

ENGINEERING EXPERTISE KEY IN RESIDENTIAL REGENERATION

Paul Waite Associates is playing a pivotal role in key residential regeneration projects to regenerate areas on both sides of the Pennines.

The firm is lending its renowned experience to Skipton Properties' £65m, mixed-use Grove Mills development in Keighley. In Barnoldswick, Lancashire, the team has helped Orchard Holdings plc overcome major obstacles to secure planning permission for a £6.2m housing development on the site of a former Victorian mill.

“ It will be a spectacular development of 350 apartments and 53 new homes, with office and leisure facilities. ”



Solid partnership: Paul Waite and team at the Grove Mills site.

Due for completion in 2011 and designed to create contemporary 21st century living, Grove Mills will be a magnificent fusion of historic architecture and contemporary design. It will be a spectacular development of 350 apartments and 53 new homes, with office and leisure facilities and a £14m state-of-the-art underground car park for residents and businesses. Paul Waite Associates' challenging brief is to design the site infrastructure and develop contemporary link structures to the old mill buildings.

The company is also designing the internal structures of a former mill building that will house bespoke offices for Skipton Properties.

Skipton Properties' Managing Director, Brian Verity, says: "Paul Waite Associates' expertise in providing tender-winning civil and structural engineering design made them the ideal choice for the project.

The team's role in the regeneration of this neglected part of Keighley cannot be underestimated."

Imaginative solutions

The company's ability to provide imaginative solutions to complex engineering problems has also been key in the Westfield Mill scheme at Barnoldswick.

Development of this Victorian mill site had been limited by persistent flooding from a watercourse that ran through the old mill's dam. After carrying out a flood risk assessment, the team came up with the solution to culvert the watercourse through the site and use the former mill dam as a wetlands area and storage pond.

Subsequent discussions with the Environment Agency and Land Drainage Authority not only resulted in planning

approval for 52 residential units – it also provided a welcome solution to the problem of regular flooding of nearby properties.

“ The team's role in regenerating this neglected part of Keighley can not be underestimated. ”

Frank Lewer, MD of NEL Construction which is responsible for building the development, comments: "It was an economical solution to a frustrating problem and repaid the faith we had in Paul Waite Associates. Without the team, this development could not have happened."

ALLIANCE BUILT FOR SUCCESS

A partnership with climbing wall specialists Entre-Prises to build one of the world's biggest man-made realistic caves has now set its sights on the 2016 Olympics.

The project at Belfast Activity Centre, Northern Ireland, is similar to a previous success in Colomendy, North Wales, where the team linked up with Entre-Prises to design a caving complex for an outdoor pursuits centre.

Designed in conjunction with an experienced caver to ensure authenticity, the Belfast facility uses the same method of sprayed concrete on pre-bent reinforcement cages – but on a much larger scale.

The project has more than 200m of tunnels, the world's biggest cavern (9.5m long, 4.5m wide and 8m high) and tallest waterfall (8m). It is one of only four realistic man-made caves anywhere on the planet and is the largest ever seen in the UK.

“ The Belfast project will be an imposing testament to the success of our partnership with Entre-Prises. ”

Due to open in June 2007, it will incorporate a structure suitable for abseiling as well as caving. The three caving passages will have water pumped through them, terminating in an egress pond through which users will have to swim to exit the tunnels.

Says Paul Waite Associates' Managing Director, Paul Waite: "The Belfast project will be an imposing testament to the success of our partnership with Entre-Prises.



Scaling new heights: The caving complex at the Belfast Activity Centre, Northern Ireland.

"The complexities involved in designing a construction like this are extraordinary. Creating a build-able structure with an organic shape that provides the full range of caving and abseiling challenges is a phenomenal achievement. You could say we have scaled our own mountain."

The dynamic duo is now set to play a crucial part in Qatar's bid for the 2016 Olympic Games. They will work alongside French engineers and Spanish contractors to design the support structure for two free-standing walls being built as part of Qatar's development of first-class sporting facilities.

Entre-Prises Managing Director, Colin Boothroyd, comments: "The sheer scale of the Belfast project is phenomenal. Its triumph is further evidence of the expertise of Paul and his team. It reinforces the confidence in our partnership and we look forward to many future successes."

Blights put right

Inner city eyesores are being given a new lease of life thanks to Paul Waite Associates.

The company has joined forces with AQH Micklegate Developments Ltd to turn Sheffield's notorious red light district into a thriving residential hub.

Two blocks of apartments, one in Upper Allen Street and another at Edward Street, are due to be complete next year. They will be marketed



Inner city inspiration: The Edward Street development.

at Sheffield's growing student and young professional populations.

An overgrown site on Upper Allen Street, which houses a number of dilapidated buildings will be transformed by a block of 131 attractive, private, one-bedroom apartments.

Having gone through a rigorous selection process, the final design comprises a concrete sub-structure and ground floor with timber-framed superstructure, clad in brickwork and zinc. Paul Waite Associates is responsible for drainage works, highway-retaining structures and all sub-structures including a reinforced concrete transfer structure.

In addition, the company also has a watching brief to oversee the sub-contractor designed elements for the timber frame. It is providing input on balcony details and supports for the building, which should be finished by March 2008.

Five months later, the neighbouring £14.5m Edward Street scheme is due for completion. This site offers particular challenges owing to its 14m height difference from the front to the rear of the development.

Having carried out a slope stability analysis, Paul Waite Associates' solution is to use a number of piling techniques to address the complex and varying ground conditions, with and ties to adjoining buildings. The designs include a series of steel-framed structures.

The imaginative development consists of four A blocks, ranging from four to eight storeys. One block will provide 32 private apartments, while the other three will offer about 417 bed student accommodation. Work begins this spring.

