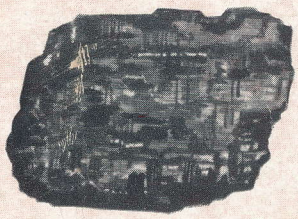
KILLOCH
COLLIERY



WEST AYR AREA

NATIONAL COAL BOARD
SCOTTISH DIVISION



Herd of Ayrshires near Killoch



OFFICIAL INAUGURATION

OF THE NEW SINKING

AND DEVELOPMENT AT

KILLOCH COLLIERY

BY Mrs William Smith

ON THE 22nd DECEMBER 1952

AT 2.30 P.M.

KILLOCH COLLIERY

- A MODERN FITTING TO DEVELOP AN AREA OF TEN SQUARE MILES IN THE MAUCHLINE BASIN
- INVOLVING THE SINKING OF TWO DEEP SHAFTS AND THE CONSTRUCTION OF A WELL-DESIGNED SURFACE LAYOUT
- THE COLLIERY WILL BE CAPABLE OF DEALING WITH A DAILY OUTPUT OF 4000 TONS OF COAL
- RESERVES AVAILABLE, 150,000,000 TONS, ARE SUFFICIENT TO KEEP THE UNIT IN FULL PRODUCTION FOR OVER 100 YEARS

An Ayrshire Note

TWO OR THREE CENTURIES AGO Ayrshire was hardly more than a bleak and barren waste of marshes and moorland. But marshes have been drained, moorlands broken up and cultivated, woodlands planted for shelter and beauty, and the whole countryside transformed into one of the most pleasing pictures of rural scenery to be found in any part of Scotland.

What is, perhaps, equally remarkable is the manner and extent to which Ayrshire has benefited socially and economically from her comparatively leisurely and unhurried *industrial advance*. For the race is not always to the swiftest. In other districts where industrialisation has proceeded more rapidly the result has been a dense growth of population, loss of amenity, and serious lack of balance as between the primary industries and manufacturing activity. Ayrshire has so far escaped and may be considered one of the best balanced counties in the country.

In having achieved such a favourable balance, and no doubt it was partly fortuitious, Ayrshire may have something in common with the Irish, for we seem to detect in both peoples a more leisurely and less feverish reaction to the major trends set in motion by the industrial revolution and accentuated by modern mass-production techniques.

Whether Dame Fortune frowned or encouraged their efforts and enterprises, Ayrshire folk seem to have had the faculty of countering the one or soberly accepting the other. Seventy to eighty years ago when the weavers in the Irvine Valley discovered their cottage industry in the toils of depression, Alexander Morton set off for Nottingham to study lacemaking and returned with the new machinery to lay the foundation of a great industry. Not only did the scheme meet with success, but the Valley steadily expanded its output until it was producing and selling more lace than Nottingham.



Poosie Nansie's, Mauchline. Associated with Robert Burns.

Glancing still further back into the past, there was a time when low-cost grain imports were bringing wholesale ruin upon the home producer. Ayrshire farmers, however, overcame this deadly challenge by switching their husbandry to stock rearing and milk production, and, in fact, they made extensive use of the cheap grains now available to nurture and increase their herds. Thus came about an agricultural revolution which is Ayrshire's greatest pride and achievement. Now every year more than 30,000,000 gallons of the most nutritious and natural food in the world is produced on Ayrshire farms and distributed to the towns and villages of the West of Scotland.

Difficult problems also arose in mining. Ayrshire's coal reserves in the north have been largely exhausted, so that to-day the north produces

less than one-tenth of the coal annually won before the turn of the century. Kilmarnock, Stevenston, and Irvine are still prosperous districts, for they have weathered the changes thus brought about and have attracted a much greater diversity of enterprise, this wider spread of industry being the best possible assurance of continuity of employment for the people.

In the Central Ayrshire Coalfield there are, however, still large reserves of coal tucked away beneath the Permian rocks which occupy the centre of the deep coal basin in this area, and these constitute some of the finest quality house coal to be found in any part of the world.

