

C A S E S T U D Y

HERTFORDSHIRE STUDENT HOUSING: BREEAM OUTSTANDING



■ **ACHIEVEMENT:** 21 RESIDENTIAL BUILDINGS ALL RATED BREEAM OUTSTANDING

SAVINGS IN ELECTRICITY CONSUMPTION: 15 TO 30%

SAVINGS IN WATER CONSUMPTION: 20%

DELIVERING A VISION OF SUSTAINABLE LIVING

A unique public-private partnership has turned the ambitions of Hertfordshire University's estates plan into reality: delivering accommodation for 3,000 students with an 'Outstanding' BREEAM rating for sustainability.

The University of Hertfordshire can boast some of the best accommodation for students in the whole of the UK. On the University's College Lane campus in Hatfield, **a complex of 21 new buildings with room for 3,000 people was completed in 2016**. The new development was subsequently rated **Outstanding by the Building Research Establishment's BREEAM** method of scoring environmental credentials.

Overall, the layout of the complex has been devised with quality of living in mind. Residential blocks are arranged in colleges, each of which has its own semi-private courtyard. The five collegiate groups of buildings are positioned around a shared central student hub, which contains a common function room, a 24 hour gym and reception area.

Students living in the residences are benefitting from high levels of natural light and ventilation, plus very good air quality and acoustic performance within the buildings, among other

things in an impressive list of design features.

Excellent energy performance designed into the buildings means a significant saving on operational running costs. Data from the first year of full occupancy, in 2016/17, shows electricity consumption at 1,086kWh per bed space. This compares with 1300-1600kWh at other accommodation sites. Water consumption also measures up well – at 42.3 cubic metres per year, in comparison to the 51 cu.m normally expected for modern en-suite accommodation.

But it was not always like this. Prior to 2012, Hertfordshire University was suffering a shortage of residential accommodation and many of the buildings it did have on its Hatfield campus were in urgent need of modernisation and refurbishment.

A masterplan had been drawn up for what was wanted. An Estates 2020 Vision mapped out the University's ambitions for rebuilding or refurbishing almost all of its academic facilities over the Hatfield site. The residential estate was the platform from which the University hoped to launch its long-term modernisation plan.

For turning the vision into reality, **a long-term partnership** was formed between the University and the Uliving@Hertfordshire project company, which has Meridiam as a principal investor, partner and shareholder. Under the terms of its

concession agreement, Uliving took on responsibility for the **design, construction and financing** of the University's new accommodation complex, and its **maintenance and management for 50 years**.

Meridiam also had its UK arm, Fulcrum, involved in the Uliving@Hertfordshire project, as Fulcrum's Christian Stanbury and Uliving@Hertfordshire's CEO explains: "Our role was very much in **driving the delivery of the project** and ensuring that the investment had a positive impact on the community and students' residential experience," says Christian.

"As the work progressed, it became critical for us to maintain liaison and good communication between all stakeholders. This helped to ensure both the design and construction of the buildings and their operation and maintenance met the project's objective, which was essentially to **deliver the University's vision for its residential estate.**"

The BREEAM aspects of the Estates 2020 Vision were stipulated up to a rating of Excellent as a condition of the development's planning consent by Hertfordshire County Council. However, the University decided to go further than this, aiming for a best-in-class rating of Outstanding.

Chris Waters is the head of residential and property management in Hertfordshire University's Estates team. He says the Outstanding BREEAM rating was a "delivery must-have" of the project from the outset:





“This came about partly because sustainability was high on the agenda for the whole university. **Reducing carbon footprint was a vital strategic aim.**”

“As an academic institution at the forefront of research and development in sustainable technology, it was important to practice what we preach; and it was decided ‘if we’re going to do this, then we’re going to do it right,’” Waters says.

Getting it right meant aiming for a very high standard of design and construction. Quality of life for students on site is enhanced by the standard of rooms available and the development’s parkland landscaping, planting and facilities provided to encourage cycling, as well as the air quality and acoustic aspects.

