BORD NA MÓNA

Peat Development in Ireland

bord na móna

A Statutory Organisation for the Development of the Peat Resources of Ireland

BOGS are a characteristic feature of the Irish landscape. It has been calculated that one seventh of the area of Ireland is bogland. Throughout the centuries these great wastelands have provided fuel for the farmers living in their vicinity: but only the perimeter of the bogs was used and the implements were of the simplest—the slean, the barrow and the fork.

Inside these outer fringes the bogs were impenetrable and unuseable. It was impossible to walk on them, because bog, despite its seemingly solid surface is ninety-three per cent. water and only seven per cent. solid matter. The problem of converting this very low-grade but abundant material to useful ends presented a challenge to which the successful response is described in this brochure. In essence the problem is to remove the water from the peat economically; the methods and stages by which this is done are shown herein.

Bord na Móna or in English the Peat Board is an organization set up by the Oireachtas i.e. the Irish Parliament, to carry out the task of producing fuel from the bogs. It was established in 1946 following successful experiments carried out by its predecessor the Turf Development Board Ltd. on the large scale production of fuel from a bog at Clonsast near Portarlington. It is endowed with statutory powers and is authorised by legislation to spend on its projects up to £14 million of public funds all of which is repayable with interest.

There are two main methods in use by the Board for the production of fuel:

(a) Machine sod peat process.

(b) Milled peat process.

THE two methods are here illustrated and described in outline. The objective of the Board is to produce one million tons of sod peat and two and a half million tons of milled peat. The sod peat is used partly for electricity generating stations and partly for domestic and industrial consumption; the milled peat except for a relatively small quantity used at present for conversion to briquettes will be used only in power stations.

The Board employs seven thousand workers at peak and an executive staff of four hundred consisting of engineers, accountants, clerks and supervisors. It has built villages for its employees and maintains hostels where two thousand men are catered for and housed. There is a research station, museum and library. The Board constructs and maintains light railway systems which when completed will comprise nearly four hundred miles of rail; it also has a road transport system. It operates shops, canteens and recreation halls. Trees, flowers and shrubs are planted to make bright and cheerful the environment of its works, villages and buildings.

Mechanisation is the keynote of the Board's response to the challenge of the bogs and a rural population is being industrialized without being uprooted. When the peat is cut away the land will be left in a fit condition for the cultivation of crops or for afforestation.

The swamps which for so long were a dreary and useless wasteland are already sustaining new families; the fuel from them is producing cheap electricity for the national network and heat and power for factory and home.

