



Health & Safety Winner 2015

Dust Mitigation Project



How can you improve the ubiquitous broom to improve health & safety? That was the brief for this project!

Still a valued construction tool for clearing up dust and debris on site, the brief to Queen Elizabeth School students was to explore what improvements could be made to the broom – without making the solution prohibitive because of excessive cost or manufacturing set up. Lovell's small tool and equipment suppliers were asked to collaborate with the students during the project which involved a variety of tasks: idea mapping; research into existing products, methods and environments; experiments around ways to reduce dust without damaging building materials; prototype design; water spray/misting tests and costings.

A prototype design was developed that aimed to reduce dust generation by introducing a controlled water mist. The students followed the risk reduction process of elimination, reduction, isolation and control to improve the effectiveness of their solution. It was also assessed for: durability – ensuring it could withstand continual use throughout the day, usability – creating a broom weighing less than 3kg and competitive pricing.

Students not only gained knowledge of the impact of dust inhalation and related health issues, but also learned how their Science Technology Engineering & Mathematics learning feeds into creating practical solutions. The project outcomes reinforce the importance of managing health and safety in a proactive manner.

Lovell Partnerships works with local schools to help students understand the variety of opportunities offered within the construction sector. Collaborating with Queen Elizabeth's School in Barnet on an Engineering Education Scheme, Lovell set students specific engineering challenges which support the Science Technology Engineering & Mathematics curriculum. This initiative is designed to encourage innovation and research which helps develop practical measures to improve health & safety.

For Lovell, engaging with students not only brings fresh insights and ideas but also allows young people to have a clearer understanding of the industry and the health hazards which construction workers face on a daily basis. The project results have been presented to Lovell's senior management, site teams and supply chain and will also be distributed to the UK Contractors Occupational Health committee.

Lovell is committed to building futures, changing lives and leaving a lasting legacy in every community in which they work. Given that around 4,000 deaths are estimated annually resulting from workplace exposure to dust, this initiative could represent a major move forward in reducing workers' exposure to this airborne hazard.



Judges comments

This engagement is way beyond what is required of a construction company and has delivered important innovations for the industry and engaged young minds in health and safety. The development of the water fed broom could have a big impact on the health of construction workers. The change in the attitudes of the students to health and safety is a really important outcome of the project.

Engagement of young people is essential to ensure the long term well-being and development of the construction industry and can be very rewarding for a business.

Finalists

- Artelia UK/Shell UK On-site Activity (Artelia Projects UK Ltd)
- CLOCS – Construction Logistics and Cyclist Safety (Transport for London)
- Dust Mitigation Project (Lovell Partnerships Ltd)
- GE Aviation (Wates Construction Ltd)