

IN THE COURT OF COAL MINES REGULATION

**IN THE MATTER of an
Investigation in pursuance of
the Coal Mines Regulation Act
1982 into an accident which
occurred at Gretley Colliery on
14 November 1996 and its
causes and circumstances**

**REPORT OF A FORMAL INVESTIGATION
UNDER SECTION 98 OF THE
*COAL MINES REGULATION ACT, 1982***

BY

**His Honour acting Judge J. H. STAUNTON
A.O. C.B.E. Q.C.**

JUNE 1998

VOLUME 2

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5 THE DRAINAGE ISSUE

5.1 The Nature of the Hazard

Mining is universally recognised as being hazardous. Systems must obviously be developed which address the particular hazards within a mine, whether they arise from the coal being extracted, or the strata which encases that coal. These are the daily problems of every mine.

The abandoned workings of the Young Wallsend Colliery were a hazard of a different kind. They were not something which the mine encountered every day. They were old, and known to be full of water under pressure. They had, therefore, a significant potential for harm. If there were an inrush, fatalities were certain (R. M. Porteous T8944).

Moreover, the workings of the Young Wallsend Colliery were likely to preoccupy the Gretley Colliery for a number of years. Mr Porteous said this:

Q. But if you look at that plan which was produced today which is exhibit 13.74 ... it is apparent from that plan that the mine was going to develop right around the Young Wallsend Colliery in the next several years?

A. Yes.

Q. And that it was going to take several years to circumnavigate that old colliery?

A. Yes.¹

It was, therefore, fundamental that the mine properly address the hazard.

5.2 The Available Strategies

There were two possible strategies for dealing with the hazard arising from the Young Wallsend Colliery. It could be eliminated by drainage, or isolated by a barrier. Whichever option was chosen, it was important that the choice should follow a systematic review of both options. That review ought to have considered at least the following matters:

- First, which strategy offered the greatest benefits in terms of safety?
- Secondly, were both options feasible?
- Thirdly, what were the costs associated with each strategy?

The first and second aspects will be considered in turn. That commentary will make reference to the third aspect, the cost of each alternative.

5.3 Selecting the Safer Option

The submission made by Mr Hall QC was in these terms:

"In the relatives' submission, it is obvious that the safest course was to drain the old workings if mining was to proceed in the vicinity of them. That fact, it is submitted, required proper research and analysis before NWCC could satisfy itself that the option, for practical reasons, was simply not available. The principle of *safety first* demanded that the obviously safest course be followed unless it was not available for good reason." ²

The company, on the other hand, made the following assertion:

² MFI 87 p.107

"It is submitted that, in the circumstances obtaining at Gretley, the obvious and prudent course in relation to dealing with the hazard constituted by the Young Wallsend Colliery old workings was to utilise a natural barrier. The old colliery, full of water and surrounded by a natural barrier, is benign."³

Mr MacLeod, formerly the manager of the Wallsend Borehole Colliery, made the following statement:

"If we had gained a lease over the area covered by the Young Wallsend Colliery we would have drained the workings. Drainage would have been done from the surface."⁴

Mr MacLeod later gave evidence, explaining his view. He said this:

Q. Why would you have determined the drainage strategy as opposed to barrier strategy, if I can put it that way?

A. Belts and braces approach.

Q. Can you enlarge upon that?

A. If there was no water there then you don't - don't have a problem if you make a miscalculation with the size of the barrier. We also had the situation at that time that water was a major problem in terms of supporting our roof...⁵

Mr Porteous gave the following evidence, referring to the strategy of draining the old workings:

Q. Well then, it is a question of particular importance to ensure that that option is carefully assessed in terms of the pros and the cons?

³ MFI 91 Vol.1 p.133/4 para.8.1

⁴ I. F. MacLeod Ex.83.02 p.2 para.14

⁵ ibid T7489

- A. Yes.
- Q. Because if at the end of the day it is feasible, it is the safer way to go?
- A. Yes.⁶

What specific matters, relevant to safety, might suggest one strategy rather than another? Mr Anderson drew attention to the following recommendation by the U.S. Bureau of Mines:

"... where the pressure head is equal to or greater than 5 atmospheres consideration should be given to draining the workings ... " - USBM -IC 8741"⁷

An atmosphere is approximately 15lbs per square inch (T1654). When the hydrostatic pressure exceeds 75 lbs per square inch, therefore, consideration should be given to draining the workings (T1654). The pressure within the Young Wallsend Colliery exceeded that figure by a considerable margin (180 lbs per square inch) (T1651).

What was the basis upon which the company, from the viewpoint of safety, advocated the barrier solution? The company's submission said this:

"It is critically important to recognise that any step taken to eliminate or even manage a hazard may create another hazard ... If the decision had been to eliminate the hazard by dewatering the old workings, assuming that any hazards or problems associated with that course were capable of being dealt with, the water hazard would be replaced by a gas hazard. If the gas had exploded with consequential loss of life or injury, then it would be an issue for equivalent of this Inquiry to investigate."⁸

⁶ R. M. Porteous T9109

⁷ Ex.21.05 p.3

⁸ MFI 91 Vol.1 p.133/4 para.8.1

Removal of the water creates a void. The void probably will be filled by seam gases (I. C. Anderson, T1824). The gases themselves may be under pressure. The company's submission put this:

"If the shaft fill and caps do form a good seal, the pressure of the gases will rise and eventually vent to the surface unless they can vent into Gretley workings. To prevent this, the standpipes, if dewatering was carried out from underground, would have to be left open, to prevent both the build up of water again in the old workings, and to prevent the build up of gases under high pressure."⁹

No doubt the gases which replace the water also have a potential for harm. However, it is important not to over-state this. Mr MacLeod said:

- Q. Well, you have got to put up with the gas once you have got rid of the water?
- A. That that's correct.
- Q. Do you see that of itself as a significant hazard if you have been able to successfully overcome de-watering underground with the hazard with a head of water, do you see that as a significant hazard, that is gas?
- A. It would be a hazard that could be managed.¹⁰

In respect of the development of miniwall 39-45, the strategy of Mr Romcke envisaged draining the Wallsend Borehole workings to the north. These workings were significantly larger than the workings of the Young Wallsend Colliery, to the south. In its application under S138 the company was obliged to provide a report which, amongst other things, addressed the following question:

"2.2.4 Is there a possible danger from noxious gases? If

⁹ MFI 91 Vol.1 p.135 para.8.2.2

¹⁰ I. F. MacLeod T7765

there is a possible danger, give details of gas concentrations and work proposed to reduce the danger.”¹¹

The Report by Mr Romcke on 6 September 1994 to the Department provided the following answer in respect of that issue:

“No dangers are envisaged from noxious gases.”¹²

Plainly, Mr Romcke believed that the gases which would replace the water in the Wallsend Borehole workings, once drained, could be managed.

Further, the escape of water from the Young Wallsend Colliery, as a result of the inrush, created the situation which would have existed had the workings been deliberately drained. A seal has since been placed in C heading to prevent the intrusion of gas and water from the old workings into the Gretley mine. Mr Flett, a Senior Inspector with the Department, prepared a report to the Inquiry, dated 23 October 1997, which included the following:

“Discussion took place regarding the present underground seal in C Heading outbye the point of inrush from the old workings with, I believe, general acceptance that the sealed area was little different to any other sealed area of the mine eg. the Wallsend Borehole workings or goaf areas, and the provision of the present seal was adequate, however the mine is evaluating the option of placing an explosion proof seal in this area completely isolating the old workings apart from a water trap in the seal.”¹³

¹¹ Ex.17.01 para.2.2.4

¹² Ex.14.01 para.2.2.4

¹³ Ex.93.03

Shortly thereafter (28 October 1997) the company wrote to the Department describing more fully what had been done:

"The existing seal in "C" Heading 50/51 panel which separates Gretley working from Young Wallsend Colliery was erected to prevent Gretley's workings in 50/51 from becoming contaminated by the atmosphere contained in the old workings of Young Wallsend Colliery. This seal was also fitted with a water tap and additional drainage pipes to prevent water build up behind the seal and a gas testing pipe to allow testing of the atmosphere behind the seal.

The sealing of this roadway was carried out in the same manner in which a goaf is normally sealed."

The letter continued:

"As the mine still wishes to extract these panels in the future it appears there are two options open to the mine:

- (a) To replace the existing seal with an explosion proof seal fitted with a water trap prior to the extraction of these panels.
- (b) To extract the panels and then build new seals where the 50/51 panel headings join the main roads, including gas testing facilities and water traps. This is the normal method of sealing a goaf area.

Both options are being evaluated and will be discussed with the Department." ¹⁴

The Court accepts the view of Mr MacLeod. Gas entering the old workings, replacing the water, was capable of being managed. If drainage were feasible, and thought desirable, the prospect of gas replacing the water would not constitute a serious inhibition at the Gretley mine.

There is a further aspect. It is one of some importance in the context of this tragedy. It emerges from the following answers provided by Mr Porteous:

Q. But of course the success of the barrier as a solution depends upon it being there?

A. Yes.

Q. But you must have confidence that there is this physical separation between your mine and the hazard which you recognise as a threat to your mine?

A. Yes.

Q. In respect of that can I suggest that there are two issues; first of all a design issue determining an appropriate barrier width, that is one issue, do you agree?

A. Yes.

Q. Secondly, satisfying yourself in some way that that barrier is the required width?

A. Yes.¹⁵

How, then, is a mine able to determine with confidence that a barrier of the design width (or thereabouts) is in place? On one view, it may do so by drilling and, where the workings are penetrated, thereafter sealing the bore holes, and restoring the integrity of the barrier by means of grout (I. C. Anderson T1684). If that were not feasible (and that issue will be examined in the next Chapter), then the mine is dependent upon its examination of the plans of the old workings, and upon research. Those plans, and that research, may or may not be enough to enable the mine to say with confidence that the barrier is there, and will protect the mine. If significant doubt remains, and drilling followed by regrouting is not feasible, that may suggest the need to drain the workings.

At the Gretley mine, the proposed development of MW39-45 involved panels which were arranged between two sets of old workings, both of

which were flooded. On one side, to the north, were the workings of the Wallsend Borehole Colliery. The coal had been extracted shortly before the mine discontinued its operation in 1988. On the other side, to the west, were the abandoned workings of the Young Wallsend Colliery. The coal from it had been extracted between 1890 and 1912.

The mine manager, Mr Romcke, recognised, in these circumstances, the danger of inrush. His strategy to prevent inrush, however, was different in each case. The Wallsend Borehole workings were to be drained. The Young Wallsend Colliery, on the other hand, was to be isolated from the Gretley mine by means of a barrier. The application to the Department under Section 138 said this:

"2.2.6 Wallsend Borehole Colliery old workings to the north of the application area contained approximately 500 Ml of water. This area is currently being dewatered via the Harris Street Borehole. Dewatering will be completed by an inseam borehole.

Young Wallsend Colliery worked the Young Wallsend and Borehole Seams. These workings are known to be filled with water. Drilling ahead of workings will be carried out when approaching the old workings in the Young Wallsend Seam and a sufficient barrier will be left between the old workings and extraction panels to maintain the safety of the current workings.." ¹⁶

Commenting upon that strategy, the former manager of Wallsend Borehole, Mr MacLeod, said this:

A. As the new Manager I would want to look at the logic behind coming to that particular decision. ¹⁷

¹⁶ Ex.14.01

¹⁷ I. F. MacLeod T7746

In re-examination, Mr MacLeod explained his puzzlement. He said:

A. Well, because there is a - quite a stark difference, if you like, between a situation where you are de-watering Wallsend Borehole Seam workings which are known - - -

Q. When you say known, recent and - - - ?

A. Or recent - recent, so that there is survey information available. I understand that they have holed into the Wallsend Borehole Seam workings so they would be able to verify the accuracy of the Wallsend Seam - Wallsend Borehole Seam workings and I - - -

Q. Did you also know that they had available the Surveyor's note books, calculation books in relation to the Wallsend Borehole and the record tracings and indeed I think the mine plan?

A. Yes. And I do believe that - well, when I asked the question as to when they holed into our workings were they where they expected to be, the answer was yes, that they were. So that we have, if you like, some accurate workings - - -

Q. Which they are draining?

A. Which they're draining ... ¹⁸

Mr MacLeod then contrasted what was known about the Young Wallsend Colliery. His evidence was as follows:

Q. In that case what do you say about those old workings?

A. We've got old workings that we - that we know are in the area. We have no - the only two things that we know is the position of the shafts. We know that .. they have been depicted from a plan supplied by the Department of Mines. So that .. there's still a difference between why we're doing one and why we did - did the other. **Now having looked at that it then comes back as to what is the risk of not de-watering those particular workings.**

Q. And the risks are?

- A. The risks are that the headings are not where we might believe that they are to be, if they are to be out by a distance, that creates - creates a problem for us (emphasis added)

Mr MacLeod's evidence continued as follows:

- Q. All right. But in terms of the logic you are drawing attention to the levels of confidence in the respective plans?
- A. That's correct.
- Q. In the one there is every reason to be confident, is that right?
- A. Yes.
- Q. That is your Wallsend Borehole?
- A. Yes.
- Q. And the other, you say?
- A. Low level of confidence.¹⁹

Given the low level of confidence in the position of the Young Wallsend Colliery workings, and assuming for the purposes of argument that drilling into the workings and regrouting was not practicable, draining the workings may have been the only safe strategy, if it were feasible.

5.4 Feasibility of Draining the Old Workings

Drilling into the old workings, for the purposes of draining them, can either be undertaken from the surface, or from underground (or both). Where drilling is undertaken from the surface, there are a number of different operations:

- First, there is the drilling phase, where the workings are penetrated.

- Secondly, water is then brought to the surface, and transferred to a point of disposal.
- Thirdly, the water is then disposed of.

Each phase involves its own difficulties. Drilling from the surface requires permission from the local Council. Disposing of the water requires a licence from the Environmental Protection Agency.

The drilling phase obviously requires a suitable location for the drilling rig, and associated equipment. The operation was described by Mr MacLeod in these words:

Q. Just in terms of physically what is involved, first of all, can you describe that to us?

A. If - once having found your site, depending on how you're going to drill it, you would probably need a sump. You are going to have a drill rig; probably a water cart; most likely a compressor on site which could be either mounted with a drill rig or separate to it; you would process of (*sic*) drilling the hole, once you've drilled the hole we would then case the hole, that would require a crane to lift the casing into the hole; a welder to weld the casing into a continuous string; they would go down the hole. Having done that we would then have to put the - if we're putting a submersible pump in, put the pump in which, again, would involve the use of a crane; electricity supply and then the reticulation of the water from the pump plus whatever control mechanisms we require.²⁰

The area immediately above the Young Wallsend Colliery is substantially a residential area [Ex.13.74]. Mr Porteous, upon this basis, thought it quite unsuitable for such an operation (T8964). Mr Anderson formed a similar view.

Mr MacLeod, on the other hand, believed that there were a number of sites upon which a drilling rig might be set up. The grass verge of Main Road would be suitable. Mr MacLeod said:

A. I don't believe that it is impossible to drill a bore hole out in that particular area.

Q. What leads you to that view?

A. That the things that you are worried about is noise, that can be controlled, inconvenience to the people in that particular area and that would require a - basically a public relations campaign, visiting the people, telling them what you want to do. It's my experience that I've also been involved in subdivision work within existing residential areas that you need to be very up front and go and tell them straight away what's going to happen. If you do that then generally there isn't a problem. The operating hours more than likely would be restricted, they would be restricted obviously in terms of starting time and it may be that you would not start your activities until people have gone to school, the kids have gone. It may mean that you might have to finish little bit earlier to avoid again the same situation. They are really just matters of co-existing with the people within the area.²¹

The location must be suitable from another perspective. The connection underground should be capable of removing as much of the water as possible. Where there is a dip in the seam (as in the Young Wallsend Seam in the area of the Young Wallsend Colliery) the pump should penetrate the workings down dip (I. F. MacLeod T7492). Even from a favourable location, the pump still will not be capable of removing all the water (I. F. MacLeod T7779/80). In-seam drilling may still be necessary to remove the water which remains.

How long would such an operation take? The volume of water in the Young

²¹ ibid T7583

Wallsend Colliery was not substantial. The estimate of the water which escaped after the inrush (and some remained within the colliery down dip from the point of holing-in) was 25 megalitres [Ex.63.04]. That quantity may be contrasted with the quantity within the Wallsend Borehole Colliery, which Mr Romcke was intending to remove, which was 500 megalitres [Ex.14.01]. Mr MacLeod thought that it may take approximately 100 hours to remove the water from the Young Wallsend Colliery (T7488). It would, however, also be necessary to maintain an automatic pump for the life of the development to prevent the build up of water once the workings had been drained (I. F. MacLeod T7782). The development would take a number of years [Ex.13.74] . Hence pumping equipment would need to be maintained for that length of time. Nonetheless, the equipment associated with keeping the mine drained would be significantly less intrusive than the equipment required to drill the hole and install pumps. Once the pumping system is in place the service facilities and the drainage pipes can be placed under the footpath (cf K. M. Mathews T7552/3).

Having got the water to the surface, it is then necessary to transfer it to a point from which it can be discharged. Mr MacLeod saw the proximity of Cocked Hat Creek as an advantage (T7584). He said this:

- Q. And are you able to say how far that is from the point of discharge?
- A. I would think that it would be somewhere in the vicinity of 500 metres.
- Q. I know you probably have not had time to study it, but do you see any problem with conveying the water that 500 metres to Cocked Hat Creek?
- A. No.
- Q. You do not see any problem in installing a pipe from the Young Wallsend Colliery to Cocked Hat Creek to get rid of it in Cocked Hat Creek?
- A. No.
- Q. You do not see any problem with odour, just from the

point of discharge, to discharging it in Crooked Hat Creek?

- A. The question of odour, whether it be objectionable odour or basically the odour associated with mine workings, as I said the water has - most mine water has a character, it doesn't - you know, it has a smell about it.²²

There are techniques, however, for dealing with odour (I. F. MacLeod T7491). The water can either be treated, or the point of discharge may be removed to a location where the odour is less offensive (T7491).

In respect of water quality, Mr MacLeod said this:

- Q. In terms of quality, is there anything that can be said on that, based on your experience?
- A. The - if it was similar to the water that we were pumping out of the Young Wallsend Seam it would be saline, but the salinity levels would probably be somewhere in the vicinity at about 10 per cent of salinity levels of salt water. There may be an iron problem and there could be a smell attached to it.

Mr MacLeod added:

- A. Because it was - if it was going into Cocked Hat Creek and it's final receiving was Cockle Creek in there which is saline in itself there was no problem. We had an existing licence, as I said, to discharge up to 1000 gallons a minute into that particular stream so that you would - we would have to work out how we got it down to the Cocked Hat Creek, but once in Cocked Hat Creek then it would have just joined the water body that we were dewatering.
- Q. In terms of iron, what was the experience in respect of Wallsend Borehole?
- A. Iron levels were - were within - we did not exceed the

iron levels. There would be a possibility that you may exceed your iron levels straight off depending where you were pumping from because there may have been some steel rails or something like that that tended to give a more pronounced problem. But the general bodies of water that we pumped did not exceed our problems.

Further, Mr MacLeod gave the following evidence:

- A. If the waters were the same as the waters in the Borehole seam that we'd pumped then there would be no reason to suspect that they'd be very - very different. We should be able to comply with the standards of the EPA.²³

Mr Porteous drew attention to the fact that Mr MacLeod had not been involved in discharging water from a mine since 1988. Community expectations, and environmental standards now made it more difficult than suggested by Mr MacLeod (MFI 88 p.65). The company said this:

"The inevitable result, therefore, in our submission is that approval would not have been granted to dewater from the surface. The Company cannot be criticised for not pursuing a course of action which was bound to fail."²⁴

The Court does not underestimate the difficulty in obtaining approval. It cannot be said, however, that it was inevitable that approval to dewater from the surface would not have been granted.

The alternative to drilling from the surface is to drill from underground. What is involved in drilling into the old workings from underground?

²³ ibid T7490/1

²⁴ MFI 91, Vol 1 p.144 para.8.4.8

First, the company drew attention to the hazards which would attend such an operation (MFI 91 Vol.1 p.134ff). The Court does not doubt that drilling into a reservoir of water which is under pressure, if inexpertly handled, may indeed be hazardous. However, Mr Hungerford, the General Manager of AMI Drilling Australia Pty. Ltd. has undertaken such an operation in a number of coal mines, including Gretley, many times before [Ex.81.01 p.3 para.13]. He gave the following evidence:

- Q. If I can just ask you this question, if you assumed that your brief was to drill into the old workings with a view to draining them, in other words, a similar sort of brief that you had previously at Gretley in the other location?
- A. Yes.
- Q. Would that have presented any technical problem?
- A. No.
- Q. And you could have set up a hole and stand pipe and the mechanism which they could then attach to their pumping system in order to deal with that situation?
- A. Yes.
- Q. And that could be done from underground?
- A. Yes.
- Q. And could be done from as far away as Cocked Hat Creek?
- A. Yes.²⁵

Secondly, drilling from underground involves the selection of an appropriate location from which drilling would begin. The selection must obviously be made with some care. Many of the same issues, discussed in the context of depicting the old working, arise (*supra* Chapter 4). For instance, it would be imprudent to assume that all old plans are accurate, or that the distance fixed by the Borehole Rule (Clause 9) (50m) is necessarily a safe distance from which to begin drilling.

Thirdly, to drain from underground obviously requires the installation of pipes, and pumps, and associated equipment to deal with the water. In the Gretley mine there was already, in 1994, an extensive pumping system [Ex.13.24]. Indeed, the mine, by means of that system, pumped 6½ megalitres of water per day from the mine [Ex.2.03]. The issue, therefore, is the extension of that system. In respect of that issue Mr Porteous gave the following evidence:

Q. So that surely in terms of infrastructure the actual extension of that system, the relatively short distance, and you acknowledge it is a relatively short distance, do you not, between Cocked Hat Creek and Young Wallsend Colliery would not be a huge cost or trouble?

