

## The achievement

Arup Associates designed a new facility, the "Campus" in Blythe Valley Park, which met the group's own requirements as a centre for Ove Arup's Midlands operations and also those of owner BVP Developments. Tenant and landlord together created a stylish, energy efficient and comfortable office building, at a cost comparable with a traditional design (£7.3 million, including fit out). The site when completed will house 600 staff, acts as an award-winning showcase for Arup's design skills and is cost effective, flexible and commercially viable for BVP.

# A new look for energy efficient offices

## Why change was needed

When planning a new Midlands office, Arup (the tenant) and Arup Associates (the designer) recognised that the opportunity to create a true showcase for their design skills was there for the taking. The design of the building had to be up-to-the-minute, innovative and sustainable, challenging current perceptions of how offices should look.

## Key management issues

- prepare a thorough case using cost modelling to win developer's buy-in
- accept that major change is a difficult process and that some dissent is normal, even after extensive consultation
- consult staff early in the design process, so that their views and wishes can be incorporated as far as possible.



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## Key benefits

- Arup is on course to achieve its target of a 450% reduction in use of electricity and a 300% reduction in use of gas, when compared with modern air-conditioned offices in the Midlands
- an increase in staff interaction has been observed
- credibility in the market place: Arup has its own cost and design model for sustainable construction.



Theme of case study:  
**sustainable construction/  
culture and people**

Sector represented:  
**offices**

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RETHINKING



## A new look for energy efficient offices

### Background

Having taken the strategic business decision to combine its Coventry and Birmingham offices in one new location, Arup chose Blythe Valley Park, because it met two main criteria. First, the company wanted to create a natural environment through opening windows, basic heating and maximum use of daylight, using air conditioning only where absolutely necessary. Natural ventilation, requiring a clean external environment, was a cornerstone of the Campus' energy efficient design. Blythe Valley Park was one of few 'clean air' sites available. A second point in the park's favour was that it was equidistant from the existing two offices and therefore a fair compromise for both teams regarding their journeys to work.

### Success step by step

#### 1 Design to encourage staff interaction

One of Arup's design priorities was to dissolve departmental barriers and encourage staff interaction. The Campus achieved this through the provision of two pavilions (a third one is planned), each of which has two storeys linked by a central area for reception and meeting spaces. Each pavilion is designed as a naturally ventilated and well-lit space with mezzanine floors. Most staff have open office workstations, generating enough ambient noise for people to feel relaxed about spontaneous conversation with colleagues.

Cellular offices and conference rooms complement the open plan arrangement with more private environments. Employees report that they can work undisturbed while small local and large central conference areas are in use. Central facilities, including a 100-seat café, further encourage people to mix and meet formally and informally during working hours.

In conjunction with Reading University, Arup is researching what constitutes a productive office environment, and nowhere better to start than its own purpose-designed premises.

#### 2 Win developer's buy-in

In the commercial property market, the move towards sustainable construction with natural ventilation is a slow process. Developers still believe that mixed mode premises are a better, safer long-term bet. So Arup had to win the developer's support for its Campus.

Arup's 'sales' strategy had two key points. The first was to prove that the capital cost of constructing a naturally ventilated building was no different from an air-conditioned or a mixed mode office building in the Midlands. During 1998 and 1999, Arup Associates set about benchmarking its proposed design against other more traditional structures it was designing at the time. The company set out a

cost plan, identifying all the main elements of construction from frame to drainage. The conclusion was that the total cost was similar (about £998 per m<sup>2</sup>), although the distribution of costs in the two approaches was different. For example, the Campus roof and external cladding represented 11.57% and 26.13% of the total cost respectively, compared with 4.19% and 13.7% in traditionally designed offices. On the other hand, for the Campus, mechanical installation was a mere 4.81%, compared with 22.26% in air-conditioned offices.

The second ace in Arup's hand was the publicity its showcase would receive. This publicity would benefit the business park as a whole, not just Arup. Sure enough, after occupation of the premises, extensive coverage in the main professional and local press ensued, all of which was a bonus for BVP Developments.

#### 3 Consult staff throughout the change process

As with any organisation wanting to introduce significant change, Arup had to address the challenge of winning employees' buy-in. Acknowledging that neither of the two Midlands teams wanted to move and, moreover, that the board was unlikely to win absolutely universal staff support, the directors wanted nonetheless to meet employees' needs and preferences as far as possible in the new premises. To this end, one director conducted an internal survey, consisting of a simple questionnaire, which was sent to all 350 staff. The questionnaire, which generated a 95% response, helped identify employees' likes and dislikes in relation to their existing accommodation and their 'wish lists' for new premises.

What became clear was that priorities of staff in Birmingham and Coventry were different. In the end the board had to make a decision but believed that the comfort and style of the new offices would in time dispel any ambivalence. In 2002 anecdotal evidence suggests that employees like the natural environment and have made positive comments informally to managers.

Arup directors have continued to use simple, short questionnaires to consult staff on important issues, although the response rate has fallen since the first survey. (This tail-off in response, they believe, is due to staff being busy). One key issue is mode of travel to work, for the move initially increased the use of individual cars, as was anticipated. Such an increase was in conflict with Arup's green agenda. The company has therefore implemented a travel policy (see case study 195) and continues to lead, in conjunction with ten other businesses in the park, a lobby for improved public transport to the site.

### Outlook

Arup Associates won a British Council for Offices Midlands Regional Award in the corporate workplace category for the Campus project and other commendations.

Some of the major benefits of the Campus for Arup are that it can monitor thoroughly all aspects of energy consumption on its own premises, which provide a credible cost model for future commissions. It can monitor perceptions, attitudes and behaviour through feedback from its staff. It can also claim to live as it preaches, with sustainability on its agenda when bidding for work.



### Possible next steps

**Workshops, seminars and visits to explore sustainable construction topics are held regularly by Construction Industry Environmental Forum.**  
Tel: 020 7222 8891  
Fax: 020 7222 1708  
Website: [www.ciria.org.uk](http://www.ciria.org.uk)

**You can book training days, organised as part of the Learning by Doing initiative, covering business improvement methods**  
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**You can book visits to companies to discuss a range of best practice business topics, by contacting the IUKE team**  
Tel: 01730 235015  
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**Workshops on a range of best practice business topics are held regularly by the Construction Productivity Network**  
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Website: [www.ciria.org.uk](http://www.ciria.org.uk)

**Fact sheets on a range of best practice topics are available from the Construction Best Practice Programme**  
Website: [www.cbpp.org.uk](http://www.cbpp.org.uk)

**Guidance notes on preparing your own case study are provided on the website**

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