

Sustainable Construction at the University of Bath

The initiative

The University of Bath has been working for several years to improve the sustainability of its construction projects. However, during a strategic review in 2005, it was felt that these initiatives whilst valuable were somewhat piecemeal and not fully developed as a sustainable construction policy.

The University has therefore set out in its 2005 Estates Strategy a standard which it seeks to follow for sustainable construction. The principles were endorsed by the University's Council and are now being taken forward. They include the following:

1. All major refurbishment and construction projects will have a separate environmental advisor identified as a part of the design team. The person tasked with this remit will act as design champion for sustainability and will monitor progress against agreed outcomes through the construction process.
2. All major new build projects with a value in excess of £1 million will be formally submitted for a BREEAM assessment. The University would target an 'Excellent' rating unless exceptional circumstances dictate.
3. For major refurbishments over £1m, the University has been trialling a review process following BREEAM methodology but not seeking formal adoption, with a target of achieving the equivalent of a 'Very Good' rating. This has proved to be successful and has now been formally consolidated for projects going forward from 2008, which will be targeting a minimum BREEAM 'Very Good' standard.
4. The University now engages commissioning agents on all of its new projects to ensure that buildings are properly commissioned across a range of seasons and that the building management systems are set to measure the effectiveness of all environmental controls. A full-time BMS Manager has also been appointed.
5. The University has engaged an additional member of staff, a qualified engineer, on its energy team to assist in the briefing of major projects and to help monitor outcomes during design and construction. This will be rolled out to all procurement professionals in the Estates team in 2008.
6. A full utility metering specification has been developed and implemented to allow all new build/refurbishment projects to integrate with the University's new AMR (Automated Meter Reading) system, and also to help ensure compliance with the new part L Building Regs; like many other Universities, Bath is finding it is having to educate the industry in how to implement this.
7. Key members of the University's Capital Procurement Team have attended training sessions on BREEAM methodology in order that they fully understand the sustainable aspirations of the University.
8. In addition to the shell construction, fit-out and furnishing proposals should also follow environmental principles. In particular, where building projects include full furnishing, these will be sourced from FSC rated product ranges. The University's three key furniture suppliers have appropriate ranges.

The benefits

The fruits of this programme are beginning to be enjoyed. Two major projects on site, the 4 West academic building and the Woodland Court residential block have achieved BREEAM 'Excellent' at design stage. Both will be re-assessed at the end of the construction phase. These two projects have a combined value of £40 million. In addition, the first academic refurbishment has achieved a 'Very Good' shadow rating and two further residential refurbishment projects are now being prepared with a brief that will allow for a formal 'Very Good' assessment.

Bath and North East Somerset Council has recognised the work that the University is doing and points to practices as an 'Exemplar' for desired construction projects across the City.

It is also noticeable that in engaging in this programme, attitudes towards sustainable construction have changed and a considerable body of knowledge has developed amongst both Estates' staff and its consultant base. Regular postings on the University's web pages have given rise to a great deal of interest amongst the staff and student body at the University. Our consultant base regularly comments on the University standing out amongst their clients in trying to drive forward sustainable construction.

The University is committed to carrying out post-occupancy evaluations which will include a focus on environmental performance.

Cost in use calculations produced by the University's Project Managers and Environmental Consultants demonstrate very clearly the benefits in reduced running costs and future maintenance schedules that will be derived over the twenty five year analysis period and hopefully beyond. These have been instrumental in bringing on board sceptics from within the University community.

Significance for the Sector

The Woodland Court residential scheme, despite being a Green Field development, has comfortably achieved a BREEAM 'Excellent' rating at design stage. It has done this largely without complicated add-ons or gadgetry and is an excellent example of good basic design meeting sustainability criteria. It should have relevance throughout the sector.

The 4 West project is complex, involving the demolition of a 1960s CLASP building at the very heart of the campus. The project consists of a significant amount of refurbishment of 1960s space and as such should prove of interest to all those planning similar interventions in 1960s campuses or building stock.

The programme has transformed attitudes across the Department of Estates and has had a significant impact in raising awareness and 'feel good factor' across the campus.

The University has been able to work with Bath and North East Somerset Council to demonstrate how sustainable construction can be achieved and has been instrumental in assisting the Council to draw up guidelines of its own for future major planning applications.

Although the sustainable construction process has begun to be embedded, neither of the two major projects has yet completed. Further work will be prepared in 2008/09 to demonstrate how specific targets were met.

The Building Research Establishment has selected Woodland Court as a project that will assist them in developing their thoughts on the forthcoming proposal for a BREEAM 'Outstanding' assessment. The University of Bath and hopefully the entire sector will benefit from the outputs of this exercise.

Trials have demonstrated that BREEAM 'Very Good' standard is perfectly achievable on a range of refurbishment projects and is now consolidated in the University of Bath specification.

Occupier surveys at completed residential refurbishments have demonstrated the strong interest from students in environmental initiatives in building projects and have helped establish a partnership approach for future specification development.

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