There are monetary reasons for all this too. For a large site that generally demands a lot of heating and power, having 21 residential buildings rated Outstanding for energy and lighting efficiency produces major benefits for electricity and all utility costs. Research on the subject has shown that while achieving high

BREEAM ratings **typically adds 2% to construction costs, the payback on the investment usually comes within two to five years.** It is still too early to assess this at Hertfordshire, but the figures for electricity and water consumption above show savings are already being seen. Cost efficiency is expected to increase further now the new renewable energy centre being completed in June 2018 which will supply heat and electricity on site for future years.

The project’s financial model is predicated on providing accommodation that will be sufficiently full to provide a return on the investment. Collection of rental payments from tenants is the University’s responsibility, but **the demand risk is entirely with Uliving@Hertfordshire.** The University is also a 13% shareholder in Uliving.

“This means we all have a **shared interest in making the project a success,** in ensuring there is a high demand for rooms available at the Hatfield campus. In this way it’s a true public-private partnership. We all want the University’s Estates 2020



THE PROJECT

Meridiam is the principal 55% shareholder in Uliving@Hertfordshire.

The other partners include the University and the development arm of contractor Bouygues UK, plus the facilities management specialist Derwent Living. Each of these three partners is a 13% shareholder in Uliving@Hertfordshire. Legal & General is another partner, with a 5% share.

Uliving’s concession agreement was signed in May 2013 and work started on site later that year.

Existing accommodation of 500 rooms was refurbished, with a total of 21 new buildings for 2,500 students delivered in four phases,

including the Central Hub prior to the start of the 2016/17 academic year in September 2016. ■



Vision to succeed, so we all want to achieve the highest possible standard in accommodation," Christian Stanbury says.

Against a measure of demand, ULiving@Hertfordshire has certainly succeeded so far. **The accommodation is full this year, for the fourth year in succession.**

Grainne O'Monghain was the Vice President of the Students Union at Hertfordshire University in 2015/16 and then President of the Union as the final phase of the ULiving construction project was nearing its end in 2016/17. She says: "This meant I became involved in working with the ULiving team to minimise disruption, to develop a partnership to help bring more of a social scene to the development and to keep up liaison and communication over what was going on.

"I'm impressed they've retained **a lot of green space and landscaping** in the development and the enclosed layout meets an expectation of what you might expect from a university campus," she adds.

"Many of the students on the campus now wouldn't know how it used to be, but compared to other sites you notice the difference. It does look stunning, the green agenda is good and ULiving has worked hard to develop a collegiate feel. **They've been open to our ideas and requests for how the facilities are used** and they've been receptive to the idea of creating a range of price options to help meet the needs of different students' abilities to pay. **It's been a healthy, open door relationship.**" ■



TOP MARKS FOR BREEAM: THE BREAKDOWN

The ULiving@Hertfordshire development was built in four stages - three phases of accommodation buildings plus construction of the Central Hub. All four achieved an Outstanding rating to the BREEAM assessment. This is a remarkable achievement, given that in 2012 only 1.5% of BREEAM measured buildings had been rated as Outstanding. Phase One of ULiving@Hertfordshire, for example, scored 96% in the Energy section and 92% for Materials with seven 'innovation points' awarded.

Technological innovations introduced include an entirely natural ventilation strategy and energy efficient LED lighting, lift systems and appliances in the accommodation. The overall development also includes an on-site Energy Centre, generating low carbon heat and power for the accommodation blocks and communal facilities.

Each flat contains an electronic panel displaying energy and

water used, so **empowering the students to monitor their own consumption**, which follows on from the construction project's policy of proactive site management to reduce demand on resources.

The site team maintained a commitment to **minimise construction waste** by using prefabricated timber panels and standardised materials, many of which were **responsibly sourced**. Maximum possible use of materials rated as A and A+ by the Green Guide specification has created a **building fabric that is itself recyclable**, with a low environmental impact over the full lifecycle of the development.

Extensive consultation was carried out with the public, stakeholders, local authorities and consultants to help steer the design process. Substantial cycle storage has been included and incorporated into the landscape design, as part of a wider **sustainable transport policy.** ■

