

the National Society for Clean Air is trying to forestall such cynicism. The annual conference of the society is being held in Blackpool this week, and papers on various aspects of air pollution are being presented. The work of the society was described by Sir John Charrington in his presidential address on Tuesday. Sir John described the change of emphasis from industrial smoke to vehicle pollution and called for amendments to the Clean Air Act.

Air pollution from road vehicles was the subject of the report of the technical committee which was presented by Dr Albert Parker. Carbon monoxide is the principal pollutant in exhausts, although nitrogen oxides and smoke also occur. In Britain less than one-third of atmospheric carbon monoxide comes at present from vehicles, but if present rates of increase continue the amount discharged will have doubled by 1980 to more than 10 million tons a year. The danger from carbon monoxide arises particularly in traffic jams, when there is little chance of dispersion. Fifty p.p.m. is the maximum concentration of carbon monoxide allowed for an eight hour day in industry, and yet in Oxford Street recently 360 p.p.m. was measured. There is as yet no legislation in Britain for controlling emission from petrol engine vehicles, and the British Standard Specification for diesel engines is above the present emission level set by most manufacturers. Work continues, however, on modifications to petrol engine design, for if it is ensured that all fuel is burnt, there will be little poisonous exhaust. Recirculation of crankcase fumes helps, and fuel injection systems and modified carburettors have been installed in some cars. The initial cost of the vehicle is increased, but fuel consumption is improved. It is hoped that preliminary murmurs from the Ministry of Transport on this subject will soon be transformed into effective schemes for checks and controls.

Industries using dangerous materials can keep checks on their employees, but waste substances that escape into the surrounding countryside can have serious effects. In a paper presented on Tuesday, beryllium, asbestos and fluorides were discussed. Illness and death can occur in both animals and humans living near processing plants, or from contact with industrial workers and their belongings, but no suggestions were made for improving the situation. The paper ended with a commendation of the care taken by those responsible for controls on radioactive waste.

By contrast, Dr E. F. Schumacher, economic adviser to the National Coal Board, considered the dangers of radioactive pollution. Too often these days decisions are based solely on economic considerations, with little reference to environmental factors. Pollution of the atmosphere by radioactive substances for the sake of cheaper electricity was the example Dr Schumacher used in his *Des Voeux* memorial lecture, when he related economics to clean air problems.

And so to the domestic scene, where keeping the home fires burning produces an estimated £280 million worth of damage every year. Working on an average figure of £16 for conversion to smokeless heating, the capital cost for cleaning up the black areas of England once and for all would come to £100 million. In giving these figures, Mr A. D. Smith described the situation as economically and technically crazy, because pollution from domestic smoke is the easiest

type to remove. If a date could be set when Treasury grants for conversion would be stopped, people might jump to get their money while they can.

Worthy Cause

THIS month, Mr Peter Scott will launch an appeal for £75,000 for development at Wicken Fen—the remnant of the once great fens of Cambridgeshire. Wicken Fen reserve, one of the oldest and most famous nature reserves in Britain, is approximately 700 acres in extent and has long been the site of biological and nature studies. But in recent years there has been a great increase in the use of the area by members of the general public, school parties and groups of students. To encourage these activities while at the same time conserving vegetation and wild life, the Wicken Fen Local Committee of the National Trust has made two sensible proposals. One, following the American National Parks pattern, is the erection of an open air laboratory with associated museum, lecture room and display unit and the provision of picnic and other facilities for visitors. A resident warden naturalist, appointed by the committee, will be in charge of the laboratory, but there will not be a permanent staff. Laboratory facilities, including exhibits and maps, will be available to interested parties, and school children will be allowed to examine in the laboratory their specimens at the end of a day's collecting. The other proposal is to create a marshland reserve in which a new range of aquatic and marsh communities can become established and provide a valuable habitat and migration refuge for many species of birds.

There has already been considerable progress in the management and conservation of the reserve. A ten acre mere, opened in 1955, is now the haunt of thousands of birds. A sixty acre reed field has also been established on the fen and, in the past three years, more than a mile of dyke has been cleared out. More manpower and modern implements are needed, however, to clear choked ditches and the wilderness of bushes—the result of years of financial difficulties. The present income of the fen, entirely composed of voluntary subscriptions and donations, is quite inadequate to meet these urgent needs.

The cause is particularly worthy. Instead of trying to restrict use of the reserve, the committee wishes to encourage public interest, while at the same time safeguarding the area.