STAGES OF DEVELOPMENT

ACQUISITION, DRAINAGE, BUILDINGS, RAILWAYS, MACHINES, POWER

STAGES OF PRODUCTION

SOD PEAT

Stripping

Cutting and Spreading

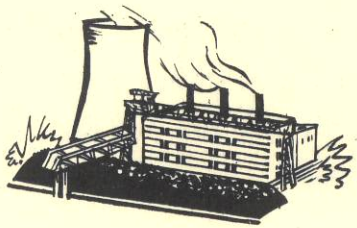
Windrowing or Footing

Windrow Turning

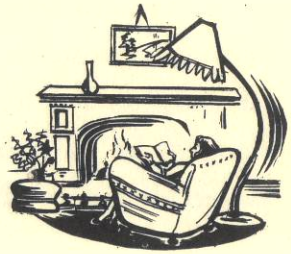
Collecting and Ricking

Loading

Transport



POWER STATION



PRIVATE CONSUMERS

MILLED PEAT

Disc Ditching

Milling

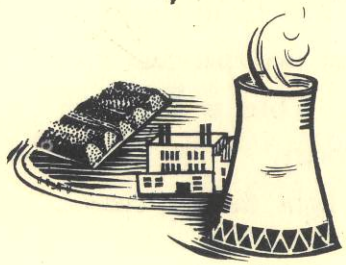
Harrowing

Ridging

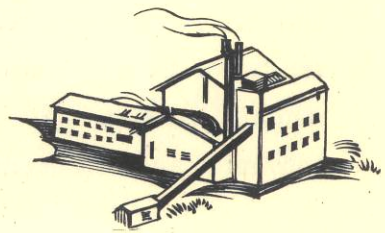
Harvesting

Loading

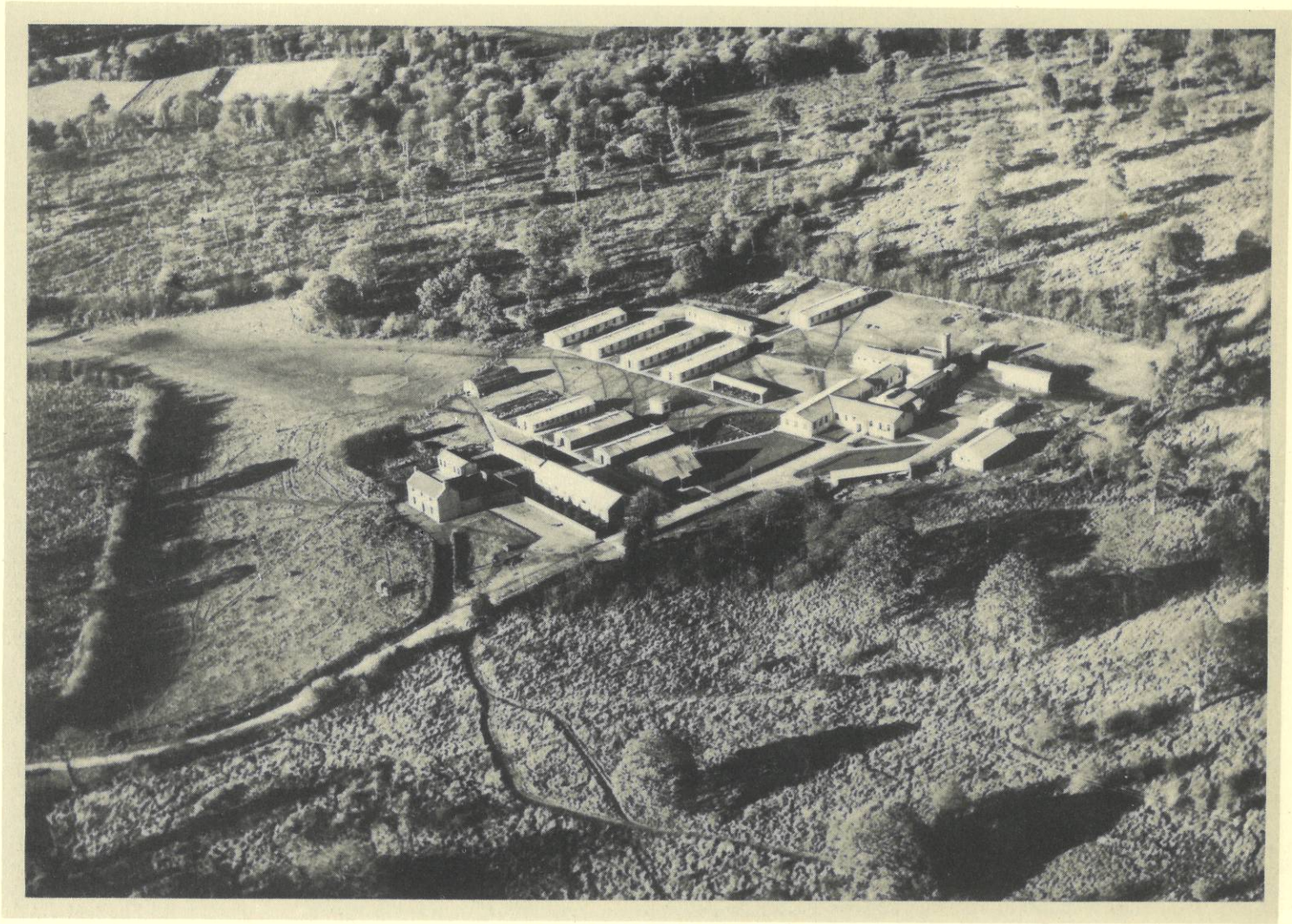
Transport



POWER STATION

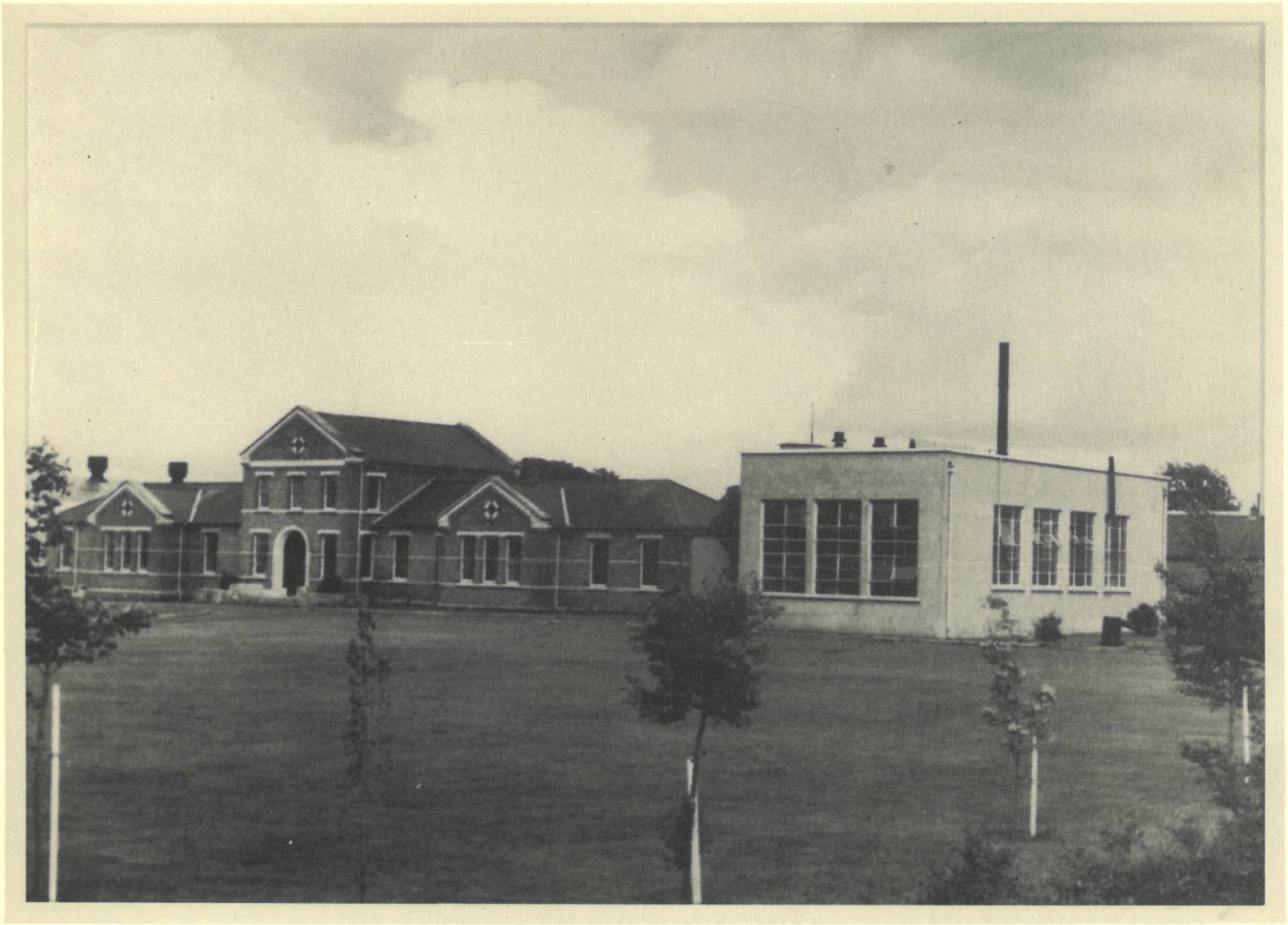


BRIQUETTE FACTORY



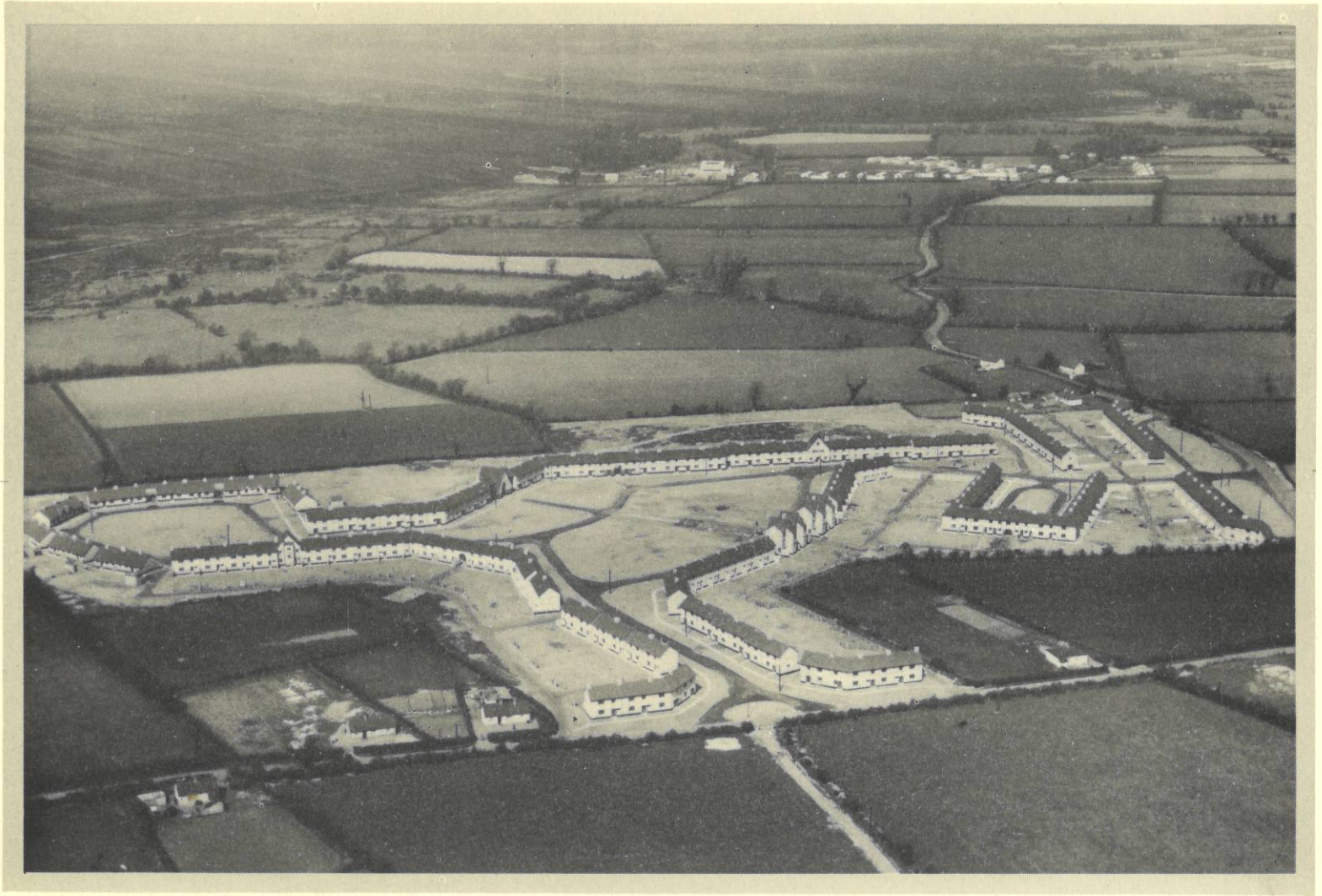
BAILE DHIARMADA HOSTEL

SITUATED NEAR RATHANGAN, CO. KILDARE, THIS HOSTEL IS TYPICAL OF OTHERS IN VARIOUS AREAS. SEASONAL WORKERS CAN OBTAIN FULL BOARD AND ACCOMMODATION AS REQUIRED



