

FROM HARDY.

5/4/47

s/56

Exhibition. "FIFE, THE FUTURE WORKSHOP OF SCOTLAND".

As I think I have mentioned before a great transition is beginning in Scotland. With the "working out" of many of the Lanarkshire collieries and the development of a new coalfield in Fifeshire a new industrial area is about to arise. This is already planned so that its development will be balanced to avoid many of the evils found in Lanarkshire. Around the mines, new towns are to be built and a balanced industry created so that the community will no longer depend on any one source of employment.

On Thursday April 10th at 11.30 a.m. an exhibition called "FIFE, THE FUTURE WORKSHOP OF SCOTLAND" will be opened at Cupar by Sir Steven Bilsland, Chairman of the Scottish Council (Development and Industry).

The exhibition ~~will contain~~ aims to give a comprehensive cross-section of the existing industries of Fifeshire, samples of manufactured products and evidence of the suitability of Fife for extensions of industrial undertakings. Features of the exhibition will be models of ships and boats and a plan and model of the proposed industrial estate at Leven.

NOTE. This might build up into a better story than just the exhibition and I attach a rough outline. Also whilst in this area it should be possible to get some material of the erection of hydroelectric plants either for the library or for my story on hydro-electrification - if we are to do this.

J.C.S.

Maybe be useful to you
for commentary.

F.J.P.

FIFE, THE FUTURE WORKSHOP OF SCOTLAND.

General outline.

Around the coalfields of Lanarkshire, grew the industrial area of west Scotland. It was an ugly area, full of the evils of haphazard development. Whole villages depended entirely upon the local pit. And now the seams are working out and only the influx of newer industry, not dependant on coal, can bring prosperity back.

On the other side of Scotland, in Fifeshire, lie rich seams so far virtually untouched. Here is rising the foundation of a new industrial area. New pits are being sunk, hydro-electric schemes developed and the whole area planned for continuous prosperity in the future. On Thursday-April 10th-an exhibition was opened at Cupar in Fifeshire showing not only the present products of Fife, but what the future holds for Fife as the "future workshop of Scotland".

Commentary basis.

Lanarkshire - the industrial area of West Scotland -grew around the coalfields of the area. It became an ugly area, full of the evils of unplanned industrial development.

The seams are coming to an end and the ~~whole~~ era is symbolised by whole villages, formerly dependant on the local pit, and now awaiting industry which does not need coal, to revitalise them.

As the Lanarkshire coalfields become closer to their end, new fields, so far barely touched, are being exploited in Fifeshire.

Amidst the rolling countryside of Fifeshire, new pits are sunk, pithead gear rises in the green fields.

The hydro-electric potential of the nearby highlands is being exploited.

(this sequence, though short, could be omitted to keep down footage).

~~At Cupar in Fifeshire an exhibition~~

Picture content.

Few g.v.s, the first broad industrial scenes, then bringing mines to the foreground. Slums, other shots typical of the squalor of the district.

Mining villages, derelict mines street shots chosen to look desolate or with men "loafing around" (if space permits include one or two shots of new factories)

Map showing Lanark coalfield relative to that of Fife. If optically possible fade out the marked area of Lanark and fade in that of Fife. (or similar effect.)

Scenes of shaft sinking and several shots of new pits.

Building of dams and power stations.

(2).

Commentary basis con...

Picture content con.....

This development is to be very carefully planned and regulated to prevent the horrors of the old type industrial area. At Cupar, this week, an exhibition was opened, showing not only the present products of Fife, but what the future holds for Fife as the "FUTURE WORKSHOP OF SCOTLAND".

Proceed to scenes of the exhibition, a brief resume of present industries, but mainly concentrate on the future.

(the outline of this closing sequence is, of necessity, rather sketchy, but the above is the theme on which I would shoot. Would propose to ignore the actual opening, using the exhibition to round off the general theme of the story.)

for W.J. Hardy

Douglas H.J. Hardy.

PLEASE NOTE - VERY URGENT. (in view of preliminary contact)

FIFE, THE FUTURE WORKSHOP OF SCOTLAND.General theme of story.

Lanark, with its coalfields, brought heavy industry to W.Scotland. Now the mines are slowly working out and, unless light industry is introduced, the villages face bad times.

