

7.4 JUBILEE CAMPUS, NOTTINGHAM UNIVERSITY

Completed: 1999

Location: City centre edge

Roof Type: Extensive (grass, moss and lichen)

Jubilee Campus completes a transformation of what was previously a 30 acre bicycle factory site on the western edge of Nottingham city centre [Figure 34]. The provides a new academic site for Nottingham University, in addition to their leafy main campus at University Park. The architects, Michael Hopkins and Partners, have previously designed and built a low energy headquarters in Nottingham city centre for the Inland Revenue (1994).



Figure 34. Aerial view of site before development

Jubilee Campus has won numerous awards for its low-energy design. These include the British Construction Industry Building Award 2000, Nottingham Lord Mayor's Award 2000, RIBA Journal Sustainability Award 2001, Energy Globe Award 2002 and the Civic Trust Award for Sustainability Special Award 2002³⁰.



Figure 35. Aerial view of finished college campus

The architects aimed to make Jubilee Campus a new 'green lung' for Nottingham. A tree-lined, landscaped lake is a striking new addition to the landscape. The buildings themselves use passive methods of heating and cooling, primarily with large atria and bespoke ventilation cowls and the green roofs. This concurred with Nottingham University's reputation for high environmental standards.

³⁰ Hopkins Architects 'Jubilee Campus – University of Nottingham', <http://www.hopkins.co.uk> [Company wepages, undated – accessed 2 November 2004]. Available at: <http://www.hopkins.co.uk/main.html>

Jubilee Campus comprises of seven new buildings along the eastern edge of the lake [Figure 35, above]. All except the postgraduate halls (top left of photograph) have planted green roofs. With the notable exception of The Exchange, a central teaching facility opposite the circular Learning Resource Centre, the green roofs are flat [Figure 36]. In contrast, two of the roofs of The Exchange stand proud and are gently curved [Figure 37]. A third central area slopes to a tapered point, being above the ceiling of a lecture theatre.



Figure 36. One of the flat green roofs, viewed from the Learning Resources Centre, top floor.

Figure 37. View of The Exchange's curved roof, seen from the ground.



The Jubilee Campus was visited for the purposes of this study on a grey autumn day. It is a short 5 minute bus ride from the centre of Nottingham. The 'green' credentials are clearly evidenced by the landscaped lake, bespoke ventilation cowls and the omnipresent cedar cladding.

If one has a reason to look up, the arched green roof of The Exchange is visible from certain areas of the campus [Figure 37]. It is possible to see these roofs very clearly from the top floor of the Learning Resources Centre, opposite The Exchange [Figure 38]. One can also see from here the flat planted roofs above the other blocks [Figure 36, above], including those on the Learning Resources Centre itself.

The curved roofs seem predominantly moss-covered. They have a soft, smooth, velvet appearance. In contrast the flat roofs signal their presence with a variety of taller grasses, which protrude above the roofline. On the date of the visit, the grasses were predominantly a mixture of reds and browns.



Figure 38. Some of the green roofs of The Exchange, viewed from the Learning Resources Centre, third floor.

Unfortunately this delight will have been lost to all except observant visitors in the third-floor computer room.

According to *Building Services Journal* the grass roofs are no heavier than a conventional roof. Only 50mm of earth has been used as a substrate. They have been planted with a “grass-like tundra of moss and lichen”³¹.



Figure 39:

Passive cooling
(A) woodland shade
(B) Lake breeze
(C) evaporative from green roofs

³¹ Palmer Roberts, J. ‘Under Pressure’, *Building Services Journal: the magazine of the CIBSE*, August 1999, p. 24

The roofs are valued for adding thermal mass to the top floor slabs. They also perform a role in the passive cooling strategy of the site [Figure 39, above]³². Evaporative cooling in summer months helps lower the temperature of the top floor concrete ceiling slab.

As a visual indication of sustainable aspirations the roofs actually come a poor second to the bespoke ventilation cowls of which the architects are most proud³³. However, the cowls actually give little saving in terms of running costs.

The project received a ‘Thermie’ grant of £750,000 from the European Community to offset the cost of “technologies that are too expensive to meet commercial viability”³⁴. This was used to subsidise the normally prohibitive cost of photovoltaic solar cells. However, it begs the question whether similar subsidies could not also be available to offset the installation costs of green roofs.

In the case of Jubilee Campus, the architect was fortunate to have a client willing to pay above the odds “promote its own forward looking image”³⁵. While the ventilation cowls are the most visible symbols of this image, it is the lower-profile extensive green roofs that appear to be the more successful in environmental performance.

³² Figure 39 based on architect’s passive cooling and ventilation diagram, as published in *Hopkins2*, p.107

³³ Davies, C. *Hopkins2* London: Phaidon Press Limited (2001), pp. 90-96. The briefest of mention is made of the planted roofs.

³⁴ Ibid.

³⁵ Downs, C. ‘Seeing is believing’, *Landscape Design*, October 2000, p. 23