STAISIUN TURGHNAMHACH AT DROICHEAD NUA

HEADQUARTERS OF THE BOARD'S RESEARCH STAFF

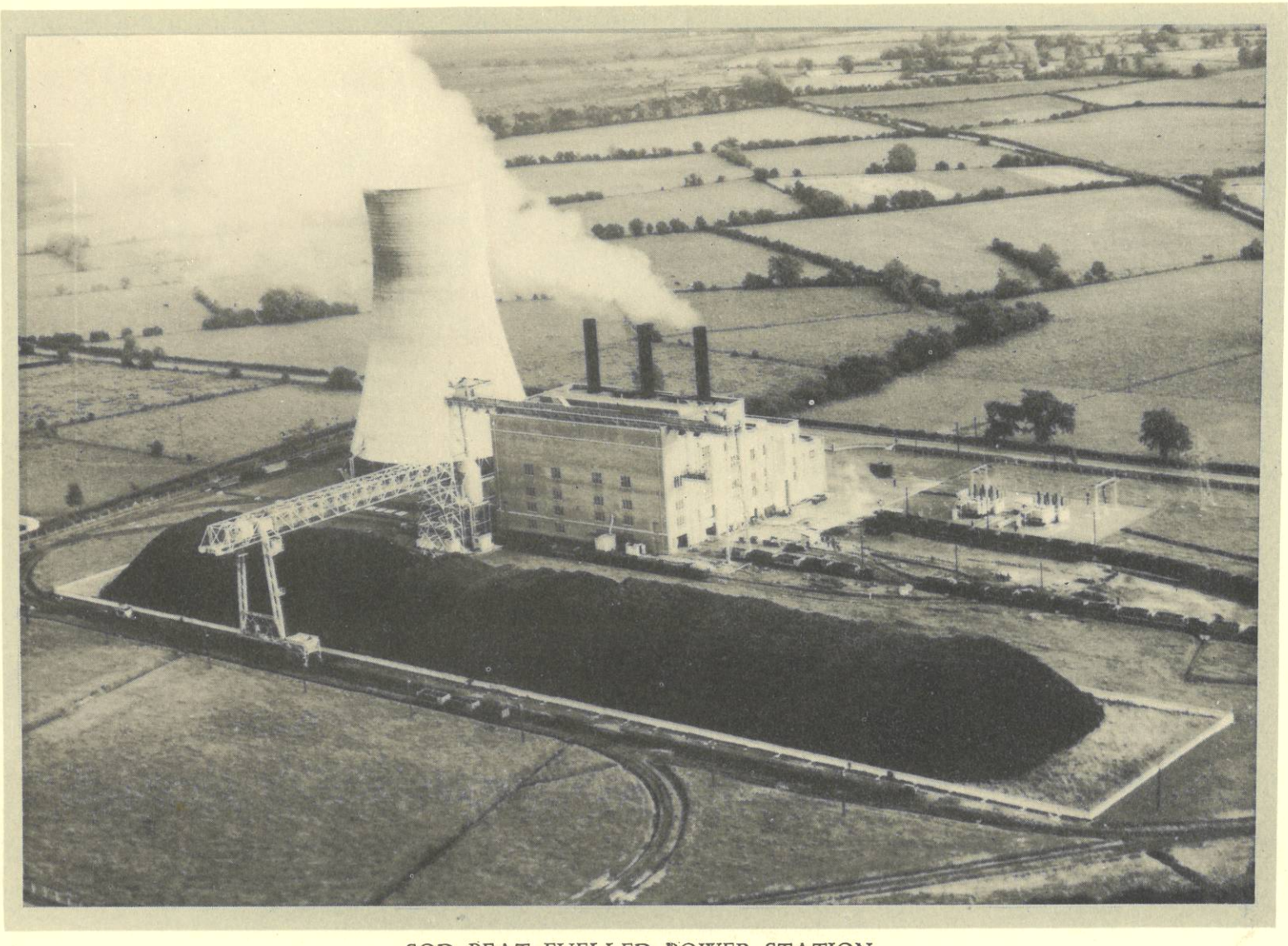


COILL DUBH VILLAGE

ONE OF THE BOARD'S NEW HOUSING SCHEMES OF ONE HUNDRED AND FIFTY-SIX HOUSES AND FOUR SHOPS FOR THE BOARD'S PERMANENT EMPLOYEES AT TIGH MOCHUA, CO. KILDARE. THE WORKS BUILDINGS AND HOSTEL CAN BE SEEN IN THE BACKGROUND

COILL DUBH VILLAGE

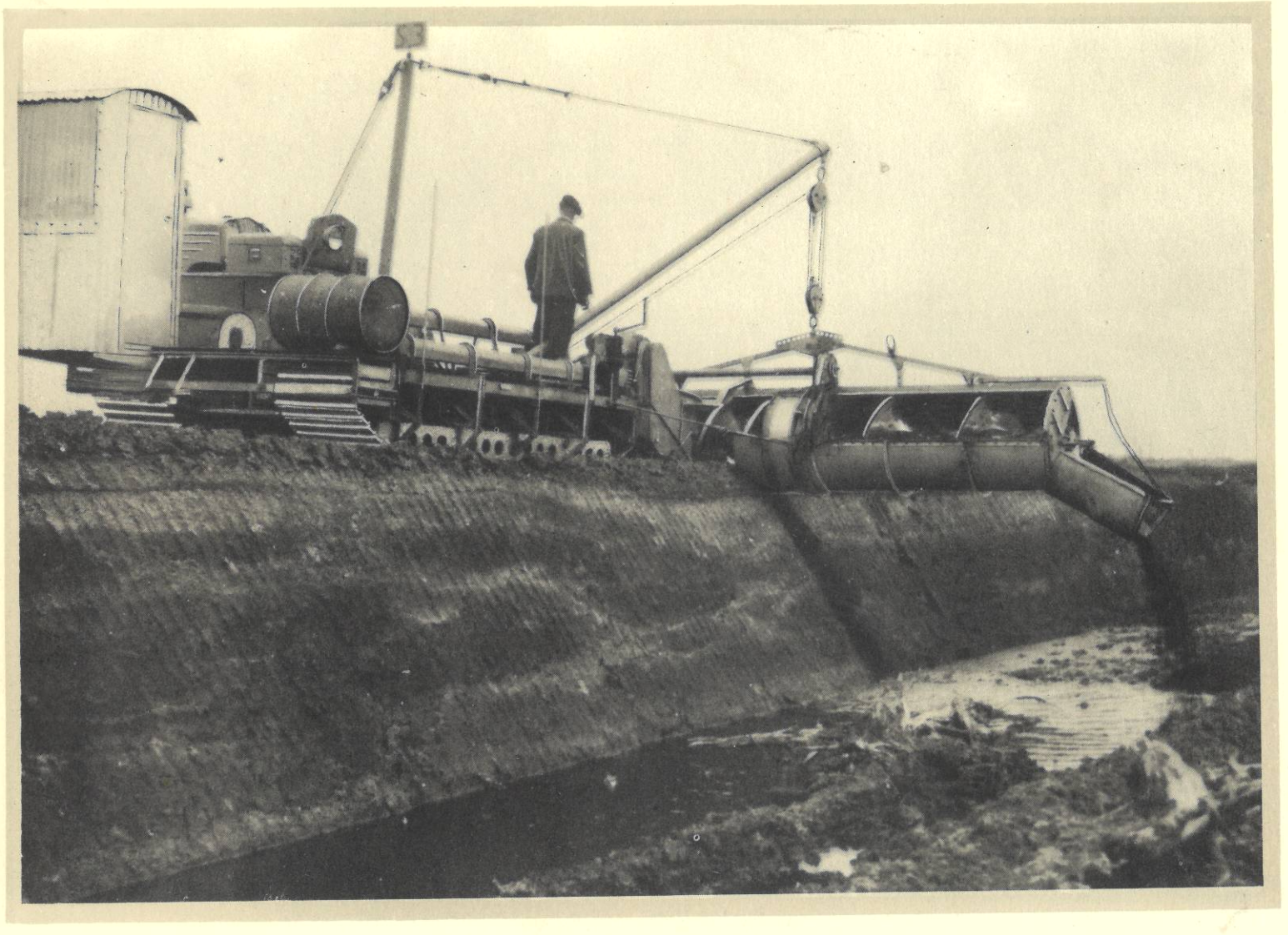
CHILDREN AT PLAY IN THE NEW VILLAGE



SOD PEAT FUELLED POWER STATION

PORTARLINGTON POWER STATION HAD A DESIGNED AVERAGE CONSUMPTION OF ONE HUNDRED AND TWENTY THOUSAND TONS OF PEAT PER ANNUM PRODUCING NINETY MILLION UNITS OF ELECTRICITY. IT IS NOW KNOWN THAT THE STATION CAN USE AND PRODUCE AT LEAST FIFTY PER CENT MORE