A. Well, I guess the best measure we've got of this is when we did try to install a new pumping system and that's when we did the work on the dams in miniwall 43 and there was required 350 metres of 6 inch pipeline and that took six months to do.

Q. See, you are getting back to time. I am just dealing at the moment with the cost and I suppose I also said the trouble, and the trouble, I suppose, is time. But just looking at the plan as a lay person and given that exhibit 13.24 sets out the infrastructure, it does not appear, does it, to be a large extension of that system to incorporate piping and the necessary paraphernalia to include the draining of the Young Wallsend Colliery; do you agree with that?

A. Yes and no. To start off a separate project is difficult. It is difficult at Gretley because of the ability we have to do these extra jobs.

Q. What do you mean by that?

A. Well, we have - we don't have very many projects going on. Some mines do have a lot of projects going on and we simply don't.

Q. What do you mean by development projects?

A. Not development projects, I didn't say development projects, I just said projects, where you might have a project, say, of cleaning up returns to improve ventilation and the very best that we can do on that is

to put two men on it and that's all we can do.

Q. Why is that, is it budgetary?

A. Yes, because we have - we work to a number of men that we employ at the mine and we have to make the best use of those people.

Q. Are you saying therefore that the infrastructure cost and the men who would be required to install that infrastructure did operate as a real inhibition to the contemplation of draining the old workings?

A. No, I'm just talking about the practicality of doing it. You've said it seems like an easy task and I'm saying it's not an easy task when you're operating the mine.²⁶

Fourthly, the water drained from the old workings could either be pumped to the surface, and discharged, or transferred to a suitable location underground. If it were discharged, the same issues already discussed would arise in respect of water quality. The water when discharged must meet the licence conditions imposed by the Environmental Protection Agency.

After the inrush a sample of the water from the Young Wallsend Colliery was taken, and tested [Ex.63.22]. Commenting upon that test, Mr Porteous said this:

Q. - - - then you would not rule it out of account, that is draining the Young Wallsend workings on account of that profile, would you?

A. Yes I would on this account.

Q. Which aspect of that account would you rule it out of?

A. The salinity, the total dissolved solids and even some of the other salts are a little high.²⁷

Subsequently Counsel for Mr Porteous, Mr Stratton QC, made the following

²⁶ R. M. Porteous T8970/1

²⁷ *ibid* T9244

statement to the Court:

... Your Honour, probably remembers when Mr Porteous gave evidence that he - or it could be inferred from the evidence that he gave that the quality of the water that did come from the old workings of the Young Wallsend Colliery was such as to make it unfit to be dealt with, had they decided to drain those old workings as a method of dealing with the hazard. Well your Honour, we do not rely on such inference from Mr Porteous' evidence in making any submissions on his behalf. We do not say that the quality of water was such as that it could not have been handled had a decision been made to drain the old workings. That is not to say of course that Mr Porteous or we do not rely on the fact that Mr Porteous relied on what he believed the quality of the water may have been before he made a decision not to drain the old workings but we are not saying the quality was such that it just could not have been dealt with could not have been handled by the mine at all and for that reason the old workings were not drained.²⁸

However, it was asserted by Mr Porteous (T9122), and reasserted by his Counsel in argument (T9488), that when the water from the Young Wallsend Colliery was discharged through the Harris Street pump, the quality of the water was such that the limits under the licence of the Environmental Protection Agency were exceeded (T9488).

That assertion is not supported by the evidence. After the inrush the water from the Young Wallsend Colliery gathered in the southern part of the Cocked Hat Creek area (T9260). Some of it was pumped to the Harris Street area from which it was discharged (T9261). The rest was transferred to an area known as the Glendale storage area (T9261). Pumping to the Harris Street Borehole had been completed by January 1997 (P. J. Pritchard T9262). Mr Pritchard gave the following evidence:

- Q. Was any attempt made to dilute the water before discharge in the Harris Street area?
- A. No. No, because it was - the Harris - the water in Harris Street was tested weekly to make sure that it complied with the EPA guidelines and it was only in late March that it actually started to increase in salinity and the pump was actually turned off on 4 April due to that problem.
- Q. But prior to 4 April had water been discharged from Harris Street?
- A. Yes.
- Q. And within the guidelines which applied under the licence as you would understand it?
- A. Yes.²⁹

The underground reservoir at Glendale covered a very large area (T9260) compared to the Young Wallsend Colliery. Mr Mathews said:

- A. ... the water pumped out of Cocked Hat Creek into Glendale would be a drop in the ocean compared to what that holds ...³⁰

If the quality of the water from the young Wallsend Colliery had been unacceptable for direct discharge from the mine, it seems probable that either it was capable of dilution, or could have been stored elsewhere in the mine.

The company's submission acknowledged that the environmental problems associated with de-watering the Young Wallsend Colliery could possibly be overcome. It said this:

"We submit that while it is possibly correct that the hazards of dewatering are not insurmountable and would have to be

²⁹ P. J. Pritchard T9264

³⁰ K. M. Mathews T7539

addressed if there were no safer option..."³¹

The submission went on to advocate the barrier solution as a safer option. That submission has already been dealt with.

5.5 The Actions of Mr Romcke

Mr Romcke responded to a question put by the Inspectors after the inrush with these words:

"Q9. Your application for MW39 to MW45, stated that the Wallsend Borehole workings were being drained via a borehole. No such de-watering was proposed in your application for the Young Wallsend Colliery.

Why was it decided to de-water the Wallsend Borehole old workings and not the Young Wallsend Colliery workings?

A9. It was decided to dewater Wallsend Borehole workings because we planned to mine close to these workings (i.e. less than 50 metres). The planned barrier around the Young Wallsend Colliery workings was considered sufficient to ensure safety."³²

Preparation for the application to the Department in respect of MW39-45 began in May 1994 (J. E. H. Romcke, Ex.61.04 p.37 para.113]. The work was undertaken by the mine surveyor, Mr Murray, and by Mr Romcke himself.

As mentioned, the proposed development was located between two sets of old workings, both flooded, namely:

³¹ MFI 91 Vol.1 p.136 para.8.2.3

³² Ex.61.03 p.3

- The Wallsend Borehole Colliery which had been discontinued in 1988, to the north.
- The Young Wallsend Colliery, which had been discontinued in 1912, and declared abandoned in 1928, to the west.

In respect of the Wallsend Borehole workings, it is clear that alternatives were considered. Mr Romcke said this:

"I assigned the investigation of the feasibility of de-watering and the associated sinking of the Harris Street Borehole to a group including Michael Murray, Jeff Sampson, Neil Searant and Russell Rigby." ³³

Mr Romcke described what happened thereafter:

"116. Michael Murray then prepared an initial layout of proposed mine workings.

117. Michael Murray brought draft plans to my office depicting two alternative proposed layouts of the miniwall blocks. We went next door to the conference room and laid the plans out on the large table. One layout involved developing first workings to within 15 m of the 85 South Panel of Wallsend Borehole Colliery workings in the Young Wallsend Seam. The other plan involved laying out the miniwall blocks so as to maintain a 50 m barrier from such Wallsend Borehole workings." ³⁴

A development which was within 15 metres of the Wallsend Borehole Colliery would require the dewatering of those workings, whereas the 50

³³ Ex.61.04 p.25 para.94

³⁴ Ex.61.04 p.37 paras.116 & 117

metre strategy would not. Mr Romcke recounted the conversation with Mr Murray resolving that issue in these words:

"I said words to the effect:

"Let us go with the plan that goes to within 15 m of the old workings. That way we will maximise coal recovery."

He replied to the effect:

"O.K. I will prepare the plans on that basis, but it will mean that we will have to go ahead with de-watering the old workings in Wallsend Borehole Colliery. We have not started any work yet, so we will have to get moving.""³⁵

In respect of the Young Wallsend Colliery, however, a barrier was to be used as the defence against inrush. Mr Romcke appears not to have seriously entertained the possibility of draining the old workings, beyond discussing it with Mr Murray before rejecting it. Why was it rejected? First, Mr Romcke believed that it was not feasible to drill from the surface. He said this: (recounting a conversation with Mr Flett in October 1994)

"No we're not planning to drain those workings because of access problems. The surface has been developed with residential housing, so it is not really feasible from an environmental view point to dewater these workings from the surface. We are not going to take the Miniwall that close to the Young Wallsend Colliery. I'm planning to stop the Miniwall at this mark (I pointed to the finish line) and put in an installation road down here. Both these places will be at least 50 metres from the Young Wallsend Colliery so that we do not have to drill ahead from the end of the miniwall face. I also think a 50 metre barrier will satisfy any barrier/pillar

stability concerns.”³⁶

The second objection was based upon timing. Mr Romcke’s statement, again relating the same conversation with Mr Flett in October 1994, said this:

“Mr Flett again asked why we couldn’t drain the workings and whether we considered doing it from underground.

I said:

“We don’t have the lead time available to be able to drain these workings from underground. We’ve got to keep the Miniwall going and development is always an issue. I don’t believe we will get development close enough to the old workings in order to establish a pump station to effectively drain it. For this reason we intend to keep a safe barrier around the old workings. As far as doing it from the surface goes - it is just too hard now that most of the area is residential.”³⁷

Mr Romcke’s perception as to problems in timing was not shared by Mr Porteous. Mr Porteous gave the following evidence:

- Q. Yes. I am simply trying to draw the contrast between what the inhibitions may or may not have been on the one hand between Wallsend Borehole where there was a real timing problem, as I understand your evidence, is that right?
- A. Yes, that’s - that’s right.
- Q. Whereas Young Wallsend Colliery, that timing problem did not exist is that right or wrong?
- A. The timing problem did not exist but there was this uncertainty about what we would be dealing with.
- Q. Yes. I am just trying to define and isolate what the problem is and then we will no doubt examine that. I

³⁶ Ex.61.04 p.49 para.139

³⁷ ibid p.53/4 para.141

am just asking you to agree that timing was not the problem, rather other issues?

A. That's right. ³⁸

The approach of Mr Romcke to the selection of the appropriate strategy to deal with the abandoned workings of the Young Wallsend Colliery stands in contrast to that of Mr MacLeod. Mr MacLeod, when cross-examined by Mr Hall QC, provided the following evidence:

Q. And in determining whether or not de-watering is feasible, I suppose the person concerned to examine it with a view to either adopting it or rejecting it, would need to consider a number of matters including an estimate of the quantity of water, is that right?

A. Yes.

Q. You would need to perhaps arrange for water samples to be taken in order to determine the quality of the water?

A. Yes.

Q. You would need to ascertain the requirements of the Department under the Environmental Planning and Assessment Act?

A. Yes.

Q. By perhaps consultation, discussions and correspondence with the Department about it, providing the Department with the necessary information such as - - - ?

A. Department or the Council.

Q. Or Council or both. And there would need to be consideration as to the relevant factors concerned with whether surface de-watering is feasible, is that right?

A. Yes.

Q. You would need, in that respect, to determine an appropriate outlet point?

A. Yes.

Q. You would need to determine matters such as flow rates?

A. Yes.

- Q. You would need to determine the question of man power that would be needed to actually physically effect the de-watering?
- A. Yes.
- Q. You would need to consider what equipment would be required to do that?
- A. Yes.
- Q. You would need to consider what materials would be needed such as whether it would have to be a de-watering through enclosed pipes?
- A. Yes.
- Q. And estimate the quantity of them?
- A. Yes.
- Q. You would need to look at the cost factors?
- A. Yes.
- Q. And estimate all of those?
- A. Yes.
- Q. You would need to perhaps get tenders from specialist contractors in the area for a particular, unique, unique in the sense of what the circumstances that existed so far as the Young Wallsend Colliery situation was concerned?
- A. Yes.
- Q. You would then need, if you had got all that information and indicated that it was feasible, submit an application in required form to the Department and or the Council?
- A. That's correct, yes.³⁹

Mr MacLeod would, therefore, expect a file to be created containing the accumulated documents relevant to the investigation of these issues (T7589). He added:

- Q. In other words, it is not a five minute exercise, it is something that requires thought, inquiry, calculation, estimation and so on?
- A. Yes, but also tempered with the fact that - that a lot of the things that you're talking about we would have

done before so that the file might not be voluminous.⁴⁰

Here, the misplaced confidence of Mr Romcke and Mr Murray in the plans depicting the Young Wallsend Colliery, appears to have caused them not to look closely at the safer option, namely draining the old workings.

5.6 The Actions of Mr Porteous

Mr Porteous was appointed manager at Gretley on 28 October 1994 [Ex.6.11]. By that time the strategy to deal with the Young Wallsend Colliery by means of a barrier had already been formulated by Mr Romcke, and submitted to the Department for approval [Ex.14.01]. The submission on behalf of Mr Porteous, quite reasonably, said this:

“Mr Porteous presumed that proper consideration had been given to the management of this hazard by Mr Romcke and his staff at the colliery. He also presumed that proper consideration had been given by the various officers of the Department prior to the application being approved by the Chief Inspector. Nevertheless, he considered it his obligation to revisit the issue himself.”⁴¹

Mr Porteous reconsidered draining the Young Wallsend Colliery on two separate occasions (MFI 88 p.61 para.5.9). The first occasion was in May 1995, when the colliery was about to commence the development work associated with MW 41 and 42. The issue addressed at that time was not inrush, but rather the improvement of the ventilation of the mine. A consultant, Mr Savidis, was retained. Mr Porteous gave the following evidence:

⁴⁰ ibid T7590

⁴¹ MFI 88 p.59 para.5.5

- Q. You see, when you retained the consultant, Mr Savidis, you gave him instructions to include the Young Wallsend Colliery in his modelling of the ventilation circuits within the mine?
- A. I did.
- Q. And you did that obviously in the knowledge that to take advantage of anything that his modelling might suggest would require draining of the old workings?
- A. Yes, **the draining of the workings was a - if it could have been accomplished was a real safety bonus** and, you know, and that certainly prompted me to continue to consider it because I could see the safety advantages of it. But ultimately, because of the uncertainty of the outcome, I wasn't able to avail myself of that. ⁴² (emphasis added)

The uncertainties which deterred Mr Porteous were, first, the possibility that roadways within the abandoned workings had been closed by rockfalls (which would then inhibit airflow), and secondly, the quality of the water within the old colliery.

Improving the ventilation of the mine, is, of course, one issue, and an important issue. However, preventing inrush is another. The quality of the water, though unquestionably a potential problem, was plainly not regarded as insurmountable. Had it been impossible to overcome, one would hardly waste money upon retaining consultants to examine possibilities which included draining the old workings.

In September 1996 Mr Porteous examined once more the possibility of draining the Young Wallsend Colliery. He said this:

- Q. And if asked why, your answer is?
- A. Because we were about to start driving 50/51 panel.
- Q. And were you prompted by some consideration of

safety in reconsidering it?

A. Yes.

Q. What aspect gave rise to you being prompted to reconsider it, or consider it again as a safety matter?

A. A consideration of safety aspects of mining.

Q. Well, relevant to the question of in-rush or possible in-rush?

A. Yes.⁴³

The re-examination took the form of a discussion with various other mine personnel. When cross-examined Mr Porteous gave the following evidence:

Q. If one were to seriously pursue the drainage option as a prevention method to guard against in-rush and to assess the pro and cons one would need to do things such as make application to the relevant authorities for permission to put a borehole down, take the sample, have the sample analysed, determine what infrastructure would be required, the cost of it, time, whether there were any disposable problems, whether there are any other operational problems; would you agree that that constitutes the list of matters about which you would have to evaluate pros and cons?

A. Yes, there are a number of authorities that are relevant in this context.

Q. You see, why I have put to you for your consideration that you did not give any proper consideration to drainage as an option is that none of the things on that list that I have just put were actively pursued by you or those on your behalf, is that not the case?

A. There was consideration of it.

Q. But nothing was done to pursue any of the matters on the list I just put to you, is that not right?

A. No, that's not right. There was discussion that I had with people, with Michael Murray in particular, and after that discussion and some time thinking about it I decided not to go ahead with it.⁴⁴

⁴³ ibid T9114

⁴⁴ ibid T9114/5

In the development of MW39-45 (MW44/45 later became MW50/51), it was foreseeable that MW50/51 would be the most vulnerable to inrush. On either side of the Young Wallsend Colliery there was a dyke system. The dyke on the eastern side was approximately 14 metres wide, with a further zone consisting of cinders and dyke material totalling 30 metres [J. E. H. Romcke Ex.61.04 p.22 para.83]. The dykes ran from the north-west to the south-east, as was usual in the region. The dyke passing between the Young Wallsend Colliery, on one side, and MW 41 and 43, on the other, constituted a natural barrier to the expansion of the old mine. Mr Kevin Mathews, a former check inspector at the mine, said this:

- Q. So you understood then between panel 41 and the old workings there was this dyke; is that right?
- A. Yes.
- Q. And did you understand then that because there was this dyke the dyke would certainly protect whatever work was going on in the 41 panel from any inrush; is that what you are saying?
- A. It'd do me for a barrier, yes.
- Q. Pardon?
- A. It would certainly do me for a barrier.
- Q. All right, so you did not have too many concerns then as 41 panel was being developed for that reason?
- A. That's true, yes. Well, at the time I would say so but I knew the dyke was there and - - - ⁴⁵

Miniwall 50/51 had no such protection. The Young Wallsend Colliery, predictably, was obliged to develop between the two dyke systems, expanding to the south-east, and the north-west. The planned location for MW 50/51 would intrude into the south-eastern area.

Was the cost of draining the old workings a factor in the rejection of that option? Mr Porteous said this:

- Q. First of all, as you pointed out yesterday, there is a cost associated with draining?
- A. Yes, there is. There's a cost associated with everything.
- Q. In particular with draining, there is a cost in terms of infrastructure; in terms of piping; in terms of you as the Mine Manager having to go to the Board for approval, is that right?
- A. That's right.
- Q. And more than that there is a cost in terms of time?
- A. Yes.
- Q. And that was a significant factor in, for instance, the Wallsend Borehole area?
- A. It was.
- Q. And as we discussed yesterday draining in the nature of things requires a deal of forward planning, investigating, seeking permission, ultimately waiting for the water to percolate through the system and be disposed all takes time?
- A. Yes.
- Q. A barrier on the other hand simply sits there and supposedly offers you, the mine, protection from the hazard, is that right?
- A. Yes.
- Q. In other words it is certainly a cheaper solution?
- A. It is a cheaper solution but that would not be something that would be an over-riding factor.
- Q. No, but it is a factor?
- A. It's a factor, there are many factors.⁴⁶

Mr Porteous later explained the arrangements in respect of finance between the Gretley mine and the Board of Oakbridge:

- His Honour: And to what extent were you subject to direction from Oakbridge, either management or the board?
- A. The senior executives within Oakbridge took a vital interest and an ongoing interest in the mine at all times and I was expected to, to run the mine safely and within a budget that had been proposed to the company and as long as that was happening the

contact that I had with my immediate superior at the time was approximately weekly and if there were any issues I would discuss that with my superior.

- Q. So when you talk about a budget and you spoke about the infrastructure that you would need in order to drain the Young Wallsend Colliery, that I would take it would not be within the budget, existing budget, would it?
- A. It wasn't within this budget.
- Q. If you decided that you - in the interests of - well, it was best to drain Young Wallsend was it necessary for you to get somebody's approval or permission or get a fresh supplementary budget, what was going to be the position?
- A. I would have had to apply for capital to purchase the items that were needed and that would have, in the normal course of events, gone before the Board of Directors.
- Q. So in other words you would have to convince somebody that that was a desirable course?
- A. Yes.⁴⁷

In answer to Counsel Assisting Mr Porteous added:

- Q. Was cost ever a factor in your thinking in respect of the draining of the Young Wallsend Colliery?
- A. If I had thought that it was desirable to drain Young Wallsend Colliery cost would not be a major factor. It would be something that had to be told to the board but it would not inhibit an application or I believe the approval of that application.⁴⁸

No notes were made of the discussions between Mr Porteous and mine personnel in September 1996. The submission made on behalf of Mr Porteous said this:

⁴⁷ ibid T8956

⁴⁸ ibid T8959

"He did not keep a file. He did not write letters. He did not make notes of what inquiries he made or what his thoughts were. He was an experienced mine manager that gave proper consideration to the problems of the mine. He considered the possibility of draining the old workings of the Young Wallsend colliery thoroughly and competently, just as he considered at the relevant time the question of whether or not the old workings of the Wallsend Borehole colliery should be drained and why. Because of his experience he knew that there would be insurmountable problems with attempting to drain underground. He believed, because of the confidence instilled in him by his surveyor, that the plan of the old workings upon which he was basing his strategy was accurate and that if that were the case, then the safest option was to leave a barrier and not drain rather than be faced with other safety problems just as hazardous as that posed by a colliery full of water." ⁴⁹

There are, no doubt, many issues which may be adequately dealt with by discussion, without formality, and without the need to set pen to paper. However, the issue of inrush, especially in the context of miniwall 50/51, was of fundamental importance. It was obvious that lives depended upon getting that strategy right. Creating a document, whether it is a risk assessment, or a private note of important issues, is a discipline which has much to commend it. It requires reflection. It offers the opportunity of amendment, as the consequence of further reflection. It creates a record of important decisions. It can be shown to others, or circulated, for such insight as they may be able to provide.

Here, as with Mr Romcke, Mr Porteous had misplaced confidence in the accuracy of the plan, as set out in the preceding Chapter. If the plan were accurate, a barrier was a simpler, less costly and yet effective solution. There was no need to explore the problems which unquestionably would attend the safer alternative of draining the workings. The failure to respond

appropriately to the depiction issue (supra p.341), therefore, caused Mr Porteous, like Mr Romcke before him, to make only a superficial analysis of the drainage option, and to be deflected from further investigation by the difficulties which would arise in the implementation of that strategy.

