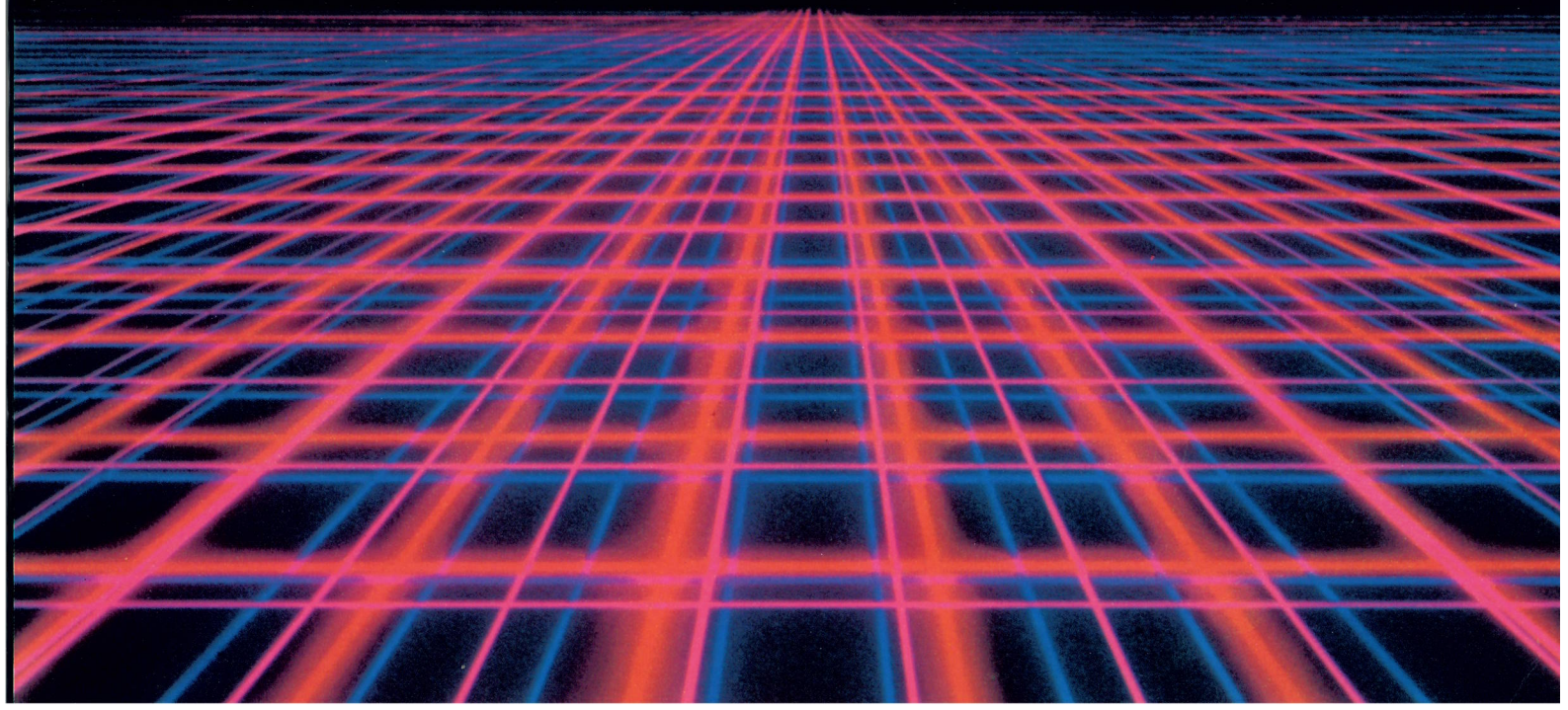


BKS SURVEYS



The Company

Excellence and reliability are the hallmarks of service at BKS Surveys Limited. For over thirty five years its mapping experience, advanced technological expertise and dedication to quality have won the company international acclaim. Today BKS is a recognised world leader in the creation of computerised geographical information. It also holds the ISO9001 quality standard accreditation - further independent evidence of its commitment to clients.

BKS successfully blends traditional skills in surveying and map making with the latest techniques to offer a wide range of services tailored to meet the sophisticated needs of business and government in the nineties.

The Services

- DIGITAL MAPPING
- GEOGRAPHICAL INFORMATION
- SYSTEMS/CONSULTANCY
- UTILITY DATA CONVERSION
- PLANT RECORD DATA CONVERSION
- MANUAL DIGITISING
- AERIAL PHOTOGRAPHY
- LAND SURVEYING
- AERIAL TRIANGULATION
- PHOTOGRAMMETRY
- AUTOMATED MAPPING
- VOLUMETRIC CALCULATIONS
- CARTOGRAPHY
- INDUSTRIAL MEASUREMENT
- UTILITY LOCATION SERVICE
- HYDROGRAPHIC SURVEYS

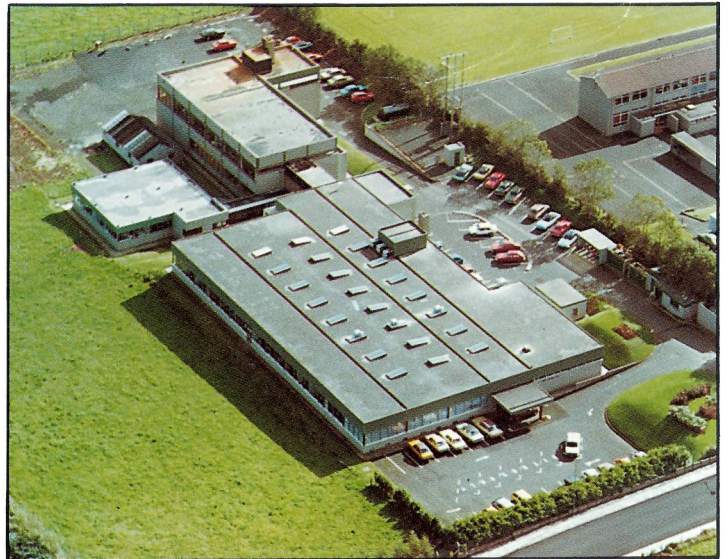
HEAD OFFICE

BKS SURVEYS LIMITED
BALLYCAIRN ROAD
COLERAINE
BT51 3HZ
UNITED KINGDOM
Tel: (0265) 52311
Fax: (0265) 57637
Tlx: 74385 BKSLTDG

In recognition of the company's export achievements, it has been a recipient of the Queen's Export Award.



