

also marked the peak of production at Hartley Vale when the output of shale from the various mines in the valley amounted to 29,419 tons, and 144 men were on the payroll, of whom 121 worked underground.

At this period a compact housing settlement had grown around the mining and refining industry located at Hartley Vale. The houses, shops, post-office, and several hotels were, for the most part, ranged against the verge of the public road leading from Hartley Vale Railway Station via Hartley Pass, to the village of Little Hartley at the base of the precipitous Mount York. What may be regarded as the business centre of Hartley Vale was situated to the west of Reedy Creek, whilst the manager's single-storied residence occupied a knoll overlooking the refinery area. There were several small cottages on the hillside east of Reedy Creek which may have been in the ownership of the company. The place generally was down to earth and somewhat squalid, although encircled by a picturesque tangle of tree-clad mountains and hills, no attempt was made at any form of civic beautification or to provide amenities.

During 1893 there was mention that the Main and Tail-rope system of underground skip haulage at the company's No 1 mine was replaced by the more preferable Endless Rope system, the winding engine being installed near the tunnel mouth. Arrangements were also made, in the interests of safety, to convey the miners and other below surface employees to the workings via the air shaft located at Holley's Flat. Modifications to the drainage of the Retort Mine resulted in a down-graded tunnel being driven in from the Hartley Pass side of the mountain through which the water ran out by gravitation, thus obviating the need for pumps and their almost continuous maintenance. To keep the company in business it was apparent to the directors that a new source of shale supply had to be quickly obtained. In August 1896 the company arranged to take over the lease held by Mr. F.W. King of the northern portion of the Genowian Shale Deposits lying beneath the north-eastern escarpment of Airly Mountain, east of Torbane. Obviously to finance this new undertaking the company was reformed in November 1896 as the New South Wales Shale and Oil Company Limited. The development of their interests known as New Hartley at Torbane will be explained in a subsequent chapter.

The small sized "Flat" locomotive was overhauled during August 1900 fitting it for a further period of service trotting backwards and forwards between the bankfoot of the main haulage inclined

it proved, to the great satisfaction of the management, that it was a trough fault when, through some geological disturbance, this section of the valley had sunk almost vertically and its one time surface covered with sand, soil, and clay deposited by the floods of Reedy Creek over aeons of time. A mine shaft, known as the Brickyard Shaft, was sunk seventy-one feet deep where first class shale, in a seam ranging from 2½ to 4½ feet thick, was reached. As the shaft was of an exploratory nature the expense of an overhead pit-head and winding engine was obviated by the erection of a temporary structure, presumably of log timber surmounted by a pulley wheel over which the cage cable was hung. What may be regarded as the free end of the lifting cable was fitted with a coupling link and dropped down to the level of the adjacent refinery railway. When shale or earthy material had to be raised to the surface the small locomotive operating the Valley Flat system was requisitioned and, on placing the link over the hook on the buffer plate of the engine, the latter steamed ahead along the rails for a sufficient distance to bring the mining cage to ground level, the process being repeated in the reverse direction when the cage had to be lowered the seventy feet or so to the bottom of the pit. It was a novel expedient and one that was far from safe but sufficed until such time as the shale seam had been proved both as to quality and extent.

As previously mentioned a short metre-gauge loop siding was laid on the western side of the Refinery line to service the shale loading staith built against the Brickyard Shale Shaft in 1889. Here the shale was transferred from the mine skips into metre-gauge open wagons for locomotive conveyance either to the shale retorts in the Valley, or it of "Export" quality, to the sidings at the bankfoot of the main cable haulage inclined way, from the bankhead of which the wagon was taken to the Hartley Vale railway station transfer sidings. Other shafts were subsequently sunk into the so-called "Bottom area" and given two-foot gauge surface tramway connection with the Valley retort bank.

The "Hill-top" section of the metre-gauge tramway, and the main-haulage track were relaid with heavier rails in 1892. Some of the replacement rails had been recovered from the then newly abandoned Main Camp Colliery sidings, a separate undertaking located about three-quarters of a mile or so to the north of the Hartley Vale Railway Station. Whilst this work was proceeding the opportunity was taken to overhaul the 2-4-0 Dubs locomotive generally in use on the "Hill-top" line. This year