6 THE BARRIER ISSUE

6.1 The Barrier Design

Having made the decision to isolate the old workings by means of a barrier, how wide should that barrier be? The *Water Dangers Committee* in 1927 said:

"No general rule can be laid down to determine the thickness or width of a barrier necessary to retain water. The circumstances of each case must decide the matter."

The *Committee* then listed the factors relevant to the issue of barrier width:

"The principal factors which have to be taken into account in deciding the width of a barrier are: -

1. The thickness of the seam and its depth from the surface.
2. The friability of a seam and its porosity.
3. The nature of the parting between the seam and its roof and floor.
4. The inclination of the seam and the direction of the barrier in relation to the inclination.
5. The maximum pressure of water to which it may be subject.
6. The porosity of the strata above and below and their tendency to close tightly in the waste.
7. In some degree, the system of working the minerals at the sides of the barrier, and the support that may be afforded by the worked out area, for example, by packing.
8. The degree to which its strength is diminished or increased by fault fractures and their direction.
9. The risk of disturbance by workings under or over the barrier." ¹

Professor B. K. Hebblewhite, the Professor of Rock Mechanics in the Department of Mining Engineering at New South Wales University, was retained by the Company to provide a technical commentary upon certain evidence given by Mr I. C. Anderson, to which reference will be made shortly. In the course of that commentary Professor Hebblewhite identified the following three purposes which the barrier at Gretley needed to fulfill;

- provision of a stable, vertical load-bearing regional support to carry overburden strata weight between adjacent areas of mine extraction,
- provision of an isolation barrier to prevent ingress or migration of water, air or gas from one side to the other,
- provision of a pillar or region of coal of sufficient width as to prevent excessive levels of induced, or abutment stresses caused by extraction on one side from adversely affecting mining conditions and strata control (to an unacceptable level) in mine workings on the other side.²

In designing the barrier each aspect must be separately considered. However, the calculation does not necessarily always compound (B. K. Hebblewhite T6335). In respect of the second purpose the *Water Dangers Committee* in 1927 said this:

"Generally it is clear that Mining Engineers have designed such barriers with a view to resisting the percolation of water, and the width of barrier necessary to prevent percolation is invariably greater than that required to prevent the dislocation or collapse of the barrier in such a manner as endanger life by inrush."³

² Ex.76.01 p.5

³ MFI 91 Vol.3 Report p.11

6.2 The Design Width at Gretley

Mr Anderson gave the following evidence:

- Q. What is an acceptable minimum width for one barrier between this particular hazard and the workings?
- A. During the discussion we are talking generically about barriers. In this particular case the specific barrier is a coal pillar, a continuous coal pillar, and the minimum width I believe appropriate to this hazard was 50 metres.
- Q. Is that subject to any proviso?
- A. Yes, providing that that barrier is intact, that there is no structural integrity problems with it. In other words you have got good contact between that coal pillar and the roof and the floor, that there is no geological structures running through the barrier that may weaken it or that there is no geological anomalies within the barrier itself which may ultimately lead to a failure of the barrier. ⁴

Mr Anderson was a member of the team at the New South Wales University responsible for the Manual of Pillar Extraction [Ex.28.03] concerned with, inter alia, pillar design (T2662). He is the Chairman of the New South Wales Pillar Extraction Committee.

What was the basis upon which Mr Anderson arrived at a barrier width of 50 m? Mr Anderson identified a number of matters. He said this, referring to the Borehole Rule, Clause 9, of the *Coal Mines Regulation (Methods and Systems of Working - Underground Mines) Regulation, 1984*, and its American equivalent:

- A. The legislation is a guide in itself that it describes 50 metres as a barrier and you must give some weight to

that. Secondly, there is experience from other places, particularly in the United States. Their legislation specifies 60 metres as a barrier width.⁵

Mr Anderson then identified a second basis, namely the approach of rock mechanics to the issue of pillar size. He said:

- A. With respect to this particular problem, that is determining the behaviour of that barrier, the general principle is that the width of a pillar - the ratio of the width of a pillar to its height may be used as a guide to its behaviour under load. So it is a little bit esoteric but I will try and put it into lay terms. If you had put load on to a particular coal pillar and the load exceeds its strength then the pillar will fail.

Mr Anderson then explained what he meant by "fail":

- A. ... it may fail violently, which means it will just simply disintegrate and blow up and there are recorded instances of those around the world and here in New South Wales where failure is instantaneous and has led to the loss of hundreds of lives. But it appears also that as pillars get wider the failure mechanism changes, it becomes what is known as gradual or controlled. So in other words people get ample warning that the pillar is not liking the load that is on it, and in fact the wider it becomes it reaches a point where the pillar for all practical purposes is indestructible. It can take whatever load you put on but it will compress, so the safety implications are not as severe. So in considering the width of this barrier there is no doubt that that barrier would not, under any circumstances fail violently. We are looking at the potential that if it did fail it would fail in a controlled fashion, which is slowly.

Q. This is a 50 metre barrier?

A. That's a 50 metre barrier and it is generally conceded

that pillars with the width to height ratio of around about 10 or 12 fall into that category of being indestructible. Anything above that is one of those pillars that will take whatever load is put upon it and not fail violently. From this point of view there was no doubt that the barrier would always be stable. What I was concerned about or would have been concerned about is how much compression would take place under any given load.⁶

The examination continued:

- Q. So for instance if you had a barrier of 20 metres as opposed to 50 and you had the water and the head of water on the other side, in other words you had not drained it, from a rock mechanic's point of view what would that suggest?
- A. From a rock mechanic's point of view that pillar may in fact be stable. However, even in its stable mode its deformation might be considerable in a rock mechanic's point of view which may then lead to gaps developing or fractures developing in the strata surrounding it which over time with a constant high head may well involve erosion of the pillar and hence ultimate failure.
- Q. Given that the width of the seam is I think 2.8 and a barrier of 20 metres would mean a ratio of what?
- A. Round about 7.
- Q. Which is?
- A. Which is just into the range where you would hope that it would be a controlled failure if it did take place, but certainly in the range where pillars have collapsed in the past. So the comfort zone is not very strong from a barrier point of view under those loading conditions with that high head of water.⁷

The person designing the pillar must recognise the inexact nature of the calculations. Mr Anderson said:

⁶ I. C. Anderson T1661

⁷ ibid T1662

- A. Rock mechanics is by itself acknowledged as being not exact. No one knows exactly the true strength of rock in situ, so there is always error and it is a greater level of error than we have where it is a man made material such as steel. As a result, having discussed this with probably the world's most foremost strata control expert, Professor Salamon, he assures me that if you can calculate to something plus or minus 10 per cent of the actual strength you are doing very, very well. And in reality most people would get plus or minus 20 per cent. So there has to be taken into account some error in the order of plus or minus 10 - 20 per cent in any calculation.⁸

Having fixed upon 50 m as the appropriate barrier width, Mr Anderson believed that the mine manager must then satisfy himself (no doubt with the assistance of his surveyor) that there is, in fact, 50 m of unworked coal (or thereabouts) between the old workings and the proposed development. That requires a painstaking examination of the plans of the abandoned colliery. Those plans may or may not enable the mine manager to say confidently that the barrier of the design width is in place. If there is uncertainty as to the accuracy or completeness of the plans, how should it be resolved? Mr Anderson said this:

- A. The only practical solution that I can offer would be to drill the barrier to determine the extent of the old workings and the possibility of any unrecorded workings.⁹

The feasibility of that suggestion will be examined later in this Chapter. The submissions made on behalf of Mr Porteous made the following statement in respect of Mr Anderson's evidence:

⁸ I. C. Anderson T1662

⁹ ibid T1672

"Mr Anderson, of course, insists on a proven barrier of 50 metres. The only way it can be proved is by drilling ahead."¹⁰

The company, in its submission, made the following assertion in respect of the submissions of Counsel (which, in turn, were based upon the evidence of Mr Anderson):

"Mr Kirby QC and Mr Hall QC argued during the Inquiry that, even where one does have available a plan which depicts, or includes a depiction of, old workings which has been certified as correct by a Surveyor as required under the Survey and Drafting Instructions, one is still not entitled to rely on such a plan. On that basis, one would never be entitled to rely on any plan of old workings, no matter when they were carried out or abandoned and whatever certification, if any, was given."¹¹

These statements misunderstand Mr Anderson's view. Mr Anderson acknowledged that there may be convincing reasons why a plan may be regarded as accurate, and complete. He provided an illustration. In 1991 Mr Ryan, a District Inspector, made certain recommendations in respect of a Section 138 application by the Gretley mine. The application related to Miniwall panels 15-23 [Ex.21.8]. The panels were adjacent to two sets of workings, both flooded. Mr Ryan's commentary upon the application included the following passage:

"Substantial barrier pillars have been indicated on the plan A-1991-4 between the proposed area and the old workings of Wallsend Borehole Colliery and the old Gretley No.4 Tunnel Goaf. Initially, the barriers were, in some cases, between 15 - 20 metres. At my insistence, these were increased to a minimum of 20T and are now at least 50 metres thick. I expressed my concern that since the old No.4 Tunnel

¹⁰ MFI 88 p.92 para.6.16

¹¹ MFI 91 Vol.2 p.316 para.14.6.24

workings were more than likely full of water, there was considerable risk to the current mine workings if pillars were of dimensions less than 20T. Modified plans have now been submitted and replace the original plans." ¹²

The reference to "20T" is a reference to twenty times the seam thickness, as Mr Anderson explained:

- A. That is going back a few years now, that was the current thinking but the principles are the same, and that barrier translated at 20 times the seam thickness of approximately or greater than that 50 metres. ¹³

Mr Ryan's report came to Mr Anderson as the Senior Inspector. Mr Anderson, as it happened, was familiar with the Wallsend Borehole workings. In 1986 he investigated a problem in that colliery, as he described in the following evidence:

- A. ... so I went down with the under manager in charge, the next senior official, I took a camera with a (flame) proof flash and plan and we walked through that area, walked around the periphery and up and down every roadway noting the position of the pillars and the conditions of them and I took photographs at various locations to show the extent and nature of rib crush and the impact it had on roadway width and pillar width and as a result of that I walked, along with Mr Medes who was the under manager in charge, along the barrier that would then exist and still does exist between what was Young Wallsend - sorry, the Wallsend Borehole 7-East headings and Gretley and I knew from that inspection that the plan was accurate and there were no unrecorded workings. The probability that unrecorded workings would take place after my inspection was remote because the area had

¹² Ex.21.08 p.10

¹³ I. C. Anderson T1695

been stripped of a conveyor belt and power and there was no mining equipment in there at all and it wasn't long after that inspection that the mine ceased operations altogether.¹⁴

Mr Anderson prepared a report on his inspection to which he annexed the photographs [Ex.21.9]. He was therefore able to respond Mr Ryan's recommendation in respect to the Gretley application in these terms:

"I am in agreement with the comments made by Inspector Ryan with respect to mine safety. In particular the 50m barrier (p.10) from known old workings. With respect to workings within the now abandoned Wallsend Borehole Colliery, I can say that prior to its closure I inspected those workings and believe the plan as shown is accurate."¹⁵

The evidence provided a further illustration of circumstances where the mine plan legitimately could be relied upon. As mentioned previously, the Gretley colliery acquired the Wallsend Borehole colliery lease in 1992. As part of its acquisition, it inherited the mine plan of that colliery, and other survey materials, including the surveyor's notebooks. The Chief Surveyor of Wallsend Borehole (Mr Barrington Walker), and the mine surveyor (Mr John Walker) were both still alive, and could be consulted if required. The Gretley mine in 1992 incorporated into its mine some of the Wallsend Borehole colliery workings in an area known as Main West. It did so by draining those workings, and then holing-in. The mine plan of the Wallsend Borehole colliery was found to be accurate.

Sometime later Mr Porteous wished to alter the layout of MW40, which was adjacent to the flooded Wallsend Borehole colliery 85 South Panel. He wished to establish a 50 m barrier between MW 40 and the abandoned

¹⁴ I. C. Anderson T1694

¹⁵ Ex.21.08 p.1

workings. Mr Porteous had the following conversation with Mr Murray, the mine surveyor, in 1994:

"I said: "I want to be sure that I've got 50 metres. How confident are you of their plans."

He said: "I'm confident because I've got their Record Tracings, and Gretley holed into Wallsend Borehole and there was only a slight discrepancy between the two sets of plans, about 2 metres. Taking into account how far their workings extended, it was within the bounds of good surveying practice." ¹⁶

Given the documentation in Gretley's possession, and its experience in verifying the accuracy of that material, it was reasonable for Mr Porteous to accept the accuracy of the Wallsend Borehole mine plan when planning the development of MW 40.

If the barrier selected were less than 50 m (say 40 m) then, notwithstanding the confidence of the manager in the plans, it would still be necessary to comply with Clause 9 (the Borehole rule), and drill ahead. The Borehole rule, relevantly, is in these terms:

"Bore Holes.

9. Where any workings in a mine approach within 50 metres of -
 - (a) a place which is likely to contain an accumulation of water ... and which may endanger the workings;
 - (b) ...
 - (c) disused workings which have not been

examined and found to be free from any accumulation of water, which may endanger the workings, ...

there shall be constantly kept at a sufficient distance in advance of the workings, not being less than 10 metres, at least one bore hole near the centre of the workings and sufficient flank bore holes on each side of the workings."

That clause has been considered earlier in this Report (supra p.237). The reason for the precaution was identified by the Federal Registry in respect of a similar U.S. rule in these words:

"The distances specified provide a safety factor to account for slight mining overruns, mapping errors, small deliberate omissions, and similar factors in cases where the position of the old workings are known with reasonable certainty." ¹⁷

6.3 The Company's response to Mr Anderson

The company responded to Mr Anderson at length. Certain arguments were directed to the merits. Others were in the nature of a personal attack. The company accused Mr Anderson of deliberately misstating certain evidence, even though that suggestion was never put to him when he gave evidence (MFI 91 Vol.1 p.204 para.9.8.20). Mr Anderson was accused of other things besides. It is plain from Mr Anderson's response (MFI 98) that the company's submission is, in some respects, mistaken. Where it is not mistaken, its accusations as to Mr Anderson's integrity are without merit. The Court accepts that Mr Anderson is a person of integrity. This Report will confine itself to the company's arguments on the merits. Those arguments were directed to two issues:

- First, the width of the barrier required to prevent inrush.
- Secondly, the proper construction of clause 9 of the Methods and Systems Regulations, and the practice in industry in respect of drilling ahead.

Each issue will be dealt with.

6.4 The Company's Analysis of Barrier Width

The company acknowledged that a number of witnesses, apart from Mr Anderson, referred to a "standard barrier" of 50 metres (MFI 91 Vol.1 p.208 para.9.9.1). Indeed, 50 m was the barrier width selected by Mr Porteous between MW 40, and the Wallsend Borehole flooded workings, and between MW 50/51, and the Young Wallsend Colliery. In respect of the latter Mr Porteous responded to a question from the Inspectors as follows:
[Ex.63.03 Q.37]

(Q.37) "... Why did you select the coal barrier to be 50m in minimum width? How did you determine that the barrier to be left did in fact have a minimum dimension of 50m and not say 45m or 55m?

(A.37): **50m is an accepted barrier width.**
I relied on plans produced by the Department of Mineral Resources, and the surveys done by Gretley staff." (emphasis added)

The company, however, said this:

"It is submitted that there is no such standard barrier prescribed in the NSW legislation. The notion of there being a "50 metre barrier" apparently arises from the wording of the

“drilling ahead” regulation, Clause 9 of the Methods and Systems Regulation. It defines the distance from the hazard or zone referred to within which if workings are to approach drilling ahead is to be carried out, but provides effectively for a barrier of 10 and not 50 metres.”¹⁸

Mr Anderson’s selection of 50 m was based partly on Clause 9 of the Methods and Systems Regulation 1984 (*supra* p.380). The company asserted that this was a misreading of Clause 9. That clause, in fact, identifies two distances, namely:

- 50 m, being the point from which drilling ahead must begin.
- 10 m, being the distance which must be drilled once the 50 m zone is reached.

Mr Anderson took the reference to 50 m as his guide. The company believed he ought rather to have taken the 10 m. The 10 m was the relevant measure because it can be demonstrated that 10 m of coal will keep the mine safe from inrush. The company said:

“It is also submitted that the legislation regards an *actual* barrier of minimum width of 10 metres between workings approaching such a place, and that place, as adequate.”¹⁹

The remaining 40 m in the zone identified by Clause 9 is a cushion against inaccuracy in plans. The company said this:

“It is submitted, therefore, that implicit in the New South Wales Regulation is provision for inaccuracy of a mine plan

¹⁸ MFI 91 Vol.1 p.208 para.9.9.1

¹⁹ *ibid* p.211 para.10.1.8

of up to 40 metres. This well exceeds the understanding by witnesses who were asked, as to the magnitude of the maximum inaccuracy in practice and of documented examples in New South Wales (see Exhibit 21.06). A requirement to know precisely where the old workings are "with certainty" as was put to several witnesses is not a requirement elsewhere, and, it is submitted, in practice is unachievable." ²⁰

The manager need not know "precisely where the old workings are "with certainty" ". The test is confidence in the plan, so that the position of the workings is known with "reasonable certainty" [Ex.83.09].

Professor Hebblewhite made what he termed a "theoretical calculation" of the minimum thickness of coal necessary to prevent "dynamic " bursting-type" failure in the circumstances of Gretley". In other words, what width of coal was needed to hold back the water within the Young Wallsend Colliery? Making a number of assumptions, Professor Hebblewhite calculated that 1.82 m of coal would resist the water pressure within the abandoned workings [Ex.76.01].

Professor Hebblewhite was, however, careful to underline the limitations of his calculation. He said this:

"It should be noted that it is extremely difficult to make this calculation as an exact determination, due to the considerable variability of the material involved, and the complexity of the actual geometry and loading conditions. It is, therefore, a best estimate using an appropriate engineering design approach. Factors such as cleating and structure in the coal, and weak or soft bands (eg. clay or mudstone) at the roof or floor contacts or within the coal horizon which lead to reduced friction 'slip' planes, may result in a weakening of the structural integrity of the coal face, or

web, as a barrier against the water pressure, and cannot be quantitatively accounted for directly in a design calculation. It is necessary to use large safety factors as a means of compensating for the effects of material defects such as these.”²¹

Referring to the calculation of 1.82 m, Professor Hebblewhite added:

“This thickness figure represent the ideal material and contact conditions for the hypothetical failure mode analysed, which would be expected to give rise to a dynamic bending failure of the coal web due purely to static water pressure acting against it.”

Professor Hebblewhite then applied a safety factor of 5. He said:

“As stated previously, it would be prudent to apply a significant safety factor to these figures (at least 5) to be assured that sufficient coal is in place to prevent this type of catastrophic failure from occurring. Application of a factor of safety of 5 yields a critical or limiting web thickness of 9.1m. Probe drilling lengths to establish the amount of solid coal present, should be determined with this in mind.”

Again, Professor Hebblewhite emphasised the limitations of his calculation.

He said:

“It is important to note that this determination of coal thickness is a simplification of reality, and is only in relation to this particular phenomenon. It does not take account of strata loading on the ‘beam’ ends if an extensive pillar existed of this dimension.”²²

The calculation was not a barrier analysis. Professor Hebblewhite said,

²¹ Ex.76.01 p.2

²² ibid p.4

referring to the other purposes which a barrier is obliged to perform:

“Determination of barrier pillar widths for vertical strata load bearing purposes, or to prevent gradual ingress of water, gas or ventilation leakage are all different issues not covered by this calculation presented above, which purely addresses the question of dynamic failure due to water pressure.”²³

The company drew attention to the similarity between Professor Hebblewhite’s calculation of 9.1 m, and the requirement in Clause 9 to drill ahead in increments of 10 m. It said this:

“Professor Hebblewhite’s critical web thickness of approximately 9 metres, based on a factor of safety of 5, is entirely consistent with the thickness implied in the “drilling ahead” regulation, Clause 9 of the Methods and Systems Regulation. This regulation requires, in effect, that in the circumstances therein set out, it is required that a minimum thickness of solid coal of 10 metres be proved by drilling.”²⁴

However, Professor Hebblewhite acknowledged that the similarity between the figure referable to the Gretley colliery (9.1 m), and the distance referred to in Clause 9 (10 metres) was really coincidental (T6283). If one varied any of the assumptions, or took a different mine, the outcome would change. For instance, Professor Hebblewhite acknowledged that the factor of safety was “arbitrary” (T6284), in that others may take a different view. A change in the factor of safety would alter the outcome, as would a different seam thickness, or a different assumed strength of coal [Ex.76.03].

The *Water Dangers Committee* 1927 received similar evidence. It said:

²³ Ex.76.01 p.4

²⁴ MFI 91 Vol.1 p.170 para.9.3.13

"It was experimentally demonstrated to us that very small blocks of coal will safely resist very high pressures. Experiments and calculations made by Mr. D. M. Mowat and Major H. M. Hudspeth were placed before us in evidence. These experiments though of interest, we do not regard as conclusive in respect of the strength of barriers. It is sufficient for us to point out that the strength of the seam itself is only one of the factors to be considered, and not in all cases the most important one. Expert evidence from South Wales showed that in certain seams of that area percolation would take place in the strata over the seam for long distances and that in such cases barriers were ineffectual." ²⁵

The 10 m in Clause 9 presupposes a mine drilling ahead, and to the side, from a narrow single heading (cf *Coal Mine Regulation Act 1912, S54, Rule 13*). That precaution is undertaken in preparation for a larger development which will follow. In the case of MW 50/51 three roadways were driven in the direction of the Young Wallsend Colliery (A, B and C headings) to enable the installation of the miniwall which would then extract 60 m blocks on either side [Ex.7.06]. The barrier, whatever its width, must then support the goaf created by that development. This is relevant to the third purpose identified by Professor Hebblewhite, namely the provision of coal of sufficient width as to prevent excessive levels of induced or abutment stresses (supra p.379). Professor Hebblewhite said this:

Q. Yes. In the case of barrier which is designed not simply to cope with the problem of the hazard posed by the Young Wallsend Colliery workings full of water but is also a petition (*sic*) between those workings and a larger development than a single heading, a development which includes a goaf and is quite broad
--- ?