Q.A.S No. 8370/373
Cert. No. FS 12145



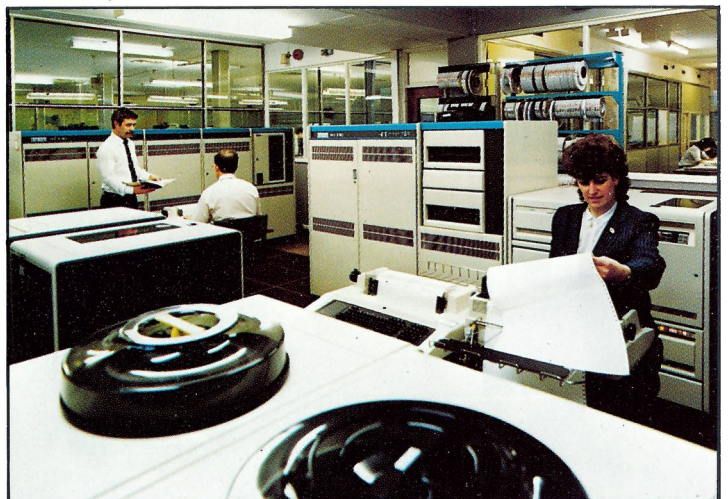
PRODUCTION CENTRE, UNITED KINGDOM.



PHOTOGRAMMETRIC DEPARTMENT



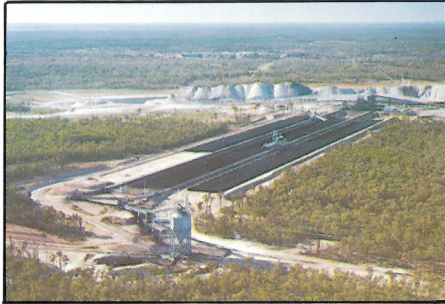
PIPER NAVAJO SURVEY AIRCRAFT



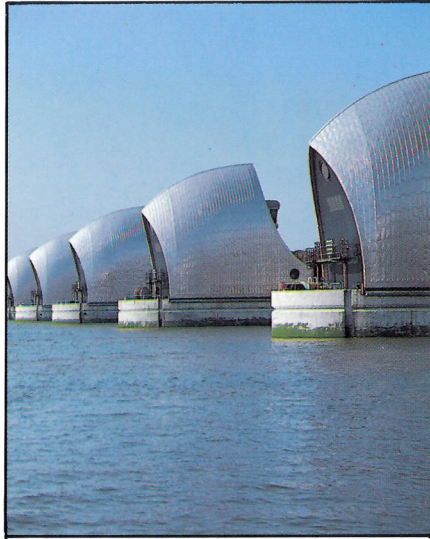
DATA PROCESSING DEPARTMENT.

BKS

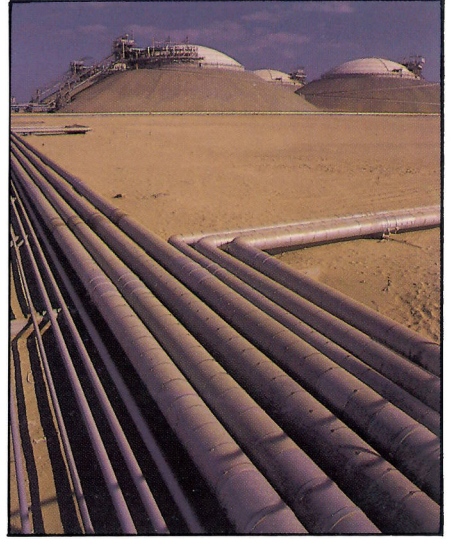
WORLDWIDE AIR AND
GROUND SURVEYORS



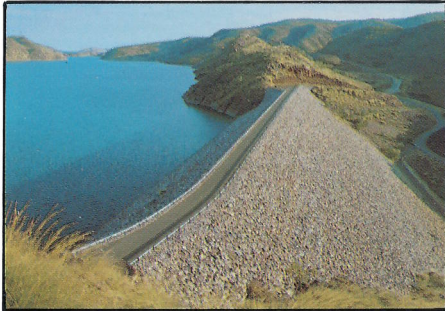
AUSTRALIA MINING



UNITED KINGDOM FLOOD CONTROL



MIDDLE EAST OIL STORAGE



AUSTRALIA WATER SUPPLY



MIDDLE EAST FEASIBILITY STUDIES



UNITED KINGDOM TUNNEL SURVEYS



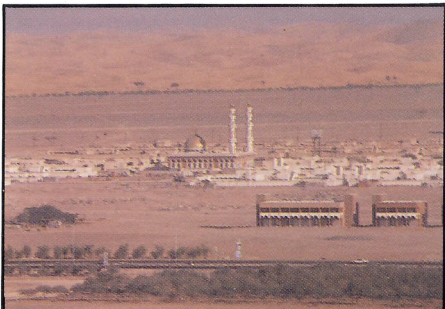
MIDDLE EAST OIL/GAS SERVICES



FAR EAST URBAN RENEWAL



UNITED KINGDOM HIGHWAYS



MIDDLE EAST NEW SETTLEMENTS



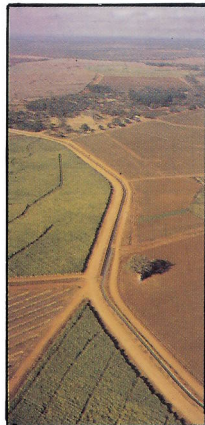
AFRICA AGRICULTURAL DEVELOPMENT



AFRICA DESERT RESOURCE EVALUATION STUDIES



MIDDLE EAST HIGHWAYS



AFRICA IRRIGATION



MIDDLE EAST MUNICIPALITY DATA BASES

Spatial Databases

The lifeblood of today's powerful Geographical Information Systems are the spatial data. BKS uses technology and experience to create accurate and meaningful models of the real world suitable for our clients' own application systems. Prime sources of such data are, Aerial Photography, Satellite Imagery, Land Surveying, Photogrammetry and Existing Analogue Material.

Digital Data Creation

Whatever the source of information, BKS has developed procedures and software to create datasets according to specification. Quality Assurance Software checks consistency of the data and its structure and numerous translators have been developed to supply the information in the required format. Products are supplied on suitable magnetic media with hard copy provided using electrostatic plotters or automatic plotting tables. Data have been provided for Topographic Maps, Hydrographic Charts, Military Mapping, Engineering Drawings, Plant Records, Resource and Special Application Mapping.