The new sinking to be known as Killoch Colliery is designed to develop a large virgin field of coal to the west of the existing Barony and Whitehill pits. The shafts are sited at the side of the Ayr-Cumnock highway some nine miles east of Ayr and approximately midway between the villages of

"House with the Green Shutters," Ochiltree



Coylton and Ochiltree. The parish of Ochiltree in which the new field is situated lies in the heart of Ayrshire and forms part of the wide central division of the county, known as Kyle.

Picturesque Countryside

This part of Kyle is given up largely to arable and dairy farming. It is a quiet, rural countryside diversified by picturesque, wooded and sometimes deeply-cut river valleys, along which narrow, rocky gorges alternate with open straths. It has its own share of historical and legendary interest. It is not certain what is the original source of the names Kyle and Coylton, but one interpretation derives them from that of a Pictish chieftain, who is said to have been slain in battle and buried at Coilsfield Mains on the Montgomerie lands four miles north-west of the Killoch site. The shadowy figure of King Coil has also been traditionally identified with Old King Cole of nursery rhyme fame, a dubious honour which it shares with Colchester. There is, however, and perhaps unfortunately, a more prosaic explanation of the words Kyle, Coyle, Coylton, and Coilsfield.

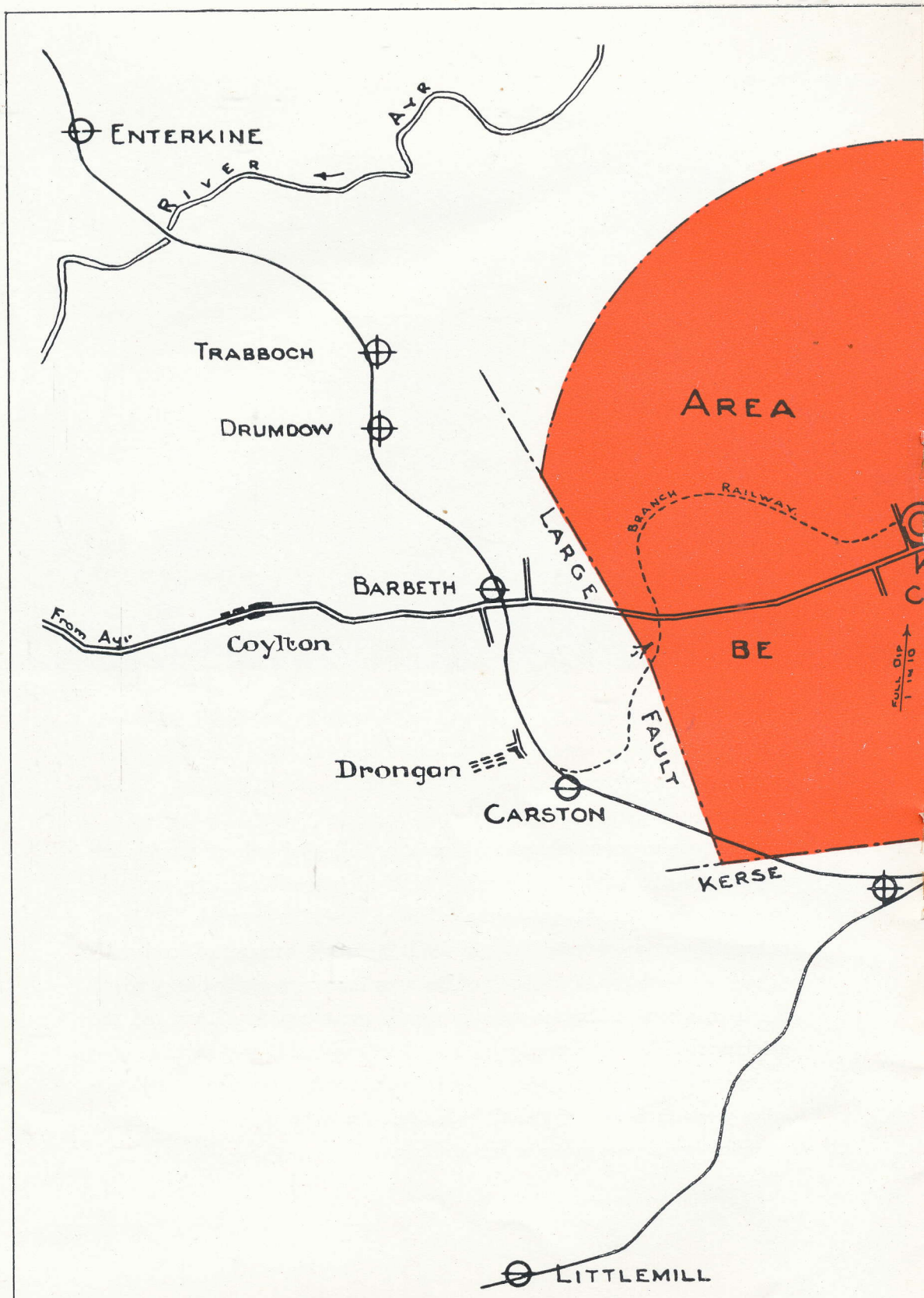
The literary associations of the district centre, of course, mainly around the name of Burns. Mossgiel farm lies only some eight miles north of Ochiltree, where Burns' poet-friend, William Simpson, to whom he addressed one of his " epistles," was schoolmaster. In more recent times, Ochiltree was the birthplace of George Douglas Brown, author of " The House with the Green Shutters." Born in 1869, the son of a farmer at Drumsmudden, Brown worked for a short time at a colliery pithead before going on to Glasgow and Oxford universities, only to die, however, a few years later. The original of the " house " which gave the title to his novel is still preserved in Ochiltree. The district has associations also with the Boswell family and Auchinleck House lies a little east of the Lugar Valley, some two miles north-east of the Killoch site. James Boswell inherited the Auchinleck estate in 1792, and it was here that part of his " Life of Johnson " was written.