THIS POWER STATION IS OWNED AND OPERATED BY THE ELECTRICITY SUPPLY BOARD



SOD PEAT STRIPPER

A TWO METRE WIDTH OF MOSS AND HEATHER UP TO HALF A METRE DEEP IS MILLED FROM THE BANK AND DISCHARGED IN THE CUTAWAY BELOW

UNDRAINED BOG

WESTERN BOG INTENDED FOR MILLED PEAT DEVELOPMENT. THE BOG HAS RISING ROLLING CONTOURS BROKEN BY LAKES AND OUTFALLS

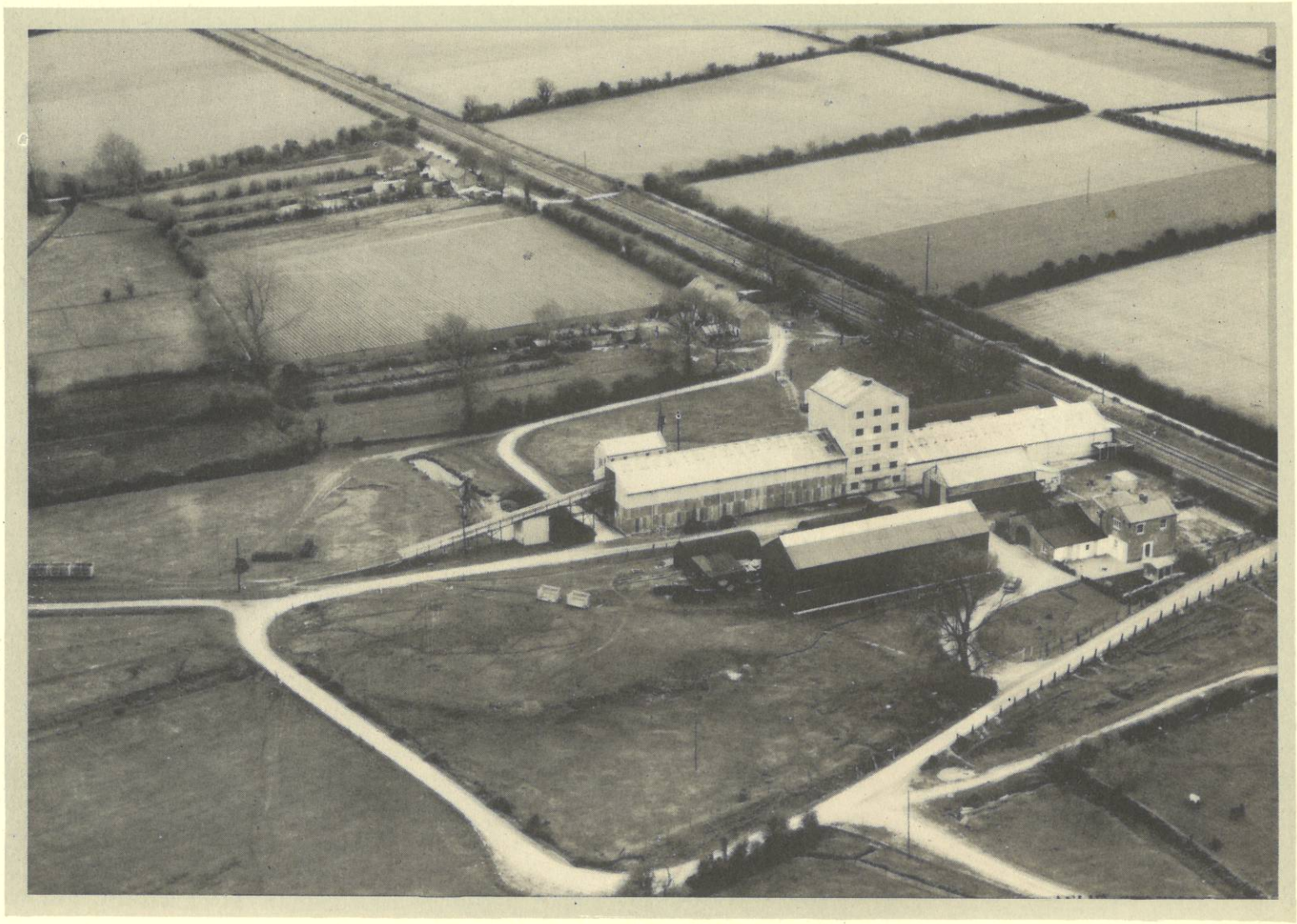
MILLED PEAT BOG BEING DRAINED

INITIAL PLOUGH AND DISC DITCHER DRAINS

SPACED AT FIFTY FEET INTERVALS

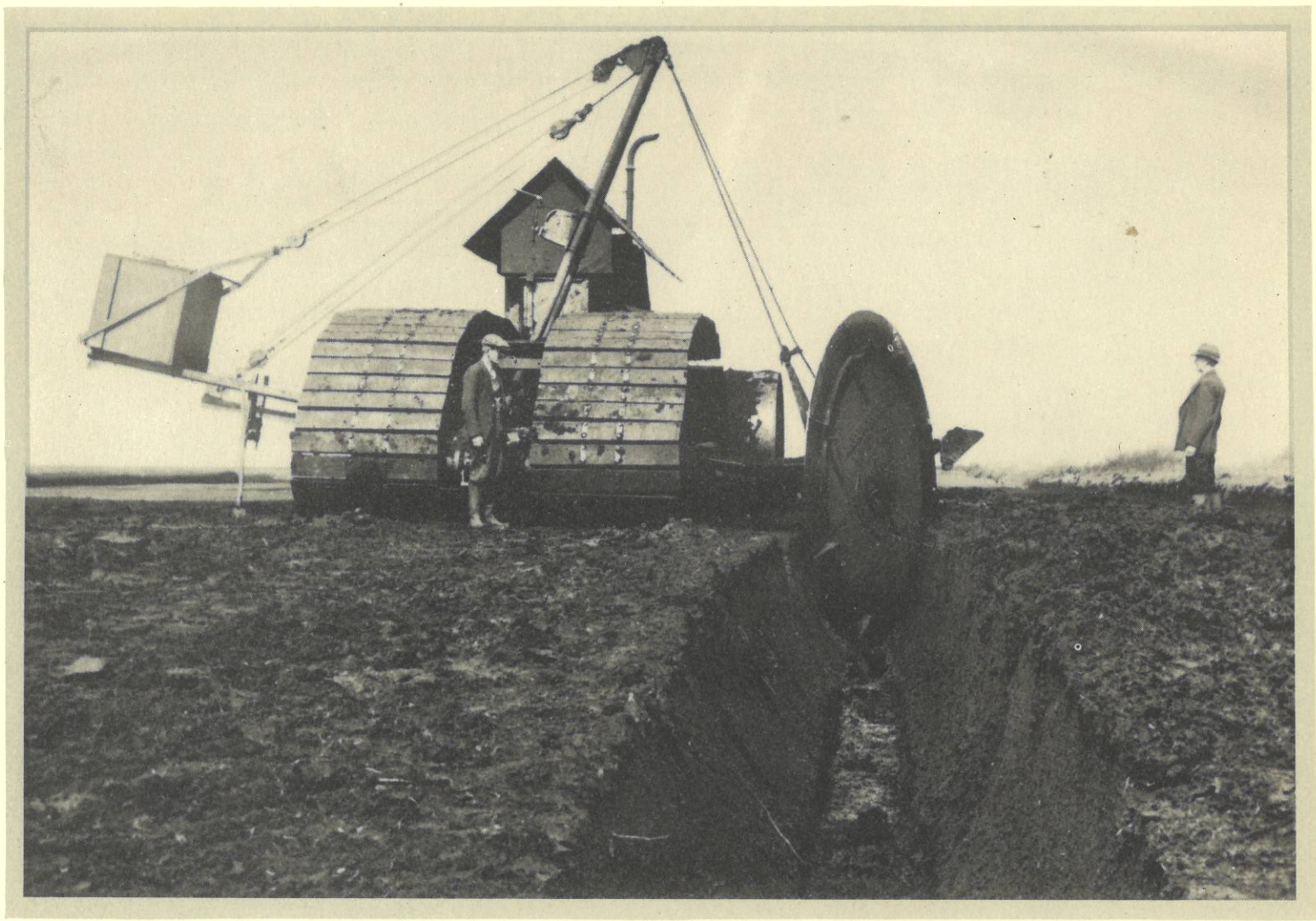
PEAT MOSS CUTTING TRENCHES AND SPREAD FIELDS