Partnership builds formidable reputation in complex projects

Paul Waite Associates' reputation as the leading cross-Pennine design and build consultancy continues to flourish through a strong partnership with Barnfield Construction Ltd.

Barnfield is a national property developer and contractor with a 250-strong workforce. It forges joint ventures with local authorities to provide new civic facilities, which play a key role in revitalising town centres across East Lancashire and West Yorkshire.

The developer commissioned Paul Waite Associates to undertake a full civil & structural design from concept to working drawings, including drainage and highway section agreements, road widening, sewer diversions and a detailed drainage scheme.

The long-awaited £6 million regeneration of Market Street in Nelson, Lancashire is due to be completed in September 2007 and will breathe new life into a brownfield site, providing a landmark civic building in the heart of the town.

TACKLING CHALLENGES

The demolition of the previous buildings left a complex site with basements, underground obstructions and hotspots of buried contamination which needed remedying. In addition, it is tightly enclosed on all sides by a public highway and surrounding buildings.

Leading the project for Paul Waite Associates is associate structural engineer Dave Topping, who comments: "The development has presented particular challenges such as the building's curved façade and roof structure, together with a requirement for clear-span offices on the upper floors.

"The structure had to be both safe and cost-effective to construct. The solution was to design a 3D steel structure on radial lines and use our leading-edge software to analyse the actual loads on each member. The resulting elevation steelwork is faceted with extended cleats to create a smooth external curve.



Nine-storey luxury: The Hilton Hotel, Coventry.

"This scheme marks a significant milestone in the ongoing regeneration of Nelson town centre."



Landmark civic building: Market Street, Sheffield.

DYNAMIC PROJECTS IN PIPELINE

The two companies have also teamed up to develop a new £8.2m, 222,000 sq ft business park in Burnley. Paul Waite Associates' role is to optimise the earthworks using its cut and fill software before designing the internal site infrastructure.

The team will also be responsible for co-ordinating phases one and two of the site investigation and carrying out detailed structural design of all buildings and retaining structures.

“ This scheme marks a significant milestone in the ongoing regeneration of Nelson town centre. ”

And the partnership does not end there. Paul Waite Associates is also playing a crucial role in Barnfield's £9.5m contract to build a new, nine-storey Hilton Hotel in Coventry.

The team will lead the civil and structural engineers to design the sub and superstructures and external infrastructure. The landmark, 32.5m high build, next to Coventry City Football Club's Rioch Arena, is due for completion in June 2008.

A further three hotel sites across the Midlands and South East are also in the planning stages.

Comments Barnfield Construction spokesman Mark Taylforth, Development Director: "Our history of successful projects with Paul Waite Associates is well established and the culture of cross-company working continues to go from strength to strength.

"Their expertise and professionalism are second to none. This is a mutually beneficial partnership that is built to last."

ENGINEERS TOLD 'YOU'RE ACE'

Investments in people development and IT systems are paying dividends for Paul Waite Associates, which recently came top in a nationwide industry study.

The benchmarking project, commissioned by the Association for Consultancy and Engineering (ACE), involved firms of up to – and over – 3000 staff. It revealed the practice is the highest spender on investment and staff training.

The survey – which also took into account staff turnover, costs, utilisation, health and safety and market performance – involved over 300 offices across the UK. Each participant received a tailored report showing how they measured against the industry as a whole, as well as their particular sector.

Paul Waite, Managing Director, comments: "The results of the study reinforce our ethos that robust IT systems and recruiting and developing a top team, are key to business success. Each of our teams operates autonomously, including the management of a budget for salaries and training and is measured by specific targets and gross profit.

“ Having our performance measured against our peers continues to be key to our growth. ”

"However, the benchmark study confirms my fear that although many engineering firms focus on excellent technical skills, they should be equally concerned with understanding financials, gaining business acumen and implementing robust processes."



Bright sparks: Paul Waite (centre) and his team.

ACE also commended the consultancy upon achieving the highest net profitability proportional to its size. At 250 per cent greater than the average, the success reflects the financial benefits of strategic investment.

Adds Paul: "Having our performance measured against our peers continues to be key to our growth as we progress our ambitious five-year plan. This entails us increasing staff numbers, quadrupling turnover and returning a net profit margin of at least 37 per cent."

Irum Malik, ACE Economic and Policy Director comments: "Benchmarking is a powerful tool for industry members to measure themselves against their competitors and I would urge all consultancy and engineering firms to take part in ACE's 2007 benchmarking initiative."

New trio strengthens team

Paul Waite Associates' strength in complex engineering projects has been further bolstered by a trio of new recruits.

Civil and structural engineers Chris Sharpe, Dave Topping and Paul McDonald joined from fellow civil and structural engineering firm, Hill Cannon.



Appointments boost expertise: left to right Paul Waite, Chris Sharpe, Paul McDonald, Dave Topping.

MD Paul Waite comments: "Key to our success is getting the right people on board. Chris, Dave and Paul represent a significant step in our programme to expand and further strengthen our structural engineering division."

Chris – responsible for the management of the civil and structural divisions of the consultancy – has been appointed Associate Director of Engineering. He says: "I came to Paul Waite to be a part of a growing, forward thinking practice and particularly for its commitment to coaching and training to improve my management skills."

Associate Structural Engineer, Dave heads up the structures team. He comments: "I work across the firm's complex projects and am key to driving through the lean processes and securing business objectives."

Graduate Structural Engineer Paul McDonald, who graduated with a Master's in Architectural Engineering in 2004, is already involved in

a number of high-profile projects, including Platts Lodge in Accrington, Market Street, Nelson and the Belfast Cave Complex. He says: "I moved to Paul Waite Associates to a part of an ambitious and expanding company that would give me the opportunity to work on a large variety of projects. I'm now working hard to achieve my Chartered status."



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