BKS use several proprietary systems during the development of their Digital Product e.g. Synercom Informap, AutoCAD, Kork Photogrammetric Capture/Editing and Wild Analytical Systems. These systems are strengthened by a wealth of software developed in-house by specialists experienced in Intergraph, McDonnell Douglas GDS and ARC/INFO.

Target systems supplied to date include, OSTF/NTF (NJUG 13 Q.A.), Intergraph, Moss, AutoCAD, Informap, ARC/INFO, McDonnell Douglas GDS, RUCAPS.

Technical Consultancy

The experience gained over the last decade in designing and constructing digital data systems is available to our clients. BKS has solutions to many of the problems that clients face when specifying database design and during the manipulation of large data sets.

*VAX is a Digital Corporation Trade Mark.



STEREO-DIGITISING



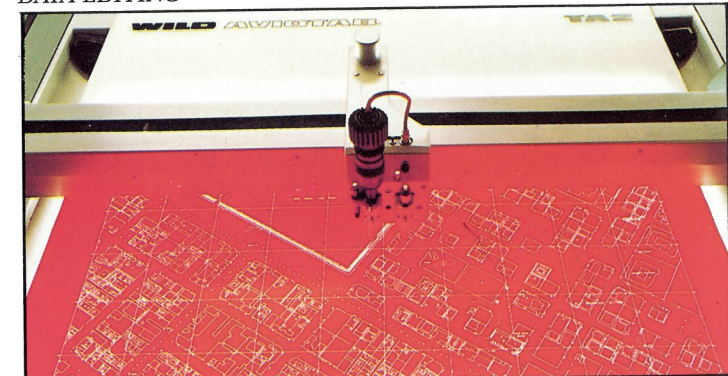
MANUAL DIGITISING



DATA PROCESSING



DATA EDITING



DATA HARDCOPY

Database Applications

BKS have undertaken geographical and utility database surveys for a number of major towns and cities. The company's considerable experience with databases enables it to offer expert assistance with

the design and planning of new databases, and in providing new data and/or converting existing data, to prepare an effective database for its clients' specific needs.

Topographical Databases

Using digital mapping techniques the topographical layering ensures differentiation of the mapping data suitable for automatic drafting, at preferred scales, of individual or composite data layers. This database also forms the geographical index for other application data sets.

Civil Engineering Databases

The graphical and non-graphical content of the land information system can be used to plan and design civil engineering projects based on accurate geographical co-ordination.

Utility Databases

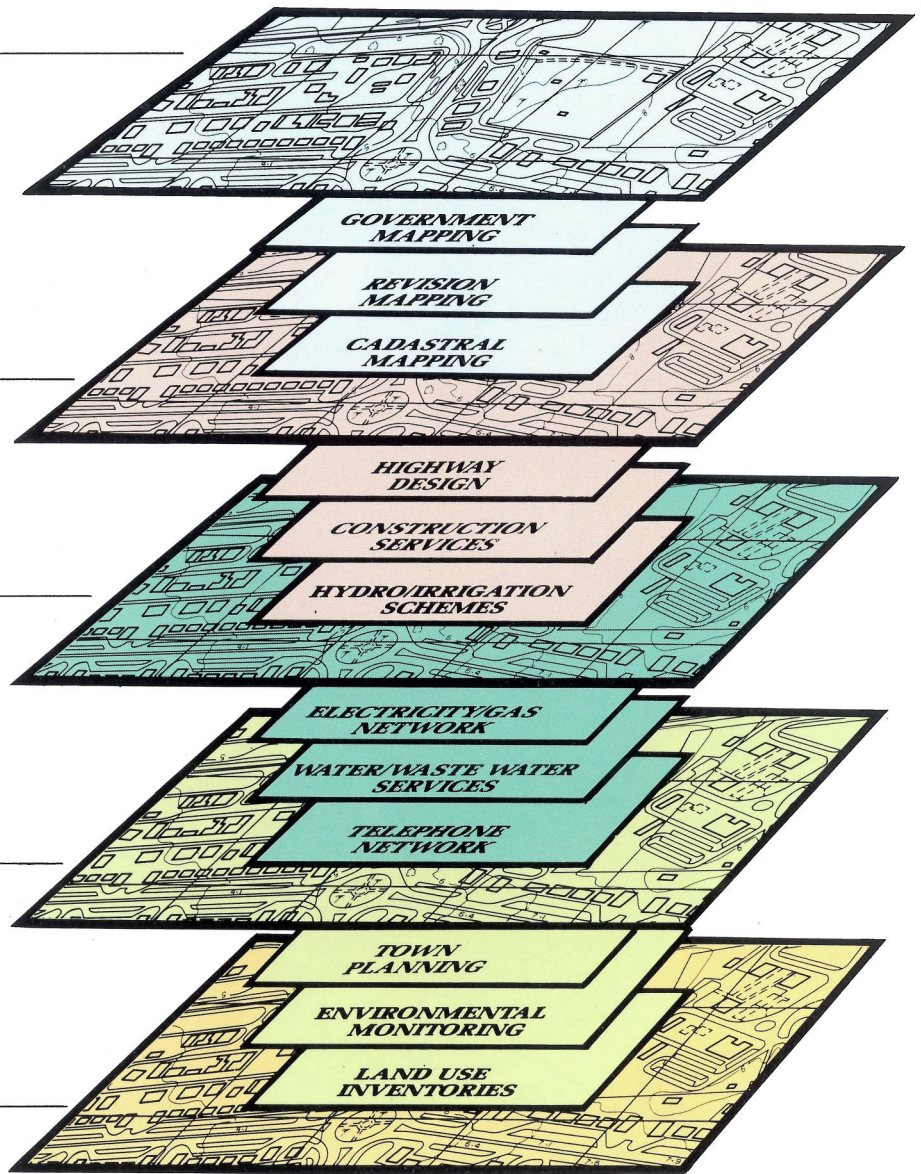
The graphical database can contain a composite utility layering to form a geographically co-ordinated utility model, registered to the topography. Textual information can be associated to the graphical items.

Environmental Databases

Through the application of polygonal processing techniques, data relating to environmental uses can be stored, processed and monitored. The database can be readily updated.