PEAT MOSS IS CUT BY HAND FROM THE TRENCHES, WEATHERED, FOOTED, HARVESTED AND SUBSEQUENTLY RICKED IN OPEN SIDED DRYING SHEDS ON THE BOG



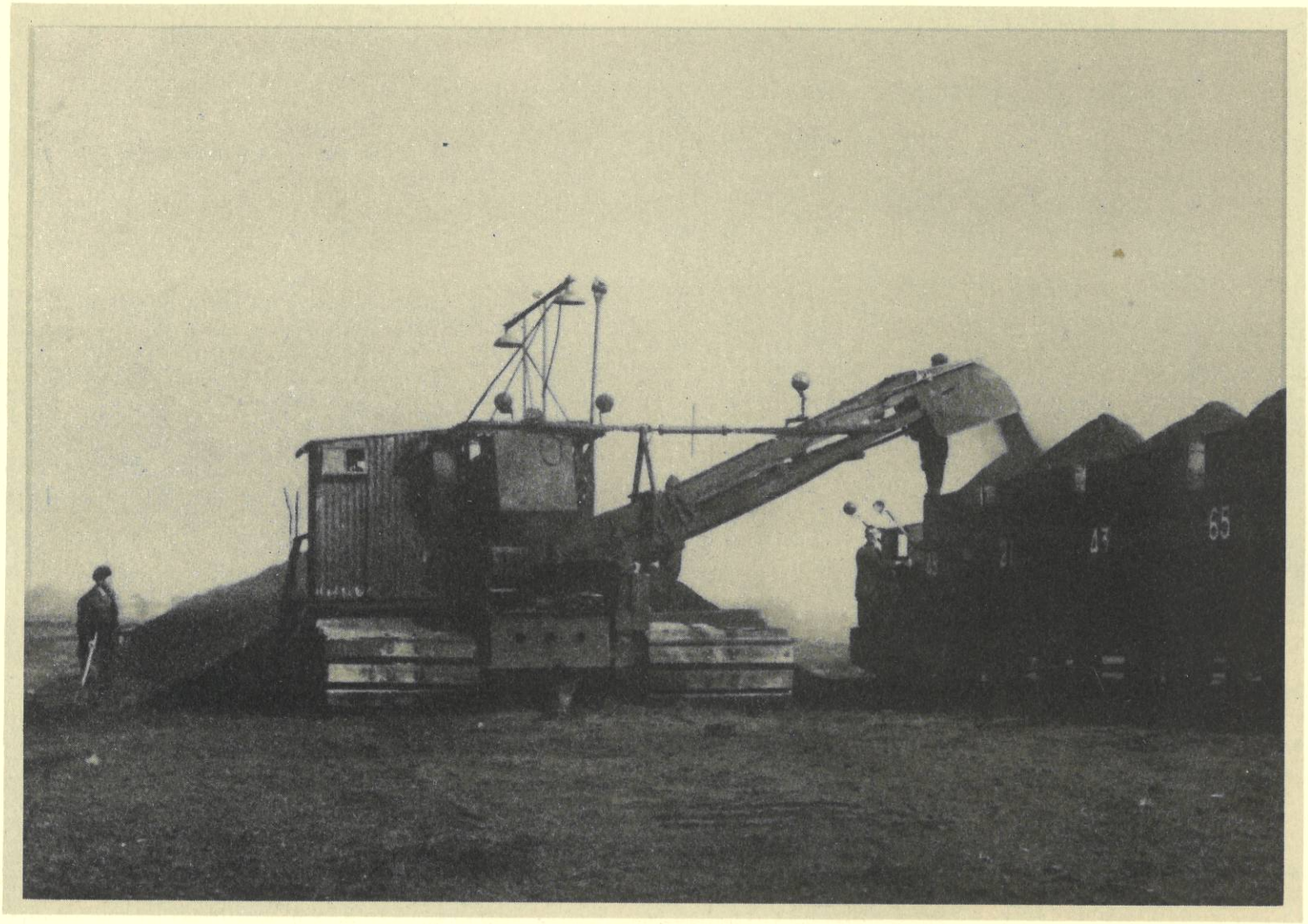
CILL BEARA PEAT MOSS FACTORY

THE DRIED PEAT MOSS IS DELIVERED INTO THE FACTORY WHERE IT IS DISINTEGRATED, SCREENED, GRADED AND BALED READY FOR DELIVERY BY ROAD OR RAIL TO THE CONSUMER



DISC DITCHER

BOG DRAIN BEING EXCAVATED TO A DEPTH OF FOUR FEET SIX INCHES.
THE SPOIL IS UNIFORMLY DISPERSED OVER ADJOINING AREAS



LOADER

THE LOADER CONVEYS MILLED PEAT AT THE RATE OF FIFTY TONS PER HOUR FROM THE RAILPILE INTO RAILWAY WAGONS WHENCE DELIVERY IS MADE EITHER TO THE FACTORY FOR THE MANUFACTURE OF BRIQUETTES OR TO THE POWER STATION FOR THE GENERATION OF ELECTRIC POWER

DRAINAGE PLOUGH

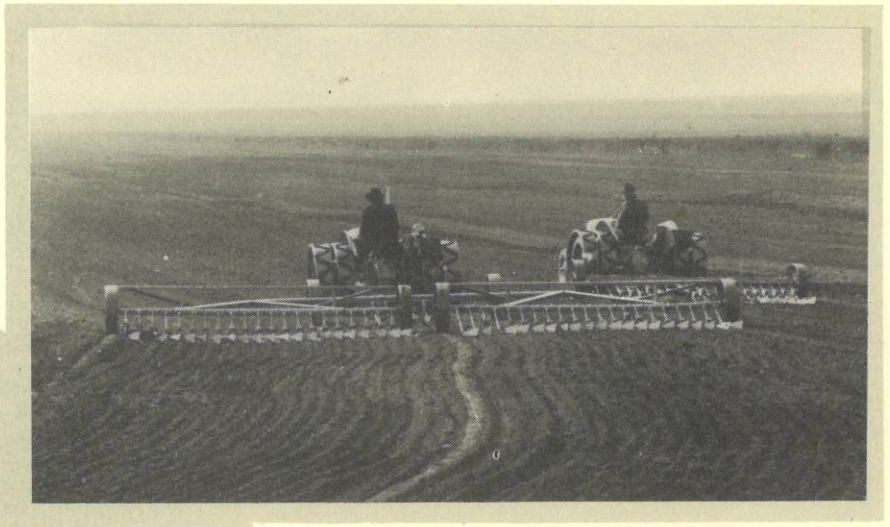
PRELIMINARY MARKING OUT AND INITIAL SHALLOW CUTS ON DRAINS CAN BE RAPIDLY MADE ON VIRGIN BOGS.