Urban Grove for Academe

from Brenda Maddox

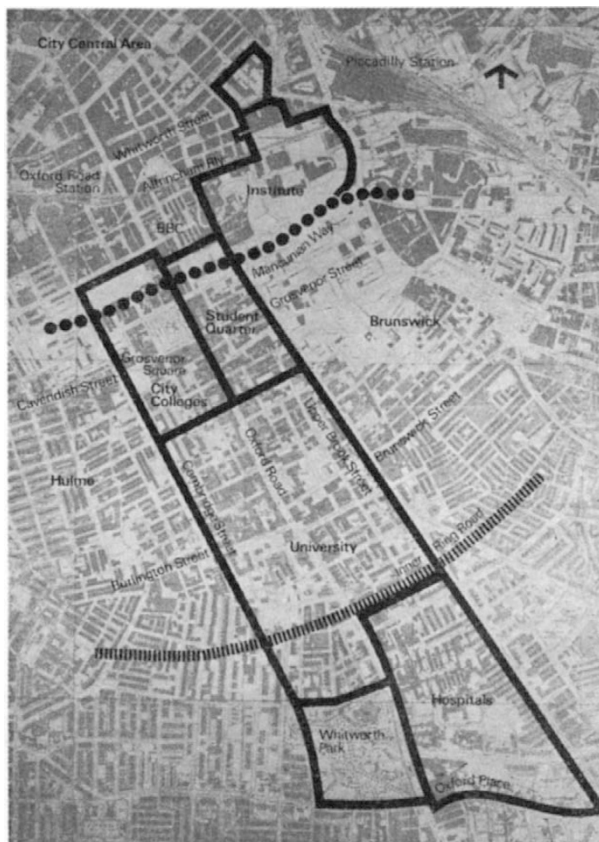
MANCHESTER is in the throes of a strenuous attempt to transform its academic community. The City Council, the University, the Institute of Science and Technology and the city's various colleges and hospitals are collaborating to create a green "educational precinct" in an area now engulfed by smog, traffic and slum. By 1984 the results of their efforts should be in place. There will be a strip, one and a quarter miles long and one-third of a mile wide, with the beautifully black university at its centre. Green grass and elevated pedestrian walkways will sweep from the site of the United Manchester Hospitals on the south to the group of city colleges on the north, and then east to take in

the Institute of Science and Technology. Cars, in the best modern manner, will be parked on the fringes, and new residential buildings will not only invite students into town, away from their suburban digs, but will screen the precinct from the noise of traffic.

The project may be what its planners (Hugh Wilson and Lewis Womersley) claim that it is: an opportunity unequalled in any city in Europe. Certainly the design critics are excited by it. The plan is grounded in realism and flexibility; it is considered to be a framework, not a master plan, the area being too large and susceptible to change for any kind of architectural uniformity to be stamped upon it. The raw material is planning.

What will create the precinct is the patterning of roads and grass and the mixture of different kinds of buildings—residence halls, academic departments, shops, restaurants and churches. The shape of any particular building is not crucial, although the planners insist on certain conformity from architects in building materials and in scale. (The centrepiece of the precinct—the university's new mathematics building—is being designed by the planners themselves.) The unifying element will be Mr Womersley's trademark, displayed before in his work in Sheffield and Nottingham—the first-floor footpath. People arriving at the precinct by bus—and there is little reason to hope that commuting will not continue to be a major characteristic of the Manchester academic scene—may take an escalator up to the walkways from the bus stop and continue, at first floor level, for the entire trip to their destination.

Will the precinct be beautiful?—a burning question in such a renowned ugly spot as Manchester. The answer, alas, is probably not. There is too much against it. The admirable realism behind the whole plan demands living with such obstacles as the Mancunian Way, the highway on stilts which, hardly finished, pours noise and darkness right across the heart of the precinct site. It isolates the university from the institute and the city colleges, creating a physical barrier to replace the invisible one which the precinct is supposed to eradicate. The whole scheme, however, depends really on the determination of the Manchester City Council to make the city more humane and attractive, even if it means sacrificing rateable land. This is a rare enough quality in city governments; one can hardly criticize the council for not wanting to tear down the Mancunian Way before it has barely risen. But the fact remains that this prior plan has doomed from the start any hope the precinct might have had of beauty and grandeur. The same, on a lesser scale, may be said of two city housing developments—



Brunswick and Hulme—which stand solidly on either side of the narrow strip. And, in an ideal world, the planners would have been able to remove Oxford Road, the north-south artery, altogether. As it must remain to carry buses and lorries, one wonders how successful Mr Womersley's pedestrian walkway will be in persuading people to walk up in the air. There is a danger that it will simply create more darkness at noon in a city which has more than its share.

That having been said, the precinct still looks like doing a lot for Manchester. It will draw the city and the university closer together; so should it make the city colleges, the adult education college and the medical school have a richer intellectual life because of association with the university and institute. If all goes according to plan, the precinct will be lively in the evening as well as during the day; it will be good for book-browsing and pram-pushing as well as for getting a degree.

Table 1. ESTIMATED CAPACITY OF THE ACADEMIC PRECINCT. IT HAS BEEN ASSUMED THAT THE SITE COULD NOT BE DEVELOPED TO THIS EXTENT UNTIL 1984

	Full time students	Part time students	Academic staff	Other staff	Hospital medical staff	Totals
University	15,000		2,500	3,750		21,250
Institute	5,000		850	1,250		7,100
John Dalton	500	800	300	170		1,770
College of Art	1,000	500	250	100		1,850
College of Music	600		100	20		720
College of Commerce	1,500	600	300	60		2,460
Teacher Training	1,000		110	50		1,160
Adult Education		730	90	40		860
Elizabeth Gaskell	850		90	80		1,020
Hospitals	1,400			1,620	1,950	4,970
Shops, offices, etc.				350		350
Totals	26,850	2,630	4,590	7,490	1,950	43,510