A. Yes.

Q. - - - then one obviously goes beyond the sort of slender diaphragm that you were describing in the

- analysis which you undertook?
 A. Very much so.²⁶

The examination continued:

- Q. So, for that sort of development, obviously 1.82 metres would be manifestly inadequate as would 9.1 metres?
 A. That's correct, if it was a - as I say, a pillar of length much greater than its width, yes.²⁷

Professor Hebblewhite also dealt with the second basis used by Mr Anderson in identifying 50 m as the appropriate barrier, namely the approach of rock mechanics to pillar design. Professor Hebblewhite emphatically agreed with Mr Anderson that the pillar width to height ratio is a useful measure of behaviour with respect to strength (T6311). Referring to Mr Anderson's suggestion of a 50 m barrier, Professor Hebblewhite said:

"It may in fact be more than adequate, given his comment that a w:h ratio of 10 to 12 is indestructible, then a w:h of 12 in a 2.8 m seam is 34 m, which even allowing for up to 20% variation in strength accuracy, would result in less than 50 m."²⁸

Applying 20% to 34 m gives a barrier width of almost 41 m. Professor Hebblewhite was asked the following in relation to that figure:

- Q. But in terms of the figure that is arrived at dealing with simply this first purpose, 41 metres, applying those

²⁶ B. K. Hebblewhite T6306

²⁷ ibid

²⁸ Ex.76.01 p.7

various matters that you have set out, or he sets out and you have acknowledged as being reasonable on that issue, 41 metres is not terribly different to 50 metres, you would agree?

A. Well, it's a different - it's a different width, well and truly.

Q. Yes. Nine metres different?

A. Yes.

Q. That, taking account of only one aspect of the three aspects you have identified?

A. One component of one aspect.²⁹

Professor Hebblewhite acknowledged that there may be other reasons for suggesting 50 m was appropriate including "the issue of separation or partitioning the two sets of workings sufficiently apart to minimise effects of induced stresses, or to allow for uncertainty over location of edge of old workings, or to allow for weakness planes due to geological anomalies such as faults and dykes ..." [Ex.76.01 p.7].

Unfortunately, Professor Hebblewhite's brief was simply to provide a critique of Mr Anderson's evidence, and not to make his own calculations, or suggest an appropriate barrier width (T6332). Given the catastrophic consequences which were likely to follow miscalculation, and the consequential need for caution, the difference between the figure of 41 m and 50 m for the first purpose identified by Professor Hebblewhite (*supra* p.379) does not appear to the Court to be large. The approach suggested by the company taking a width to height ratio of 8 or thereabouts (MFI 91 Vol.1 p.186,188ff) is not sufficiently inside the "comfort zone" (to use Mr Anderson's expression T1662, *supra* p.382) in the Court's view. Mr Anderson's opinion in respect of barrier width appears to the Court to be reasonable.

6.5 Submissions in respect of Clause 9 (the Borehole rule)

The Department made the following submission in respect of Clause 9:

“... Parliaments throughout the history of New South Wales had addressed expressly the issue of mining near old workings and had designed a specific regime, namely the Borehole Rule, which had never failed previously in New South Wales.”³⁰

The company took a similar view. It pointed to the evidence of Mr Pala, a former mine manager at Gretley, which was in these terms:

Q. ... I rather gather from your answer that you would have contemplated the possibility that plans may be inaccurate?

A. Yes.

Q. But you think that 50 metres would cover any such contingency?

A. Yes.³¹

Elsewhere Mr Pala said:

Q. But that presupposes that you have confidence in the outline of the whole colliery so that you can fix the point from which you begin to measure the 50 metres?

A. I think - I think we had covered this last time in that the determination of the barrier I think contemplates that there may in fact be survey errors in those old workings and my view would be that the 50 metres would in fact have contemplated even the most extreme of those examples.³²

³⁰ MFI 92, p.128 para.C.5.13.2

³¹ J. A. Pala T5680

³² ibid T5731

Relying upon these and other passages, the company made the following submission concerning Mr Pala's evidence:

"He was quite definite in his evidence to the effect that the 50 metre distance in the drilling ahead regulation was to be taken from the plan, and provided for the maximum amount of potential inaccuracy in such plan." ³³

The company's submission, therefore, was as follows:

"It is also implicit in the provision in Clause 9 of the Methods and Systems Regulation and the accepted practice in industry that the dimension of 50 metres is taken from plans." ³⁴

Mr Porteous fixed a barrier of 50 m between the end of MW 50/51 and the Young Wallsend Colliery. The barrier was fixed by reference to the plan (sheets 2 and 3). Because Mr Porteous did not intend to mine within the area identified by Clause 9, namely the 50 m, he did not regard himself as obliged to drill ahead (T9077/8). It is this decision by Mr Porteous which is being defended. Because there was a substantial allowance for inaccuracy in Clause 9, and because that allowance had never previously been exceeded in Australia, therefore, it was argued, the company, and industry, were justified in assuming that inaccuracies in plans would continue to be of the same order in the future.

That assumption has already been dealt with (*supra* p.237). It was unwarranted. It ignored the overseas experience, which was relevant. Even local experience of inaccurate plans, as revealed to this Inquiry (*supra* p.245) demonstrated that such an approach was incautious. Further, it was

³³ MFI 91 Vol.1 p.219 para.10.3.3

³⁴ *ibid* p.214 para.10.1.13

an approach which ignored the commonsense implicit in the statement of the U.S. Federal Register: [Ex.83.09] (supra p.244) which distinguished between plans in which the mine has confidence ("where the position of the old workings are known with reasonable certainty"), and those where there is no such confidence ("where old workings are known to exist but their position is unknown or known with little confidence"). Only in respect of the former, is the mine justified in taking the perimeter of the plan, relying upon the 50 m zone to cover such inaccuracies as may exist, notwithstanding ones' confidence.

In respect of Clause 9 Mr Anderson made the following submission:

"We submit that the 50m distance in Clause 9 needs to apply from the location of the disused workings (subclause (c)). Therefore, in our submission unless the actual position of the old workings is known with certainty then the 50m must apply from the most likely position determined by a conservative, prudent method." ³⁵ (emphasis in original)

In other words, the manager (or surveyor) must first determine the reliability of a plan, since, if it is unreliable, the place which is likely to contain the accumulation of water will not necessarily be the perimeter of the mine, as shown on the plan.

Mr Anderson asserted that his approach was consistent with the approach in the U.S. Federal Register (MFI 98 p.44). The company responded by disagreeing with Mr Anderson's construction of Clause 9, and then adding these words:

"Mr Anderson's assertion that the included quote from Exhibit

83.09 is consistent with his submission is incorrect. The text clearly indicates that the specified distances allow a safety factor for plan inaccuracies, not that the extent of the inaccuracies has to be assessed and the distances applied from the assessed position. The text also indicates that it is when the position of the workings is unknown, or known with little confidence that drilling is necessary in excess of the minimum distances, these by inference being the distance as taken from the plans.”³⁶

The company, in this submission, appears to have shifted its ground. The submission contemplates the examination of each plan on its merits (as Mr Anderson advocates), rather than simply assuming that whatever the level of inaccuracy, it will be accommodated by the 40 m “cushion” in Clause 9.

The construction of Clause 9 suggested by Mr Anderson is sensible. Its application, in practical terms, can be illustrated from the evidence. Mr Knight, whilst a surveyor with BHP Collieries, was required to investigate the Redhead Colliery. The workings were known to be flooded. Mr Knight had a plan of the workings, and the surveyor’s notebooks. When he matched one with the other, he found that certain workings had not been charted (T6761). The discrepancy was approximately 30 or 40 metres (T6761). The mine manager, in these circumstances, would clearly not be justified in using the perimeter of the plan as the limit of the workings for the purposes of Clause 9. He would need to adjust that limit by reference to the information in the surveyor’s notebook. The “place which is likely to contain an accumulation of water” (Clause 9(a)) was 30 or 40 metres removed from the perimeter, as shown on the plan.

A second illustration was provided by a seam sheet produced by the company in the course of evidence. It was one of the 1:4,000 series, and

related to the Hartley Hill Colliery at Camden. The sheet depicted workings within the Hartley Hill seam. Those workings were encircled by a line. Against that line there was a warning in these terms: [Ex.4.03]

“WARNING LINE - position of workings in doubt 10m”

In identifying the point at which the mine is 50 metres from a place which is “likely to contain an accumulation of water”, the manager would plainly not be justified in taking the perimeter as drawn on the plan. To do so would be to ignore the warning. He must take account of the warning, just as he should take account of any information which tends to establish the likely location of the accumulation of water.

Having said that, it must be acknowledged that the present form of the Borehole rule, Clause 9, perhaps invites the sort of approach which the company, and the Department, suggested was widespread in industry, namely, measuring 50 m from the perimeter of the plan. The Court will return to this matter when formulating recommendations to the Minister.

6.6 Holing-in to the Old Workings to Locate them

Recognising that there may be considerable doubt as to the location of the Young Wallsend Colliery workings, Mr Anderson said this:

- Q. And is it necessary in your view to drill ahead to prove the full extent of the 50 metre barrier?
- A. Well, I believe if you are attempting to quantify or to try and reduce your level of uncertainty, that is to become confident about the position of the old workings, you have to drill into them at various points to locate them and then measure that position or that location of (holing) against the - at the purported

workings on the record tracing and then make a comparison between the two.³⁷

Professor Hargraves, commenting upon that suggestion, said:

"The holes would have needed to be sealed in both the zones of future development and extraction and also to maintain the integrity of whatever barrier was required between Gretley and the old workings. In my opinion such holes could not be reliably sealed either by cement grout with or without additives or by resin grout."³⁸

The company, in its submissions, rejected Mr Anderson's suggestion. It said this:

"With respect, Mr Anderson's opinion is simplistic ... We submit that it is noteworthy that the English, American and New South Wales legislation, aimed at preventing intrushes, require when approaching old workings, to prove by drilling where the old workings are *not*, not where they are. It would obviously be simple, if it was safe to do so, to provide that drilling be carried out to establish accurately where the old workings are, as Mr Anderson's "expert" evidence states.

It is submitted that the absence of such a provision in the respective legislative regimes is powerful evidence that it is not safe to so provide. Once a barrier is penetrated, even by a borehole, it ceases to be a barrier."³⁹ (emphasis in original)

Mr Hungerford, the General Manager of AMT Drilling Pty. Ltd. provided the Court with expert evidence in respect of drilling. The swarm of dykes which surround the Young Wallsend Colliery create difficulties in designing a drilling programme which will exclude unrecorded workings. Ordinarily one

³⁷ I. C. Anderson T1677

³⁸ Ex.79.01 p.18

³⁹ MFI 91 Vol.1 p.157/8 para.8.5.33

may have wished to drill from MW 41 or 43 towards the south-west, just beyond the limit of the workings of the Young Wallsend Colliery (as shown on the plan), in order to remove the possibility of unrecorded workings. Such a strategy, however, would involve penetrating the dyke and cinders zone. Mr Hungerford said this:

- A. ... the dyke is very hard so it'd require coring to get through it and cinder is an unknown quantity in terms of it can .. come in the form of a glassy type material that would require coring or it can come in the form of material that's like sand, it's got no strength and drilling into that or through that, negotiating that area would be next to impossible.⁴⁰

There would be a risk of losing the expensive drilling equipment in such an operation.

Where the manager is uncertain about the accuracy and completeness of the plan, what, then, are the possible strategies which are open? First, the area between the dykes, where the Young Wallsend Colliery may have expanded, may simply be abandoned. The mine would develop elsewhere (Hungerford T6593). Alternatively, the mine may drill towards the old workings, not intending to hole. Such drilling would need to be undertaken with a standpipe, since the possibility of accidentally penetrating the old workings must be recognised (T6593). In respect of that strategy Mr Hungerford said this: (T6593)

- Q. But assuming that you did not hole-in but you reached a location which was a certain location from which you then measured what you believed to be a suitable barrier, say, 50 metres, and set out your panel accordingly?

- A. Yes.
- Q. And had your drill pattern so they intersected and defined an envelope in the way that you have described, would that be a feasible alternative?
- A. Depending on the geometry of what you could achieve with the - with the drilling, yes.⁴¹

Mr Pala gave the following evidence which is relevant in this context:

- A. ... If I had any doubt whatsoever I would have - if I had that type of doubt, that level of uncertainty about the exact location of the mine plan, modern day drilling techniques let you drill 1000 metres. You can drill 1000 metres in a week. So, I guess what I'm saying is that I would have drilled two or three holes for that 1000 metres and it's not dissimilar to the methods that are used when laying out workings for outburst mining but prior to putting people into outburst mining conditions - and I guess this is the sort of thinking that I'm - I'm applying - is that you do do the drilling, you do take the sampling and you do confirm, if you like, that there is a safe zone within which people can work but they don't go outside - outside that safe zone ... I'm saying that would be my approach .. to these circumstances; setting up at the head of Cocked Hat Creek Headings and drilling out 1000 metres to satisfy yourself that you have that safe zone. There's some cost involved in it but if I had that level of doubt that's what I would do.⁴²

The third strategy was that suggested by Mr Anderson, namely the confirmation of the old workings by holing-in at a number of locations. Mr Hungerford made the following statement in respect of the feasibility of that suggestion:

"20. The principles involved in sealing gas holes are

⁴¹ F. Hungerford T6593

⁴² J. A. Pala T5913

appropriate for the sealing of water holes.

21. In the case of a borehole that is connected to a high head water body, sealing and filling of the hole may be achieved by:

- The sealing of at least one, preferable two, petro/metallic packers at the inbye end of the hole. Location of the packer in relation to the actual point of holing depends upon pillar rib conditions in the old workings.
- The installation of a grout/bleeder line to the end of the hole followed by pumping of an appropriate grout mix into the borehole to completely fill the hole.
- Following the setting of the cement mix it is possible to remove the standpipe and commence mining along the length of the borehole to any appropriate point.
- Design of the grout pumping arrangement needs to take into account the trajectory of the hole at the point of packer installation.”⁴³

Mr Hungerford undertook a similar task (using a standpipe and grout) at the Moura Open Cut mine, where gas was involved (T6544). With respect of the application of these techniques to a colliery full of water under pressure (such as at Gretley), Mr Hungerford said this:

Q. And I think you have also indicated that you have not personally undertaken that process?

A. True.

Q. It therefore being new to you, you would need to undertake certain preliminary design steps and testing phase in order to determine that what you set out as being capable of achievement is in reality able to be achieved. Is that --?

A. Yes.

Q. Am I right in thinking that it is your understanding ... that what you set out in paragraph .. 21, is capable of

being achieved with the technology which is available today?

A. Yes, I'd be confident.

Q. Pardon?

A. I'd be confident.⁴⁴

Mr Hungerford added:

Q. So, you are talking about obviously a very elaborate process?

A. It's probably an elaborate process that you - you'd contemplate going through - through a national research project that - to develop the technique so that it could be used in - in mines in the future, or so that it would be available to be used.

Q. Are there such research projects?

A. There are ongoing research projects funded by the coal industry - Coal Association, but this would have to be put in the usual process of an application and whether it was deemed adequate to get the support from the coal owners or whatever to develop that system.

Obtaining the grant, and undertaking trials, would obviously take time. Mr

Hungerford said this:

Q. What sort of time are you talking about?

A. Well, the application process probably takes nine months and you may - may do the trial over a period of several months.

Q. So that the company would then need to contemplate in that circumstance whether or not it wishes to maintain the barrier strategy, given those limitations, or whether or not it should simply drain the old workings?

A. Yes.⁴⁵

⁴⁴ F. Hungerford T6591

⁴⁵ ibid T6592

Drilling into the old workings to verify the plan would require a series of holes, each with a separate standpipe (T6588). Mr Hungerford said this:

- Q. So a deal of work would be necessary, I gather, from your point of view to enable the mine to find out precisely where the limits of those workings were?
- A. Yes.
- Q. All pretty expensive work, I suppose?
- A. Yes.
- Q. Cheaper in the long run to drain, or you do not know?
- A. Don't know.⁴⁶

Given the experimental nature of re-grouting a barrier at this point in time, Mr Anderson's suggestion may not be practicable. Assuming it were impractical, and yet serious doubts remained concerning the accuracy or completeness of the plans, the manager would then be obliged either to revert to the alternative strategy of draining the old workings, or abandon the area.

7 RISK ASSESSMENT

7.1 The Process of Formal Risk Assessment

It is fundamental that mine managers should identify risks or hazards in mining in order that these may be removed or their potential for harm be minimised. In the past mine managers seem to have undertaken that task with minimal formality, calling upon others to provide assistance where that was thought useful.

The process of formal risk assessment is relatively new. It has been described as a "management tool". The manager appoints a team to identify the risks in a proposed development, and to devise a strategy for dealing with them. Mr Anderson provided a useful definition in the following evidence:

- A. A risk assessment is the procedure of identifying a hazard, then quantifying that hazard, making a decision as to whether that hazard is acceptable or unacceptable and then designing a procedure to either eliminate the hazard altogether or if that's not practicable to manage the hazard by placing a number of barriers between that energy source, the hazard, and individuals. That is a procedure of designing and implementation that is typical management from that point on.¹

The advantages of having a team are obvious. Each member brings to the task different expertise and experience. A recent publication by the Department (*Risk Management Handbook for the Mining Industry*, May 1997) said this:

"No single person has complete knowledge. Further, while

¹ I. C. Anderson T1649

we may be aware of some of the fields of knowledge which we know little about, we cannot know of information which we have never heard of. We all have "blinkers", and are unable to comment on what is outside our field of vision." ²

Mr Pala, a former manager of Gretley, made the following statement:

"In my experience, some of the best suggestions for improvements in mining procedures emanate from the input and thoughts of employees. It really reinforces the adage that your people are your most valuable asset." ³

Drawing attention to that statement, Counsel Assisting put the following question to Mr Pala:

- Q. The same goes for risk assessment, is that right, that it is a demonstration of, again perhaps a cliché, but something which is nonetheless true, namely that two heads are better than one and a group of heads, especially experienced heads are better than a single individual, is that right?
- A. Yes, that's correct. ⁴

Mr Kininmonth gave the following evidence in respect of formal risk assessment:

- Q. But do you see advantages in that sort of approach?
- A. I do. I think it means that it is probably necessarily a way in which a number of people have an input and therefore it's less likely that some things will be overlooked... ⁵

² Ex.17.15 p.13

³ Ex.57.04 p.7 para.32

⁴ J. A. Pala T5720

⁵ R. J. Kininmonth T1778

A risk assessment team, having undertaken the analysis, is obliged to produce a report. That is an important discipline. The report typically will break down the operation into steps or tasks. It will then identify the risks associated with each task, and suggest the means by which those risks can either be eliminated or at least ameliorated.

The company produced, amongst its discovered documents, two risk assessments which had been undertaken at the Gretley mine before the inrush. Both were impressive documents. The first was undertaken in November 1992, when Mr Pala was the mine manager [Ex.21.10]. Mr Pala had the task of incorporating the workings of the recently acquired Wallsend Borehole colliery into the Gretley mine. The Wallsend Borehole colliery was flooded, and had to be drained. The process of dewatering obviously required boreholes, which served also as a means of confirming the location of those workings [Ex.57.04 p.11 para.55]. However, samples of the atmosphere within the abandoned colliery, once drained, revealed gases within the explosive range [Ex.57.04 p.11 para. 55]. In these circumstances Mr Pala appointed a team trained in "risk review methods" to provide him with a "risk hazard analysis" [Ex.21.10 p.6]. Mr Pala, in the following evidence, explained why he took that step:

- A. As.. mine manager the circumstances that I look at to trigger a risk assessment are those where either .. we are going to contemplate something that .. there is a level of risk such .. as the holing-in and we need to have a clear set of steps to follow or if .. there is some lack of clarity with respect to what approach ought to be taken in some .. circumstances I find ... that risk assessment process does help me as a mine manager and is a good set of tools in that regard.⁶

As a result of the analysis a very specific procedure was identified, under the following headings:

- "a) Before starting to drive sequence (A) the following will be done ...
- b) Driving sequence (A) and (B) until 3M to hole (refer plan 3) ...
- c) To drive last 3M using Auger to be done on Saturday 28th and Sunday 29th November, 1992 ...
- d) Procedure after both sequence (A) & (B) have the 1M dia hole in them (refer plan 4) ... " ⁷

Under each heading the precautions to be taken at each stage were identified. For instance, in respect of sequence (c), the final holing-in to the Wallsend Borehole Colliery, fourteen specific matters were listed, of which the following is a sample:

- "1. Minimum number of people underground at the time.
- 2. Colliery Rescue Team on standby on surface.
- 3. Communications, fireline pressure and flameproof parts checked.
- 4. Operator and Undermanager only to be in face area while cutting.
- 5. Firehose to be used to keep auger cool and dust suppressed..." ⁸

The other formal risk assessment undertaken by the mine before the inrush related to MW35-36. It is undated. However, that development proceeded

⁷ Ex.21.10 pp.8-11

⁸ ibid p.10

during the time Mr Romcke was mine manager. Approval to extract miniwall 35-36 was given on 8 March 1994 [Ex.28.01 p.20 para.80]. The original proposal was to extract a miniwall block (miniwall 36) on the eastern side of a section of workings of the Wallsend Borehole colliery which remained flooded (85 South Panel). The plan was to drain 85 South Panel from the surface, and to complete the dewatering from underground. The gate roads associated with miniwall 36 were to pass within 15 metres of the Wallsend Borehole old workings [Ex.13.35]. Mr Romcke in these circumstances arranged for a risk assessment to be undertaken. The first page, entitled "Overview of mining sequences", identified "High Volume Water Inrush" as a risk associated with the development [Ex.6.13]. The broad control measures established to deal with that risk were as follows:

- Barrier left and proved by drilling
- Monitoring of water levels at Harris Street pump.
Monitoring of water pressures at stand pipes "C" 17 85 South
- Awareness of Deputies and crews regarding water make and geology encountered and ensure reporting of facings, faults, etc. and any water make.⁹

The assessment then considered in greater detail the risks associated with each task. The first task was described as "Drilling Heading Towards Wallsend Workings". The risks associated with that task were described in these words:

- **Heading not as drawn on plan of old workings.**
- **Survey and Deputy distance could be incorrect on old plan and 50m distance from Wallsend Borehole Workings may be encroached.**
- **Geology - faults and planes of weakness in coal or strata. This may lead to nuisance water make - not a**

major threat.