Remains of Ancient (Eighteenth Century) Colliery, near Killoch

Early Coal Workings

THE EARLIEST RECORDS of coal workings near Killoch date from 1497, when coal is reputed as having been wrought in the vicinity of Tarbolton, probably by the monks of Fail Monastery, as well as on the " Burrowlands " of Sorn. In the description of Stair Parish in the " Statistical Account of Scotland " (1793) we read: " On the lands of Drongan is an extensive colliery which has been wrought above a century to the great benefit of Ayr and the neighbourhood." The remains of the old colliery buildings can still be seen at the hamlet of Coalhall, west of the Killoch boundary fault, and nearly two miles west-south-west of the Killoch site. An early type of atmospheric pumping engine was in use at this colliery.


ENTERKINE
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TRABBOCH
DRUMDOW
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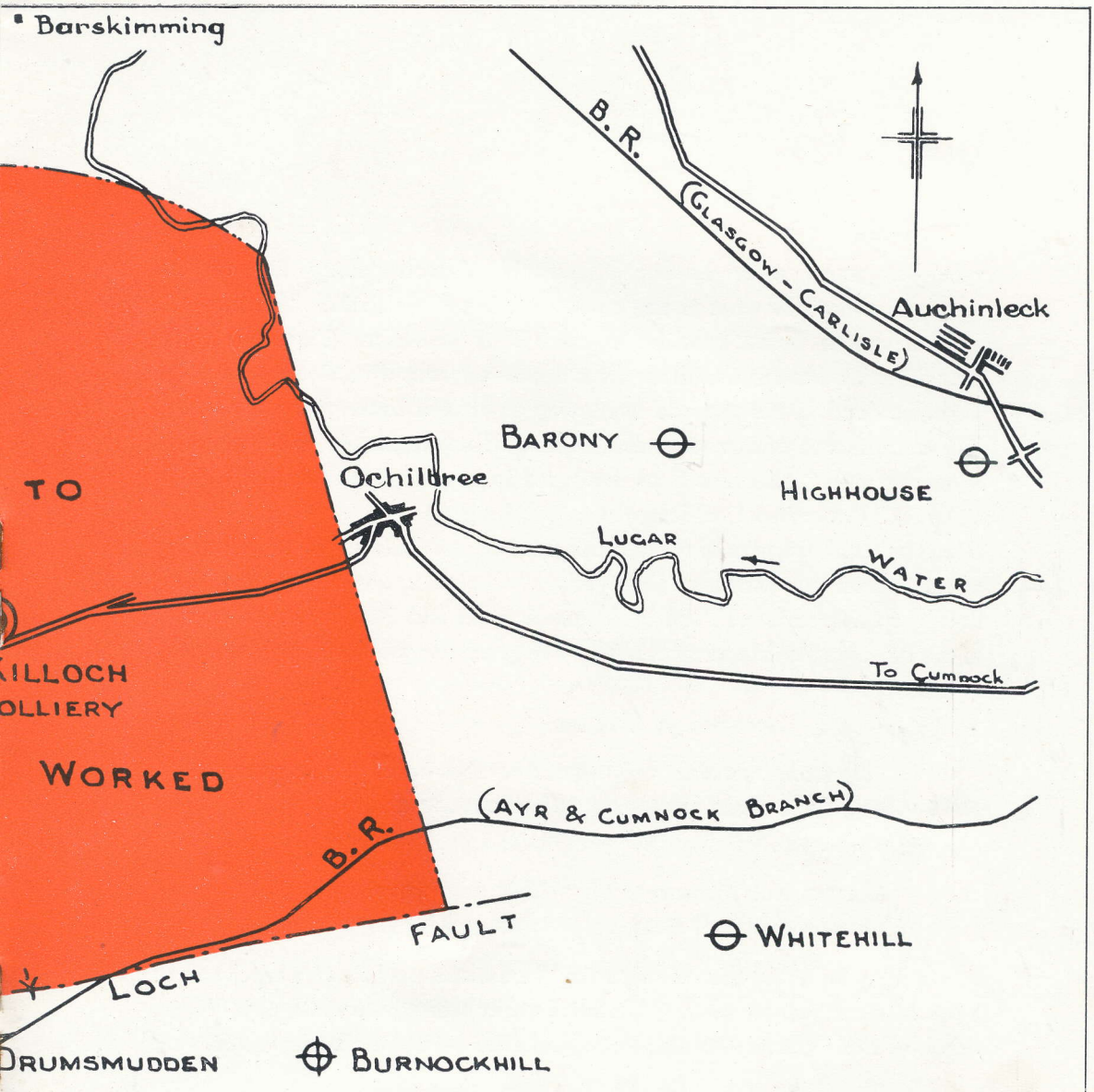


Killoch Colliery

Mineral Field and Colliery Site.

Scale of Miles.

1 3/4 1/2 1/4 0 1 2 3.

Geological

