



Awards 2013 Case Study

Award Winner

Project of the Year

Taf Ely Learning Campus

Embedded in the foundations of most successful 21st century construction projects are the complementary elements of innovation, sustainability and collaboration. Without them, there is little chance of any major scheme rising out of the ground.



With standards increasing year on year, it takes something exceptional to attract the attention of the industry's leading experts. But this is exactly what was achieved by the new Taf Ely Learning Campus in Nantgarw, winner of the CEW Project of the Year Award for 2013.

Overcoming a number of challenges, scoring highly on waste minimisation and sustainability, making extensive use of BIM and demonstrating a remarkable commitment to community benefits were some of the qualities that made this project stand out as the best in Wales.

The fact that main contractor Laing O'Rourke forged a real partnership with client Coleg y Cymoedd and other stakeholders, made all the difference to the outcomes of the scheme, according to Laing O'Rourke's project leader Paul Norman.

"We created a genuine collaborative environment with the client and bought into the aspirations of the college," said Paul. "We also made it our business to do all we could to satisfy the concerns of the local community about disruption and the new building."

The £40m campus opened in September 2012. It caters for more than 3,000 students taking vocational courses and A'levels as well as adult learners, and encompasses a crèche, gymnasium, refectory, shop and cafe.

The benchmark community engagement aspect of the scheme has already featured as a CEW Demonstration Project, with a community liaison manager appointed to oversee the extensive programme. The development had caused anxiety for a number of local residents but this interface resulted in 92% of them commenting that communications from the site had exceeded their expectations.

The economic aim of the project was always to help stimulate the area and up-skill the local workforce by targeting local companies. In doing so 81% of people employed in the scheme were from a 40-mile radius of the site. Twenty-six apprentices benefited from the scheme and two students gained employment with Laing O' Rourke as site engineers.

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Milica Kitson

Chief Executive of Constructing Excellence in Wales

But for Paul, the award is first and foremost an accolade to the substantial effort by his team to contribute to the community well beyond the confines of the project itself. The renovation of Oxford Hall, a dilapidated community building, was their legacy to the area and involved considerable donations of materials and free time from Laing O'Rourke staff, the client's team and the supply chain. They also completed a sponsored walk for a cancer charity and set up a blood donor session for staff, students and residents.

On a project that impressed at many levels, one particular aspect that stood out was the strategic use of the scheme as a learning facility for construction students from the college, who were encouraged to use it as work experience. This participation left a lasting impression on both students and lecturers who plan to incorporate similar hands-on involvement into future courses. Laing O'Rourke personnel also got involved in the Lecture Support Programme to enhance the learning experience of students, receiving overwhelmingly positive feedback. It was a first for site staff and demanded an investment of their time in lecture preparation and in the honing of presentation skills. This is one of the many aspects of work done on this project that is now being adopted across the Laing O'Rourke business.

The two-year project was procured under a traditional NEC Option C form of contract and the designer was appointed by project managers Gardiner and Theobald ahead of the main contractor. While this could have been challenging for the team, a clear client brief and early engagement of all parties helped ensure early consolidation of the design. An early test of

the strength of this collaborative environment was an enforced budget cut that meant value engineering the project which resulted in changes to the fabric of the building.

The main areas of innovation were the use of Building Information Modelling (BIM) and offsite manufacturing to save time and costs and enhance safety. A design, manufacture and assembly process was used, which included a pre-cast frame and modularised M&E installation. BIM enabled a clash detection process to be implemented, so that reviews and alterations were completed early on and making a significant contribution to this large-scale project being delivered on time, within budget and with no major accidents.

Environmental considerations included the robust management of recycling under the WRAP initiative to minimise waste on site and resulting in 96% recycling efficiency. The scheme achieved a BREEAM Excellent rating with its low carbon technologies including bio-mass boilers, water harvesting tanks, photovoltaic energy and natural air ventilation.

Chief Executive of CEW Milica Kitson said: “The Nantgarw Campus project represents all that is good about the construction industry and the built environment in Wales. The partnership between Coleg y Cymoedd, Laing O'Rourke and their supply chain has not only delivered a magnificent facility to high standards, it has also provided fantastic opportunities for the young people in this area both during the construction process and for the future.

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