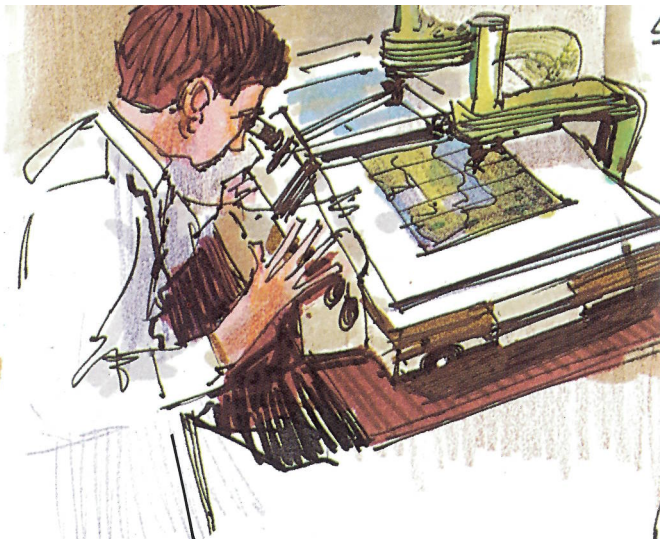
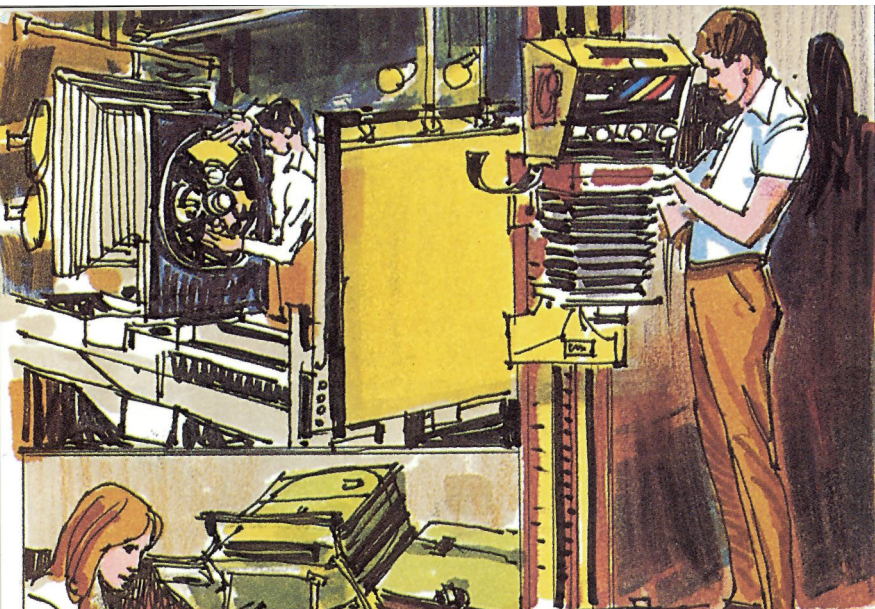
Associated Textual Databases

Any required textual information can be stored to a geographically defined point, line or area, effectively producing a computerised filing system, indexed by both geographic and textual relationship.



TOPOGRAPHIC DATABASE WITH CADASTRE AND UTILITY SERVICES



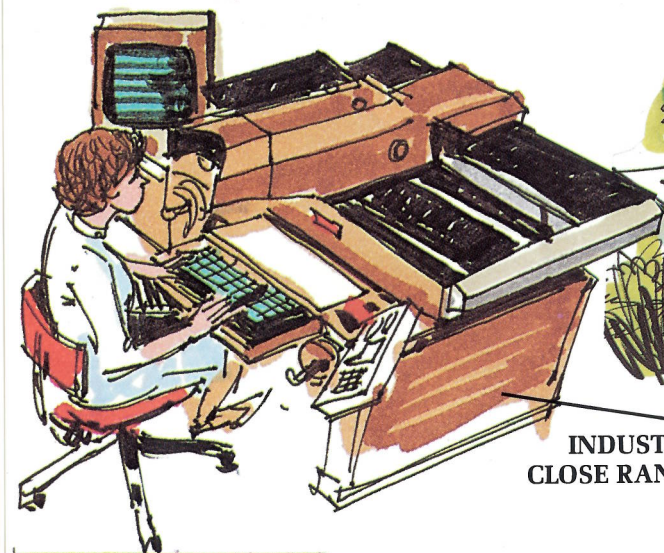


PREPARATION DEPARTMENT
AERIAL TRIANGULATION/MAPPING.

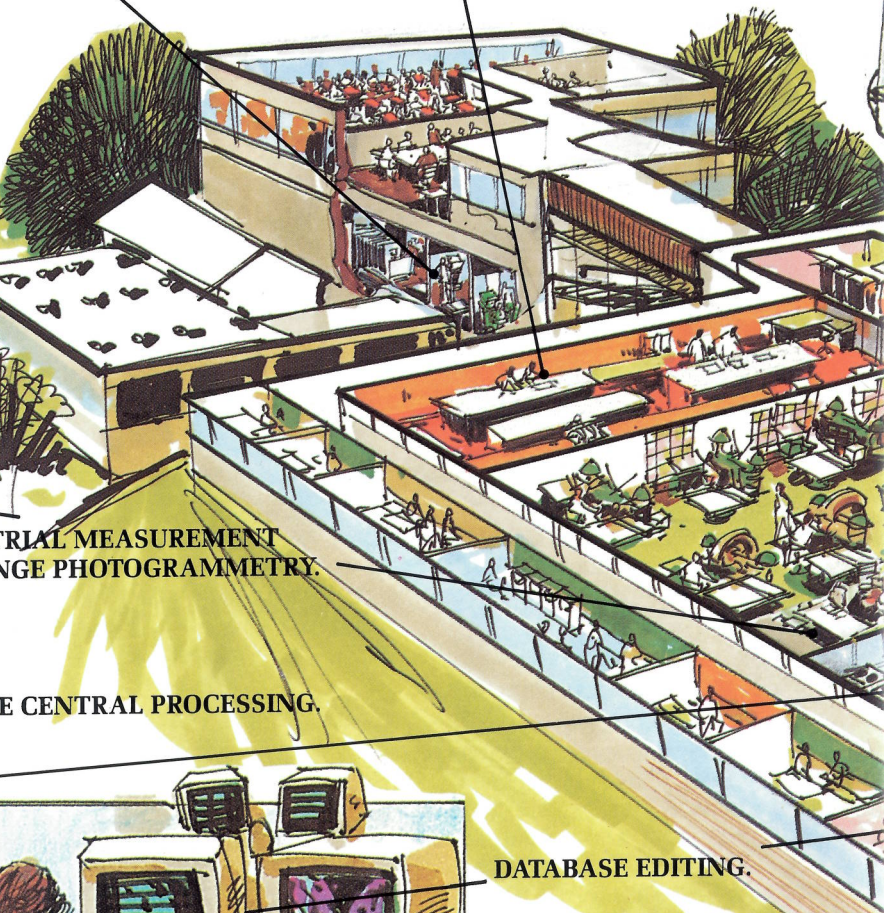


PHOTOGRAPHIC SERVICES.