THE NEW FIELD to be developed from the Killoch sinking lies on the southern margin of what is known as the Mauchline Basin. This name is applied to the broad syncline of New Red Sandstone (Permian) rocks stretching from near Ochiltree in a north-westerly direction to between Tarbolton and Symington and occupying an area of some 30 square miles. This central area of Permian rocks is fringed and underlain by Barren Red Measures and Productive Coal Measures in turn and constitutes what is called the Concealed Coalfield of Central Ayrshire.

The southern part of the Killoch field is underlain by strata belonging to the Barren Red Measures followed and overlain in a northerly direction, first by a thick series of Permian Volcanic rocks and then by the lower part of the Permian Sandstone succession. The general sequence is approximately as follows:—

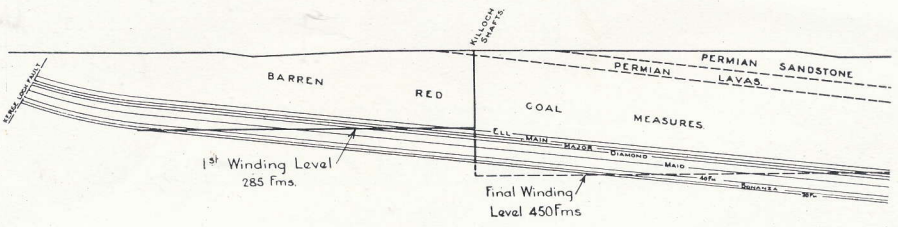
Permian:

Sandstones, mainly bright red:	perhaps up to 900 ft. present.
Volcanic rocks (lavas):	about 480 ft.

Coal Measures:

Barren Red Measures:	1500 to 1700.
Productive Coal Measures:	about 900 ft.

It may be noted that the Permian Sandstones may attain a thickness of 1540 ft. in the centre of the Mauchline Basin near Barskimming. Here the depth of the Ayr Hard or Maid Coal is estimated to be about 3840 ft.



