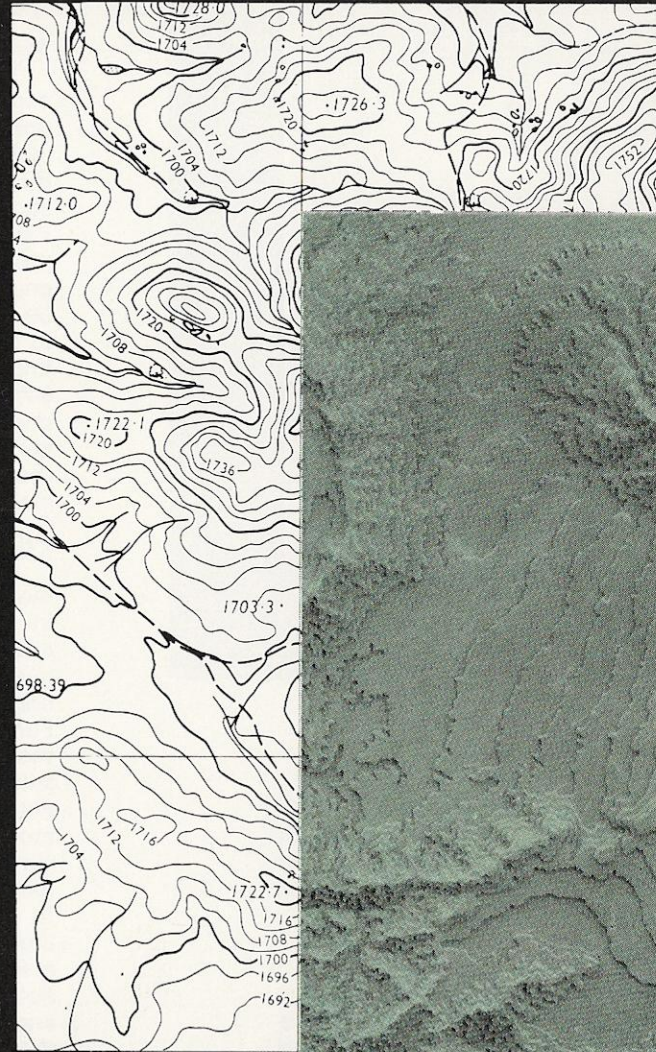


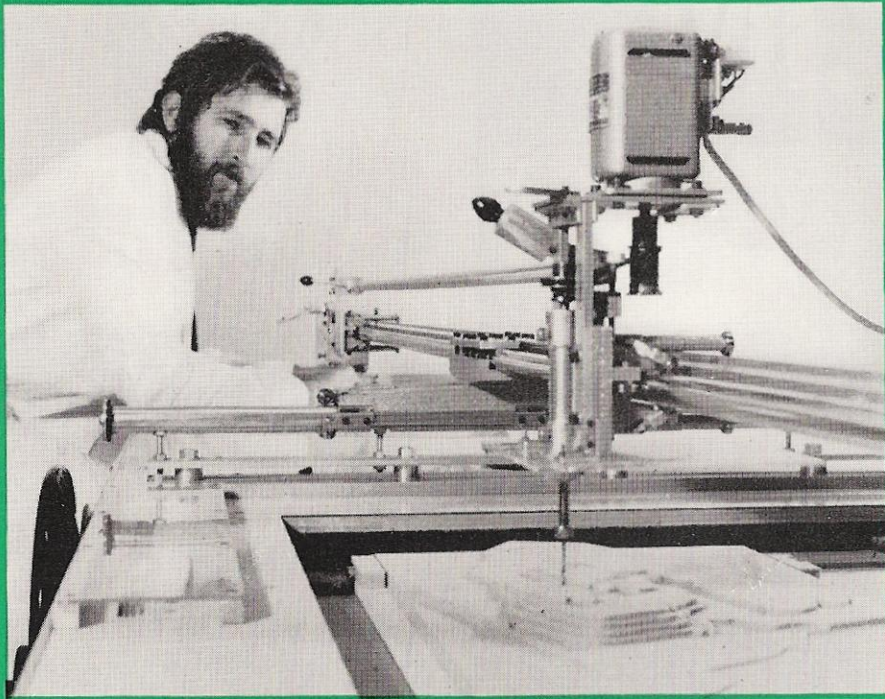
CONTOUR MODELLING



- ACCURATE
- DURABLE
- FAST
- LIGHT
- LOW COST



Fairey Surveys



A Fairey-Packman modelling machine at work.

CONTOUR MODELLING

The demand for accurate terrain models continues to grow as the variety of uses continues to expand.