- Expected water head 6m (currently 30m)
- Harris Street pump does not drop water level to 6m head.¹⁰ (emphasis added)

It will be noticed that one of the risks identified was the possible inaccuracy of the plans. The control measures to be established to deal with these risks were described in these words:

- Commence forward drilling from 17 C/T B Heading overdrive.
 - 2 Holes minimum required to ensure position of Wallsend Borehole Headings also a Flank hole to be drilled at 17 C/T to prove B17-18 won't hole old workings.
 - Surveyors to monitor and maintain survey points of both headings and drill holes.
 - Instruct Deputies to report any anomalies encountered in coal or strata.
 - Keep monitoring Harris St. pump to obtain accurate water make and head.
- IF NOT DROPPED - RE-ASSESS RISK¹¹
(emphasis in the original)

In respect of the task identified as "miner to drive B17/18 C/T", the risk of holing-into the old workings was recognised. The following control measures were proposed:

- 1st hole from 17 C/T must be drilled to eliminate this risk.
- Crews to be made aware of importance of monitoring width and centre of heading.
- Crews to observe and report any alterations in water make into heading.

¹⁰ ibid p.2

¹¹ ibid

- Crews to receive briefing on proposed procedure.¹²

7.2 When should a Formal Risk Assessment be Undertaken?

Mr Anderson identified the circumstances in which he believed a formal risk assessment should be undertaken. He said this:

- A. ... My understanding risk assessment would be a procedure conducted when there has been the introduction of a new piece of equipment or a new technology or a new mining method at a mine. Also when there has been a significant change or modification made either to a procedure at the mine or to a piece of equipment or when there's been an identification of a new risk or a new hazard that may have to be dealt with at the mine.¹³

The Handbook recently published by the Department identified the following circumstances, amongst others, as appropriate for a risk assessment:

- wherever there is a particular risk which could have serious consequences and where the causes and adequacy of safeguards are not entirely clear or understood;
- wherever there is a change planned to equipment, machinery, procedure, manner of working etc.¹⁴

Neither Mr Romcke, nor Mr Porteous saw the need for a risk assessment in respect of the development MW39-45, and specifically in respect of the hazard posed by the Young Wallsend colliery. Two issues arise:

¹² Ex.6.13 p.4

¹³ I. C. Anderson T1648/9

¹⁴ Ex.17.15 p.19

- First, had a risk assessment been undertaken, is it likely that it would have uncovered the error in the depiction of the Young Wallsend colliery, and have prevented the inrush?
- Secondly, would one have expected a prudent mine manager in the position of Mr Romcke in 1994, and of Mr Porteous in 1994-6, to have undertaken a risk assessment in respect of the Young Wallsend colliery?

Each issue will be examined in turn.

7.3 Is it likely a Risk Assessment would have detected the Error?

It can be assumed that each member of the risk assessment team would have recognised the potential for harm of the water within the Young Wallsend Colliery. What issues is it likely the team would have considered?

Mr Pala said this:

- Q. So that the issue for the risk assessment team would be what control measures need to be put in place in order to avoid that hazard or to minimise that risk?
- A. Yes.
- Q. Do you agree that it would be likely that someone on that risk assessment team would seek to identify what is known about the Young Wallsend Colliery?
- A. Yes, it would be likely.
- Q. And that it is likely therefore that the risk assessment team would require the production of the plans or a description at least of what is there, is that right?
- A. That's possible. ¹⁵

Mr Pala added:

- Q. .. The proposed development comes within 50 metres of the extremity as depicted of the Colliery, is that right?
- A. Yes.
- Q. Is it not therefore likely that questions would have been asked as to whether or not the plan was up-to-date and whether or not one had confidence that that extremity was reliable?
- A. I guess that's likely, yes. ¹⁶

Mr Pala was unsure whether it would have occurred to a risk assessment team that all workings were in the one seam (T5730). In that context, Mr Pala said this:

- Q. No. I am not suggesting it would. It may have but I am not suggesting it would. But the issue as to whether or not the plan was reliable and up-to-date would surely have occurred to the team because that really is the issue, is not that right?
- A. Yes, I - that's likely to have been one - one of the issues.
- Q. Once that question is posed then it creates the need to demonstrate that it is reliable and up-to-date, is not that right?
- A. That would be one of the processes.
- Q. And once that need is created then one begins the detective work of tracing back the paper trail, if I can use that expression, in order to reach a view as to that issue?
- A. Yes.
- Q. That examination may or may not ultimately come up with an interpretation that everything is in the one seam but it is likely, would you agree, to identify that there has at some point in time been an interpretation of sheet 1 by someone?
- A. I guess that's possible, yes.

- Q. And once that is uncovered as having occurred then the possibility of a mistaken interpretation is again the very sort of issue which a risk assessment is there to identify as one possible loss scenario, is not that right?
- A. Yes, I guess so. I guess so.
- Q. So that you get to a situation in that circumstance where the risk assessment team examining whether or not that interpretation is correct may either come to the view that the interpretation is correct, incorrect or they cannot reach a view?
- A. That's - that's some of - some of the possible outcomes or they may - they may do other things.¹⁷

The Chief Inspector of Coal Mines, Mr McKensey, gave evidence along similar lines. He said:

- Q. Would you agree, Mr McKensey, that if a risk assessment had been undertaken in respect of 50/51 panel or any part of the development which surrounded the Young Wallsend Colliery that it would very likely have thrown up the issue of the reliability of the plans of that Colliery?
- A. I believe a competent risk assessment would have brought that to question.
- Q. Those in the risk assessment team would no doubt have asked for details of the research which had been undertaken in respect of that issue in order that they can understand any conclusion that may have been reached?
- A. I would think it would probably go that way, yes.
- Q. Would you see that as a desirable process?
- A. It certainly would have been, yes.¹⁸

Mr Porteous, likewise, acknowledged that the central issue, concerning the reliability of the plans of the Young Wallsend Colliery, would have been examined by a risk assessment team. He said this:

¹⁷ J. A. Pala T5730/1

¹⁸ B.R. McKensey T7032

- Q. Now, it is likely that members of the risk assessment team at some stage would have asked questions about what is known about the Young Wallsend Colliery?
- A. Yes.
- Q. It is likely that plans would have been produced to that risk assessment team and an analysis made of those plans and what they showed?
- A. Yes, that's possible.
- Q. And it is likely therefore that the reliability of the plans in terms of their accurate depiction of the extent of the workings would have been examined as an issue?
- A. Yes.¹⁹

The submissions on behalf of Mr Porteous, however, asserted the following:

"It is submitted that had a risk assessment been done the issue of the accuracy of the plans would have been an issue examined by the risk assessment team but that the team would have undoubtedly deferred to the mine surveyor's expertise in their examination of the issue just as the mine manager had done."²⁰

The company's submission made the same claim (MFI 91 Vol.2 p.269 para.13.8.6). Mr Flett, a Senior Inspector with the Department, made the following comment, which has some force:

"Since the Gretley disaster, I have spent a lot of time going back over the events prior to the incident and have pondered whether the outcome would have been different if a formalised risk assessment had been carried out as regards approaching the Young Wallsend Colliery workings. I would like to believe that it would have uncovered the mistake in the seam correlations made in the plans but, in reality, I am doubtful that this would have been the case as the plans

¹⁹ R. M. Porteous T9065

²⁰ MFI 88 p.117 para.7.26

were so well entrenched and accepted - both at Gretley and adjacent mines."

Mr Flett added:

"I believe if a formalised risk assessment had been carried out prior to the Gretley incident, it would probably have shown that when the probability of this type of incident occurring was examined, in view of the wide acceptance of the plans and the barrier of a fifty metre exclusion zone, I believe the probability of holing would have been rated quite low. Perhaps a slightly wider exclusion zone may have been adopted, in addition to that which was adopted and also specified in the regulations, but even if the exclusion zone had been widened; I believe it is very unlikely to have been sufficiently wide to have prevented the tragedy." ²¹

That suggestion was adopted by the company in its submission, which was as follows:

"We submit that the outcome of a formal risk assessment would at its highest be a decision to commence drilling some probing holes designed not to penetrate old workings and only to test some 10 metres ahead of the goaves proposed to be developed, at 70 to 100 metres from the position of the old workings as shown on the plan. We submit that this would not have avoided the inrush." ²²

It is, of course, possible that a risk assessment team would have deferred to a surveyor on an issue which related to plans. But they may not have done so. Indeed, the Court believes it likely that a team, or some members of it, would not do so. One of the advantages of a formal risk assessment is that it encourages the questioning of assumptions, as Mr Porteous acknowledged:

²¹ Ex.73.01 p.39 para.99

²² MFI 91 Vol.2 p.389 para.15.8.14

Q. If I could return just very briefly, Mr Porteous, to the issue of risk assessment and one of the advantages of risk assessment can I suggest, is that the process, the discipline is designed to uncover what may be assumptions which underlie peoples thinking, that is one of the advantages, is it not?

A. It is.

Q. And unstated premises behind their thinking?

A. Yes.²³

Mr Porteous, for instance, assumed that RT 523 sheets 2 and 3 were the only plans relating to the old colliery available from the Department. He was not aware of the copy mine plan (RT 523 sheet 1). Referring to that assumption, Counsel Assisting put the following question to Mr Porteous:

Q. Now, that sort of assumption is the very sort of thing that might have been investigated and exploded, if you like, by a risk assessment team looking at that issue, do you agree?

A. It may have.

Q. That, of course, may have led to an examination by that team or certain members of it of sheet 1 and that in turn may have led to a very different perspective on the problem?

A. Yes, I believe the members of the team would defer to the expertise of the mine Surveyor in consideration of this problem.

Q. They no doubt would require him to produce evidence before them which they would then analyse with his assistance?

A. Yes.

The evidence of Mr Porteous continued:

His Honour: I mean, the mere presence of such people as part of a committee or a group might spur the Surveyor to be more

diligent in his work, do you think?

A. I believe the Surveyor was diligent, your Honour.

Q. I am not asking you that, you see, I am asking you for your opinion on the matter I put to you: might spur the Surveyor to be more diligent?

A. Yes, your Honour.²⁴

Mr Hall QC.,made the following submission:

"It is submitted that in several instances persons in the mine management hierarchy demonstrated, by their answers to questions in the course of the hearing, an attitude of mind which appeared to make assumptions and act on them without questioning whether or not they were valid. Similarly, on several occasions, conclusions appear to have been readily arrived at (eg, that no investigations of a particular matter were required) rather than maintaining an open or a questioning mind. A tendency towards closure rather than maintaining a questioning and open mind is an attitude fraught with danger."²⁵

That general observation has some validity. Earlier, this Report identified certain assumptions made by Mr Porteous when examining the plans produced by Mr Murray, which included:

- First, that plans circulated by the Department as the record tracings were accurate, and could be relied upon
- Secondly, that a plan certified by a surveyor as accurate could be relied upon
- Thirdly, that old plans were accurate except perhaps for a "handful of metres", and that protection against such inaccuracy was provided by Clause 9 of the

²⁴ R. M. Porteous T9074

²⁵ MFI 87 p.18 para.2.3

Methods and Systems Regulations (the Borehole Rule) (supra p.237).

Each of these assumptions was unwarranted, as previously demonstrated (supra Chapter 4). Other assumptions were made besides. Mr Porteous, and indeed Mr Romcke, either assumed or made no enquiry in respect of the following:

- That Mr Murray had been to the Department of Mineral Resources
- That Mr Murray had obtained from the Department all the material it had available relating to the Young Wallsend Colliery
- That Mr Murray had viewed the original plans
- That Mr Murray had examined the Abandonment Register
- That Mr Murray had determined whether or not there was an Abandonment plan
- That Mr Murray had undertaken historical research into the old colliery
- That Mr Murray had determined that the plan was up to date and accurate

For the reasons set out in Chapter 4 of this Report, the Court believes that Mr Murray did none of these things. It is highly likely that a team with responsibility of formulating a strategy in writing for the manager would have explored these, and related issues. Although the depiction of the Young Wallsend Colliery was entrenched, as Mr Flett has suggested, it only needed one individual to enquire about the source documents for the mystery to begin to unravel.

7.4 Should Gretley have undertaken a Risk Assessment?

Mr Anderson gave the following evidence, referring to the miniwall panels which were adjacent to the Young Wallsend colliery:

Q. Now, when you come to the development comprising 41/43, 50/51, would risk assessment be required in those locations?

A. I believe so because of the presence of the Young Wallsend colliery and known to be full of water. A risk assessment should have been done to handle mining in and around that particular hazard. It may not have been necessary to do it for every panel but if one had been done which had developed as a result of that assessment a plan of management for the area you may need to have only done it once.

Q. Only done it once, in other words if you confront the hazard of the Young Wallsend colliery when you were developing 41, which chronologically was the first panel extracted, then you may not need to do it again for 43 or 50/51?

A. Well, that's correct, it's depends upon the management plan that you develop. If there was a programming of drilling, another form of exploration perhaps that satisfied you where the location of the workings were in stages, it wouldn't be necessary to do a risk assessment for every subsequent panel.²⁶

Mr Tapp, the Northern District check inspector for the CMFEU, gave this evidence:

Q. Each of those panels, or certainly 41, 43, 44, 45, as you will see surround in various locations the old workings of the Young Wallsend Colliery?

A. Yes.

Q. Do you believe that according to the practice of industry as you understand it, that a risk assessment in that situation would have been appropriate?

A. Yes.

- Q. Why do you say that?
 A. My experience when you're dealing with old workings is that you can never trust where they are, and I say old workings. Anything - anything ---
 Q. What do you base that upon?
 A. Quite a number of years ago - on experience basically
²⁷

Mr McKensey on the other hand, gave the following evidence:

- A. Certainly I'm aware of the risk assessments that I've asked for, as part of approvals and exemptions and I've become aware of things I pick up on hearsay, but I don't believe I'm in a position to have a full knowledge of what risk assessments are done outside of those areas, outside of my - us - requiring them under approval or exemption situations. Now, I - we have not done a survey to find out just how frequently they're used and I think it's very, very - my impression is it's very, very variable. Some companies would do them not at all and some companies, I'm guessing, are starting to get into the practise of using them as a more - more regularly as a management tool.²⁸

Mr McKensey, in this evidence, refers to "approvals and exemptions". When new machinery is introduced into a mine, Mr McKensey requires, as a condition of approval (under Clause 6(2) of the *Coal Mines Regulation (Approval of Items) Regulation, 1984*) the preparation of a risk assessment. To obtain an exemption from the Regulations under Section 174(5) of the *Coal Mines Regulation Act 1982*, the applicant is obliged to demonstrate that the safety regime proposed is at least as safe as that set out in the Act and Regulations. A risk assessment is a recognised means of demonstrating that fact (T7036).

²⁷ J. J. Tapp T3979

²⁸ B. R. McKensey T7030

However, in the circumstances of an application under Section 138 of the *Coal Mines Regulation Act 1982*, Mr McKensey did not see the need to direct a risk assessment (T7031). Indeed, a number of witnesses drew attention to the Department's Guidelines for Section 138 applications [Ex.17.01] and suggested that compliance with those guidelines was itself a form of risk assessment. Mr Ryan, for instance, said this:

- A. .. I'm not familiar with what the actual application from Gretley was for the 138 approval, but by in large the format of our 138 applications and all the industry works on this, is, if you like, a risk assessment, because the manager's required to address issues such as flammable gas, noxious gases, uncontrolled collapse of roof, in-rush of water, geological anomalies, and they're all part of it, and I would think that in broad terms that is a risk assessment because he's actually been asked or instructed under our guidelines to address those risks and those issues. Now, how far he goes with that risk assessment, if you like, is another matter.²⁹

Upon the basis of this, and other evidence, the company made the following submission:

"True, Mr Ryan states that the format and the manner in which those risks are addressed may not be akin to a formal risk assessment, but it is our submission that the 138 process as a whole is an adequate form of risk assessment similar to a formal risk assessment, and if properly carried out, adequately addresses the risks and hazards of mining."³⁰

The submission on behalf of Mr Porteous took a slightly different view. It said this:

²⁹ A. A. Ryan T4535

³⁰ MFI 91 Vol.2 p.262 para.13.4.8

"The preparation and lodgment of an application under section 138, in accordance with the Guidelines, is not the same thing as a formal Risk Assessment, but it does require an analysis of potential risks or hazards." ³¹

The Department, on the other hand, made the following submission:

"The s.138 approval process is not a substitute for the process of risk assessment simply because they are different things. Therefore notions of adequacy are not relevant." ³²

Whilst it is unquestionably true that there are similarities between a Section 138 application and a risk assessment, they really are quite different. First, a risk assessment is undertaken by a team. The Section 138 application, however, is the responsibility of the mine manager. He may consult as many or as few people as he believes necessary.

Secondly, the level of detail concerning the chosen strategy is quite different. One need only compare the identification, step by step, of the procedures devised by Mr Pala, and his team, when holing-in to the Wallsend Borehole colliery described above, with the following which is a description of the strategy to avoid inrush from the Young Wallsend colliery in the Section 138 application:

"Young Wallsend Colliery worked the Young Wallsend and Borehole Seams. These workings are known to be filled with water. Drilling ahead of workings will be carried out when approaching the old workings in the Young Wallsend Seam and a sufficient barrier will be left between the old workings and extraction panels to maintain the safety of the current workings. The Borehole Seam workings are limited to single or two heading driveages, adjacent to MW42. The

³¹ MFI 88 p.107 para.7.17

³² MFI 92 p.135 para.C5.23.1

interburden is 18m thick and these workings do not pose a danger to Gretley workings. The old workings in the Borehole Seam, adjacent to MW45 are first workings only. The interburden will be intact, providing a separation between the old workings and Gretley miniwall panels." ³³

The analysis of the holing-in procedure of the Wallsend Borehole colliery by Mr Pala runs to some twenty-one pages with Annexures, whereas the Section 138 application is eleven lines, (thirteen as reproduced above).

Thirdly, the purpose of each document is quite different. The risk assessment is ultimately a protocol developed to guide and instruct those who participate in the operation. The Section 138 application is designed to convince the Department to approve the application. It canvasses a number of issues, including subsidence, which are of no interest to those who will be involved in the extraction of the coal once approval has been given. The Section 138 application is not a document used for instruction of the workforce, and would not ordinarily be seen by miners.

Returning to the issue as to whether industry practice required a risk assessment in respect of the hazard of the Young Wallsend colliery, Mr Pala, who was the manager at Gretley before Mr Romcke, said this:

- A. ... On looking at the example of the Young Wallsend colliery situation, again, my understanding from what I've seen over the last .. few days is that in .. my mind the application of the barrier would be more than adequate to compensate for the sort of .. doubt that .. there may have been and .. that's why I say ... I haven't had anything put before me that would .. necessarily lead me to undertake .. a risk assessment. There's nothing I've seen to date that would sway me

in that matter.³⁴

As mentioned, neither Mr Romcke nor Mr Porteous saw the need for a risk assessment. Mr Porteous provided the following answer to the inspectors in which he identified his reasons for not having done so:

"Q29: Was a risk assessment conducted on 50/51 panel? If not: Why not? If yes: What were the findings of that assessment?

A: No.

I relied on plans produced by the Department of Mineral Resources, plans produced by neighbouring collieries and plans produced by the Mine Surveyor, and implemented a 50m barrier around the Young Wallsend Colliery workings."³⁵

Mr Van Dijk, the District Inspector responsible for Gretley, gave his understanding of the use of risk assessments by industry in the period prior to the inrush:

A. A new mining method would have a risk assessment or a risk assessment would be useful but to methods of mining in general that is not at the moment conducted so far as I'm concerned.

Q. Do you mean by that, therefore, that it is not regulated by law?

A. Risk assessments aren't a requirement by law.³⁶

Mr Shacklady, a former District Inspector, had a similar understanding (T1275).

³⁴ J. E. H. Romcke T5862

³⁵ Ex.63.3

³⁶ F. J. Van Dijk T4616

In March 1997 the Department published certain draft regulations which had been framed by the Joint Safety Review Committee. The committee comprises representatives from industry, the unions and the Department. Clause 7 of the *Coal Mines (General) Regulation 1997*, though not requiring risk assessment as such, will, if proclaimed, no doubt, promote its use. It is in these terms:

"7 Assessment of, and dealing with, risks to health or safety

A manager who becomes aware of a risk to health or safety must (within his or her capability) assess the risk and deal with it in the following order of priority;

- (a) eliminate the risk,
 - (b) control the risk at source,
 - (c) minimise the risk by means that include the design of safe work systems,
 - (d) in so far as the risk remains, provide for the use of personal protective equipment."
- (emphasis in the original)

What, then, was the position in respect of the use of risk assessment before the inrush? To what extent had it become part of industry practice, such that a manager might fairly be criticised if he did not avail himself of it?

The technique of risk assessment was, before November 1996, a relatively new phenomenon. It was not required by legislation. It was not required by the Department as part of a Section 138 application. There was no published industry standard defining when it should be employed. It is perhaps not surprising, therefore, that its use was patchy. Some managers

embraced it more readily than others.