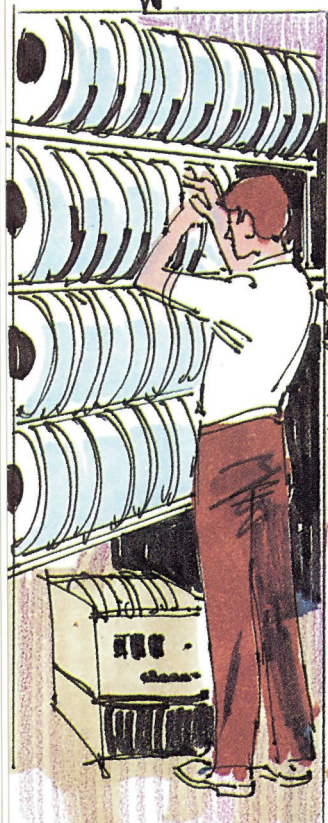
FLAT BED/DRUM,
AUTOMATIC PLOTTERS.



INDUSTRIAL MEASUREMENT
CLOSE RANGE PHOTOGRAMMETRY.

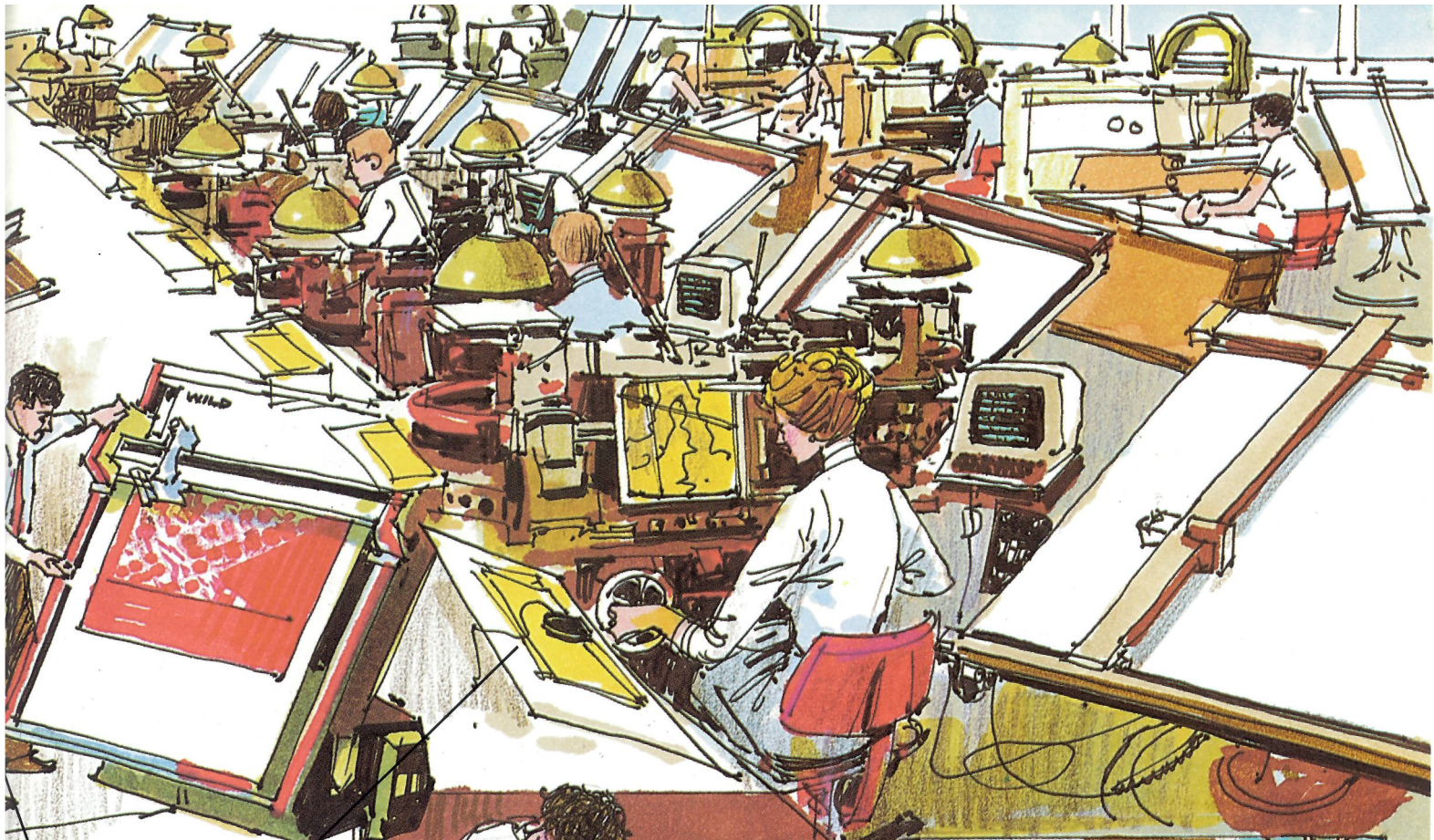


DATABASE CENTRAL PROCESSING.

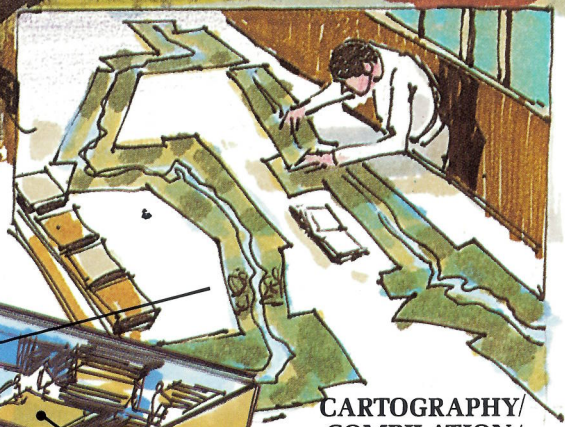


DATABASE EDITING.

