students – Engineering Department–  
University of Strathclyde

“10/10 would do this again. I think future years would benefit from this activity”

“Was a great experience learning about new materials that are used in the Industry. A great idea for next year”

**Anonymous students, 1st Year Engineering Student 2019/2020**

#### The Challenge

To engage with our local community, offering a unique and fun way of learning. We reached out to Mike Murray, Teaching Fellow in Construction Management at University of Strathclyde’s Civil Engineering Department. We came up with the idea of ‘Wonder Learning Boxes’ used recycled materials from site. The idea was to engage students and open their minds to a whole host of different materials that can be used when designing buildings.

#### What We Delivered

The project team built 10 wonder boxes using materials that we had on site and filled them with various engineering materials: some civil, some electrical and some mechanical.

We delivered a presentation to 75 students on Balfour Beatty, the various career paths you can take and our current projects. This was delivered by Rebecca and Gail Boyd, a 1<sup>st</sup> year graduate programme employee from Balfour Beatty. We they got the students to feel inside the boxes and describe and guess what they were feeling. Once every student took their turn we presented back to them on what the objects were and how they would be used on an engineering project.

#### The Results

Mike Murray asked the students to fill out a questionnaire at the end of the class. The feedback has been very positive with students feeling the session was both informative and fun. We asked the class if they thought it should become a regular feature for years to come, and the answer was a resounding yes!

**For more information, please contact:**  
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11<sup>th</sup> November 2019

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Dear Rebecca

**RE: Balfour Beatty Construction Technology Curiosity Boxes, Friday 8<sup>th</sup> November 2019**

I would like to thank you and your graduate engineer colleague **Gail Boyd** for your kind assistance with the “Balfour Beatty Construction Technology Curiosity Boxes” activity on Friday 8<sup>th</sup> November. Please pass on my appreciation to your colleagues at the University of Strathclyde T&L project who were also involved in the preparation of the boxes and the contents.

I have include the anonymous feedback from the first-year students below and you can see that overall the initiative was successful, with a few ideas for improvements for next time. I would also like to make you aware that your assistance helps us meet the requirements of the Joint Board of Moderators (JBM) who are the organisation responsible for accrediting civil engineering courses in the U.K. (under licence from the U.K. Engineering Council):

**ANNEX H: INDUSTRIAL INFLUENCE AND INPUT IN DEGREE PROGRAMMES**

The JBM believes that, in the same way that professional experience can enrich a student’s learning, degree courses can benefit considerably from engagement with the civil engineering profession. For this reason, the JBM strongly recommends that higher education institutions (HEIs) maintain strong, viable and visible links with the civil engineering profession. (p.22)

[http://www.jbm.org.uk/uploads/JBM117degreeguidelines\\_jan18.pdf](http://www.jbm.org.uk/uploads/JBM117degreeguidelines_jan18.pdf) )

Yours Sincerely



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The place of useful learning

## Verbatim Responses

*I enjoyed this type of learning, it was a good way to learn about different and variable things used in construction.*

*I found the wonder and curiosity boxes exercise to be both fun and useful, as it was a good alternative to usual lectures where there may not be much hands-on learning.*

*I enjoyed this activity. I learned a lot. I did not know about most of the objects were and I enjoyed learning what they uses were. I would recommend the activity again as it was a good intro to construction.*

*Enjoyable presentation, impressive company. I enjoyed seeing equipment and things from different fields + disciplines of engineering. You built my house, thank you!*

*Was a great experience learning about new materials that are used in the industry. A great idea for next year.*

*It was interesting to hear about how to get into industry and the current projects being done.*

*10/10, would do again, Think future years would benefit greatly from this exercise.*

*Overall, very informative and interesting. More fun than expected. Would recommend this is done next year and with more people to give more perspectives into jobs.*

*Interesting to hear about the different career paths you can go into, not just engineering, and about the opportunities to do internships.*

*It also gave a good insight into what equipment I may encounter in my careers as an engineers.*

*Interactive and enjoyable, would recommend.*

*I like feeling inside the boxes, Defo do it next year.*

*I thought it was worthwhile and should be done again next year.*

*Good way to learn differently, and keeps you interested.*

*Overall pretty interesting. Gave a good insight.*

*Enjoyed the exercise.*

*An interesting task*

*Good idea, short and sweet, should be repeated next year.*

*The challenge was interesting.*

*It was good and I learned about different component and what they do.*

*I thought it was a good laugh.*

*It was fun to learn about different components,*

*I think it was a good idea to do this sort of thing because it helps break up the monotony.*

*It was useful knowledge.*

*I like it when companies come in to speak to students.*

*A good insight to alternative route to working as a civil engineer .It would be helpful for first-years next year.*

*It was good to hear about graduate engineering apprentices and different career paths.*

### **Problems / Improvements**

*The exercise took too long, if it did not take so long it might be a bit fun, I can't say I gained anything from this.*

*Took too long for everyone to get around the boxes.*

*A prize would have been appreciated.*

*I feel it would work better in a smaller groups.*

*It did seem like if it had been a competition, it would have been better.*

*Sometimes you could see the object in the box.*

*Concrete dust wasn't very nice.*

*Could use blindfolds.*