In Fife, however, lie vast untouched coal seams. New pits are being sunk, hydro electric stations in the nearby highlands built and housing estates—firstly temporary and then permanent prefabs—are the fore-runners of large new towns. Carefully planned ~~and balanced~~ light industries will balance the heavy ones in the new "workshop of Scotland".

SEQUENCE DETAIL.

SEQUENCE ONE.

The coalfields of East Lanark, brought heavy industry to the west of Scotland. It was an ill balanced industry, for the prosperity of whole villages depended upon the local mine or works. Now that the coal is being worked out ruin faces many villages, they will have to be saved either by the introduction of new light industry, not dependant upon coal, or by the wholesale removal of the population to new areas.

Here I suggest a map showing Lanarkshire and Fife, a dark area showing the coal of Lanark fades out and a similar marking fades in on Fife. Or some similar optical such as a map of Lanark with the coal area marked, mixing into one of Fife.

This would cover the commentary on the theme, Lanark is dying whilst Fife has yet to be fully exploited.

SEQUENCE TWO.

In Fife lie vast untouched deposits of coal, new pits are rising. At Comrie, already in full production, is the finest pit in the country. Set in the midst of fields, the pit buildings are grouped around spacious lawns. It is a completely mechanised pit, so much so that although coal was being lifted continuously, the pithead presented an almost deserted scene.

SEQUENCE THREE.

In the nearby highlands hydro electric schemes are being pushed forward at top speed. Near Pitlochry, for instance, giant excavators dig the foundations of the Clunie power station on the banks of the river Tummel. Higher upstream a dam is being flung across the river to feed the station by raising the level of Loch Tummel.

(notes. At Pitlochry the water will leave the Clunie station and immediately flow into another dam, so that the same water will drive two power stations within a few miles.

There are 8 or 9 power schemes in one stage or another of construction. The full scheme aims at 102 hydro-electric

(2)

stations in the next twenty years. Unless, the demands of Scottish industry are much greater than anticipated, electric power will be "exported" to England.)

SEQUENCE FOUR.

Several entirely new towns are planned for Fifeshire, meanwhile housing schemes are being pushed forward as fast as possible. Prefab estates are rising fast, firstly temporary houses and then permanent prefabs go up.

SEQUENCE FIVE.

To balance the heavy industry, light industries are to be developed. Only one worker in eight for instance, will be employed in mining. Thus the evils of the unbalanced development found in Lanarkshire will not occur in Fife. Estates of light industries will be built on parklike lines. Many of the light industries already exist in Fife and will be developed, whisky, linen, silk, clothing etc will all expand. So amidst the rolling countryside of Fife will arise "the future workshop of Scotland".

WAGON ASSEMBLY.

Box 16321

The Woolwich Arsenal has assembled and dispatched 2,076 16-ton all-steel wagons since August last year to 4th April 1947 to replenish Britain's rolling stock.

Present rate of assembly is 80 wagons per week.

The workmen, generally, feel that they are doing as good a job now as they did during the war - i.e. providing railway stock which is badly needed to help to transport coal from pits to consumers.

General picture is that the parts of the wagons - which are bought from the trade - are assembled in one corner of a 150 ft. long shed.

The under frame is placed upside down on the assembly line, and travels slowly along for 100 ft., having the following parts rivetted and welded on en-route.

- 1 Axle Guard
- 2 Vee Hangers
- 3 Bottom Doors
- 4 Brake Gears
- 5 Springs
- 6 Wheels and Axle.

There are normally nine underframes on the line at one time. As each reaches the end, a turning gear lifts the fully equipped underframe, turns it the right way up and places it on railway lines; a process taking about 10 minutes.

The underframes are then shunted outside the shed and back into the opposite side, where 18 ft. by 5 ft. and 8 ft. by 5 ft. sides are clamped and welded on to the underframe.

The complete wagons are then shunted into an adjoining shed for painting.

The assembly shed provides a scene of great activity, vividly lighted by the glare and sparks from the welders, and with a constant clatter of sledge hammers and rivetting machines and travelling overhead cranes.

Personalities on the work include the following :-

BEN BROWN, a 65 year old rivetter, who is a typical, sturdy British workman type. He has worked at the Arsenal for 45 years, rivetted gun mountings through three wars, and during the last war worked mainly on 6" and 9.2" gun mountings.