Section on Line of Full Dip at Killoch Shafts.

The Killoch Scheme

KILLOCH COLLIERY will be the largest mining unit in Ayrshire, and will form an important link in West Ayr's area programme for output expansion and for the replacement of those collieries which will become exhausted within the next ten to twenty years. The present annual output of West Ayr Area is 2,000,000 tons, and when Killoch is completed in about eight to ten years' time the output will exceed 3,000,000 tons—with, of course, assistance from other new developments now under way.

Incidentally, a considerable amount of planning and development work has been carried out in West Ayr Area during the past five years. Three new surface drift mines have been brought into production, and other four are in process of development. Two collieries have been reconstructed, and at four further units reorganisation is in progress. The sinking of a new shaft at Littlemill commenced last month, and a new preparation plant will be built at the same point. Prospecting for further sites and developments is a continuous operation and plans for further surface drifts and deep fittings are under review at the moment.

The new Colliery will develop an area of ten square miles in the southern part of the Mauchline Basin, with reserves of workable coal estimated at 150,000,000 tons.

Three separate boring tests have been carried out over a long interval to establish the position and nature of the seams. In 1877 the company then in operation put down no fewer than four bores, but these bores were not sunk far enough to catch the seams. In 1890, further boring from an underground position in Drumsmudden Colliery, in the vicinity of Kerse Loch Fault, succeeded in locating the lower seams in the basin.

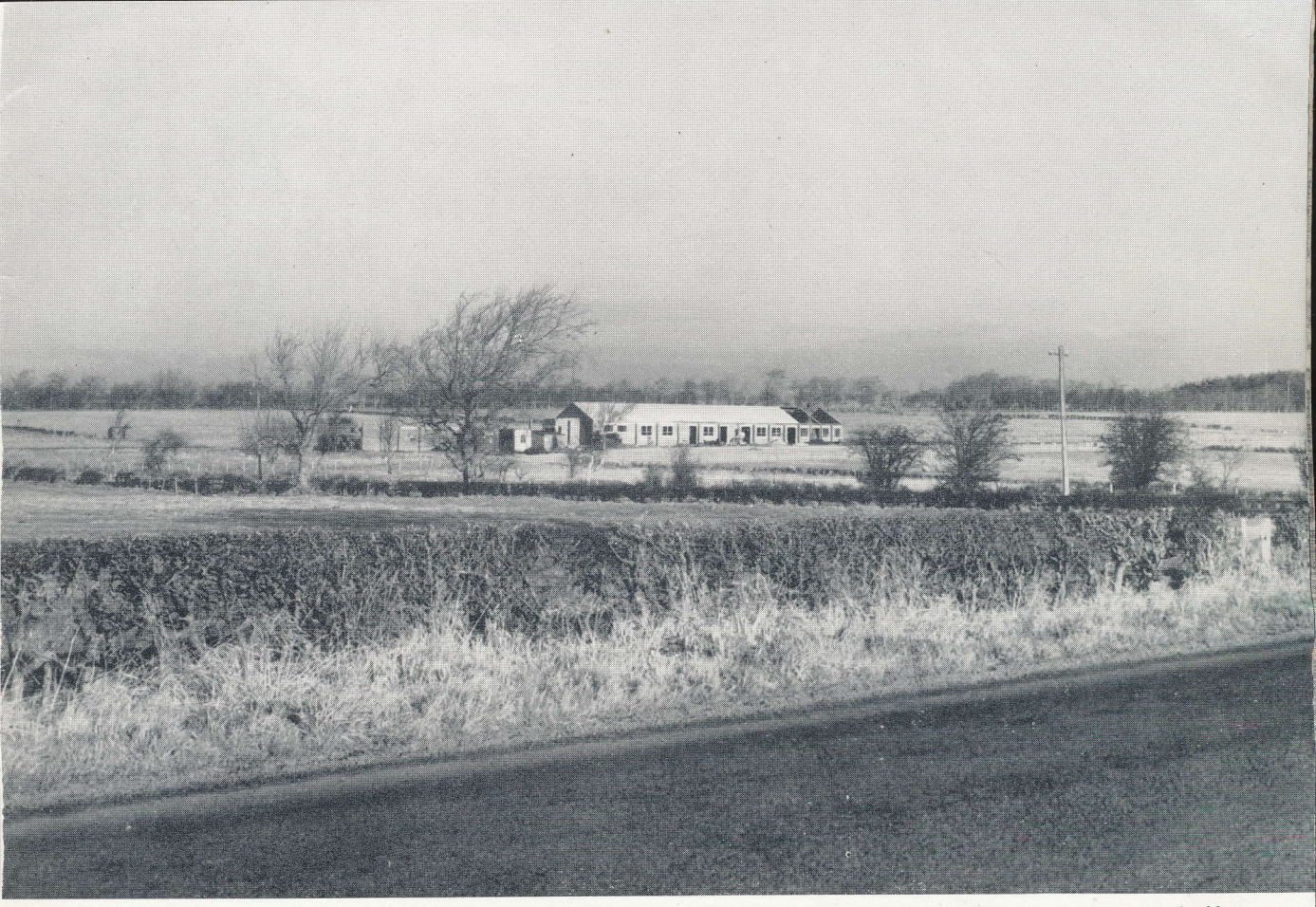
Finally, just before the outbreak of World War II, a series of six deep bores were started; these were completed successfully by 1942 and proved eight valuable coal seams of substantial thickness, as set out overleaf:—