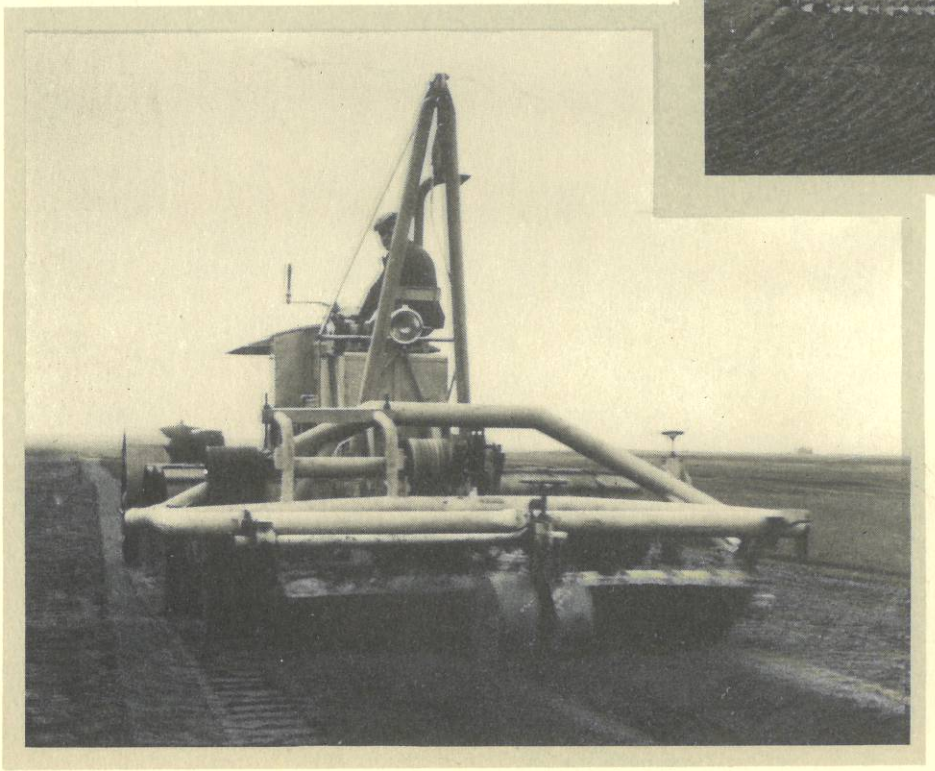
MOLE DRAINER

IMPROVEMENT OF SURFACE CONDITIONS ON SPREAD GROUNDS CAN BE ACHIEVED AT RELATIVELY LITTLE COST. THE MACHINE IS MAINLY USED TO SUPPLEMENT THE CROSS DRAIN SYSTEM BETWEEN MAIN TRENCHES ON SOD PEAT BOGS.

HARROWS

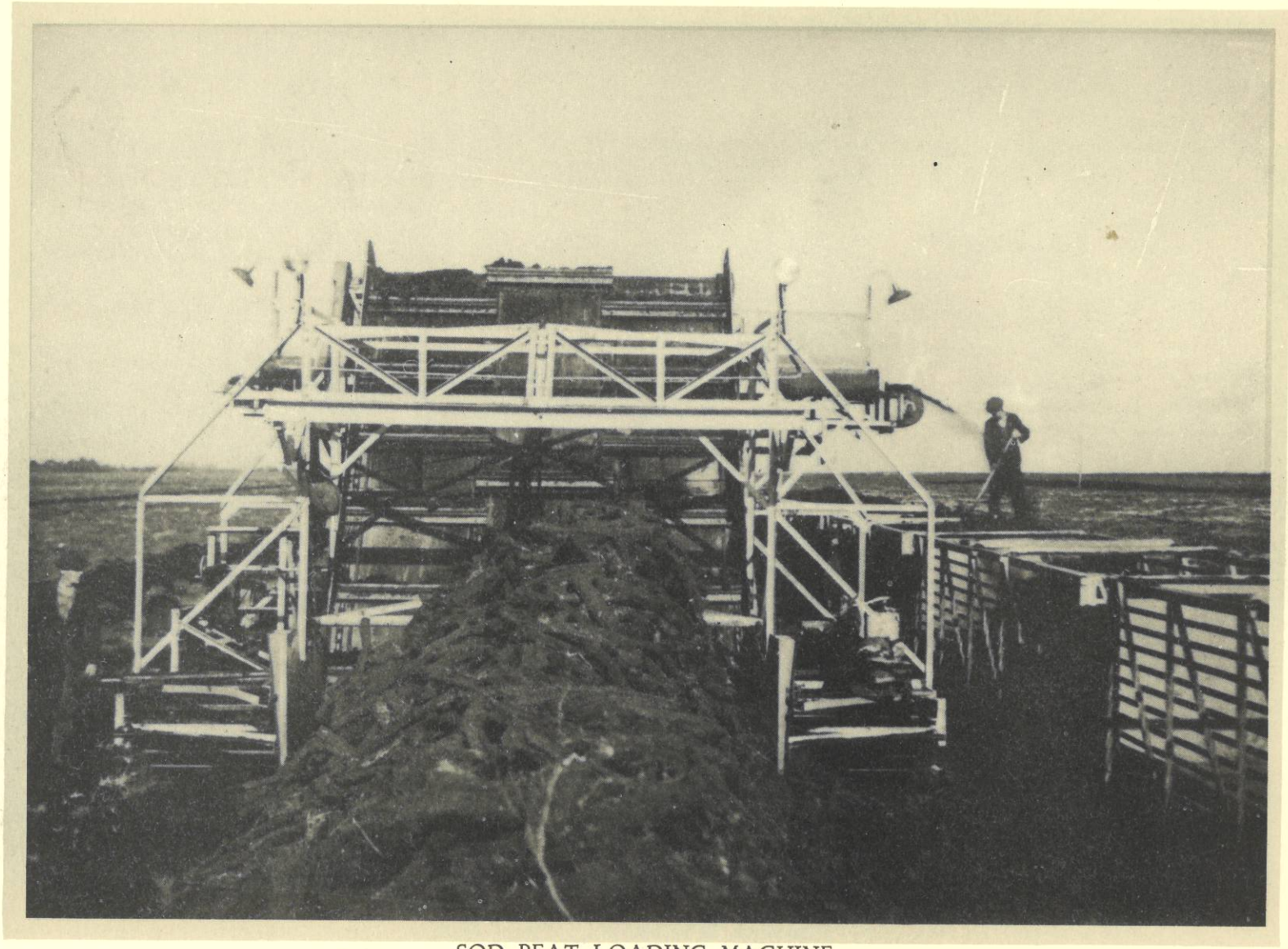
SINGLE AND DOUBLE SPOON HARROWS ACCELERATE THE DRYING OF THE MILLED PEAT





MILLER

THE SURFACE AREA OF THE FIELD IS CUT TO A DEPTH OF APPROXIMATELY HALF AN INCH BY THE MILLING ATTACHMENT FITTED TO A SPECIALLY DESIGNED HALF-TRACK TRACTOR