On an average he now places 480 large rivets a day.

He is due to retire in February next.

JAMES (JOCK) WILLOX, 25-year old ex Gordon Highlander, who lost his ^{Right} ~~left~~ hand and about 4" of his forearm at Normandy. He wears a steel hook in place of his hand. On demobilisation he took a Government Training Course to be trained as a welder, and began work at the Arsenal about 12 months ago.

Cheerful, hard working youngster, and finds his loss no detriment in his work.

LEN CURTIS, 27-year old ex Arnhem man, also a welder, works alongside Willox. Still rather proudly wears his plum-coloured "Airborne" beret when not wearing welding mask.

Suggested shots:-

- (1) Eighty to one-hundred wagons in sidings awaiting despatch.
- (2) Long shot of first assembly line (a) from travelling overhead crane; and (b) low shot from ground level.
- (3) Close up of Ben Brown at work.
- (4) Shot of turning gear in operation.
- (5) Close up of Willox and Curtis at work.

Ministry of Supply,
Information Directorate.
Gerrard 6933, Ext. 810.

OILFIELD EQUIPMENT.

Probably the main angle to this story is that the production of oilfield equipment at the Woolwich Arsenal is helping Britain to save dollars.

The work started twelve months ago in the gun barrel boring sheds of the Arsenal, the machines of which required modifications before being suitable for their new role. They can, however, quickly be adjusted for "war potentialities".

The equipment is made for, and under the supervision of, the British Oilfield Equipment Co. Ltd., (BOFEC).

The necessity for oil is obvious, and to maintain supplies of oil from territories outside the United Kingdom, those territories must be supplied with good, trustworthy equipment to produce the oil.

Until the Minister of Supply and Sir Charles McLaren, D.G.O.F., agreed to the production of equipment at Woolwich Arsenal, it was estimated that the equipment required might take four years to produce because of the limited capacity for this class of work in the country and the equipment now being made at the Arsenal would otherwise only have been obtainable in the United States on long term delivery dates. The Arsenal's effort, therefore, has considerably reduced delivery dates and the work is regarded as a fine example of industrial endeavour.

To date, some 6,000 ft. of equipment, capable of boring three miles into the earth, has been produced by means of an improved process which enables 25 ft. of high grade gun steel shafting to be precision bored in one hour - a method which is at least five times faster than has been achieved before for a bore of the size required - $4\frac{1}{4}$ ".

The work is, of course, of a high precision nature and requires considerable skill. Inaccuracy of a fraction of a thousandth of an inch would ruin the equipment.

The equipment is sold mainly in South America, and to Middle East territories - Iran, Iraq, etc.

The sequence of operations is as follows:-

- (1) Forging the billet on 1,200 ton Presses - the billet is a $2\frac{1}{2}$ ton ingot of steel which becomes a 40 ft. long drill collar.
- (2) Rough, high speed turning for boring.
- (3) Boring on long, specially adapted lathes.
- (4) Heat treatment - the collar is hardened at 860° centigrade and tempered at 660° centigrade, and finally dipped into a great oil bath.
- (5) Machinery for blanking out of the pins and boxes and threading.
- (6) Precision inspection and checking.

The personalities in this branch are a crew of thirteen men who work on the initial forging process. A crew of grimy, tough men who man-handle the $2\frac{1}{2}$ ton ingots of white hot steel with easy familiarity. The crew worked together throughout the war on the forging of large calibre gun barrels.

Suggested shots-

- (1) Close up of drop forging process with the crew man-handling the steel.
- (2) Long shot of same from above.
- (3) Overhead shot of long lathes during the precision boring process.
- (4) The dipping of the tempered collar into the oil bath. This produces clouds of smoke from the bath followed by a strong glare and fierce flames as the collar is slowly hoisted out with some 20 feet blazing and burning oil dropping from it.
- (5) Final inspection.

Ministry of Supply, Information Directorate.
Gerrard 6933, Extn.810.
11th April, 1947.

*W. Stockwell*CoalFILM DEPARTMENTNEW MINE

Coal - the most important fuel in use to-day. Great Britain has the richest coal seams in the world, and this basic wealth played a major part in industrial expansion. More and more seams were opened up below the countryside. And around the mines Britain's industries and towns converged.