No doubt the nature of the risk, and the particular circumstances ought to determine whether risk assessment should be used in a particular case. Here, the risk was serious. Fatalities and catastrophe for the mine was certain if there were an inrush [R.M.Porteous T9256]. The obligation upon the mine manager was, moreover, expressed in absolute terms under Clause 8 of the *Coal Mines Regulation (Methods and Systems of Working - Underground Mines) Regulation 1984*. He was obliged to take such steps as were necessary to prevent inrush. As it happens, time was not pressing. A number of panels had to be extracted (MW 39-40) before the mine would begin its encirclement of the Young Wallsend Colliery. Indeed, Mr Pala said this: (T5735)

Q. But is there any disadvantage in doing a risk assessment?

A. I couldn't think of any disadvantage.

Mr Romcke and Mr Porteous were both familiar with the technique of risk assessment. Both had employed it to advantage in the past [J. E. H. Romcke T6089; R. M. Porteous, T9060]. The Court, in these circumstances, would have expected Mr Romcke and Mr Porteous to have recognised the importance of using risk assessment in reaching an understanding of the hazard of an old colliery, and in formulating an appropriate strategy to deal with that hazard. By failing to use risk assessment they denied themselves the benefit of an expert analysis. The analysis which they chose to conduct without such assistance was, in each case, flawed. In the case of Mr Romcke it rested upon a guarantee from the mine surveyor which was accepted without investigation. In the case of Mr Porteous it rested upon limited investigation and a series of unwarranted assumptions. Had the mine surveyor been exposed to the

discipline of the risk assessment process, the need for a more solid foundation for his views would more than likely have emerged. That, in its turn, would have made it more likely that the issue would have been determined by the manager on its actual merits, rather than upon the basis of assumptions. The merits suggested uncertainty, and the need for caution.

The Court is not suggesting that risk assessment will always deliver the wisdom which will avoid accidents. The report in respect of the explosion at Moura Number 2 Underground Mine on 7 August 1994 (in which eleven men died) demonstrates that, even where risk assessment has been used, accidents may still occur [Ex.87.01]. Risk assessment is but one step in the systematic review of hazards. It is nonetheless an important step making it less likely, to use Mr Kininmonth's words, that matters will be overlooked (T1778).

With the experience of Gretley, the words of this Report, the publication by the Department of its Handbook in May 1997, as well as Clause 7 of the proposed Regulations, managers in the future will be expected no doubt to make use of this technique when faced with serious hazards. The Court will return to this aspect when formulating its recommendations to the Minister.

7.5 Informing the Miners

Each risk assessment undertaken by the Gretley colliery before the inrush made provision for the workforce to be told of the risks, and to be put on alert. The risk assessment in respect of MW35-36, for instance, included the following amongst the control measures:

"Awareness of Deputies and crews regarding water make and geology encountered and ensure reporting of facings, faults, etc. and any water make." ³⁷

The control measures for the sequence where the risk of holing-in was recognised, included the following;

"Crews to observe and report any alterations in water make into heading.
Crews to receive briefing on proposed procedure." ³⁸

Had a risk assessment been undertaken in respect of the Young Wallsend Colliery, therefore, it is likely that the workforce would have been involved. They would have been told of the presence of water within the Young Wallsend Colliery, and that it was under pressure, and they would have been put on alert. Mr Abbott, a senior inspector with the Department, gave the following evidence:

- Q. Would you expect as part of the risk assessment as one of the control measures for there to be included the sort of provision which appears in the document in front of you, exhibit 6.13, namely that the work force and the deputies ought to be told and ought to be, as it were, put on the alert for any changes in water?
- A. Yes.
- Q. On the way?
- A. Absolutely.
- Q. You would expect that?
- A. That's right. ³⁹

It will emerge later in this Report that there were symptoms of the

³⁷ Ex.6.13

³⁸ ibid

³⁹ T. Abbott T4240

impending disaster shortly before it occurred, although it must be acknowledged that they were subtle. A number of deputies noticed abnormal water in the weeks before the inrush.

Now, Mr Porteous knew that the Young Wallsend Colliery was full of water, and that there was a head of water. He had read the Section 138 application, and had spoken to Mr Murray. However, the undermanager in charge, Mr Alston, provided the following answer to the question posed by the Inspectors:

"Q11. Were you aware of the content of the old workings? If so, what was the content of the old workings?

No." ⁴⁰

Mr Pritchard, also an undermanager, and the person who replaced Mr Alston shortly before the inrush, was asked the same question. He, likewise, was not aware of the contents of the old workings [Ex.8.03 Q.11]. The same response was provided by Mr Coffey, another undermanager [Ex.19.03 Q.11], and Mr Shacklady [Ex.16.03 Q.11]. Each assumed that there may be water within the old workings.

To assume is one thing; to know is another. It was plainly desirable that these senior officials should have been told precisely what management knew about the Young Wallsend Colliery, including the considerable pressure arising from water within the shaft.

Very few of the miners who worked in 50/51 panel knew that the old workings were full of water. It appears that reference was made to the

presence of water in the old workings at a meeting between management and the union to discuss an Enterprise Agreement [D. R. Hern Ex.26.01 pp.2 & 3]. Referring to that meeting, the submissions for Mr Porteous said:

"This was a meeting at which Mr Porteous gave the representatives of the workmen full information concerning the fact that the old workings were full of water and the hazard that they constituted. It is submitted that it would be reasonable to anticipate that the representatives of the men would convey this information to the men." ⁴¹

Clearly, the workers were not told. Management ought not to have left it to others to pass on this information.

There were suggestions that it would be unconscionable to put the workers on alert in circumstances where there was the fear of inrush. The submission made on behalf of Mr Porteous was:

"It is submitted that if there had been the slightest doubt in the accuracy of the plans and the accompanying strategy of leaving a 50 metre barrier, the proper course would have been to stop work, withdraw the men and review the plans and/or the strategy. The alternative of continuing work and instructing the men to pay close attention to the presence of water and report back observations is completely unacceptable." ⁴²

The risk assessment in respect of MW 35-36, to which reference has been made, however, required the miners to be put on alert, and to report any changes [Ex.6.13]. No one is suggesting that this precaution should be the only defence against inrush. Other precautions were plainly essential. However, having settled upon a strategy, and the operation having begun,

⁴¹ MFI 88 p.171

⁴² ibid p.173

it would be unwise to assume that every possibility had been foreseen. Were something to arise which had not been foreseen, the miners should be armed with information which would permit them to recognise danger.

Certainly the miners who were called as witnesses made it clear that they wished to be informed. Mr Pugh, a mine deputy, said this:

- Q. ... Do I assume that you, in so far as you are aware, indeed, the men who work under you as miners take an intelligent interest in what is going on about them and their own well being, is that right?
- A. That's correct.
- Q. If management is in possession of information would you, for one - and that information concerns possible hazards which may be encountered - prefer to know about them or would you prefer a situation of blind trust in management that they will tell you what they believe you need to know?
- A. I would prefer to know about them. ⁴³

Mr Mathews, a former check inspector at Gretley, provided the following evidence:

- Q. .. But do you have a view as to the advisability or the need for briefing of the workforce in relation to potential hazards?
- A. Obviously, you know.
- Q. Mm?
- A. Obviously, yes.
- Q. What is your view?
- A. Well, yes, you should be briefing the workforce of any potential hazards.
- Q. The suggestion has been made that to do so, that is, to admit that there may be certain doubts in respect of some issues, may needlessly alarm the workforce; what do you say as to that?

- A. I haven't heard that but I think you would be under estimating the professionalism and maturity of the workforce.⁴⁴

The position is, therefore, that the miners would have been fully briefed had a risk assessment been undertaken. However, they should have been similarly briefed when a risk assessment was not undertaken.

Having dealt with various aspects of the company's performance, the Court will now examine the actions of the Department in processing the company's application for approval under Section 138.

8. THE DEPARTMENT

8.1 Methods of Mining

The *Coal Mine Regulation Act 1982* makes a distinction between different methods of mining. The distinction is important. It determines whether a mining company is obliged to seek the Minister's approval before extracting coal. The Act differentiates between the following:

- The bord and pillar system, sometimes referred to as first workings.
- Other systems referred to as second workings (which include longwall and miniwall)

The distinction can best be explained by example. In the development which gave rise to the inrush (known as 50/51 panel) the plan was to drive three roadways (A, B and C headings). The width of each roadway was 5.5 metres. That width is prescribed. At intervals of 100 metres (and less towards the end of the development) further roadways were to be driven at right angles (known as cut-throughs), linking the three headings. By this means a chain of pillars would be created. These are first workings. In this case they were undertaken as a prelude to second workings, namely the installation of a miniwall. The miniwall would then be used to extract a large block of coal on either side of the outer roadways. Each block was to be 60 metres in width, and run for the entire length of the roadways (over 400 metres) [Ex.14.10].

8.2 The Obligation of the Department

The relevant provision of the *Coal Mines Regulation Act 1982* is as follows:

"138. (1) No method of mining other than the bord and pillar system shall be used in an underground mine except with the approval of the Minister given on the recommendation of the Chief Inspector and subject to such conditions as he may impose."

The Gretley mine proposed to use a "method of mining other than the bord pillar system" (namely the miniwall) to extract MW 39 to 45. It therefore required the approval of the Minister. The authority to give that approval has been delegated by the Minister to the Chief Inspector. The Chief Inspector, Mr McKensey, has published what are termed "Process Control Procedures", being "guidance notes" or guidelines for dealing with an application for approval [Ex.17.01]. The purpose of the guidelines was described by Mr McKensey in these words:

"The purpose of the Quality Assurance processes is to give the Minister, or his delegate, assurance that the Managers application has been assessed in a consistent and appropriate manner by people with the necessary skills and information." ¹

The guidelines include a short introduction by Mr McKensey in which he identifies "three significant issues associated with the extraction of coal by underground methods". They are:

- "1) The safety of persons working in the mines;
- 2) The responsible exploitation of the State's coal resources; and
- 3) The impact of the mining operations on other land users and groups within society." ²

¹ Ex.28.01 p.15 para.61

² Ex.17.01 p.2 of 13

The introduction defines the responsibility of the mining company in these terms:

"It is the responsibility of the lease holder wishing to mine the resource to properly research, investigate and plan the mining operation."³

The company is obliged to provide "a comprehensive report", as well as a plan of the development which is described as an "approved plan" [Ex.17.01 p.3 of 13]. The report must deal with each of the three issues. In respect of mine safety the company is expected to "cover and answer in detail" nine specific issues. They include such matters as the method of mining, the ventilation system, and specific hazards associated with underground mining. In respect of gas, for instance, the report is obliged to address the following question:

"Is there a possible danger from noxious gases? If there is a possible danger, give details of gas concentrations and work proposed to reduce the danger."⁴

Inrush is identified as a matter which the mining company should deal with. The issue is defined in these terms:

"Is there a possible danger due to ingress of water from the seam being worked, the surface, or old workings?"⁵

It is curious that the form of this question is different from the question dealing with gas (and other hazards). The company is not asked to identify

³ ibid

⁴ ibid p.4 of 13 para.2.2.4

⁵ ibid p.5 of 13 para.2.2.6

the way in which the hazard will be avoided. However, the Court believes nothing turns on this difference. It is clear that the company understood that it was obliged to identify its strategy for avoiding inrush.

The application must be accompanied by a number of plans. Plan 1, for instance, should depict existing and proposed workings, and Plan 2 significant surface features. Plan 4 is described in these terms:

“A sepia overlay (Scale 1:4000) showing all known workings and proposals in other seams (above and below) the proposed workings and where available, the seam structure and contour plans of those workings.”⁶

A section of the guidelines is devoted to the Approved Plan. The Approved Plan is described in these words:

“As part of the application, a plan is required to be submitted which will be endorsed by the Chief Inspector at the time of granting any approval. This plan, known as the “Approved Plan” then becomes part of the permanent record of the details of the approval. It is important that this plan is of a high standard and clearly shows all of the pertinent details of the coal being approved for extraction.

Approval will not be granted unless an adequate “Approved Plan” is provided. ...”⁷

The guidelines set out standards which the Approved Plan is obliged to meet. They include:

⁶ ibid p.10 of 13 para.2.5.4

⁷ ibid p.11 of 13 para.3.1]

"Surveyor's signature certifying to the plans accuracy." ⁸

The manager is also obliged to sign the plan. The guidelines make the following provision:

"Manager's Certification of Plan

The mine manager's signature and date of signing should be clearly evidenced on the plan to testify to the manager's acceptance of the information shown on the plan." ⁹

The Department having received the application is then obliged to make an assessment under Section 138(1) of the Act. Mr McKensey in his introduction to the guidelines defined his role (and that of subordinate officers) in these words:

"It is the responsibility of the Chief Inspector of Coal mines to have the proposal fully appraised and assessed and only if adequate, to approve the proposal subject to the observance of conditions considered appropriate." ¹⁰

The application passes through a number of hands. There is a system of "multi-level review" (MFI 92 p.106 para.C5.2). The separate duties of each level of review are defined in a document within the guidelines known as Quality Assurance Work Instructions [Ex.17.01]. The application first goes to the district inspector. The district inspector is obliged to satisfy himself that it conforms to the guidelines. He then distributes copies to persons described as "in-house experts" (MFI 92 p.106 para.C5.2). One is the Principal Subsidence Engineer (Dr Holla). The other is the Senior

⁸ ibid p.11 of 13 para.3.3

⁹ ibid p.12 of 13 para.3.4

¹⁰ ibid p.2 of 13

Inspector, Special Duties (Mr Anderson), whose role is identified in these terms:

- "5.3 The Senior Inspector of Special Duties Newcastle, is responsible;-
 5.3.1 To assess the application in matters relating to Geotechnical aspects (see Guidance Note 08010104.GUI)" ¹¹

The Guidance Note is important in view of certain submissions made by the company in respect of Mr Anderson, to which reference will be made. It was issued on 22 August 1994 by the Chief Inspector and was, therefore, in operation during the time the Gretley application was being assessed. It is in these terms:

**"ISSUE = GUIDANCE NOTES TO DICM'S FOR 2ND WORKING
 WORK INSTRUCTIONS - SENIOR INSPECTOR
 SPECIAL DUTIES**

- (1) Due to a limitation on available work time (as a result of external contractual arrangements) the SICM's SD assessment under section 5.3.1 Work Instruction (080101.WKI) will be modified.
- (2) This modified assessment will apply until 30.6.1995.
- (3) As per the Work Instruction DICM's are to send copies of all applications they receive to the SICM SD, highlighting those applications that the DICM feels is extraordinary and highly sensitive.
- (4) The SICM SD in his assessment procedure will deal with these applications on a priority basis concentrating on extraordinary and highly sensitive applications.
- (5) As a result not all applications, for the above period,

¹¹ ibid p.2 of 4 para.5.3

will be completely assessed, however a formal communication will be provided to the DICM as per section 5.3.3 of the Work Instruction (080101.WKI)."¹²
(emphasis in original)

The limitation was introduced at a time when the Chief Inspector had directed Mr Anderson "as part of an industry working party, to formulate guidelines for the design and control of pillar extraction operations" [B. McKensey Ex.28.01 p.12 para.52]. Mr McKensey explained his purpose "was to limit his (Mr Anderson's) role during a period of his unavailability." (T6961) Mr Anderson described the effect of the direction, as he understood it:

Q. How do you understand it was to modify the procedure?

A. Well, my understanding was that due to my work commitments I didn't have - external work commitments by a contract out from the Department that I did - wouldn't have had adequate time to address all applications that were coming through the normal procedure and, therefore, the district inspectors in this procedure were to take due note of that to send to me applications but then just tagging, as it were, those that they believe were extraordinary or highly sensitive so I'd be able to identify those from the run of the mill, as it were. I would then be in a position to deal with these on a priority basis, depending upon my availability and as a result it then says: For the period of this particular exemption, I guess that's the right word for it, all applications will not be - may not be completely assessed but a formal communication would be directed to the district inspector.¹³

After the review of Dr Holla, and Mr Anderson (where appropriate), the

¹² ibid p.1 of 1

¹³ I. C. Anderson T2878

district inspector is then obliged to undertake the following:

"The District Inspector, upon receipt of reports from The Senior Inspector of Special Duties and Principle Subsidence Engineer, is responsible:-

- 5.5.1 To prepare a report on mine safety and resource recovery aspects of the application. The standard of the report to be adopted will comply with document 08010101: GUI
- 5.5.2 To compile all reports made by himself and other officers.
- 5.5.3 Submit a complete report including proposed approval conditions and other recommendations to the Senior Inspector of the district. ..." ¹⁴

The application, and report of the district inspector are then passed to the senior inspector for review. Ultimately the application reaches the Chief Inspector, whose function is defined in the following terms by the guidelines:

- "5.8.1 To review all reports in relation to a proposed second workings approval.
- 5.8.2 To communicate in writing, to the appropriate officer if the application does not address any aspect satisfactorily, stipulating what aspect needs to be rectified for the application to be successful.
- 5.8.3 To identify and take corrective action on non-conforming product in the procedure.
- 5.8.4 To sign approval documents." ¹⁵

8.3 The Gretley Application

Mr McKensey in the introduction to the guidelines urged consultation with the Department before an application was lodged [Ex.17.01 p.3 of 13]. The

¹⁴ Ex.17.01 p.3 of 4 para.5.5

¹⁵ ibid p.4 of 4 para.5.8

manager of Gretley, Mr Romcke, began preparation of the application in respect of miniwall 39-45 in May 1994 [Ex.61.04 p.37 para.113]. An initial layout of workings was prepared [Ex.61.04 p.37 para.116]. Mr Romcke discussed the application with Mr Flett, the district inspector. In one such discussion Mr Flett enquired whether it was proposed to drain the Young Wallsend Colliery [W. R. Flett Ex.73.01 p.20 para.48]. Mr Flett recalled Mr Romcke's response was as follows:

" "We have considered that but it presents some major problems for the mine. The development of the headings is some distance away and we would have to have time to drive roadways to drain the area and would need extra pipes and pumps installed and an area for water standage. I cannot afford to stop mini-wall development or the mine will close if the mini-wall stops for too long,"

He also said, "There are also environmental problems of getting the water out of the mine."

"He again stated, "I prefer to leave a barrier." "

Mr Flett added:

"I accepted this proposition after some further questioning on the above details and decided to accept the barrier principle."¹⁶

The width of the barrier was also discussed. Mr Flett recollected having told Mr Romcke the following:

"I said words to the effect of: "If we adopt that then these workings of mini-wall 42 (referring to plan) need at least a fifty metre barrier on this side of the old workings and I don't believe any mini-wall extraction should be closer than fifty

metres." " 17

Mr Flett had discussed the Young Wallsend Colliery with Mr Romcke before this conversation. In December 1993, when Mr Flett first visited the mine, he noticed some football-shaped workings on the Gretley mine plan. He said he had the following conversation with Mr Romcke:

"What are these workings?"

"Mr Romcke replied, "They are the workings of the Young Wallsend Colliery".

I asked, "When was it worked and what seams were worked?"

He replied, "It was worked in the late 1800's and early 1900's and was closed in about 1912. They worked the Young Wallsend and Borehole seams". He then left the room and returned with two plans, which showed the individual seams of the Young Wallsend Colliery, shown as "top" and "bottom" seams and said: "These are the Department plans of the two seams". "

Mr Flett added:

"I looked at the plans and noted that the football shaped workings on the Gretley plan correlated with the plan marked "top" seam on the plans produced, which I accepted as a Departmental plan and as a copy of the record tracing. I recall the plan was on sepia paper. I accepted these were correct plans, showing the workings in the two seams and, specifically, that the football shaped workings on the plan on the wall correlated with the workings shown as "top" seam on what I believed was a Department plan taken from the record tracing." 18

17 *ibid* p.19 para.46

18 *ibid* p.15 paras.40 & 41

Mr Romcke recalled a conversation with Mr Flett along the following lines:

"I said:
(Mr Romcke) "When we are approaching the Young Wallsend Colliery workings we will keep boreholes in advance of the face from at least the 50 metre mark."

He said:
(Mr Flett) "Given the age of the workings, we probably should consider starting drilling ahead further away than the 50 metres envisaged in the Regulations."

I said:
(Mr Romcke) "In order to be cautious, I would not have a problem with drilling ahead at a distance greater than 50 metres from the old workings."

He said:
(Mr Flett) "Probably about 100 metres would be appropriate, don't you think?"

I said:
(Mr Romcke) "That might be appropriate, we will look at it in more detail when we get closer."
" 19 (parenthesis added)

Mr Romcke's diary contained an entry made in late August 1994 in these terms:

"Bill Flett.

Drill ahead when close to YWS Colliery workings.

↓ Go from 100m?? Drilling ahead." 20

On 6 September 1994 the application under Section 138 in respect of MW39-45 was lodged. Multiple copies were provided as required by the

19 Ex.61.04 p.42 para.125

20 Ex.61.05

guidelines. It was a substantial document, perhaps one inch thick including the annexed plans [Ex.14.12]. The report required by the guidelines runs to 11 pages, of which 2½ pages are devoted to mine safety. In respect of the danger from the ingress of water from old workings, the report said this:

"2.2.6 Wallsend Borehole Colliery old workings to the north of the application area contained approximately 500 MI of water. This area is currently being dewatered via the Harris Street Borehole. Dewatering will be completed by an inseam borehole.