Seam	*Thickness of Coal (in inches)*	*Depth from surface (in feet)*	*Quality*
Ell	36	1710	*First-Class House*
Main	80	1800	*First-Class House*
Major	50	1840	*Industrial*
Diamond	33	1930	*House*
Maid	54	2040	*House and Industrial*
40 fm.	36	2270	*House*
Bonanza	60	2350	*Industrial*
20 fm.	33	2390	*First-Class House*

The fitting is designed to produce an annual saleable output of one million tons of coal, or 4000 tons daily, winding on two shifts. The personnel required will be about 2200 men, equivalent to an output per manshift of 35 cwts.

New Red Sandstone Cliffs by the River Ayr, near Ballochmyle





Killoch Colliery Site, showing temporary buildings

A modified form of horizon mining has been found suitable and adopted. Level roads will be driven on the strike line in easterly and westerly directions from the pit bottom, and cross-cuts set off to the south to intersect the seams. The full dip is in a direction south to north, with an average inclination of 1 in 10. The first production level will be at 285 fathoms, and, as the coal at this level becomes exhausted, lower horizons will be developed. The final winding depth will be approximately 450 fathoms.

Two concrete-lined shafts will be sunk, 400 feet apart, their diameters being 24 feet and 20 feet respectively. No. 1 shaft, the larger of the two, will be the main winding shaft. It will be fitted with rigid steel guides in four winding compartments. An " A " type headgear will be installed, and during the initial working stages of the Colliery two compartments will be equipped, each with a four-deck cage carrying one $2\frac{1}{2}$-ton capacity mine car on each deck.

At a subsequent date, either to meet an increased output demand, or if desired to work two horizons simultaneously, a further pair of cages with operating equipment will be installed. The electric winder will be parallel drum type, with balance rope, and will have a winding capacity of 350 tons output per hour, or 4500 tons gross output per day on two winding shifts.

The No. 2 shaft, which will be the upcast and is intended primarily for the winding of men and materials, will be fitted with two three-deck cages. The winder for No. 2 shaft will be similar to the No. 1 shaft winder and will be capable of dealing with an additional output of 180 tons per hour if required.

Locomotives will be used in the haulage roads, and an underground engineering shop and locomotive station constructed in the vicinity of the pit bottom. The most up-to-date method of mechanised mining will be applied for coal production, and the types of plant used those best suited to the mining conditions prevailing.

The Car Circulation Hall has been laid out for straight line operation with gravity flow and power operated shunt backs. The operation of loading and changing decks will be fully mechanised and interlocked with tipplers, creepers, and rams. The N.C.B. $2\frac{1}{2}$-ton standard Mine Car will be used. Control of the cars and decking on to the cages, both on the surface and underground, will be fully mechanised.

Ventilation will be provided by means of exhaust fans of the axial-flow type, situated close to No. 2 shaft, which will be equipped with airlocks and cage seals.