Of course, terrain models are not new; rather inaccurate models built up laboriously layer by layer using wood or plaster of paris have been around for many years, but these were more decorative than scientific.

The modelling service offered by

Fairey's Mapping Division has all the advantages of being fast, extremely accurate, light yet reliable and economical.

MACHINES

The machines used are Fairey-Packman modelling machines; these work on the simple principle of the pantograph with a tracing head at one end which follows the contours on the plan and an electrically

driven fine cutting tool at the other end which duplicates the movement of the tracer and sculpts out the modelling material contour by contour within a fine tolerance of ± 0.127 mm.

MATERIAL

The modelling material used is expanded polyurethane, a close grained, tough and dimensionally stable plastic which weighs only 80 kg. per cubic metre. The use of such a lightweight material and the manufacturing technique of producing large models in sections, enables even the largest model to be easily transported. Our largest to date was the whole of Scotland, England and Wales, made in 80 sections which, when assembled, measured approximately 33 square metres. All models are produced to the same accuracy as the original map.

PRODUCTION

The initial cutting results in a model in terraced form and it is in this form that many architects and engineers prefer to use their models as measurements of relative heights may more readily be taken. For illustrating the true nature of the terrain, the model can be hand smoothed thus producing a more natural appearance. If desired, the model can then be sealed and any surface detail applied to indicate roads, rivers, towns, vegetation, etc. In this form, the terrain model is of the greatest assistance to town planners, environmentalists, local authorities, consultants, developers, and nationalised industries. A further advantage for planning is that models can easily incorporate removable design features to show the effect of alternative proposals.

REPRODUCTION OF MODELS

It is now common practice to produce copies of models and this can be done by two different methods.

Method one involves a G.R.P. moulding system using epoxy resin. This produces the most accurate results possible.

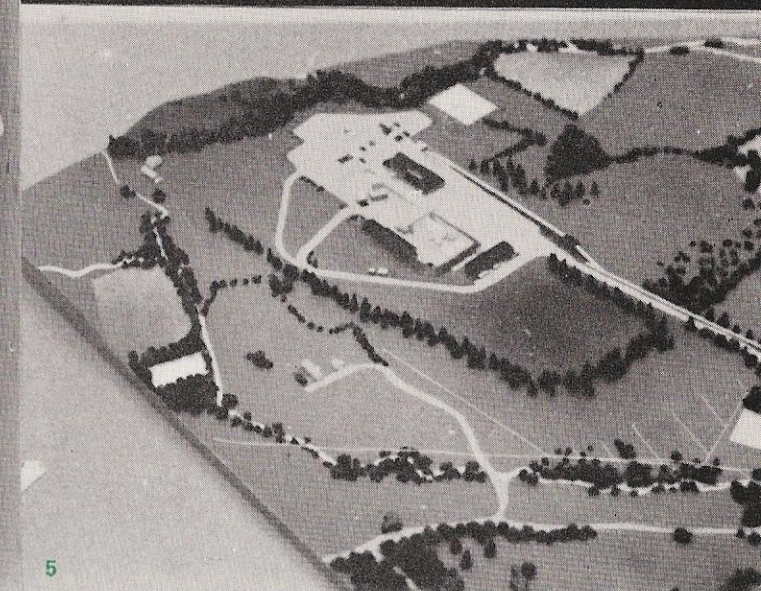
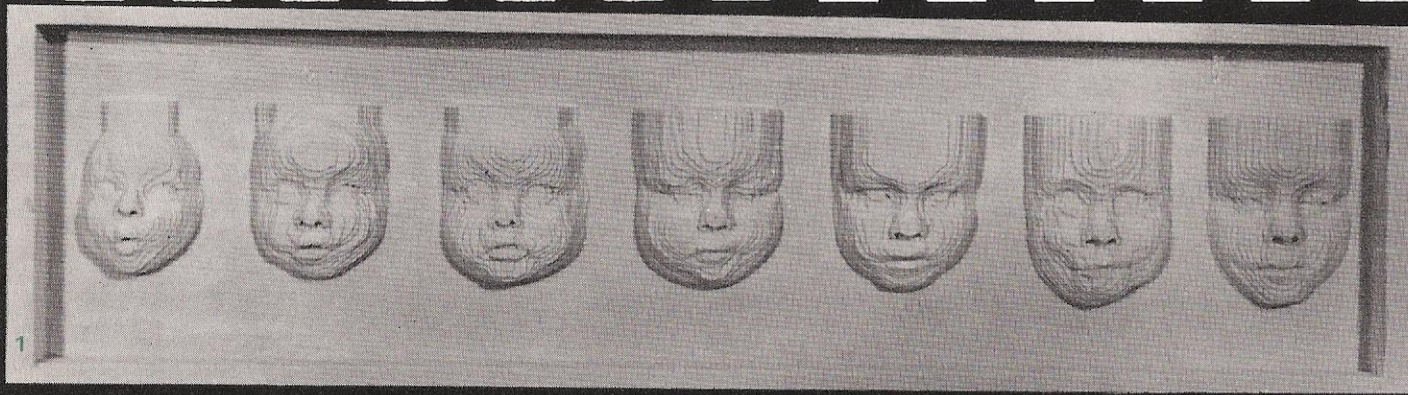
Method two is more suitable where a slightly reduced accuracy can be accepted in the interests of speed and economy. This method uses a vacuum form P.V.C. sheet which can either be plain or pre-printed with any details required.