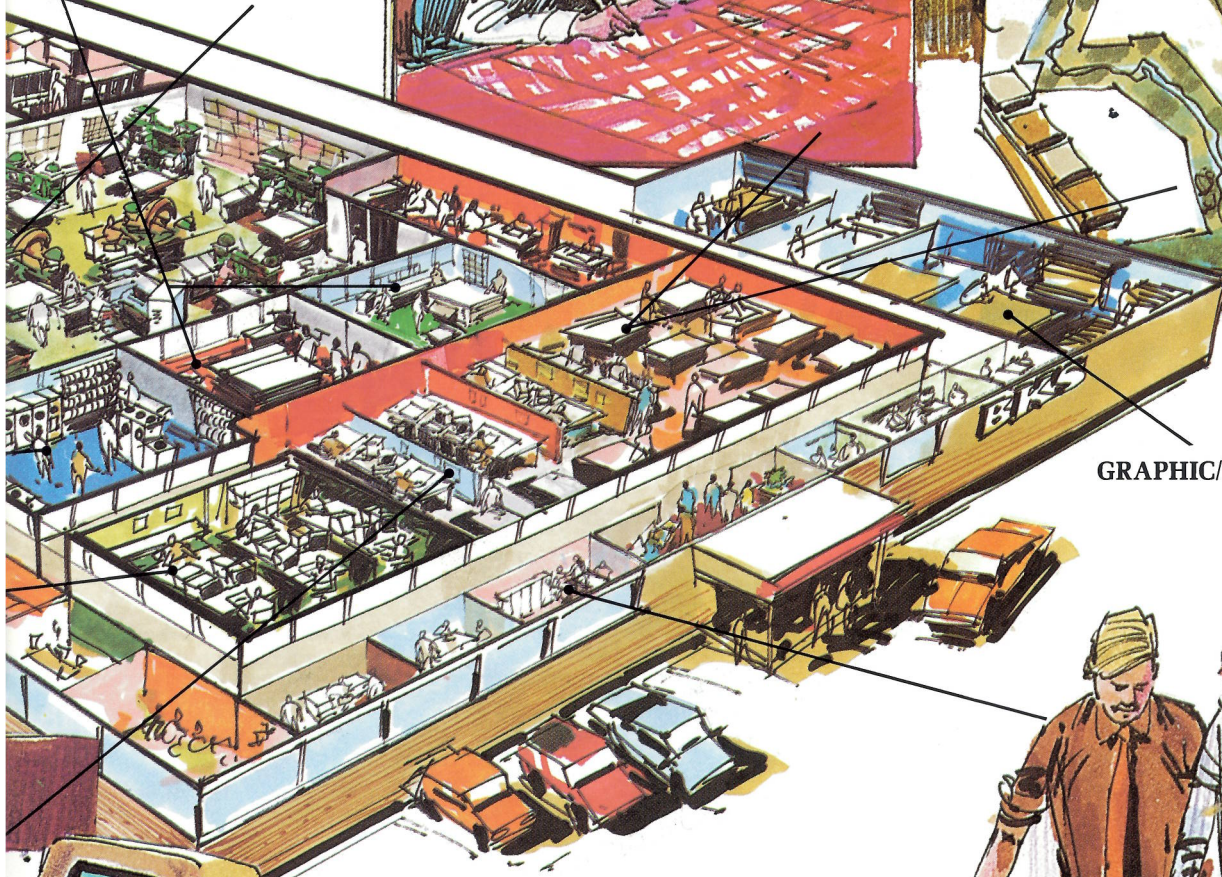




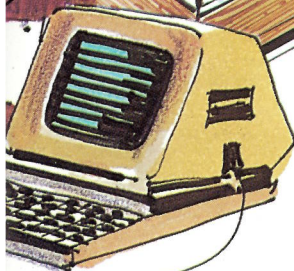
PHOTOGRAMMETRIC DEPARTMENT.



CARTOGRAPHY/COMPILATION/MOSAICING



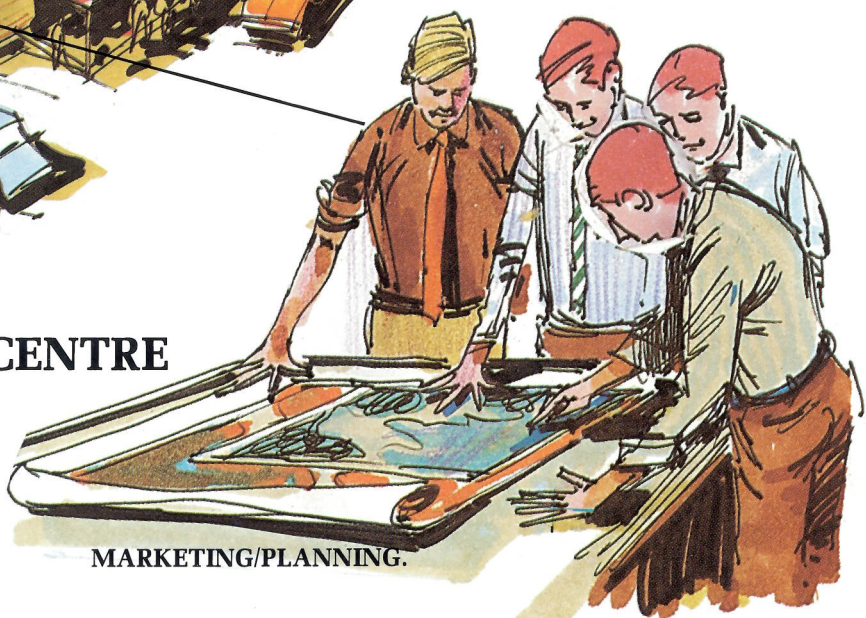
GRAPHIC/REPROGRAPHIC SERVICES



DATA CONVERSION.

PRODUCTION CENTRE

BKS
SURVEYS



MARKETING/PLANNING.

Aerial Photography and Photographic Services

Aerial Photography

The basis of successful mapping is quality aerial photography and only the very best satisfies the exacting standards of BKS. The company's specially modified Piper Navajo aircraft is supported by additional aircraft as required to meet the company's needs.

