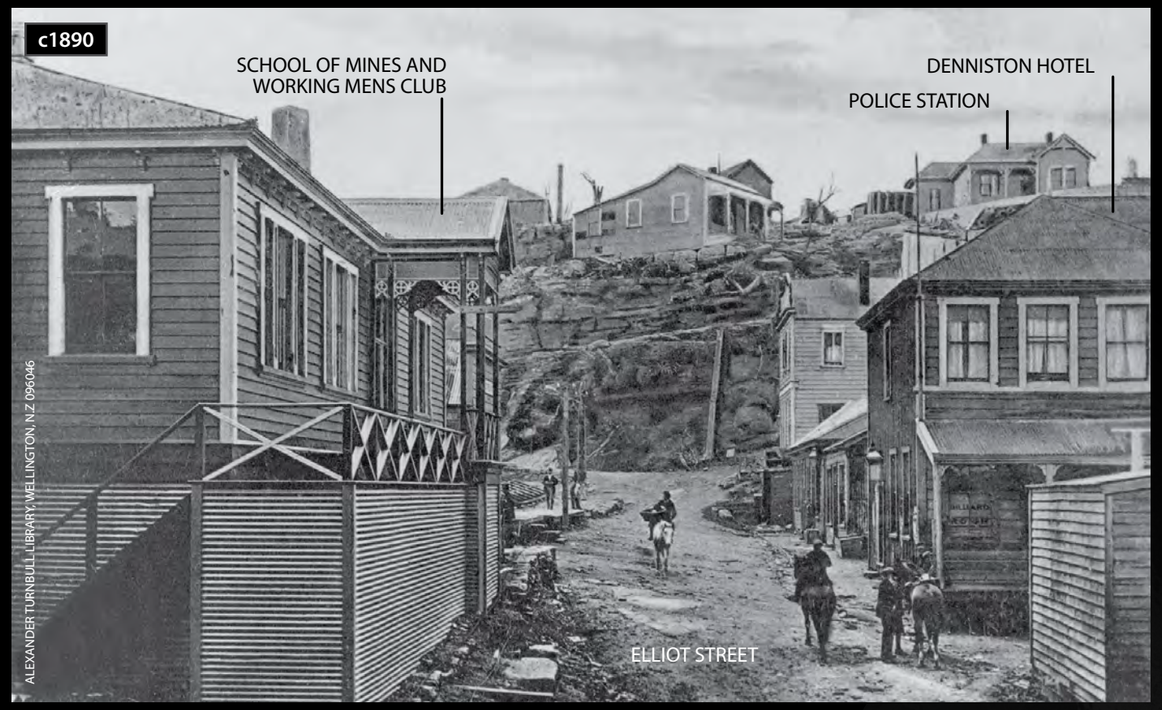
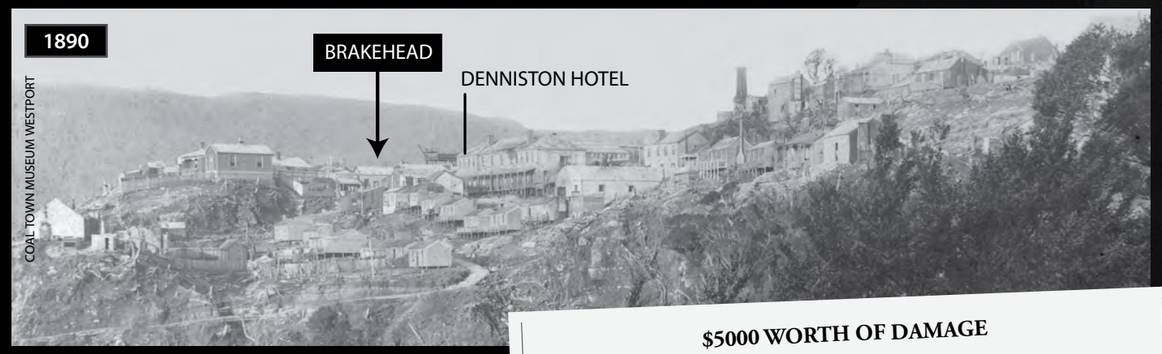
THE DENNISTON BRAKEHEAD





BRAKEHEAD 1890

In 1890 the Brakehead was the centre of Denniston Town. The town extended up the hill and onto the Plateau. For 25 years Brakehead workers rubbed shoulders with the butcher, baker, school teacher and librarian. Within an arm's reach was their favourite tipple at a local bar, the downside to this being that the whole town would know where to find them when they were summoned home.