After two hundred years of enterprise, Britain had world markets for her coal.

At home in the industrial areas, there were three thousand coal mines spread across the countryside.

These mines employed one and a quarter million men. In Britain there were coal mines, giant industries and busy towns, but all had been created with little thought for the country as a whole, for its social amenities.

But that's an old story. And now here's a new one.

It became clear that if Britain wanted her coal resources to last, she had to plan for the future. And now here in Scotland is the pithead of the new world, right in the heart of the countryside. The coal seams under the surface of the ground were proved by boring and when their extent was known, mining engineers were sent to America and the Continent to study all that was new in mining practice.

The surface buildings of the pithead are built on modern symmetrical lines in the form of a square. One shaft is used for transporting men, and the other for coal. Safety, efficiency and economy are the three considerations of the plant. And there is no longer any reason for a new coal mine to be a blot on the landscape.

The fountain serves a dual purpose, for it cools the water used by the winding machinery. But the plant is not restricted to buildings and machinery. The miners take an all-round course in mining engineering, and supplement their practical training by attendance at the mining school near the colliery. They study geology, mechanics, physics, mathematics and science. These students are being examined for a Certificate in Mining Engineering.

Besides this training, the miners are instructed at the colliery in the use of safety appliances. This class of firemen is having a lecture on safety matters.

The instructor is demonstrating the diffusion of gases. The men are drawn from the surrounding villages, and the old practice of building homes near the pithead is abolished. Buses take the miners to their work.

As soon as a new shift comes on the miners go to the canteen, and collect the food they will take with them underground. This usually consists of jam and cheese sandwiches carried in a dustproof tin box. These young miners do the lighter jobs near the pit bottom and elsewhere.

The miners also take flasks of hot tea with them.

They go from the canteen into the pit baths and change into working clothes. A separate locker is provided for each man's clean clothes.

His working clothes are kept in another locker at the other end of the baths, which has a current of hot air running through it. The miner wears special protective clothing for his job steelcapped boots.

And a safety hat for head protection and to which he fixes his lamp. The miners are supplied with numbered checks which they take with them to the pit bottom and return when they finish work. Great emphasis is laid on each miner's personal safety. A cap lamp, worked from a light portable battery is worn by each miner. This lamp leaves both hands free to work and gives a constant light.

In this mine one shaft is used for winding coal and one for men. The men use the downcast shaft. Each shaft is operated from its own winding engine house. Here again, the latest electrical braking and speed controlling devices have been installed to ensure the safety of the men. The cage holds 20 men at a time.

The signal is given to the engine house and the descent of the cage is controlled by the engine-man who keeps a constant watch on the indicators recording the position of the cage in the shaft.

In two minutes you are twelve hundred feet below the fertile Scottish countryside. As the day-shift arrives, they meet the men who have just finished work on the nightshift waiting to return to the pithead.

The days of haphazard roof supports and blinding darkness are gone. Here are tube-like tunnels supported by steel girders, lined with concrete slabs and lit by electricity. Every effort is made to maintain the same degree of tidiness underground that we saw on the surface.

At the shaft bottom the foreman allocates each man to his working place. All the roads leading from the shaft bottom are ventilated by a clean current of fresh air from the downcast shaft. This air is circulated throughout the mine, and is controlled from the fan-house on the surface. The fan drives the air down this tube into the mine. The used air escapes up the upcast shaft. Meanwhile the miners who came on shift are nearing the work face. As the extent of the coal seams are known in advance, the main roads were formed and the coal is now being worked from them.

At the coal face, strict attention is constantly paid to roof support. These men are securing the roof at the end of the shift. Machines are used where possible underground and this electrically driven coal-cutter drives a cutting arm under the coal, making a cut along the face at the floor of the seam. The cutter pulls itself along by means of a strong wire rope. This type of machine is used in seams being worked by the "longwall" method.

In the shortwall method of working a similar machine can be used to cut the coal either vertically or horizontally.

The arm of the cutter goes into the coal in the same way.

When it reaches the face it cuts across.

While this operation is going on the driller starts drilling holes which will later be filled with explosives.

When the whole face is cut the machine is withdrawn.

The small coal in the cut is then removed with a longhandled shovel.

