

The CEBG spent almost two years making trial borings and surveys on three sites in North Wales—Dinorwic, Bowydd and Croesor—and the decision in favour of Dinorwic was made “having taken into account environmental considerations”. The second choice very definitely seems to be Bowydd, which is partly in Merioneth and partly in Caernarvonshire, for the board says that it “does not foresee circumstances arising that would justify development at Croesor”.

#### SOVIET SCIENCE

## Synthetic Asbestos

from our Soviet Correspondent

THE successful production of synthetic asbestos has been announced by the Institute of Geology and Geophysics of the Siberian Branch of the Academy of Sciences of the USSR. It is claimed that this is the first time that asbestos has been produced synthetically and that the Siberian product exhibits physical and chemical properties considerably “better” than those of asbestos occurring in nature.

Interviewed in *Pravda*, Dmitrii V. Kalinin, head of the Laboratory of Hydrothermal Synthesis of Silicates of the institute, explained that the common form of asbestos, chrysotile asbestos, contains too high a proportion of water of crystallization, so that it is heat-resistant only up to some 500° C. A more stable form, amphibole asbestos, containing far less water of crystallization, does occur naturally, but it is extremely rare, especially in the fluoride form which is especially useful for industrial purposes. Accordingly, Kalinin and his team set out to synthesize asbestos in the amphibole form.

The product they have obtained, bluish-grey lumps growing relatively rapidly (1 cm per week), is, they claim, “incomparably more heat-resistant, strong, stable to the action of salts and acids” than naturally-occurring chrysotile asbestos. Until recently, however, the synthetic product was “not entirely satisfactory” for practical purposes, consisting of short tangled fibres. Now, however, it has been found possible to produce synthetic amphibole asbestos in the form of the long parallel fibres needed for industrial applications.

## Rothschild Soeur

DR MIRIAM ROTHSCHILD, Lord Rothschild's sister, has a notice on her laboratory door at Oxford which reads “I am not my brother's keeper—but do come in”.

#### NATURE CONSERVANCY

## Ecology in Science

A WARNING that ecology must become a scientific subject, and not a label for alarmism, is issued by Dr Kenneth Mellanby in the triennial report of the Monks Wood Experimental Station, published last week (NERC, £0.60).

Dr Mellanby, director of the station, says that one of the unfortunate effects of the growing recognition of the importance of ecology is that “many so-called ecologists, with no real expertise or experience, are trying to jump on the environmental bandwagon. They know that publicity will be given to those who make extreme statements, generally of impending disaster, and that those who prefer to rely on scientific observations will enjoy less popularity. It is essential . . . that ecology becomes a recognized scientific discipline”. To ensure this, Dr Mellanby says, research at Monks Wood, one of the eight British stations of the Nature Conservancy, which is itself part of the Natural Environment Research Council, must be of the highest standards. “Only then will our results be recognized as generally significant.”

In the introduction to the report Dr Mellanby also gives his views on the Rothschild report, although without actually mentioning that dread name. “I agree,” Dr Mellanby says, “with those who say that there are only two types of research—good and bad.” The distinction between research and development when applied to the conservation work and pollution studies that the station undertakes is unreal, Dr Mellanby says. A good worker he continues, may make fundamental discoveries, while working on strictly applied research, simply by realizing the significance of the observations he makes. A poor worker will simply accumulate trivial data.

Dr Mellanby also makes a plea for more popularization of scientific knowledge. “I believe it is the duty of all scientists, but particularly of those whose work is supported by public funds, to try to tell the public what they are doing,” he says. To this end, the staff at the station have written many newspaper articles and appeared in well over 100 radio and television programmes. Also, technical publications run to well over 300 papers in the 3 years the report covers (1969–71).

Monks Wood, with its staff of 110, is Britain's largest ecology and conservation centre and the immensely detailed report gives a lengthy summary of the research projects on which the station is currently working. These include studies on lead pollution near road verges, which have shown levels significantly higher than background

close to the roadside, fading away to background levels within 8 to 16 metres. Work on herons and golden eagles has shown that reductions in dieldrin sales in 1966 have resulted in greater breeding success for the eagles and falls in the dieldrin content of heron eggshells.

#### ENVIRONMENT

## The Polluter will pay

THE principle that the polluter must pay to clean up the environment has finally been accepted by the OECD. At a meeting in Paris last week, the 23 ministers of the organization agreed on the “polluter pays” principle to help allocate costs of pollution control, to encourage the rational use of scarce resources, and to avoid distortions in international trade.

The effect of companies having to pay to clean up their pollution will be to raise the price of goods whose production would otherwise greatly damage the environment. The ministers also resolved that subsidies should not be provided to offset this effect.

The ministers also agreed that more stringent anti-pollution controls are needed, but that care must be taken not to create barriers to trade. Where such controls will affect products that are traded internationally, governments should seek common standards.

These measures are not intended to undermine any country's independence in deciding its environmental standards. In the guiding principles that accompany the agreement, the ministers state that national pollution policies are bound to differ because of different social priorities and different levels of industrialization. In spite of this, attempts to harmonize standards should be made.

The ministers also agreed that in conformity with the General Agreement on Tariffs and Trade, measures taken should be applied to all products sold in a country, whether they are produced at home or abroad.

The Confederation of British Industry was unable to comment on the agreement this week as the clauses were still being studied by the CBI. But it is clear from recent remarks by Mr Arthur Biggs, the CBI's chief technical adviser (see *Nature* 237, 126; 1972), that the agreement should gladden the heart of industrialists, provided that it is applied across the board. Such a general increase on costs, which can then be passed on to the consumer, is industry's preferred recipe for combating pollution. In contrast, the United States has opted for a pollution tax to encourage companies to protect the environment.