In October 1909 a fire swept through the town. It started in the Denniston Hotel and almost destroyed the Brakehead buildings. Aware of the mine closure and lay-offs that would have eventuated if the bins had erupted, fire-fighting townsfolk worked 'like trojans' to save them. The newspaper reporter (right) got slightly carried away – The Club, although charred, survived to be relocated to Jamieson Street in 1923 when many buildings were demolished to make way for new bins.

$5000 WORTH OF DAMAGE

WESTPORT, September 29.

A big fire at Denniston early this morning totally destroyed the Denniston Hotel (a large building), four shops, two dwellings, the club and library (large and well fitted). Practically all the contents of a couple of other buildings were also damaged.

A brick building fell on the co-operative store, smashing a wall and doing great damage to the stock.

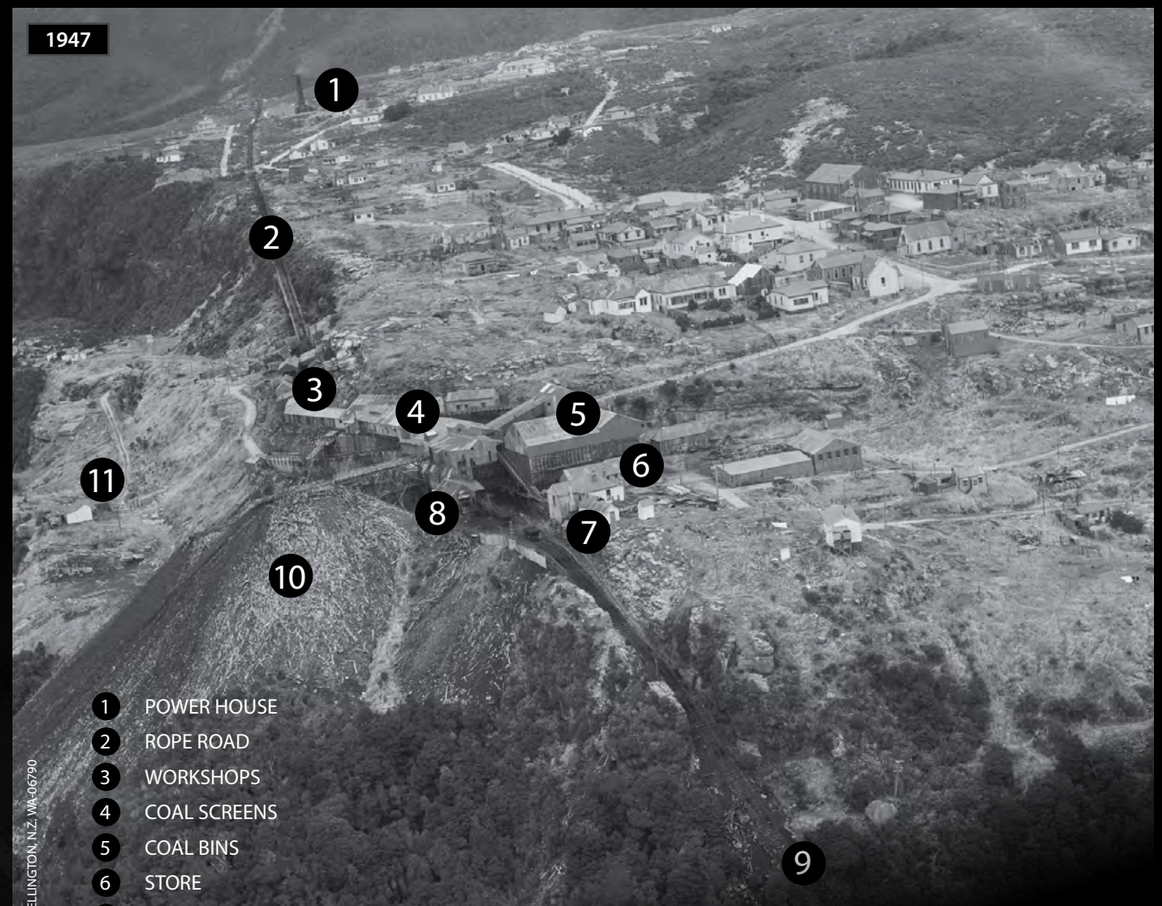
The Westport Coal Co.'s bins and the brake head work were saved with difficulty.