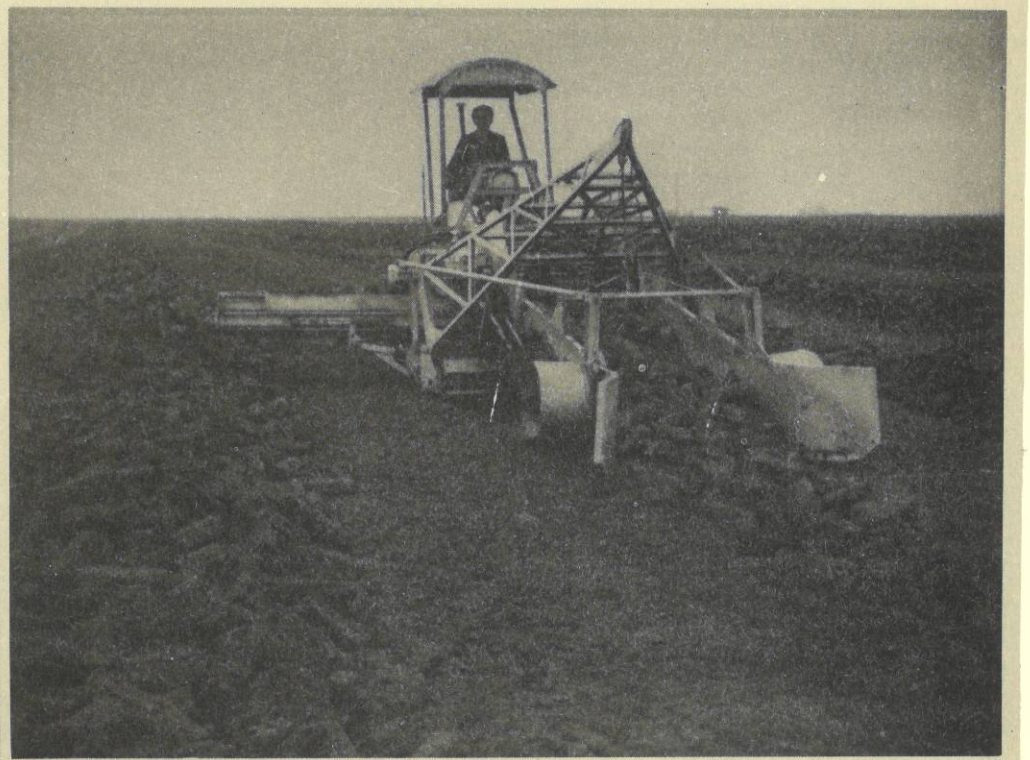


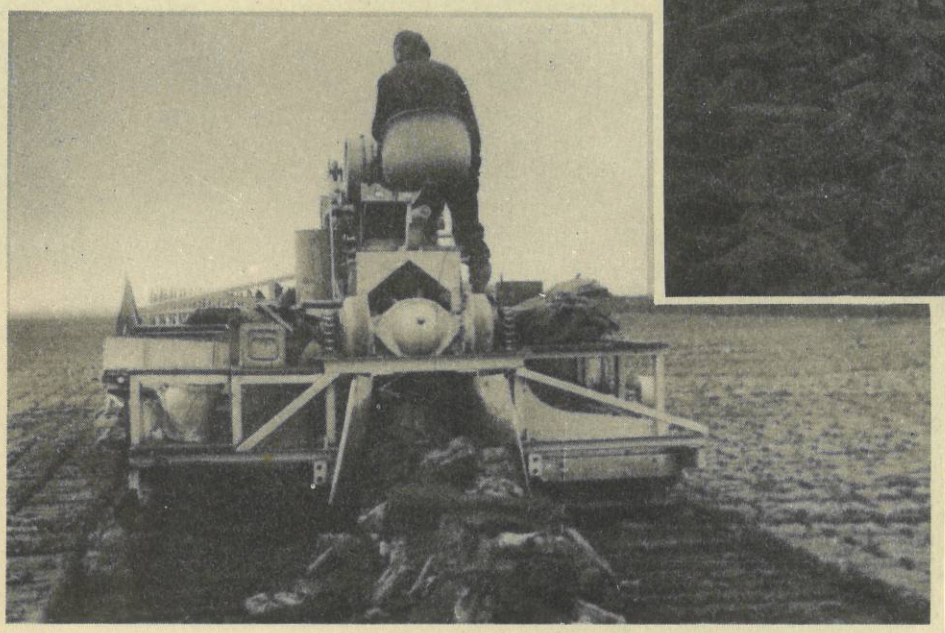
SOD PEAT LOADING MACHINE

THE LOADER FILLS WAGONS OF SIXTEEN CUBIC METRE CAPACITY
FROM A CLAMPED RICK OF TURF FOR DELIVERY TO CONSUMERS
OR POWER STATION

SOD PEAT WINDROW TURNER

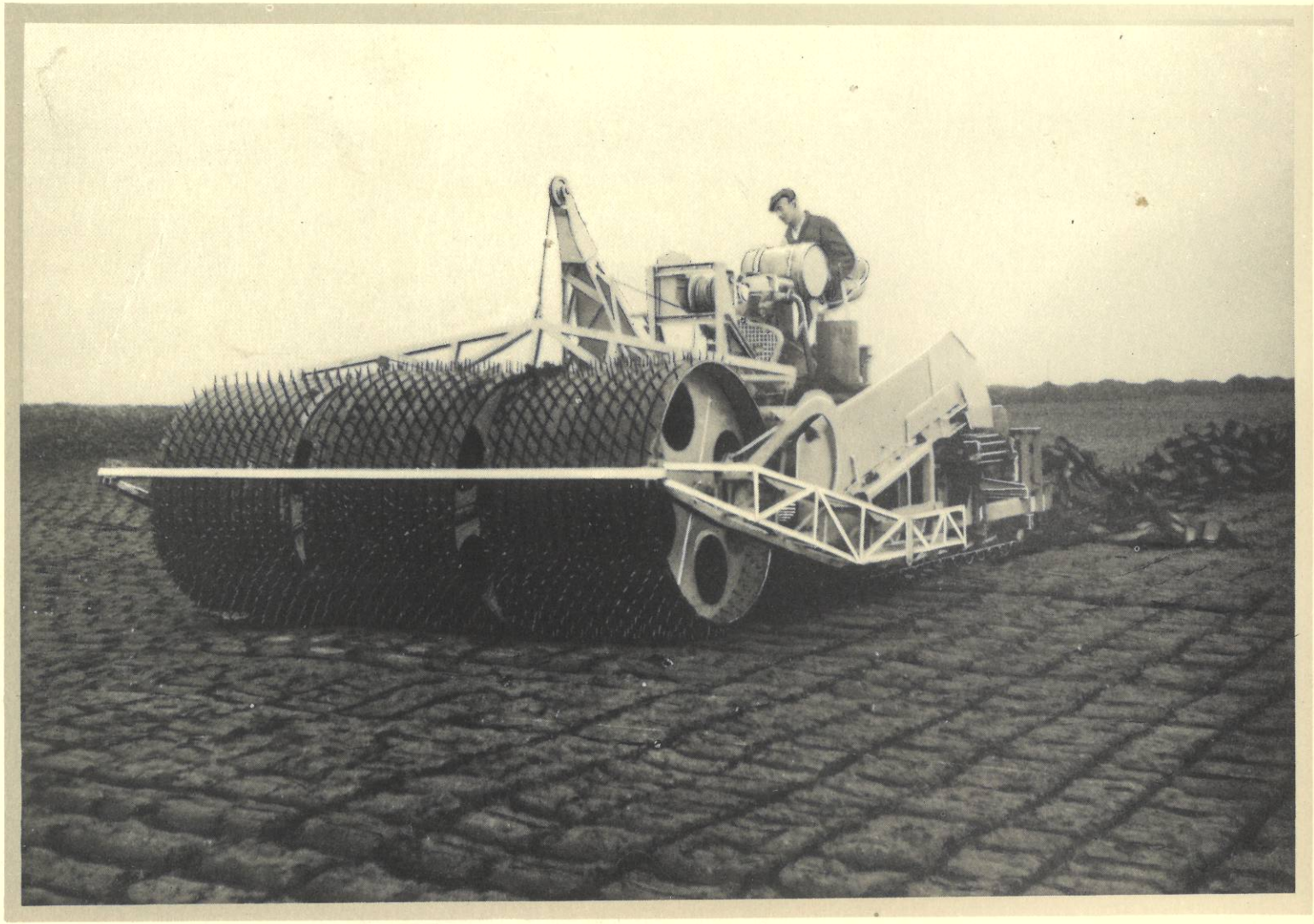
THE WINDROWS REQUIRE TO BE TURNED AFTER A PERIOD SO THAT THE SODS AT THE BOTTOM OF THE ORIGINAL WINDROW CAN BE EXPOSED. THE WINDROWS ARE TURNED AND RE-MADE THREE METRES AWAY FROM THE ORIGINAL POSITION, LEAVING THE PEAT IN POSITION READY FOR COLLECTION





SOD PEAT WINDROWER *(Rear)*

THE PEAT IS DISCHARGED AT THE REAR AND FORMED INTO A CONTINUOUS WIND-ROW, IN WHICH IT GRADUALLY DRIES



SOD PEAT WINDROWER *(Front)*

THIS IS THE LATEST IMPROVEMENT IN SOD PEAT MECHANISATION. THE DRYING PEAT IS PICKED UP ON PINS AND FED ON TO A CHUTE DELIVERING AT THE REAR OF THE MACHINE. THIS MACHINE WILL REDUCE THE AMOUNT OF MANUAL FOOTING REQUIRED ON EACH CROP

SOD PEAT AUTOMATIC COLLECTOR

THIS NEWLY DEVELOPED MACHINE COMPLETES THE LAST PHASE OF FULLY MECHANISED PRODUCTION—
LIFTING THE WINDROWS POSITIONED BY THE PREVIOUS MACHINES AND CONVEYING THEM TO THE RICK

