

AN ENVIRONMENTAL VISION FOR KEELE IN 2010  
Richard Parncutt, 20 August 1998

Acknowledgments: The following contributed to the preparation of this document: John Barry, Aaron Berry, Mark Charlesworth, Steve Cropper, Paul Ekins, Neil Farrow, Meira Hanson, Philip Kivell, Annette Kratz, Mike Leech, Angus McKendrick, Simon Morris, Kaisa Muhonen, Stephen Protheroe, Paul Singleton, Peter Thomas, Ian Trippier, Amanda Ufford, Peter Fletcher (for USS), Carol Mountford.

## Introduction

Background. The March 1997 report of the Environmental Policy Task Force (see <http://www.keele.ac.uk/university/campus/ep/eptf/eptfr01.htm>) refers to "a 21st Century campus which provides a high quality living and working environment". The report proposes that Keele University "work to create a living and working environment based on sound and sustainable environmental principles".

Aim. If accepted, this document will specify the university's primary long-term environmental targets. For concision, the text is written in the present tense as if in 2010; many of the listed objectives could be achieved much earlier than 2010.

Publication of progress reports. It is proposed that the Environment Subcommittee or its representative prepare an annual report outlining progress toward environmental goals in each area (transport, power, recycling, etc.) in the previous year, and setting out plans for the coming year; that the report be made public (via www) and its existence made known to HEFCE, relevant local community groups, clients, and sponsors; and that the student prospectus (on www) include links to these reports, either in full or in summary form.

University's commitment. It is proposed that a suitably revised version of the present document become university policy, complementing existing environmental policy. Acceptance of the present document would not imply commitment on the part of the university to achieving the various listed objectives. The university would, however, be committed to documenting, in the minutes of the Environment Subcommittee or in the annual report, decisions to reject or change previously accepted objectives.

Responsible staff. The university hopes to employ a full-time Environment Officer to oversee the environmental programme. In addition, specific members of staff would be responsible for parts of the programme, as shown under each section heading below. These staff members would manage the targeting and achievement of shorter-term objectives, as steps toward the listed longer-term objectives.

Financial benefits. Several of the environmental initiatives referred to below would have significant long-term financial advantages for the university. Where appropriate these are highlighted. Price estimates are today's, and would require appropriate adjustment for 2010. Financial gains would also follow from increased student intakes (both undergraduate and

postgraduate) associated with Keele's national and international emergence as a leading environmental campus that "practises what it preaches".

Size of the university. When making quantitative estimates, numbers of staff and students have been assumed to remain constant. Changes in the size of the university will need to be accounted for when setting and adjusting targets in future.

#### A. TRANSPORT (Responsible staff member: Registrar, or delegate)

A1. Parking is charged by pay and display or by barriers on entrance and exit roads (operated in each case by smart cards or cash). Maximum charges are around 50p for 1 hr, £1 for 4 hrs and £2 for 24 hrs. Charges for staff depend on income. Annual tickets are available only for disabled motorists, single parents with young children, and staff whose contracts require them to own and use a car. The number of parking spaces on campus has fallen by 40% since 1998 (or returned to 1980 levels) due to a drop in demand (see below on buses and cycling), allowing extra space for new buildings without encroaching on existing green areas.

A2. Subsidies. The university is publicly committed to spending all proceeds from parking (including fines) on maintenance of existing parking facilities, development of alternatives to private motor transport (bus, cycle, walk), and/or payment of national parking taxes. A current annual statement of income from all parking fees and all associated expenditure is available from 24-hr reception.

A3. Buses. Subsidies to bus companies from the university (direct grants to assist the establishment of new services; cut-price passes for university students and staff) have led to a doubling of both patronage and frequency of service since 1998. Especially the Keele-Madeley route has been upgraded and promoted. Several new routes have been added to the network. Buses are cleaner, using electric (batteries or fuel cells), "clean" diesel, gas, hydrogen, and/or flywheel (regenerative braking) technology. Buses are more comfortable, with improved disabled access. There are racks for 1 to 2 cycles on the front of buses; cyclists use them to avoid climbing Keele Hill. All bus stops in the local area have shelters. One-third of stops also have bike racks (financed jointly by the university, bus companies and local authorities). Most passengers carry passes, so drivers seldom deal with cash. This, coupled with reduced traffic, has reduced journey times by 20%. Bus services (fares, passes, timetables) are well advertised on campus (posters, leaflets, email, www).