The fire originated in the hotel. The losses are severe, the Atlas, State, Phoenix, South British, National and Alliance insurance offices being affected.

The Denniston people worked like Trojans to prevent C. Smith's building taking fire, as had it done so the Westport Coal Co.'s bins, containing about 3000 tons of coal, would have gone also, and the output of the mine would probably have been suspended for months.

The club had to be sacrificed to save the bins.

HAWERA & NORMANBY STAR 30/09/1909



BRAKEHEAD 1947

The large photograph above shows the Denniston Brakehead covered with the activities of coal handling and transport. Once a cluster of town buildings nestling right up beside the coal bins and haulage facilities, the Brakehead became increasingly industry-dominant as coal mining output expanded. By 1947 when this photograph was taken, roads and transport services enabled workers to live on other parts of the Plateau and even down by the sea at Waimangaroa. The Camp, once a huddle of homes and public buildings, was by this date mostly clear of houses but not yet covered in regenerating forest as it is today.

If you were to take a wander around the Brakehead Walk (see page 74), try to imagine the scale of the complex mass of interlocking buildings that once stood on this site – enormous, timbered storage bins; an elevated tramway for tipping stone, slack coal and rubbish over the cliff; rope road haulage engine shed beside the brick chimney of the old boiler house; the rope road stretching around the escarpment onto the Plateau; the rest cluttered with corrugated iron sheds housing tub clipping, weighbridge tally and smoko tables, plus various engineering workshops needed to keep wheels and coal in motion.

The distant smoking chimney in the photograph is part of the power house built in 1921 to supply the town and mines with electricity.