Young Wallsend Colliery worked the Young Wallsend and Borehole Seams. These workings are known to be filled with water. Drilling ahead of workings will be carried out when approaching the old workings in the Young Wallsend Seam and a sufficient barrier will be left between the old workings and extraction panels to maintain the safety of the current workings. The Borehole Seam workings are limited to single or two heading driveages, adjacent to MW42. The interburden is 18m thick and these workings do not pose a danger to Gretley workings. The old workings in the Borehole Seam, adjacent to MW45 are first workings only. The interburden will be intact, providing a separation between the old workings and Gretley miniwall panels." ²¹
(emphasis in original)

The district inspector, Mr Flett, was disturbed by one aspect of the proposal, which he described in these terms:

"...the original application plan ... still had some of the development headings as two heading developments, as opposed to the normal three heading developments used at the mine. In effect, this would reduce the strength of the barrier pillars left between the mine walls and I queried the strength of these pillars with Senior Inspector Special Duties

Ian Anderson. He agreed that these barrier pillars should be probably larger ..." ²²

A meeting was arranged at the mine. It took place on 11 October 1994. Mr Romcke, Mr Murray and a consultant Mr McGowan were present on behalf of the mine, and Mr Anderson and Mr Flett on behalf of the Department.

8.4 The Meeting on 11 October 1994

The meeting is important. The company has characterised the meeting "as a missed opportunity by the Department to prevent the occurrence of the accident" (MFI 91 Vol.2 p.395 para.16.2). It singled out Mr Anderson as the person from the Department who failed in his duty in various ways. The company's criticism of Mr Anderson will be considered later in this Chapter.

Mr Anderson's description of the conference was as follows:

- A. Mr Flett asked me to attend a conference at the colliery which was held in their conference room at short notice to discuss this particular application and for my comments upon one area; that was the pillars shown in the layout on this conceptual mine plan. I did that; I came in without prior knowledge of the proposal or any of the details and was concentrated on the particular aspect that I was asked to look at, and that is between the various miniwalls the layout that was originally proposed had one row of pillars left between each of the miniwalls and there was a considerable discussion between myself and a Mr McGowan from the company who was their rock mechanics adviser about the role and behaviour of those pillars.

Mr Anderson's evidence continued:

- A. ... Mr Romcke interceded and said that he had heard the discussions for and against, took comments that I had on board and noted the comments that I made and would take them on board in the future and I took that to mean that the point had been made and essentially, my part of the conference ended then and I left the mine following that conference. ²³

Mr Flett, having referred to the issue which he raised with Mr Anderson, concerning whether the development should have two headings or three, said this:

"Senior Inspector Anderson left before we discussed other matters. ..." ²⁴

Mr Romcke, however, had a different recollection. He said:

"... Michael Murray had all the plans ready for the discussion, laid out on the conference table ... We had a wide ranging discussion about the various issues relating to the mine plan and the issues specifically requested in the Section 138(1) Application." ²⁵

The wide ranging discussion touched upon drainage, ventilation, the barriers proposed, and other matters besides. Mr Romcke provided a detailed account of this conversation (some eight pages in all), attributing to Mr Anderson comment on various issues. Mr Anderson's contribution was not confined to the layout of the development. Mr Romcke acknowledged that Mr Anderson left the meeting before its conclusion [Ex.61.04 p.53 para.140].

²³ I. C. Anderson T1733

²⁴ Ex.73.01 p.19 para.47

²⁵ Ex.61.04 p.47 para.139

Mr Romcke's account was drawn from his recollection. He had no note of the conversation (T6069). He gave the following evidence concerning the discussion of the issue of draining the old workings:

- Q. ... do you have a definite recollection as to whether Mr Anderson was present when that issue was discussed?
- A. I think he was but these are to the best of my recollections and maybe they were a little bit different but I believe he was there for more than just the discussion on pillar stability.
- Q. All right. Are you able to say whether he was there definitely for the discussion on draining?
- A. Well, I can't be 100 per cent certain but I think he was.²⁶

The Court prefers the recollection of Mr Anderson and Mr Flett. Mr Anderson had a very specific role. The issues raised in the "wide ranging discussions" were not relevant to that role. Mr Anderson's duties had been circumscribed by reason of other pressing demands upon his time. The Court believes it likely, therefore, that the issue which directly concerned Mr Anderson was dealt with first, and that he then left.

After the conference Mr Romcke accepted the need for a three heading layout. A revised plan was prepared on 19 October 1994 [Ex.14.07]. It was submitted to the Department, and passed by Mr Flett to Mr Anderson in December 1994 (T1733). Mr Anderson reviewed it, and spoke to Mr Flett. He sent a short report in these terms:

"I refer to the modified layout plan AO-1944-14 Rev.No.1 as discussed. I have no objections to this layout being

adopted.”²⁷

Mr Flett then prepared a report on the application. It runs for 3½ pages. In respect of the danger of inrush, Mr Flett said:

“INGRESS OF WATER

Adjacent old workings to miniwall 39 are currently being dewatered and the manager advised this dewatering will be complete before extraction commences. In accordance with the requirements of Clause of Coal Mines Regulation (Methods and System of workings - Underground Mines) Regulations bore holes are drilled ahead when approaching within 50 metres of then (*sic*) old workings.”²⁸

Mr Flett was intending to refer to Clause 9 of the Methods and Systems Regulation. This short paragraph is the only material in the whole of the Department's Section 138 file which deals with the danger of inrush. Mr Flett recommended approval of the application.

On 12 December 1994 the application was reviewed by senior inspector Morgan. Mr Morgan believes that he read the application and various reports before speaking to Mr Flett (T5007). His conversation with Mr Flett was for “about ten minutes or a quarter of an hour” (T5004). Mr Morgan said this, in relation to that discussion:

“18. During the discussion I believe it was established that the mine was not planning to ... extract coal on the miniwall within 50m of the old workings in the Young Wallsend Seam.

19. It was I believe also established that where bord and

²⁷ Ex.14.04

²⁸ Ex.14.03

pillar workings were to approach within 50m of the old workings then drilling ahead of the workings in accordance with the legislative requirements would be undertaken." ²⁹

Mr Morgan then wrote the following words on Mr Flett's report (12 December 1994):

"I have reviewed the application & it appears to meet all the requirements of the application Guidelines & is a sound mining proposal. The time frame from the Companies view point is that they now require approval for use in early January 95" ³⁰

The application then passed to the Administrative Officer, Mr Simpson. He had various duties, including the preparation of draft approval conditions for the Chief Inspector. Having prepared such documents the file was placed before the Chief Inspector, Mr McKensey, on 5 January 1995. Mr McKensey described the procedure he adopted in these words:

A. ... this whole process involved Mr Flett, Mr Anderson and Mr Morgan, all of whom had a mandate to look at these issues far more closely than I am able; all of which have access to the colliery and work with the colliery as a matter of routine and they are in a much better position to evaluate the situation than I am from my office in Sydney. I relied very much upon the information they provided and their evaluation and then I tested their reports against what was written in the manager's reports and the approval plan ³¹

Mr McKensey specifically focused upon the barriers separating the Young

²⁹ Ex.75.01 p.2

³⁰ Ex.14.03

³¹ B. R. McKensey T7057

Wallsend Colliery from the proposed development panels. At first he had a concern as to the planned separation between the old colliery and miniwall 42. After being referred to the revised plan, Mr McKensey determined that the barrier proposed was 80 metres, which he regarded as satisfactory [Ex.28.01 p.22 para.93]. Mr McKensey also made an examination of the area in which the inrush ultimately occurred. His statement, in respect of that issue, is in these terms:

- "94. I recall having concerns about the 50m distance between the areas of extraction for miniwalls 44 and 45 and the extremities of the abandoned workings of the Young Wallsend Colliery as shown on Plan OA-1994-14 Rev. 1. This plan showed a roadway within the 50m barrier.
- 95. I recall going back to the Manager's report and Mr. Flett's minute and being satisfied that adequate precautions, consistent with the requirements of the regulations, were proposed.
- 96. I recall seeing a copy of the record tracing for the Young Wallsend Colliery R.T.523 - Sheet 3. At that time and had no reason to believe it to be inaccurate."³²

Mr McKensey gave his approval. He signed the Approved Plan on 5 January 1995, and sent a letter to the colliery enclosing a copy of the approval conditions [Ex.14.06]. The conditions included the following:

"CONTROL OF EXTRACTION:

- 3. The layout shown on the aforementioned Plan shall be implemented. ..." ³³

³² Ex.28.01 p.22

³³ Ex.14.06 p.1 of 2

The conditions also included the following:

"VARIATION OR REVOCATION

9. By notice in writing the Chief Inspector of Coal Mines may vary or revoke this approval." ³⁴

8.5 Criticisms of the Department

The Department's handling of the Section 138 process was trenchantly criticised by a number of parties. Certain comments were directed to particular officers. Others dealt with the system established by the Chief Inspector. It is convenient to deal with these submissions under the following headings:

- First, there was criticism of Mr Anderson in his role as Senior Inspector (Special Duties), specifically in relation to the meeting on 11 October 1994.
- Secondly, there were a number of criticisms of the system established by Mr McKensey, and in particular the acceptance without investigation of the Approved Plan.
- Thirdly, there was criticism of the Department's review procedures and in particular of Mr Flett in respect of his appraisal of the application. Those officers obliged to review his report (Messrs Morgan and McKensey) were also criticised for failing to recognise and correct the alleged deficiencies in Mr Flett's analysis.

The Court will begin by considering the criticisms of Mr Anderson. Three aspects of his conduct excited adverse comment from the company. They were:

- First, the limitation which Mr Anderson chose to place upon his role in respect of geotechnical assessments.
- Secondly, the failure of Mr Anderson to draw attention to the inadequate barrier between the Young Wallsend Colliery, and miniwall 44-45, as shown on the Approved Plan, (it being less than 50 metres).
- Thirdly, the failure of Mr Anderson to say anything to Mr Flett concerning the possibility that the plans may be grossly inadequate to the point where drilling ahead 200 metres may be regarded as prudent.

These matters will be dealt with in turn.

8.6 First Criticism: The Limitation upon Geotechnical Assessment

The company asserted that Mr Anderson had adopted "an unwarranted restricted scope of his duty" (MFI 91 Vol.2 p.397 para.16.2.3). The guidelines required Mr Anderson to assess an application under Section 138 "in matters relating to Geotechnical aspects" [Ex.17.01 p.2 of 4]. What does that mean? Mr Anderson said this, in response to Counsel for the Director General, who was exploring the difference between the role of Mr Anderson, and that of the Principal Subsidence Engineer, Dr Holla:

- A. The trouble is the two are inter-related but if you had to draw a line subsidence is a - is a surface manifestation of underground mining so Dr Holla's interests extend beyond the surface.

- Q. But yours do not, yours are below the ground concerns, are not they?
- A. They relate pretty well to the pillars.³⁵

The examination continued:

- Q. They are concerns with the capacity of barriers to hold back water, are not they?
- A. No, not necessarily.
- Q. Perhaps not necessarily but that is certainly one of the matters in which (you) purport to have expertise, agreed?
- A. I've never purported to have expertise in that area. What I have said is that I consider myself a competent mining engineer in which the role of geotechnical analysis relates as far as I'm concerned to an undefined area and I've defined it to be pillar behaviour and pillar strength and my role in this process is to assess that application in that particular area. If the District Inspector wishes me to extend beyond that then he specifies that and I will do that at his request but unless requested I look at the pillars and their behaviour.³⁶

Mr Anderson added:

- A. No one has specified in writing what I should do and no one - and I haven't specified in writing what I should be limited to and certainly no one has disagreed with how I've gone about that work since 1992/92.³⁷

When cross-examined by the company, Mr Anderson gave the following evidence:

35 I. C. Anderson T2715

36 ibid

37 ibid

- Q. So, are you really saying that you do not know what your job description is as at today?
- A. I've never been given a specific job description. I was told - I went on to the project full time as pillar design and pillar behaviour at the University. I came off that ... and that was the expertise that I was put into. So, I've assumed - - -
- Q. You have assumed it?
- A. - - - that description but nobody has ever said to me that's exactly what you do. But nobody has either disagreed with what I've done, either.
- Q. You have been doing this job for four years?
- A. Yes.
- Q. Have you ever asked anybody what your job is?
- A. There's been no need to because the results that I was providing seemed to be satisfying people. If it was - I wasn't providing the satisfactory results I would have been told that I was out of court, our (sic) of order, as it were, and that I needed to review the area that I was working in. ³⁸

It is obviously desirable that a statement of duties should define with some precision what is expected of an employee. Indeed, Mr McKensey gave the following evidence:

- A. ... I recall after some of the evidence had been given, a discussion Mr Anderson and I had in the Cardiff office where we did talk about what actually Mr Anderson was to do and what the term "geotechnical aspects" meant, because that was raised. My recollection was that I said I believed it was a dictionary meaning, that we had to ascribe to it and that I said to Mr Anderson that I thought it would be appropriate for him to actually seek that out and come back to me with some sort of job description, so to speak, in those matters.
- Q. And did he?
- A. No, not to my knowledge, not to my recollection.
- Q. Did you follow it up?

- A. No, I did not.
 Q. Why is that?
 A. I think the matter slipped my memory.³⁹

Mr Anderson responded to that statement as follows:

"I have no recollection of any such discussion. I personally would regard it as most unusual to define my duties by reference to the random description which may appear in a dictionary, rather than by reference to the specific tasks which could most usefully be performed. Accordingly, I feel sure that I would remember such a conversation had it taken place. I, therefore, believe Mr McKensey is mistaken in his recollection."⁴⁰

The Court believes Mr McKensey is mistaken. Mr McKensey was either in Court or read the transcript of Mr Anderson's evidence as it was given (T6961). He thereafter made a series of statements. One statement dealt specifically with the role of Mr Anderson in the Section 138 approval process [Ex.28.06]. It was signed on 28 May 1987. There was no reference in any of these documents to this incident. It was provided to the Court for the first time on 25 August 1997. Mr McKensey could not call to mind what it was that provoked the conversation with Mr Anderson (T6961), nor what prompted his subsequent recollection of it (T6961). In the context of someone who was pressed for time, as Mr Anderson was (because of the duties allocated to him by Mr McKensey) it would indeed be unusual to define such duties by reference to the general words of a dictionary, rather than identifying the particular matters which Mr Anderson might usefully address. The Court accepts that it is likely that Mr Anderson would have remembered such a conversation, had it occurred.

³⁹ B. R. McKensey T6960

⁴⁰ Ex.21.34 para.2

In the absence of a job specification, it was not unreasonable that Mr Anderson should focus on the area in which he regarded himself as expert. Indeed, Mr McKensey, in his supplementary statement which carries the title "... ROLE OF IAN ANDERSON IN SECTION 138 APPROVAL PROCESS," appeared to recognise the nature of Mr Anderson's specialty:

"7. Mr Anderson has, in my opinion, developed a sound understanding of the theory of rock mechanics and I rely on his professional abilities in the area of pillar stability.

8. Mr Anderson's role in the s138 process was initially created so that situations where sudden pillar failure might occur could be recognised at the planning/approval stage and thus avoided.

9. I have sought his advice on other related issues, such as chain pillar stability in longwall systems and issues of pillar stability, in areas where surface subsidence is a concern.

10. I have not specifically called on his expertise in the past to check the stability or safety of a barrier against flooded workings.

11. In the Gretley approval process I did not consider whether Mr Anderson should have checked the adequacy of the barrier left against the old workings of the Young Wallsend Colliery or the Wallsend Borehole Colliery. I did not specifically ask Mr Anderson to check these barriers. I did not have any concerns as to the adequacy of the barriers proposed in the Manager's applications, which I eventually approved." ⁴¹

Mr McKensey himself was not provided with a job specification in respect of his role as Chief Inspector. He gave the following evidence:

Q. But to some extent you defined your own role in the

expectation that if your definition was wrong, those who had the power to re-direct you would do so?

A. Yes.

Q. And in that respect not dissimilar to Mr Anderson, no doubt, in his geotechnical role?

A. There is a similarity.⁴²

There is, therefore, no substance in this aspect of the company's criticism of Mr Anderson.

8.7 Second Criticism: The Alleged Failure to Deal with the Barrier

The second criticism of Mr Anderson suggested that he had failed to draw attention to the inadequacy of the barrier between the proposed development and the Young Wallsend Colliery (supra p.456).

The company set out at some length to demonstrate that Mr Anderson was provided with the application made under Section 138, and not simply with the Approved Plan. The application made it clear that the Young Wallsend Colliery was full of water [Ex.14.01], and would not be drained. The Approved Plan showed a barrier which was plainly less than 50 metres, by reason of the intrusion of the bleeder heading inside the 50m zone [Ex.14.12]. Mr Anderson raised no objection. His insistence, when giving evidence to this Court, upon a proven 50m barrier is, therefore, inconsistent with his conduct at the time, in the company's view.

Mr Flett joined in this criticism. He said:

"... When the matter was raised with him I believed it was then the responsibility of Senior Inspector of Coal Mines Anderson to fully peruse the application in order to become

conversant with it and thus be able to totally assess the geotechnical aspects arising.”⁴³

Referring to the intrusion of the bleeder heading into the 50m barrier zone Mr Flett added:

“... I believed the strength of those pillars would have been part of the geotechnical assessment by Senior Inspector of Coal Mines Anderson, as would be the nominal 50m barrier from the miniwall extraction to the old workings. ...”⁴⁴

Referring to Mr Anderson’s minute sent to him after the revised plan was received from the colliery, Mr Flett said:

“... When I received the brief minute from Senior Inspector of Coal Mines Anderson on 9th December, 1994, stating he “had no objection to the layout being adopted”, I believed that he had fully assessed all the above geotechnical aspects relating to the application and had no objection to all geotechnical details of the proposal, which also included the barrier to the Wallsend Borehole workings and the septum between the Young Wallsend seam and Borehole seam workings, these matters all being of a geotechnical nature.”⁴⁵

Mr Anderson had no recollection of having received the application (T2647), although he acknowledged that the system provided for it being given to him (T2880). The Court thinks it probable that he did receive it. However, he did not read it, since he knew from memory the information he required to make the calculations of pillar strength (depth of seam etc). He, therefore, did not feel the need to read the file in order to perform his duty.

⁴³ Ex.73.03 p.1 para.2

⁴⁴ Ex.73.03 p.2 para.4

⁴⁵ ibid

The criticism of Mr Anderson in not having read the application, in order to deal with the broader geotechnical issues, is unwarranted in view of the Court's finding that Mr Anderson's role was limited, in the way that he described, to pillar strength and pillar behaviour.

8.8 Third Criticism: The Alleged Failure to Warn Mr Flett

The third criticism of Mr Anderson is a variation upon the second. There is no question that Mr Anderson saw the Approved Plan submitted by the company. It was necessary that he should do so in order to deal with the issue concerning the layout of mine (and whether there should be two headings or three). The Young Wallsend colliery was "virtually smack bang in the middle of the plan" (T2730) (MFI 91 Vol.2 p.410 para.16.2.16). No one could fail to notice it. Indeed, Mr Flett said this:

"If Senior Inspector of Coal Mines Anderson did not notice the Young Wallsend seam workings on the plans discussed at the mine or those later submitted for approval, I find that astounding as these workings are very distinctive and are obviously old workings ..." ⁴⁶

Being an old colliery, it could be assumed to be full of water. Yet it was shown on the plan as being less than 50m from the proposed development (because of the bleeder heading).

This being the context, the company drew attention to Mr Anderson's evidence concerning the way in which a manager (or surveyor) should have reacted to an old plan. Mr Anderson suggested that it was necessary first to determine whether the plan could be relied upon. The company said:

⁴⁶ Ex.73.03 p.1 para.3

"According to Mr Anderson's evidence, at the time of the meeting, he possessed the knowledge to the effect that the plans of old mines could be so inaccurate, by more than 100 metres, that the protection afforded to an approaching mine by complying with the "drilling ahead" regulation would not prevent an accident such as that that occurred." ⁴⁷

The company characterised such knowledge as "special knowledge" (MFI 101 p.27). It was known to Mr Anderson, but not Mr Flett, Mr Romcke or, Mr Porteous (MFI 101 p.27). The company said:

"... There is a distinction between what might be described as general knowledge that old plans could be inaccurate to a minor degree and as contemplated by Clause 9 of the Methods & Systems of Working Regulation and general knowledge that they could be inaccurate to such an extent that compliance with that clause would not prevent an inrush. Those witnesses of which there were several and included Mr Romcke and Mr Porteous that were asked (all) gave evidence of their understanding of the possible minor extent of inaccuracy, implicitly recognised by the Clause 9 provisions. ..." ⁴⁸

Mr Anderson asserted that once it had been determined that the plan was unreliable, then the manager ought to have consulted mining literature for insight into the ways in which such uncertainty might be resolved. Mr Anderson's survey of a number of textbooks in Exhibit 21.05 suggested that drilling ahead from 150 to 200 metres was appropriate. The company responded to that suggestion with these words:

"... Exhibit 21.05 relevantly refers only to old texts. Those witnesses who were "the officers of the Company", Mr Romcke and Mr Porteous, that were asked gave evidence to the effect that they had never heard of those old texts. It was

⁴⁷ MFI 91 Vol.2 p.397 para.16.2.4

⁴⁸ MFI 101 p.28

not suggested to either Company officer that he was not telling the truth, nor is there any basis on which such a suggestion could be made.”⁴⁹

Not all the texts in Exhibit 21.05 are “old”, though some of them can be so described. The company asserted that if Mr Anderson had such knowledge before the inrush (as to which it was obviously sceptical) then it was his duty to call attention to the potential for harm arising from the proposed barrier. It was common ground that Mr Anderson administered no such warning. There was no warning, according to the company’s argument, because Mr Anderson, like the rest, assumed that the plan was accurate, or assumed that whatever inaccuracy there was, would be overcome by the 50m zone identified in Clause 9.

The Court has already dealt with this argument (*supra*. pp.201ff; 237ff). It is unpersuasive. Mr Anderson simply asserted that one should approach the issue of reliability of the plan without making assumptions as to the extent of possible inaccuracy. He was right to approach the issue in that way. There was no warrant for assuming that because the level of inaccuracy leading to inrush in New South Wales had never exceeded 26 metres in the past, that it would not do so in the future. It can be said, without hindsight, that it was demonstrably wrong to approach the important issue of the prevention of inrush with a fixed idea that Clause 9 would deal with whatever inaccuracy there may be within the plan.