Surface Features

The surface buildings for the Administration, Pithead Baths, Canteen, Lamproom, First Aid, etc., have been designed so that the miners will be under cover from the time they enter the Baths until they go on to the cage at the shaft.

The Preparation Plant will have a capacity of 450 tons per hour and will be designed to clean and prepare the entire output mechanically with provision to crush and retreat any middlings product.



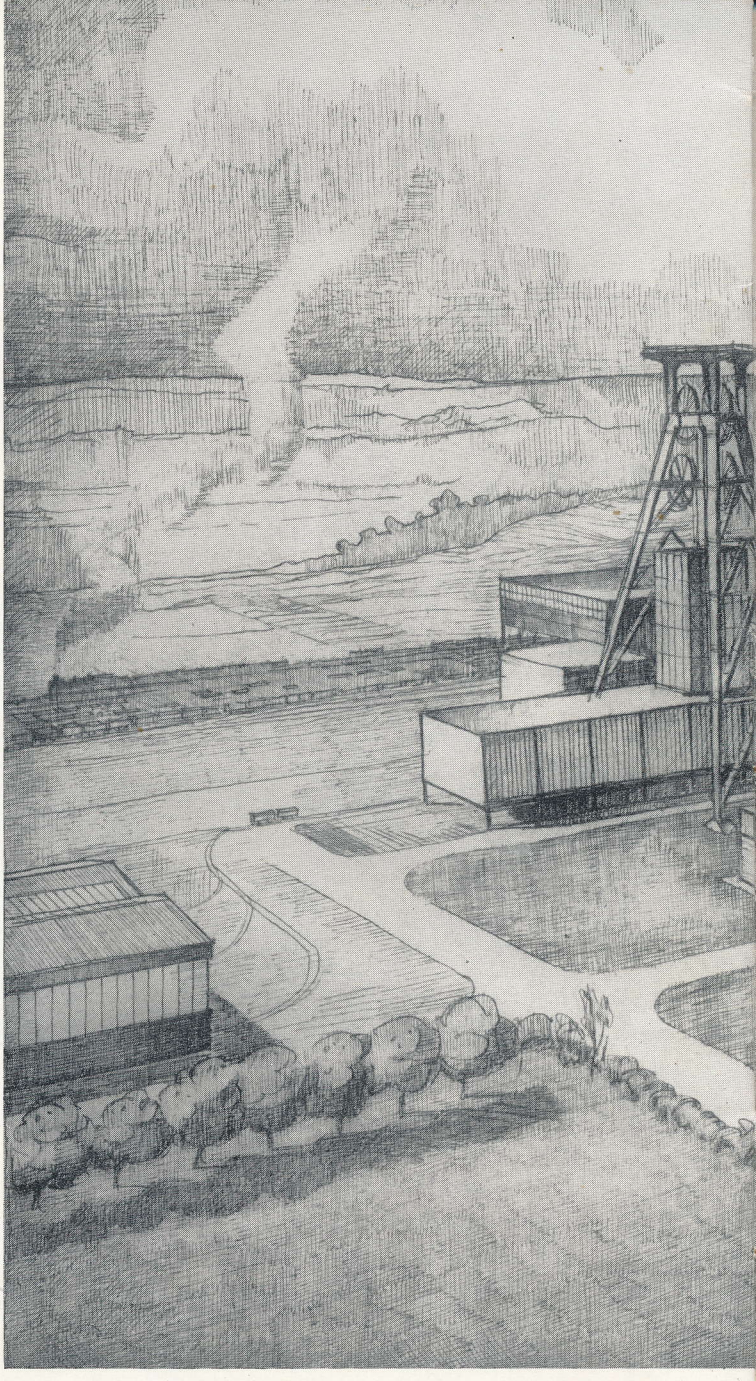
The Harbour of Ayr

The power for the colliery will be obtained from the grid of the South-West Scotland Electricity Board.

A new branch railway line to serve the colliery is to be constructed from the main line at Drongan Station. It will be approximately three miles in length with an average inclination of 1 in 85 in favour of the load. The British Railways Engineering Department will be responsible for the construction of this railway.