A4. Cycling. 40% of off-campus students and 20% of off-campus staff are "fair-weather cyclists", using a variety of on- and off-road, dedicated and shared cycle paths financed jointly by the university, local authorities and environmental funding agencies. (The off-road paths have had the greatest positive impact on the cycling population, by reducing or eliminating fumes, noise and danger.) Paths cross the campus and connect it to Silverdale, Newcastle, Madeley, and Seabridge. Bike racks on campus range from the most convenient to the most secure. Major racks are located near cycle routes. There is a bike rack near

the main entrance to every campus building, and a large secure cycle shelter near each hall of residence. Many Hawthorns residents cycle daily to university. There is a bicycle shop either in the student's union building or in central Newcastle. Cyclists regularly use showers in the leisure centre and in all major campus buildings.

A5. Walking. Campus lighting is adequate to allow safe use of public transport at all hours. There are three pedestrian crossings on the ring road; drivers give way to pedestrians on all other roads (reminded by signs to that effect). Separate paths are available wherever pedestrians necessarily encounter road traffic. There are kerb ramps at all crossing points to allow easy wheelchair and pram/stroller access.

A6. Speed limits. The speed limit of 20 mph on the campus ring-road is enforced. The speed limit on Keele Hill and selected nearby roads is 40 mph. (Reduced speed limits mean cleaner air, less noise, and less danger for cyclists and pedestrians.)

A7. Car sharing. The university encourages off-campus staff to work from home where appropriate, taking advantage of various information technologies to support their teaching, administration and research activities. When staff and students do travel to/from the university by car, 10% are passengers to drivers who live at different addresses. Lift sharing is coordinated through a newsgroup on the central university computer; anyone can post messages offering or requesting regular lifts. The university encourages hitchhiking, but stresses the risks and provides safety guidelines to both drivers and passengers. Official hitchhiking bays are provided with adequate lighting and shelter near the two main exits from the university (opposite Barnes Hall, and opposite Church Plantation), and are frequently used during the evening peak period.

A8. Staff housing. New staff are asked to provide general information on where/how they would like to live/commute. They are then sent detailed information on currently available housing that would minimise their need to travel by car; recommended locations are on campus, within cycling distance, or on bus routes. General information of this kind is also freely available on www, and regularly updated. New staff are required without exception to live within 20 miles of campus. Travel patterns of staff are reviewed annually (e.g., by email questionnaire), and university commuting policies adjusted accordingly.

B. POWER (Responsible staff member: Estates Manager, or delegate)

B1. Electricity. The university's annual electricity bill has fallen by 30% since 1998 due to awareness raising, rationalisation programmes, and creative technological innovations (e.g., combined heat and power units; library PCs that turn off automatically when not used for a given period; classrooms and stairwells fitted with energy-efficient lights connected to movement sensors). The university purchases or generates over half its electricity from renewable sources (wind, solar, biomass, etc.).

B2. Gas. Natural gas consumption on campus has fallen by 30% since 1998 due to enhanced thermal efficiency, insulation, and energy generating/saving design technologies in campus buildings (residences, offices). The nett unit price of natural gas has increased due to international global warming taxes, so the overall cost to the university has fallen little since 1998. Students in residences have easy control over heating; they can always turn it down rather than opening windows, and are advised to do so. Where heating is seasonally turned on and off in residential blocks, dates/times are known in advance.

C. RECYCLING AND PURCHASING (Responsible staff member: Estates Manager, or delegate)

C1. General recycling and waste minimisation. All recyclable materials (paper, glass, metals, plastic) are segregated and collected from departments, student residences, and staff houses and flats by either university staff or external contractors, who are monitored by the university to minimise motor transport and environmentally harmful chemicals. Departments provide course materials and information electronically (website). Use of on-line electronic media for teaching/learning (including computer connections to individual student rooms on campus) has considerably reduced paper consumption. Most office-grade paper sent for recycling is printed on both sides. Some staff receive and mark written work by email.