Photographic Services

The Photographic Division handles aerial film processing and printing at home and abroad in support of the company's flying operations. Colour, false colour, infra-red and black and white aerial photographs are printed at the company's U.K. production centre for use throughout the world. Incorporated within the photographic division is a specialist graphics section which can provide quality services in:

- COLOUR PRINTING
- MAP AND PLAN REPRODUCTION AND COMPILATION
- PHOTO MOSAICING
- PRECISION COPY CAMERA WORK
- PLAN REJUVENATION
- MICROFILM COPYING
- OBLIQUE AERIAL PHOTOGRAPHY
- ENLARGEMENT AND REDUCTION SERVICES



AERIAL PHOTOGRAPHY WITH RC10 CAMERA



AERIAL FILM CHECKING



AERIAL COVERAGE CHECKING



PRECISION MAP/PLAN COPYING

FALSE COLOUR INFRA-RED IMAGERY

COLOUR IMAGERY



Land Surveying Services

The BKS Land Survey Division uses the most up-to-date equipment and techniques including satellite geodesy to provide a professional service worldwide in all terrain and climatic conditions. BKS field crews apply their wide range of experience and knowledge to provide such commercial services as:

- GEODETIC CONTROL
- PHOTOGRAMMETRIC CONTROL
- BORDER CONTROL SURVEYS
- ENGINEERING SURVEYS
- INDUSTRIAL SURVEYS
- CADASTRAL MAPPING
- TOPOGRAPHICAL MAPPING
- TUNNEL PROFILING
- MAP REVISION SURVEYS



SURVEY BASE CAMP



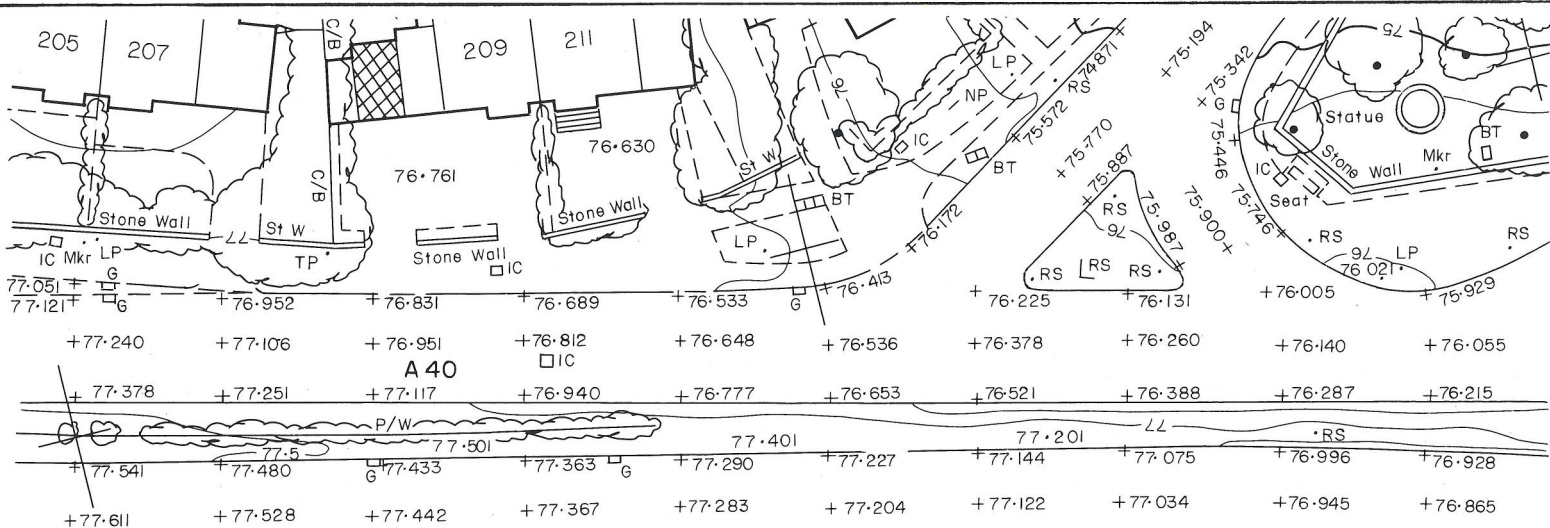
PRIMARY CONTROL OBSERVATIONS



LARGE SCALE TOPOGRAPHICAL MAPPING



PHOTOGRAMMETRIC CONTROL SURVEYING



Mapping

Throughout the world BKS is recognised for the excellence of its mapping services. The company's extensive range of photogrammetric instrumentation enables it to undertake major projects requiring mapping for a wide range of scales of entire countries and major towns and cities. BKS mapping services include:

Photogrammetry

- AERIAL TRIANGULATION
- DIGITAL MAPPING
- AUTOMATED MAPPING
- LARGE SCALE ENGINEERING SURVEYS
- MAP REVISIONS
- SMALL SCALE MAPPING
- TERRESTRIAL AND CLOSE RANGE PHOTOGRAMMETRY
- INDUSTRIAL MAPPING FOR PLANT ENGINEERING
- VOLUMETRIC COMPUTATIONS
- CROSS SECTIONING AND PROFILING
- ORTHOPHOTO MAPPING

Cartography

- LARGE SCALE DRAFTING
- MAP COMPILATION
- SMALL SCALE CARTOGRAPHY
- MULTI-COLOUR SEPARATIONS
- SPECIALIST MAPS
- TOURIST MAPS
- TOWN MAPS AND STREET GUIDES
- ORTHOPHOTO AND PHOTO MOSAIC COMPILATION