The housing of the miners and their families has received the careful attention of Ayr County Council. Some 300 houses have been built at the Lane Farm site, Drongan, while another 110 are nearing completion by the Scottish Special Housing Association, with a further eighty at the planning stage—a total of 490. Adequate shopping, education arrangements, and social facilities will be made to meet the needs of the men employed.

Artist's Impression of New Colliery



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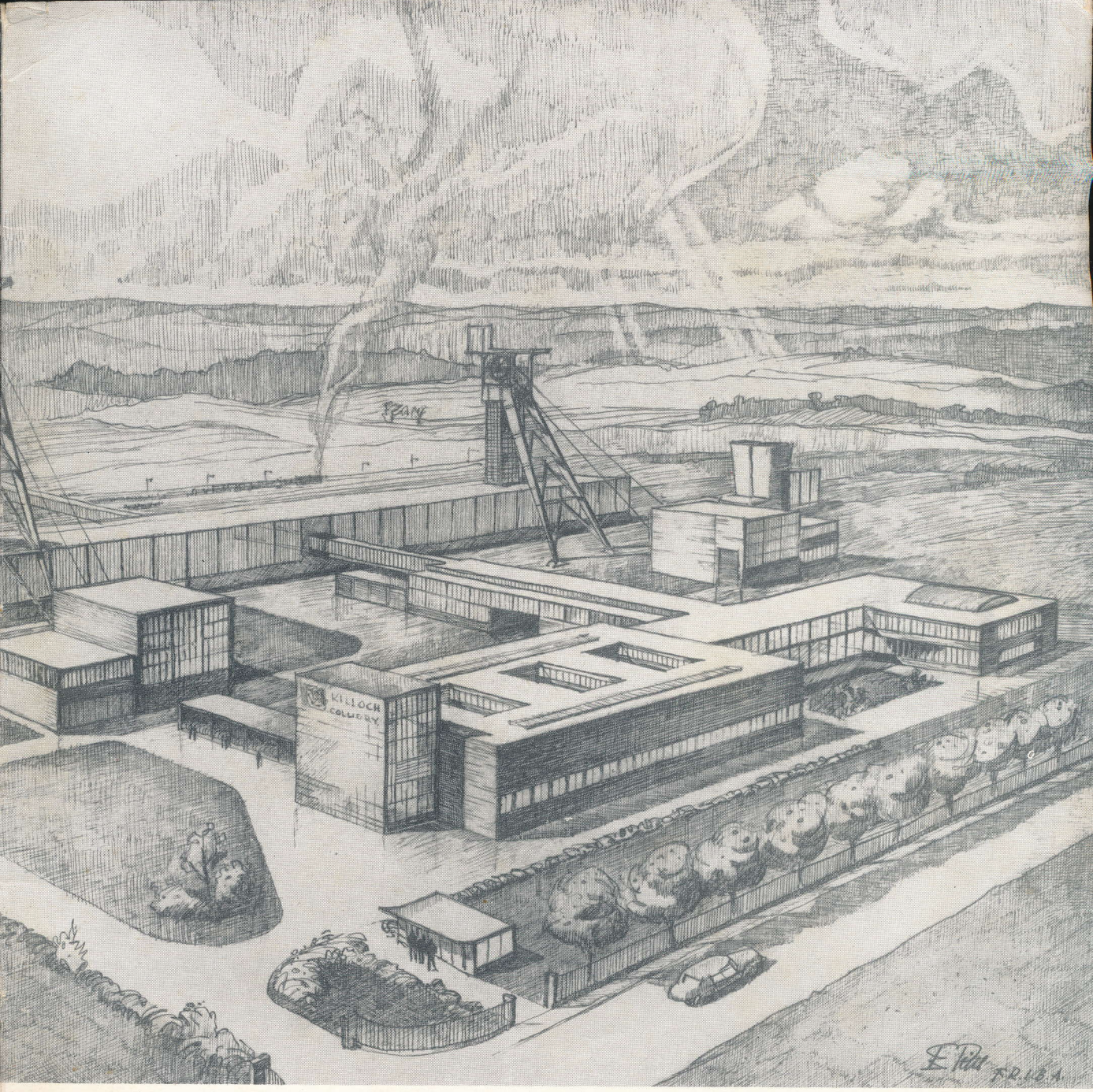

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