1947

ROPE ROAD

WORKSHOPS

WEIGH BRIDGE

HAULER ENGINE

ROAD TO CAMP

ROPE ROAD
BACK BALANCE

EMPTY TUB RETURN

OLD BINS

CREEPER

NEW BINS

DONKEY WINCH

CREEPER

SLACK & RUBBISH HEAP

CRANE

BRAKE HOUSE

BRAKEHEAD

COMPANY OFFICE

BATH HOUSE

CARPENTERS SHOP

SURVEYORS HOUSE

DIRECTORS QUARTERS

DENNISTON MINE MANAGERS HOUSE

COALBROOKDALE MINE MANAGERS HOUSE

IRONBRIDGE MINE MANAGERS HOUSE

MECHANICS WORKSHOP

POST OFFICE

1951

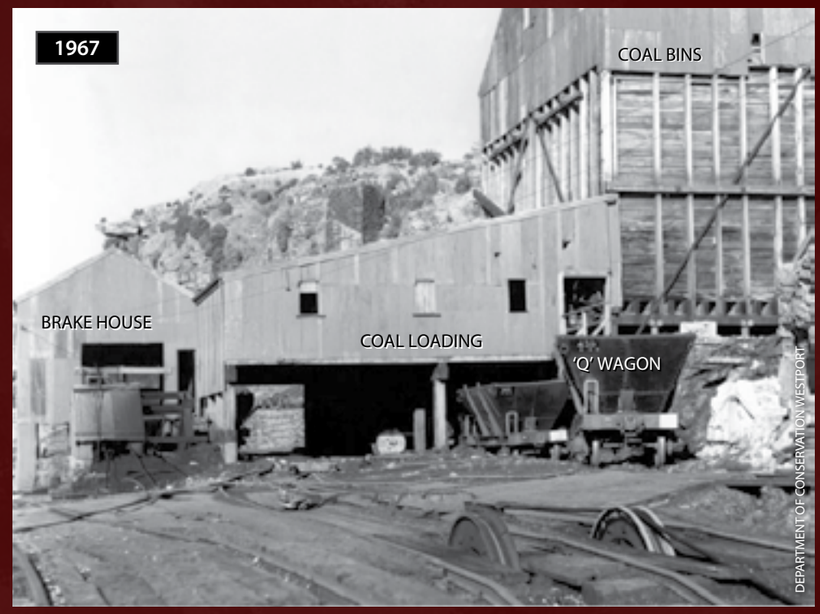
FRIENDS OF THE HILL MUSEUM R HALE COLLECTION

SCREENS AND STORAGE BINS

COAL ARRIVAL AND DEPARTURE

Coal arrived along the rope road at the upper level of the Brakehead where tubs were unclipped, weighed and emptied into the bins. Coal was fed into railway wagons located on the lower level of the Brakehead – in this case early 'O' wagons.

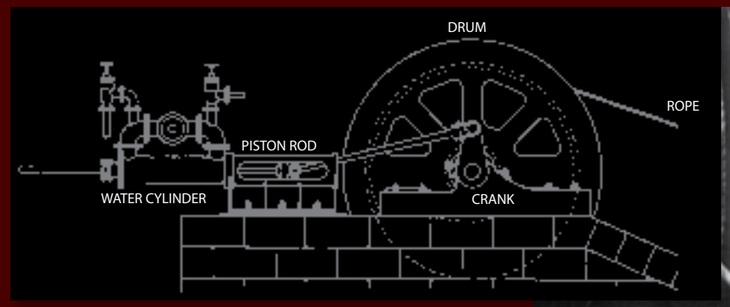
The creeper was used to convey goods and equipment that had travelled up the Incline to the rope road for transport to the mine.



COAL HANDLING

Details and mechanisation changed over the years but basically coal was passed through rocking screens that sorted it into sizes. Broad-sheet conveyors took the coal to storage bins. Slack (small coal) was dumped over the side of the hill for many decades until it became of value. Miners whose days underground were over would hand pick stones from the coal as it moved along the 'old man's belt'. Coal wagons ran beside, or later directly under, storage bin chutes where they were filled before moving down the Incline. After the Incline closed, road transport carried the coal down the hill to Waimangaroa and the bins continued in use. The bins were destroyed by fire that burned for over two weeks in 1979.