AERIAL TRIANGULATION



ANALYTICAL PHOTOGRAMMETRY



AUTOMATED MAPPING

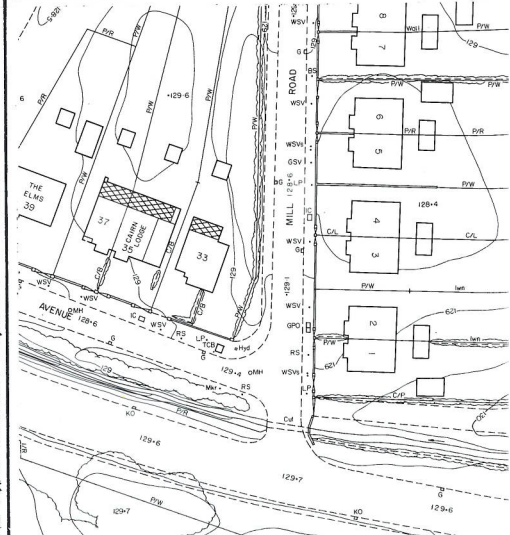
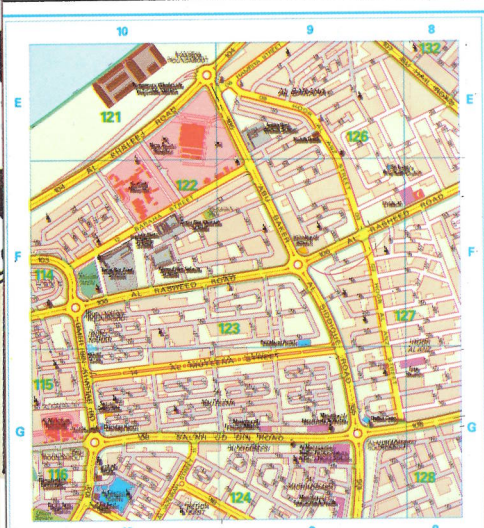


SPECIALIST MAPS

PLANNING MAPS

CARTOGRAPHY

ENGINEERING PLANS



Specialist Survey Services

Industrial Measurement

BKS combines close range photogrammetry and remote measurement techniques to offer an economical data capture service for industrial applications.

- NUCLEAR PLANT ENGINEERING
- PROCESS PLANT ENGINEERING
- OIL AND GAS RELATED INDUSTRIES
- SHIPBUILDING INDUSTRY
- AIRCRAFT INDUSTRY
- GENERAL MANUFACTURING INDUSTRIES

Close Range Photogrammetry

Calibrated photography allows the photogrammetrist to prepare accurately scaled drawings or extract three dimensional co-ordinate data for use in the following:

- ARCHITECTURAL SURVEYING
- HISTORIC MONUMENT RECORDING
- STRUCTURAL MONITORING AND INSPECTION
- BRIDGE AND TUNNEL PROFILING
- DISASTER SURVEYS
- VOLUMETRIC SURVEYS

Utility Location Service

BKS provides a comprehensive service for location and mapping of underground utilities, using advanced electronic instrumentation operated by experienced surveyors. The company's utility location services are used for the following:—

- MAPPING UTILITIES
- CREATING COMPREHENSIVE UTILITY RECORDS
- UPGRADING UTILITY RECORDS
- PRE-CONSTRUCTION UTILITY VERIFICATION



INDUSTRIAL MEASUREMENT USING P32 METRIC CAMERAS

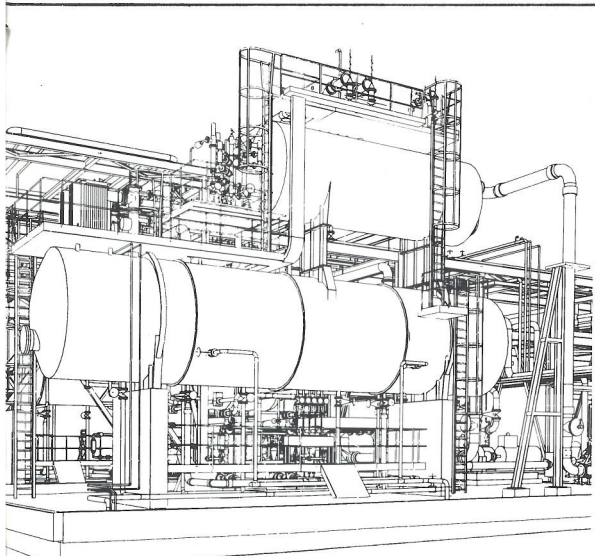


CLOSE RANGE PHOTOGRAMMETRY AT LACOCK ABBEY

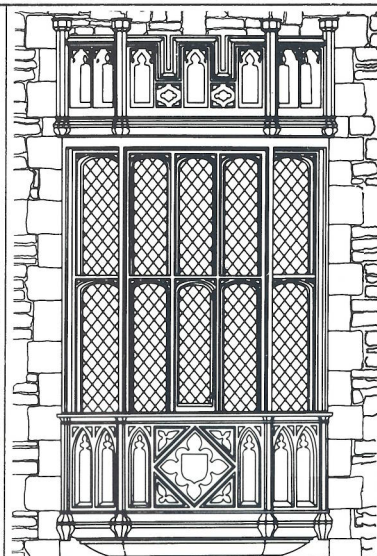


LOCATING UNDERGROUND UTILITIES

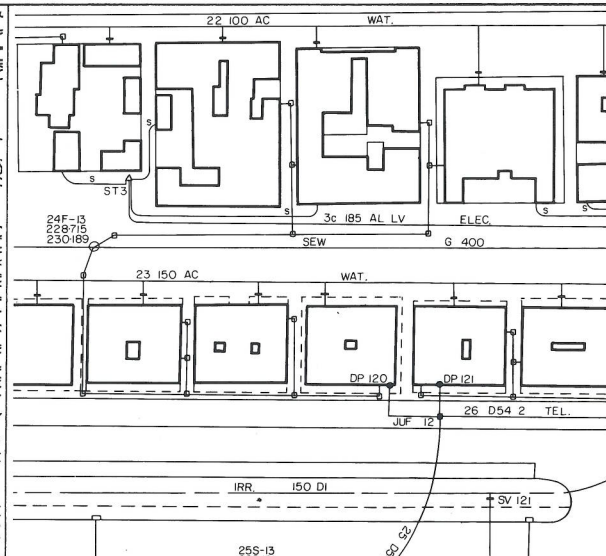
INDUSTRIAL MEASUREMENT



CLOSE RANGE PHOTOGRAMMETRY



UTILITY LOCATION SERVICE



BKS
SURVEYS

OPERATING WORLDWIDE

Egypt, Sudan, Somalia, Malawi, Zimbabwe, Swaziland, Cameroon, Nigeria, Sierra Leone, Azores, Saudi Arabia, Bahrain, Qatar, United Arab Emirates, Sultanate of Oman, Sri Lanka, Australia, Hong Kong, United States of America, Canada, Alaska, Belize, Jamaica, Dominica, Barbados, St. Lucia, Bahamas, Bermuda, Guyana, Romania, Djibouti, Italy, The Netherlands, Ireland, United Kingdom.