VERSATILITY OF THE SERVICE

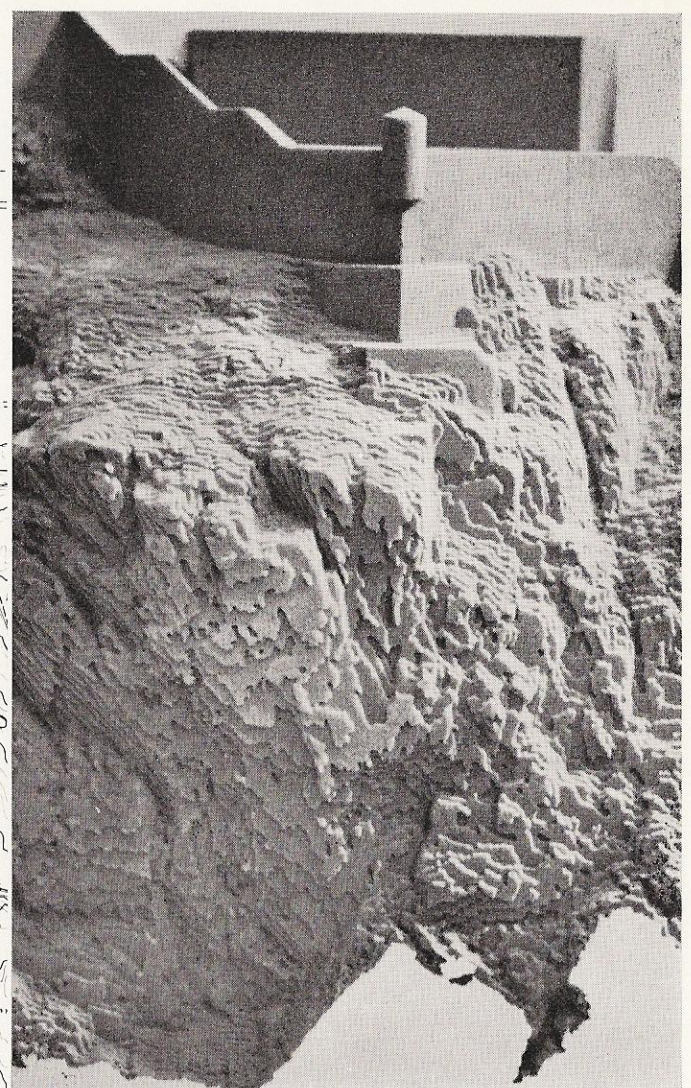
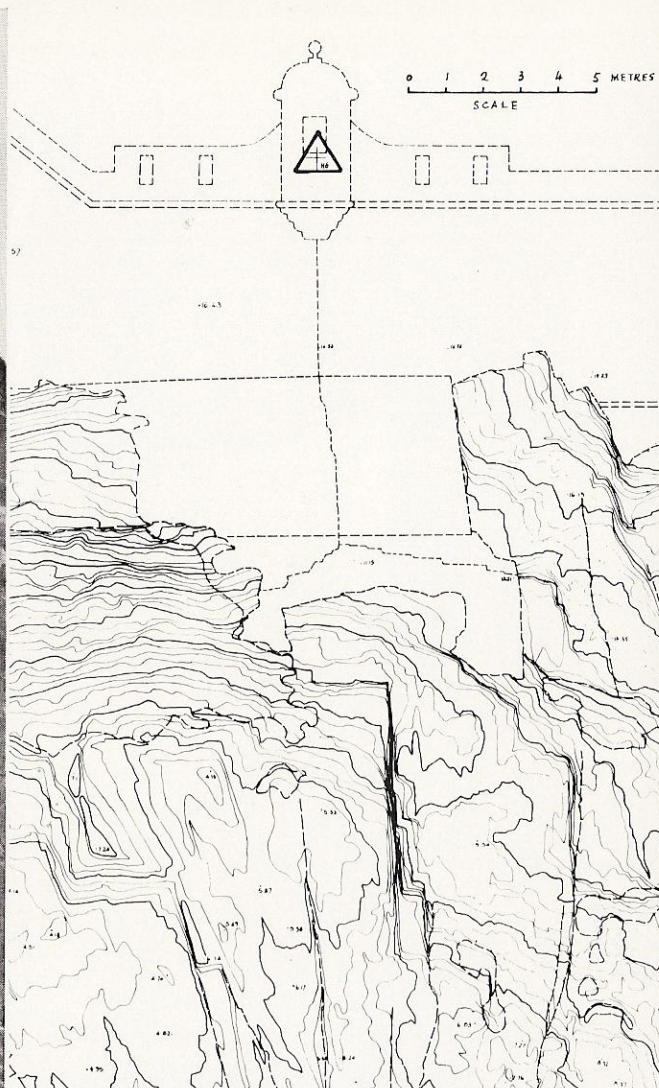
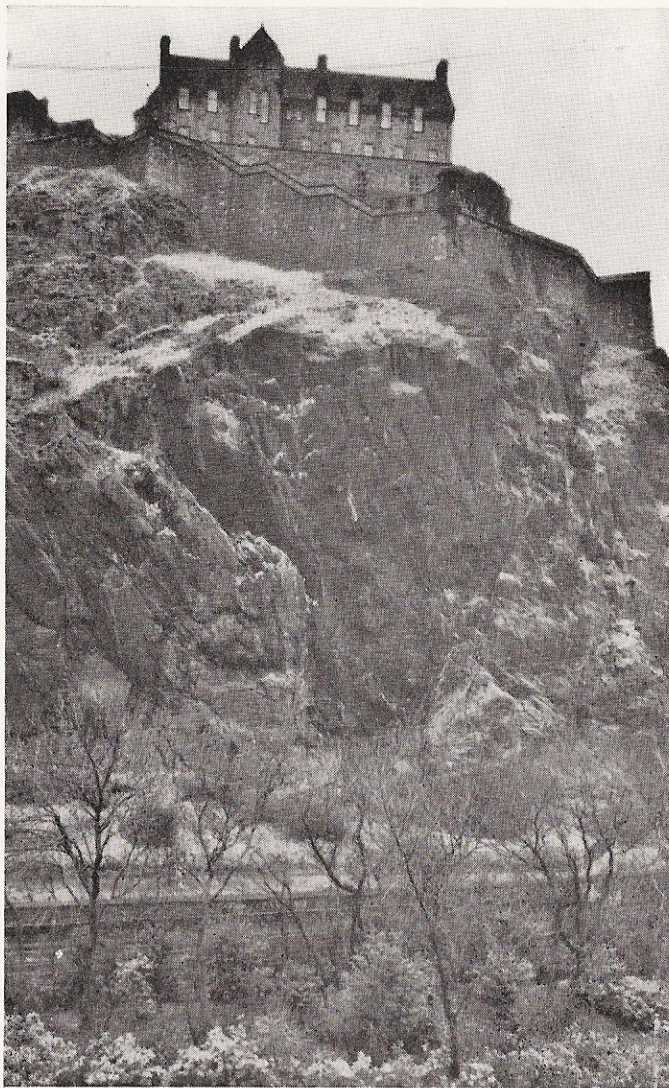
Fairey Surveys' modelling service is not however limited to terrain models. We claim that if a subject can be shown as a contour plan, we can model it. To illustrate this point, models have been produced of such diverse subjects as the development of children's faces in three dimensions as pioneered at the famous Addenbrooke's Hospital, Cambridge, the hulls of boats to assist boat designers, a model of Mount Fuji to be used in wind tunnel tests to determine air flow patterns around the mountain and the modelling of the head of a damaged statue of Buddha to help the craftsmen engaged in the task of restoration.

This technique is versatile and adaptable if you have a model problem perhaps we can offer a model solution.

Further information can be obtained by contacting Fairey Surveys Limited.



(1) Seven studies of the face of a child from 3 weeks to 3 years. Addenbrooke Hospital, Cambridge.
(2) Terrain model of Stonehouse, Scotland. A new town development.
(3) Mount Fuji. Constructed for wind tunnel experiments to gauge air turbulence around summit.
(4) Head of Buddha: Produced to assist in restoring the original statue.
(5) Betws Colliery: Demonstrates landscape effect necessary for modern mines.



*Photogrammetric Survey and Contour Model project of the North Face of Edinburgh Castle Rock.
Illustrations depict the three stages of development: Photograph — Contour Plan — Terrain Model.*

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