C2. Waste. Recycling programmes have reduced the total amount of non-recycled waste generated by the university by 50% since 1998. But costs associated with the collection, transport and dumping of non-recycled waste have fallen relatively little, due to increased landfill taxes.

C3. Water. In new and some old buildings, rainwater is collected for non-drinking purposes, and some grey water is recycled for toilets. Water meters are installed in all staff flats and houses. Taps in residences turn off automatically after a given period. Toilets have a choice of two flush quantities. These measures have together led to a 40% reduction since 1998 in water consumption and associated charges.

C4. Paper use. 70% of all paper used by the university (including paper used by KUP and SU printers, letterhead, toilet paper, kitchen towels) is 100% unbleached recycled. Increasing reliance on electronic media has resulted in a 30% fall in paper consumption since 1998.

C5. General purchasing. North West Consortium, of which Keele University is a member, has developed a comprehensive strategy to favour the purchase of environmentally friendly products (e.g., soaps and cleaners).

C5. Food. The supermarket on campus offers a range of products comparable to that of large supermarkets in Newcastle and at competitive prices. It provides 70% of food consumed domestically by 4000 campus residents; they seldom need travel to another supermarket. It sells a variety of organic foods, including locally produced fresh fruit and vegetables, and a range of environmentally friendly soaps and cleaners. It is

committed to reducing, reusing and recycling packaging materials. It regularly surveys the needs of campus residents, and responds accordingly.

D. EDUCATION (Responsible staff member: Director of Academic Affairs, or delegate)

D1. Undergraduate courses. The proportion of FTEs in environmentally oriented courses has doubled since 1998. All students take a basic environmental awareness course whose subject matter is closely linked to that of personal, public and global health. 5% of students undertake environmental experience/practical projects with voluntary, public and private organisations as part of their degree. Not only students but also residents and staff - academic, administrative, service & are involved in the 'greening of Keele'.

D2. Graduate courses. Keele's departments of Environmental Social Sciences, International Relations, and Politics together represent the strongest concentration of environmental teaching and research in the UK. Keele's internationally prominent Graduate School of Environmental Studies pools graduate students from the 3 departments. Enrolments at any one time comprise 80 students on taught masters courses (of which there are 8) and 30 research students. These students are taught and supervised by 12 full-time staff across the 3 departments. Student research projects are often relevant to Keele's campus environment and related community projects. Local community and environmental issues are integrated into teaching and research, and help the university to meet its physical needs as locally as possible.

D3. International collaboration. Through its research output and participation in relevant international conferences and political events, Keele is playing a significant role in international efforts to counter global warming by cutting international fossil fuel consumption and increasing the total area of the world's forests. To reduce the amount of jet travel generated by international conferences, Keele actively promotes teleconferencing and electronically linked regional conferences.

D4. Information services. Students, staff, and the general public have access to a major collection of environmental books, magazines (including the periodical publications of major environmental organisations) and special-purpose environmental documents held in the university library. The university also provides detailed environmental information (relevant to the campus and surrounding area, and more generally) to the public via www and occasional paper publications. The university regularly surveys quality of life on campus and in surrounding areas so as to establish and revise environmental priorities.

D5. Health. The Occupational Health Service is available to all staff for advice on effects of work on health, and of health on work. It collaborates with environmental bodies on campus to promote healthy lifestyles and working environments both in the university and in the wider community. It promotes healthy eating (awareness of available food choices), well-being at work (stress management; leisure centre activities; walking, cycling, jogging), and sensible drinking (including availability and consumption of low/non alcohol drinks).

E. PHYSICAL ENVIRONMENT (Responsible staff member: Estates Manager or delegate)

E1. Parks and woodland. The campus has been surveyed for species diversity and range of habitat, and an environment/conservation management plan is in place. The campus is ringed by a purpose-built jogging track that favours forest and park and avoids roads.

E2. Buildings. Environmental and energy issues are considered imaginatively and in depth during the design and construction of new buildings, in consultation with external bodies such as the Centre for Alternative Technology. Design technologies used include active and passive solar energy, water convection, fabric thermal capacity, and separation of grey water and sewage for recycling. Estates and Buildings require all building contractors to comply with internal environmental standards that tend to be stricter than equivalent national or European standards.