Sufficient holes are drilled in the cut coal and when the last one is completed, preparation is made for shotfiring.

A safety lamp is used to test for an explosive gas called firedamp. If present, a blue flame would appear inside the lamp.

The miner extinguishes his cap-lamp while he is making this test. The holes are then charged with explosive and sealed with clay.

Stone dust is scattered along the face to prevent a possible coal dust explosion.

When the men are well clear of the face the shot is fired and goes another face of coal.

This giant shovel called a duckbill loader digs under the broken down coal. From the shovel the coal is conveyed along a steel shaking conveyor.

This conveyor has a reciprocating action driven by an electric motor and carries the coal to an endless belt conveyor.

The shovel is on a swivel to enable it to pick up all the broken coal on this shortwall face.

On a longwall face, coal is loaded by hand on to a conveyor. The steel conveyors pass the coal to a belt.

The belt conveyors pass the coal on to a main belt conveyor.

This main belt carries the coal to the loading station where it is filled into $3\frac{1}{2}$ ton steel cars. The cars are moved forward by machinery controlled by a lever, one man doing the whole operation.

When twelve cars are filled, a diesel locomotive of 50 H.P. takes them to the tipping plant in the pitbottom.

This way of moving cars is highly efficient, a locomotive being able to handle much more tonnage on the level than any other form of haulage - in this case the locomotive is pulling 42 tons of coal.

The cars are run into the tippler and are weighed automatically before being emptied.

The couplings on the cars are of a swivel type and any number of cars can pass through the tippler without being uncoupled. The tippler capacity is 140 cars an hour, and the operation, car moving and emptying is controlled by one operator.

The coal is tipped into a skip which holds $10\frac{1}{2}$ tons of coal and is wound up the upcast shaft, which is on the south side of the square near the railway sidings.

The skip discharges automatically on reaching the surface.

The coal flows from the skip into an apron feeder and thence by a large belt conveyor to a screening device which grades it into three sizes.

The small pieces of coal fall below and the larger ones pass over to a picking belt where the sorters pick out any stone. The picking belt is 85 feet long and when all these men have done their task, only the best coal remains. Finally, the larger pieces are re-screened and pass on a loading boom into a wagon.

The loading boom can be raised or lowered into the wagon to prevent breakage of the coal.

While the larger coal is being sorted in this way the small sizes are conveyed to the washing plant in a separate part of the building. The coal floats on the surface of the water and passes out of the tank. The stone sinks to the bottom and is discarded. The coal receives a final polish by water aprays before being sized and loaded separately into wagons.

The discard from the tank is dumped by an aerial ropeway over a stretch of marshy land some distance from the colliery.

Back at the screening plant lie wagons of coal sized and graded with care and precision. The rate of production is over 1,000 tons per day, but it is planned to raise and load 400 tons an hour just as easily, and all this is accomplished without spoiling the outline of the countryside.

While this coal goes down the line to play its part in production the dayshift have arrived back at the shaft bottom.

The cage delivers them safely to the pithead. These men have finished their seven-and-half hour shift, but before going home they have a shower at the pithead baths. Inside the baths electrically driven brushes take the coal dust off their boots.

The miner's welfare is given great consideration and emphasis is laid on health and cleanliness. Further, owing to the excellent working conditions and training, the accident rate is low. The miners here do not suffer from fatigue as in the past, and unrestricted, they enjoy their freedom at the end of a working day.

And now that we have proof that there is no longer any necessity to associate the Mining Industry with ugly mining towns and chimneys belching black smoke, we can plan future ventures on the lines of this modern coal mine. This successful experiment opens up great possibilities for future mining, and miners of Great Britain. Modern coalmining, built and run on the lines you have seen here will stand the test of time and guarantee a steady supply of coal for home use and for export to many countries overseas.

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Reply to:
 Film House,
 142-150, Wardour Street,
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YOUR REF

OUR REF

~~rah/ma~~

7th May, 1947.

Dear Jim,

With reference to the Coal Board story scheduled for release on Monday, 12th May, if you desire any further information regarding it would you please communicate with Mr. P. Wright, Industrial Publicity, N.C.B., 7, Millbank, S.W.1, Abbey 7000.

Yours sincerely,

R. S. Howard

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