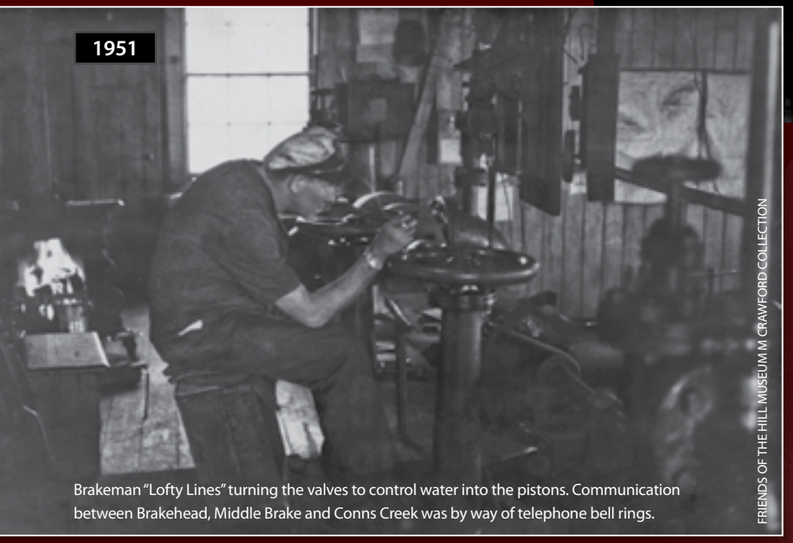
TOP INCLINE BRAKE



THE FIRST BRAKING SYSTEM

For the first few years of Incline operations, the 3.2 metre diameter drum had a "strap friction" brake which consisted of a single brake band on the drum. The cable band broke frequently, causing delays and reducing output – not to mention the danger – as the brakesman and others in the vicinity had to flee for their lives.

Hydraulic braking was installed about the same time as the mining of the thicker seams of the Coalbrookdale mines increased output.



Brakeman "Lofty Lines" turning the valves to control water into the pistons. Communication between Brakehead, Middle Brake and Conns Creek was by way of telephone bell rings.

HOW THE SPEED WAS CONTROLLED

The brakeman controlled the speed of the wagons by regulating water flow to the brake cylinders. The brake unit resembled a direct acting horizontal winding engine, but instead of steam driving the pistons, water was run into the cylinders to slow the pistons down. That made the drums turn more slowly, checking the speed of the descending wagon.

The position of brakeman rarely changed hands; two men worked shifts. John McDonald held it for 25 years and his son Bill, working with Joe Morgan, stayed in it for 40 years. The same family was involved in the responsible job of controlling the winding drum for much of the life of the Incline.

HOW THE DRUM WORKED

A pair of 3.2 metre diameter drums were fixed side by side on a horizontal shaft. As it turned, a 20mm diameter steel cable or 'rope' wound onto one drum while another rope wound off the other. The weight of a loaded wagon descending the Incline and unwinding the rope from one drum, provided more than enough power to haul up an empty wagon attached to the rope that was being wound onto the other drum.

Next time, the side that had pulled up an empty wagon lowered a full wagon, while the empty was hauled up on the other side. It was known as a 'self-acting incline'. However, the weight of the 11 ton loaded wagons going down had to be controlled to stop them speeding out of control.

UNION DISPUTES

The Incline continued to operate during the 1951 waterfront and coalminers dispute but judging by the 'heads down' in this photograph, possibly not as efficiently as usual. Strikes, particularly prolonged ones, prompted dramatic actions such as the one reported in 1913 (right).

EXPLOSION AT DENNISTON

WESTPORT, 10th November 1913.

At about 11 o'clock to-night, a big explosion occurred at Denniston as a result of an attempt to blow up the shed with the drum and winding engine that controls the lowering of the coal trucks down the Denniston incline. The attempt was partly successful; and though the damage was not as bad as it might have been, still the engine is rendered unfit for immediate service. The floor of the shed was sent flying in splinters in all directions.

The dastardly action is believed to be the work not of anyone connected with the Strike Committee, but of some irresponsible sympathisors with the strikers.

BACKSHUNT AND DONKEY WINCH

VIEW FROM THE BACK 1880

Coal was loaded down chutes into waiting railway wagons. Early O wagons – 4 wheel iron box hopper wagons – are in use in the above photograph. Slack dumped over the side of the hill conveniently built up flat land to the right of the brakehouse, making space for an additional line to marshal the wagons with the donkey winch to the elevated backshunt before filling.

Near here sat the donkey winch, used to haul wagons to the elevated backshunt area from where they were gravity-run (using the wagon brake) under the loading conveyors, then on to the brow of the Incline to await descent. The winch that sits near here today is from the Whareatea Mine.

VIEW FROM THE BACK 1966

The view in the image to the left is from a similar position to the 1880 photograph but taken much later. The donkey winch cable (left foreground) has winched empty Q wagons into a waiting position near the loading conveyors (sited in the corrugated iron clad structure between the brake house and the bins). The utilisation of gravity was cunningly engineered into Brakehead operations, as demonstrated with the use of the elevated backshunt area.