

Two seams were worked, one 6 feet thick at 108 feet from the surface, and the other 9 feet thick at 162 feet. At the time of the accident the workings were confined to the lower seam. Overlying the stratified rocks are about 54 feet of measures, principally composed, for 40 feet, of sand. Several dislocations exist, and the fracture is usually found filled with sand, so that in mining up to these fractures it is customary to meet with a partial discharge of water. In May, 1878, such a discharge took place, and a rough dam was put up, which shut off all the water. On the 5th July sand and water were passing; this was stopped, but on the 6th it burst in, making an opening down the fracture of 25 feet x 4 feet x 10 feet. Three men were killed.

On the 23rd January, 1877, an accident occurred at the Home Farm Colliery, in Lanarkshire. Three seams of coal were worked: the ell coal, at 282 feet; the main coal, at 357 feet; and the splint coal, at 432 feet. On the 15th January a heavy fall had taken place in the extreme rise workings of the ell coal, where it was known to be within 108 feet of the surface, near the River Clyde. This allowed the water from the overlying sand and gravel to run down into the ell coal, and by the shaft to the splint. Four men were killed, and about sixty escaped. On the plan accompanying the report from which the above particulars are taken, the Clyde is shown to be about 11 feet deep, and distant horizontally about 370 feet.

Though not an accident, the following case may be included in the list:—

In the Chancery Division of the High Court of Justice, before Mr. Justice Kay, on the 24th March, 1882, Mr. Mundy sought to restrain the Duke of Rutland from leasing certain seams of coal of the Shipley Estate, in Derbyshire, to the Manners Colliery Company. The section of the coal field is as follows:—

Deep soft coal	...	...	4ft. 3in., at 350 yards.	} Difference, 270 yards.
Deep hard coal	...	...	4ft. 6in., at 366 "	
Kilburn coal	...	...	4ft. 1in., at 636 "	

The two upper seams were leased to Mundy, and the lease provided that a barrier 66 yards wide on the south and 50 yards on the north should be left as a protection against a body of water in some old workings. Subsequently the Duke leased the lower seams to the Manners Colliery Company, and the plaintiffs endeavoured to prove that the working of this seam, at a depth of 804 feet below the deep hard, would damage a barrier measuring 66 yards by 1,450 yards, so as to let the water through. The working would be conducted on the long-wall system. An enormous amount of evidence was taken and the injunction granted, but the case is not yet concluded.

4. *General Remarks.*—In a matter of this sort it is not desirable to approach within a "measurable distance" of the limit of safety. Where the circumstances of the mine are such as to require immunity from the chance of accident it would be folly to attempt to leave pillars of an ordinary size. Besides the pressure due to gravity, we must consider the effect of storms. The force of waves is well known, but the circumstances here are so different that I will not compare them.

On inspection of the plan it will be seen that the dangers to be provided against are—(1.) Irruption of water into the subaqueous area, whereby the twenty men thereby employed would probably have lost their lives. (2.) Overflow down the shaft into the pit-workings, where there were twenty-four men working mostly above the level of the shaft-bottom, and therefore possessing very small chance of escape. I have thought over the matter for some weeks, and can come to no other conclusion than that the existence of these workings is a constant danger. That they may stand for some time without coming in is possible; that, as Mr. Williams thinks, the sea would come in gradually if at all, may be true: but I cannot take the responsibility of allowing them to remain open.

5. *Suggestions for future working:*—

It must not be imagined that the abandonment of this district would have the result of closing the Shag Point Mine. The main seam no doubt exists under a very large area of the 190 acres secured by license. The seam at 247 feet in the shaft is practically untouched, besides which there may be, and probably are, other seams yet improved, which alone would make the mine a valuable property. The regulations under which I can sanction submarine working are as follow:—

(1.) No coal to be wrought under less than 180 feet of solid measures, provided that the owner or lessee of such area may drive passage-ways to win the coal under less cover than 180 feet, but not under less than 100 feet of solid measures.

(2.) A boundary of 66 yards shall be left between the present submarine workings and any future workings.

(3.) A proposed system of working shall, before work is commenced, be submitted to and approved of by the Inspector or Viewer appointed by the Commissioner of Crown Lands or the Minister of Mines, and no change shall be made in the approved system without the written sanction of the Inspector.

(4.) A report shall, once in each month, be sent to the Inspector, stating fully the condition of the works and any other particulars which may be required.

On the 24th February I wrote to Mr. Williams requiring him to discontinue working in the submarine area, and to put dams in. On the 28th February he called at my office, and represented that, if these workings were suddenly stopped, he would be (in the absence of Mr. Rich, the principal proprietor) financially unable to carry on. I was naturally unwilling to close the mine altogether, and therefore, with great reluctance, after an inspection on the 25th, gave my consent to work being carried on in one district where a good cover rendered the operation less risky, but entirely without prejudice to its being closed at any time, and on the express understanding that the concession was by no means to be taken as a precedent or justification for keeping the dip open. On the 19th instant I revisited the mine, and met Mr. Rich, of whose readiness to fall in with my views I cannot speak too highly. We agreed to close the submarine area, and let it fill with water. This will, of course, be a great support to the roof in the worst place, as there will be a sustaining