SOD PEAT BAGGER SPREADER WITH CUTTING DISCS

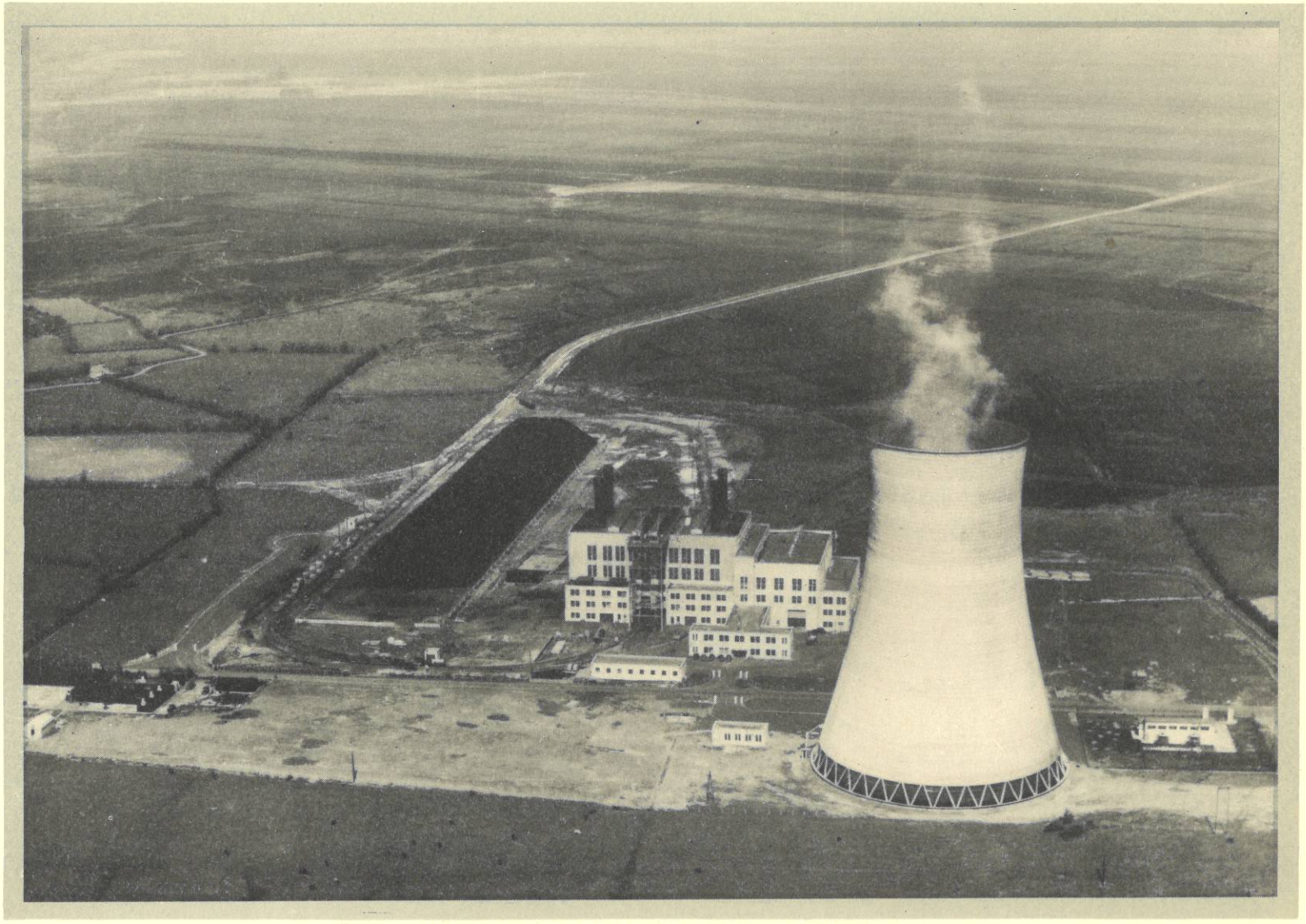
THE SPREADER ARM IS MOUNTED ON CATERPILLARS AND ROLLERS AND MOVES FORWARD WITH THE BAGGER. THE MACERATED PEAT IS FED OUT ALONG THE ARM AND IS DEPOSITED IN CONTINUOUS ROWS ON THE GROUND WHERE IT IS CUT BY THE DISCS

SOD PEAT BAGGER

FULLY-AUTOMATIC EXCAVATOR CUTTING A TWO METRE WIDTH OF BANK THREE METRES DEEP. THE TURF IS SUBSEQUENTLY MACERATED AND FED ON TO THE FIFTY-FOUR METRE SPREADER ARM OF THE MACHINE AS A CONTINUOUS SOD

SOD PEAT BOG IN PRODUCTION

CUTTING TRENCHES, SUB DRAINS, CROSS DRAINS AND RAILWAYS
SHOWING TYPICAL LAYOUT FOR SOD PEAT PRODUCTION



SOD PEAT FUELLED POWER STATION

ALLENWOOD POWER STATION, CO. KILDARE WITH A DESIGNED CONSUMPTION OF ONE HUNDRED AND EIGHTY THOUSAND TONS OF PEAT PER ANNUM AND AN OUTPUT OF ONE HUNDRED AND THIRTY-FIVE MILLION UNITS OF ELECTRICITY. IT IS NOW ESTIMATED THAT THE STATION CAN USE AND PRODUCE AT LEAST FIFTY PER CENT MORE

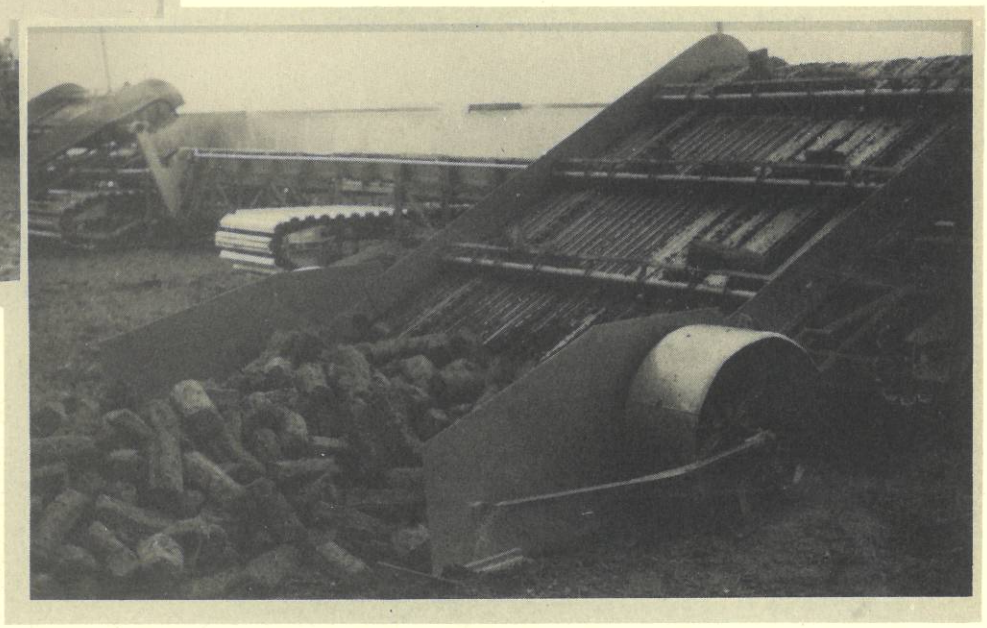
THIS POWER STATION IS OWNED AND OPERATED BY THE ELECTRICITY SUPPLY BOARD

ELEVATOR OF AUTOMATIC SOD COLLECTOR

PARALLEL TO THE CUTTING TRENCH, THE AIR-DRIED PEAT IS FORMED INTO A RICK ALONGSIDE WHICH TEMPORARY TRACK IS LAID TO MAKE DELIVERIES TO THE RAILHEAD

WINDROW ELEVATOR OF AUTOMATIC SOD COLLECTOR

THE WINDROWS ARE LIFTED FROM THE GROUND ON TO THE STEEL-PLATE CONVEYOR OF THE SOD COLLECTOR WHICH FEEDS THE ELEVATOR



Ceapaḋ agus rinneaḋ an leaḃrán
so imḊaile Áṫa Cliaṫ ꝑaor ċomarṫa
na dTrí gConneal. In Éirinn a rinn-
eaḋ a ḃꝑuil ann de ꝑlátaí de ꝑáipéar
agus de ḋubaċ. ⁊ Dia dár gcabair.
1954

Sé príom-ċúiṙ foillṙiċe an leaḃṙáin ṙeo, é a ṙcaipeaḋ i meaṙg daoine i dtíoṙċa ṫaṙ leaṙ.

Fágṫaṙ le h-uḋaċt ag Muinntiṙ na h-Éiṙeann anoiṙ í, maṙ annál aṙ ḋéantaiṙí Boṙd na Móna, cómluċt Gaeḋalaċ a ṙáṫann í féin i gceiṙt teicniúil Gaeḋalaċ ṙṙeiṙialta.

boRD na móna