The Court accepts that Mr Anderson was not hampered by these assumptions, and that his approach was in line with that recommended by the U.S. Federal Registry, [Ex.83.09] to which reference has been made (*supra* p.244). Each plan had to be examined, and a determination made

as to whether it was reliable. If it was unreliable, it would be perfectly appropriate to turn to textbooks for insight as to the way in which that issue might best be handled.

There is, fortunately, an illustration of Mr Anderson's approach which predates the inrush by some five years. It relates to the Gretley colliery, and has already been described (supra p.386). Mr Anderson's review of an inspector's report in respect of a Section 138 application demonstrates that he was conscious of the need to consider the reliability of the plan. He said:

"I am in agreement with the comments made by Inspector Ryan with respect to mine safety. In particular the 50m barrier (p.10) from known old workings. With respect to workings within the now abandoned Wallsend Borehole Colliery, I can say that prior to its closure I inspected those workings and believe the plan as shown is accurate."⁵⁰ (emphasis added)

Having knowledge that inaccuracy in plans can sometimes be considerable, should Mr Anderson have intervened during the course of the meeting on 11 October 1994? The submission made on behalf of Mr Anderson said this (referring to Exhibit 21.05 which contained the quotations from relevant textbooks):

"... It would appear from Ex 21.05 that inaccuracy in old plans should have been widely known through the industry, including to those officers of the Company investigating and planning work to be the subject of a s.138 application. General knowledge of some mining problem cannot require articulation unless there is a reason to do so. If that were not so, then Mr Anderson should also have recited warnings about all other possible mining problems, including explosions, dust, gas, ventilation or any other of the

innumerable problems confronted in mining of which inaccurate old plans and unrecorded workings are only one part.”⁵¹

That submission is accepted. The focus of the meeting on 11 October 1994 was not the barrier separating the Young Wallsend colliery from the proposed development. It was the layout of various panels, and whether there should be two headings or three. Mr Anderson gave the following evidence in respect of that conference, making it clear that the plan (which included a depiction of the Young Wallsend Colliery) was not prominent during the discussion:

Q. You had a plan in front of you which showed the workings of the old Young Wallsend Colliery?

A. Well, the plan may well have shown workings. I don't recall them on the plan, I don't recall them being referred to as the Young Wallsend working. I was asked to look at a concept layout, once that was done we spent about an hour and a half discussing the analysis that was performed by Mr McGowan. So the plan was not necessary for that. The plan was necessary to look at the particular layout of the two headings and the dimensions of the pillars, the width of the goaf, then we went to a series of spreadsheet calculations to determine the strength of those pillars and the behaviour of them. So the plan was irrelevant for that, we were talking about numbers and my recollection is that I saw a particular layout. We were looking at (a) two heading layout, pillars about 16 metres wide, goafs of about 50 metres on either side. That's what I recall. That was all we need to do the analysis. The (plan) was put to one side, overheads were put on and a series of spread sheet calculations were done. That resulted in a series of figures coming up - figures, I mean, an arithmetical figures - and a discussion took part around that.⁵²

⁵¹ MFI 100 p.22

⁵² I. C. Anderson T2729

The Court accepts that there was no occasion for Mr Anderson to intervene in respect of the barrier issue. Since none of the criticisms of Mr Anderson has substance, the meeting of 11 October 1994 cannot be considered a "missed opportunity" to prevent the tragedy.

The Court is in a position to move to the second criticism of the Department, (supra p.455) which concerned the system established for the review of Section 138 applications.

8.9 Criticisms of the System

Four matters were raised which may be thought to reflect upon the process established by the Chief Inspector for the assessment of Section 138 applications:

- First, Section 138 gave the power to impose conditions. The Chief Inspector recognised the merit of risk assessment as a process, and encouraged its use. However, he did not believe it appropriate to direct a mining company to undertake a risk assessment as a condition of approval, even where, as in this case, a substantial hazard was evident. Why did the Chief Inspector take that view?
- Secondly, the Chief Inspector saw the Department's role in respect of the issue of subsidence as quite different from its role in respect of safety. What was the basis of that distinction, and was it appropriate?
- Thirdly, and most importantly, Mr McKensey believed that he and his officers were entitled to accept the Approved Plan as accurate. It was, after all, certified

by the mine surveyor, and accepted by the mine manager. In the absence of specific information that might suggest it was wrong, or manifestly in error, the Chief Inspector considered that his Department was entitled to accept the accuracy of the plan.

- Fourthly, the company suggested that the approval process ought to have required an examination by the Department of the material in its possession (including RT 523 sheets 1, 2 and 3) in order to satisfy itself that nothing had been overlooked.

It is convenient to deal with the first two issues together, since the foundation for each appears to be similar.

8.10 The Philosophy of Non-Intervention

It was evident that Mr McKensey was philosophically inclined towards self-regulation rather than prescription, and that this philosophy affected the way in which he exercised the power to impose conditions when giving approval under Section 138. He said:

- Q. No, but are you of the view that self-regulation would more likely assist the solution to such problems?
- A. I believe effective self-regulation with responsible mature management systems is likely to have a better outcome than are prescriptive regulations.
- Q. Right. What role does the Department have in that regime?
- A. Is to encourage the development, lead people in a direction till they get to the point where they can be mature enough to have effective management systems in place and to be overseeing the scene to ensure that there is a degree, an adequate degree of management control in place before they let loose.

- Q. But not directing them to do what they believe will avoid the problem?
- A. In the absence of them having adequate systems in place, yes, to direct.
- Q. But allowing them a time to achieve the maturity necessary to find the solution themselves?
- A. Well, I - I think leading people towards a - a development of an appreciation of this order isn't done over a short period of time. It takes, especially with an industry with a whole range of people, it takes a long time.⁵³

Mr McKensey recognised one mine might differ significantly in its approach to safety from another. He said:

- Q. And you recognise that industry is not homogeneous, if you like?
- A. I certainly recognise that.
- Q. That, out there there are good and bad and competent and incompetent, all, mixed in, in some cases and there is a variety?
- A. There is a variety.
- Q. And that some companies are working on finer margins than others?
- A. I would recognise that.
- Q. And for some, money is an issue. I am sure for all of them money is an issue but, for some it is a greater issue in terms of the costs of various aspects of safety?
- A. I think that would be a fair statement.
- Q. And that consequently there is a need for you to approach your issues, bearing in mind the spectrum of competence and capacity and diligence of mining companies?
- A. I think we are looking for a certain standard. It may take longer to achieve that with some than with others.
- Q. Yes, but you approach your tasks conscious of that absence of uniformity?

A. Absolutely.⁵⁴

Mr McKensey was appointed Chief Inspector in April 1990. He was an advocate of risk assessment (I. C. Anderson T2860). He required a risk assessment (pursuant to the *Coal Mines Regulation (Approval of Items) Regulation 1984*) before he would give approval to the introduction of certain new machinery into a mine (T7036). Yet, in the context of Section 138, seven years after his appointment, Mr McKensey said this:

Q. Would you regard it as appropriate to direct a company as part of a section 138 process which happens to involve a significant hazard to undertake a risk assessment in respect of that hazard?

A. I haven't done it.

Q. Could you answer my question? Would you regard it as appropriate?

A. Well, the fact that I haven't done it, I haven't seen it as appropriate.

Q. Why have you not seen it as appropriate?

A. Because the processes I thought we had in place were adequate to manage the risk that we were trying to manage and it was a process of evolution of trying to introduce risk assessment into the industry.⁵⁵

When Mr McKensey reviewed the Gretley's application in respect of MW39-45, he recognised that it did not include a risk assessment. He believed, therefore, that one had not been performed (T7045). He accepted that it was unlikely that one would be performed, unless he were to so direct (T7045). In these circumstances Counsel Assisting put the following question to Mr McKensey:

Q. ... now recognising therefore that there was a tool

⁵⁴ B. R. McKensey T7018

⁵⁵ *ibid* T7031

available which was likely to enhance safety, if properly performed, only one step but an important first step recognising as well that you had no risk assessment and therefore you assumed one had not been performed and recognising further that according to your understanding of the industry at that time probably one would not be performed and recognising, finally, that you had the power to impose conditions, why then would you not impose a condition requiring a risk assessment?

- A. Because I didn't think it was warranted. Within the legislation there is a quite well enunciated process for ensuring this hazard is properly managed and that is the manager and the surveyor make sure of the reliability of the plan.⁵⁶

Mr McKenney had in mind Clauses 8 and 9 of the Methods and Systems Regulation (T7047). Gretley's application was submitted in September 1994. The time had surely arrived when those companies who had not responded to Mr McKenney's encouragement should have been directed to undertake a risk assessment, as a condition of approval.

Mr McKenney contrasted the Department's role, in the context of mine safety, with its role in the area of subsidence. He said:

"... The inspector's role is one of overseeing and being satisfied as to the arrangements to be ... (put) in place, not to do the Manager's job for him. I believe this is consistent with the intent of Section 15 of the Occupational Health and Safety Act." ⁵⁷

In respect of subsidence, however, Mr McKenney said this:

"The Role of the Minister, or his delegate in this area is, in my opinion, quite different to the role exercised in the area of

⁵⁶ ibid T7046

⁵⁷ Ex.28.01 p.14 para.55

safety. In this regard the Minister has a direct responsibility to the community to determine and control the extent of surface subsidence and thus control the resulting impact on other land users. This is not an overseeing role, but is a decision making role.

The Manager is therefore required to bring forward all the necessary information so that the Department can properly calculate the likely subsidence and then evaluate its impact on the community. ..." ⁵⁸

When taken by Counsel Assisting to these paragraphs, Mr McKensey said:

- Q. And you see, what I want to suggest is this, that if you look at section 138 of the Act, the Coal Mine Regulation Act, it is in disarmingly simple terms, is it not?
- A. I agree.
- Q. Nothing about any distinction between safety and subsidence?
- A. I agree.
- Q. Nothing about you or your Department having a decision making role in subsidence in contrast to an overseeing role in safety?
- A. I agree. ⁵⁹

Mr McKensey stated that the distinction was already evident before his arrival (T7009). It apparently came about as a result of major subsidence at Chain Valley Bay at the southern end of Lake Macquarie, which affected some twenty houses. Mr McKensey said:

"... This was not anticipated by either the mining company, or the Department. Restoration work was carried out by the

⁵⁸ Ex.28.01 p.14 para.56 & 57

⁵⁹ B. R. McKensey T7009

Mine Subsidence Board at a cost of approximately \$10 million and is the subject of ongoing litigation between the mining company and some affected residents.”⁶⁰

There is no warrant in the Section for such a distinction. Indeed, the distinction carries the unfortunate suggestion that property is more important than human life.

The distinction, nonetheless, operated at the time of the Gretley application. It may to some extent explain the lack of intrusion into the discretion of management as to how it should approach its task. It is not suggested that the Department should have assumed the manager's role. However, had the same rigour been applied to the issue of safety as was applied to subsidence, safety would have been enhanced.

8.11 Reliance upon the Approved Plan

Mr McKensey acknowledged that the Department had a responsibility under Section 138(1) to examine each application with care (T8081). Its duty was to ensure that the proposal was “safe and sound” (T8082). Now, the application in respect of MW39-45, of course, proposed a development which would partly surround the Young Wallsend Colliery, known to be filled with water. A barrier was proposed to prevent inrush. The following was put to Mr McKensey:

Q. So it was fundamental to your view as to the way in which this application should be handled that a view be formed by the Department as to the reliability of the plan?

A. We relied on the management and the certification of the management that they told us the plans were

reliable. We relied on that throughout the process.

Q. Can you now answer my question?

A. It's fundamental to the issue that the plans are reliable, yes.⁶¹

Mr McKensey added:

Q. ... What do you say was done by the Department, if anything, to satisfy itself as to the reliability of the plan?

A. We required the mine manager and the mine surveyor to certify that the information they were giving us was accurate.⁶²

The examination continued:

Q. But what you are saying is that by the simple device in your guidelines of requiring a mine to put in certified plans, you could wash your hands of that issue because it was of no concern to you, that's what you are saying.

A. I wouldn't have expressed it that way, but we rely on their certification.

Q. So, once you have a plan before you that is signed, certified as you would understand it in accordance with the guidelines then there is nothing for the Department to do in respect of that issue.

A. Yes.⁶³

Mr McKensey, therefore, would not criticise his inspectors for not having gone behind the plan to investigate the basis upon which the mine had formed its view (T7077). He frankly acknowledged that he led by example. He said:

61: B. R. McKensey T7071/1

62. ibid T7072

63 ibid T7073

- Q. There is nothing said to that effect in the guidelines, it simply says you shall provide certified plans, is that right?
- A. Something to that effect.
- Q. So that this is a practice which has grown up under your leadership?
- A. Yes.⁶⁴

In the context of inrush, such a view emasculated the Section 138 process. It removed from consideration the very issue central to the Gretley application. The words of Section 138(1) provide no warrant for limiting the review process in that way. Nor, indeed, do the guidelines [Ex.17.01]. Such a limitation is not consistent with ensuring that the proposal is "safe and sound". The Department's faith in certification mirrors the view expressed by a number of mine surveyors that certified plans could be accepted, and relied upon. That view has already been the subject of comment (*supra* p.259). The information on a plan should not be accepted simply because the plan is certified.

The company's submission on this issue was curious. Whereas it suggested that it was reasonable for the mine surveyor and manager to rely upon certified plans (MFI 91 Vol.2 p.341 para.14.8.18), the Department should not have done so (MFI 95 p.26). In fact neither the mine nor the Department should have accepted uncritically any plan, whether certified or not (*supra* p.219ff). Each should have recognised the difference between workings which were accessible, recent and well documented, and those which were old and inaccessible. The Department ought to have investigated the basis upon which the company had formed the view that the plan could be relied upon.

The Director General submitted that there were "fundamental problems" with the suggestion that "the Department is not entitled to rely upon a regime of certification in relation to S138 applications" (MFI 92 p.45). It does not have a survey section with underground surveyors. It cannot, therefore, verify the information on the plan (MFI 92 p.46). The history of mining legislation since 1854, according to the Director General's submission, demonstrated that "Parliament has adopted a regime of regulation by certification" (MFI 92 p.48).

The Court cannot accept this submission. It is not suggested that the Department should have re-surveyed the mine. The focus, rather, should have been upon the duty of the mine manager under Clause 8 of the Methods and Systems of Working - Underground Mines Regulation 1984. The inspectors who reviewed the Section 138 application were themselves former mine managers. They should have examined the analysis undertaken by the mine manager (or his surveyor). What had been uncovered by research, in terms of plans and material, relating to the old colliery? What was the basis upon which the mine manager had felt confidence in the outline in the Approved Plan?

The Director General further suggested that the Act, and the Process Control Procedures and the guidance notes [Ex.17.01] made it reasonable to rely upon the certified work of a professional, whether a mine manager or a surveyor (MFI 92 p.115ff). The submission culminated in the following assertion, which dealt with one of the criticisms of the Department's approach:

" (Issue) "... The report does not address, but should have addressed ... the issue of the reliability of the plans ..."

The statement is wrong. The reliability of the plans was addressed. It was addressed by the operation of a very pedantic and structured regulatory regime.

Without repeating the submissions made elsewhere herein, it is sufficient to note that Parliament has put in place a regime whereby the task of assessing the reliability of plans is entrusted to a select few. Two of those select few, namely Messrs Romcke and Murray, certified the accuracy and hence the reliability of the plans in accordance with the regime." ⁶⁵ (parenthesis & emphasis added)

That submission is likewise unpersuasive. The Department also has a responsibility to assess the reliability of the Approved Plan where that is material to the approval which is sought. The plan, and its reliability, will always be material in circumstances where there is the danger of inrush. Mr McKensey, when cross-examined by Mr Hall QC, appeared to accept the shortcomings of the Department's system. He said:

Q. That is why I am saying that the policy, if it is one, or practice of relying upon the applicant for having examined and adequately dealt with critical issues is a very fragile if not dangerous one, would you not agree?

A. Certainly the evidence from this has demonstrated that and it is a question of reasonable practicability.

Q. Yes?

A. Are we, you know, just how far can we go with all these checks and balance?

Q. Well, that is why I have raised with you in a number of questions the question is not only whether there was the ability to independently check these applications but whether there is any factor which would operate as a hindrance or which would prevent you from doing so. You earlier mentioned resources but I think you accept now that really in a matter such as this it would not require much by way of resources?

A. For this specific issue to have been checked I agree

it would not have required an undue resource that we couldn't have obtained.⁶⁶

Elsewhere Mr McKensey gave the following evidence:

- Q. I am just raising these matters because I suggest it highlights the absurdity again I am not meaning offence - but that such a practice does not get to grips with analysing, in any critical way, the work of the applicant, would you not agree.
- A. Yes.⁶⁷

The Department receives approximately 50 applications under Section 138 each year. Of these, perhaps two or three may involve the danger of inrush (B. R. McKensey T8348).

The company approached the Department's duty somewhat differently. The approved plan should have been checked by the Department, not by reference to material used by the company, but by reference to material within the Department's possession (such as RT 523, sheets 1, 2 and 3 and the archive file [Ex.17.17]). It said:

"Paragraph C5.3 at page 107 in effect asserts that the Inspectorate is justified in not going behind the plan certified by the mine surveyor and signed as accepted by the mine manager. We disagree with that submission, for the following reasons:

- (a) Such an approach is, it is submitted, inappropriate. The Department has the exclusive possession of plans and other information relevant to the application. It is possible for the applicant to identify certain of the plans and some information.

⁶⁶ B. R. McKensey T8182

⁶⁷ ibid T8183

- (b) There is however no index of, for example, relevant file names or numbers, or other information except, for example, better known things such as the register of abandoned mines.
- (c) We submit that the Department is in a superior position to check the application against its information than the applicant is in finding out what information the Department has, especially where an old colliery is concerned. This is implicit in Clause 8(3) of the Methods and Systems Regulation." ⁶⁸

The company added that the Department did in fact go behind the approved plan, and provided examples drawn from the evidence (MFI 95 p.27 para. R4.3.4(d)). However, it is clear that the Department confines its attention to lease boundaries and other matters of a formal nature.

Had the Department made an examination of the material in its possession it is likely that the flaw in the certified plan would have been evident. Mr McKensey said:

- Q. No, no. Just let me put this to you. There is no doubt, is there, that had the officers of your Department taken the time and made the effort - and by officers, I mean include yourself - to have examined these plans before giving approval in January 1995, it would have become apparent on such inspection that these plans that we are talking about, sheets 1, 2 and 3, certainly did not form a reliable basis for the application so far as a defence strategy is concerned?
- A. That certainly was the view I came to when I reviewed those plans after the event.
- Q. And that would have been a position that would have easily been discoverable before approval was granted, would you not agree?
- A. Had I looked at the plan before approval with the knowledge I had at the time, my view is I probably

would've come to the same view.⁶⁹

No doubt the Department's examination of the issue would begin with a request to the company for its analysis, and the documentation upon which it relied. If that material were comprehensive, and furnished some basis for confidence in the plan, it may not then be necessary for the inspector to personally examine the documents held by the Department.

8.12 The Third Criticism of the Department (supra p.455)

This criticism relates to the alleged failure by the different inspectors, including the Chief Inspector, adequately to appraise and review the application.

Mr. Anderson, when cross-examined by Counsel for the Director General, identified the obligation of the Department in these words, which the Court accepts:

Q. So, what you are saying is that the obligation of the Department is to ensure that the analysis that the manager has put forward and the analysis of the Department is thorough and adequate?

A. Yes.⁷⁰

Translating that general obligation into the context of the Gretley application, Mr Hall QC, made the following submission, which the Court believes is reasonable:

"The commencement point in determining whether and what

⁶⁹

B. R. McKenney T8098

⁷⁰

I. C. Anderson T2681

duty of care was imposed on the Chief Inspector in approving the application under S.138(1) is the CRMA itself. The primary purpose of the Act, as previously submitted, is to ensure mine safety. The guidance notes (Exhibit 17.01) are themselves evidence of the fact that the Department acknowledges that that is the central objective and that the Chief Inspector has a duty to fully appraise and assess an application having regard specifically to the question of hazards and safety. Unless an approval is given, it is clear that the proposal for mining will not and cannot proceed. Accordingly, it is the favourable exercise of the statutory power under S.138(1) which is the legal act which permits mining to be undertaken in accordance with the approval, whether conditional or unconditional.

In those circumstances, it is submitted that the Department and, in particular, the Chief Inspector were under a duty only to exercise the power and grant approval if it were satisfied that it properly addressed the known hazard of inrush. That was a particular feature of this application that called for and required careful consideration and evaluation. The report and information submitted by the applicant would be amongst the information the Chief Inspector would need before he could be satisfied that relevant safety issues had been properly addressed. ...⁷¹"

That obligation, in turn, required those involved in the review process to have regard to the salient facts (cf Brennan J. (as he then was) *Minister for Aboriginal Affairs v Peko-Wallsend Limited* (1985-86) 162 CLR 24 at 61) (MFI 87 p.156). Mr Hall QC suggested that the relevant matters, which the Department should have addressed, included the following:

- "i. Whether drainage was feasible thereby removing the hazard altogether.
- ii. What the basis was for determining the location and extent of the old workings.

- iii. The need for an appropriate plan to drill ahead as a secondary precaution." ⁷²

Mr Flett's report on the danger of inrush is indeed brief. It deals with none of these issues. There was no analysis of the logic behind the decision to drain the Wallsend Borehole Colliery, and yet not drain the Young Wallsend Colliery. The Wallsend Borehole Colliery was said to contain 500 MI. of water [Ex.14.01]. Young Wallsend Colliery contained only 25 MI [Ex.63.04 p.7 Q.9]. The Wallsend Borehole workings were recent, and well documented. The mine plan of the Wallsend Borehole Colliery had been found to be accurate when holing-in at Main West in 1992. The Young Wallsend Colliery, on the other hand, was old (1890-1912). It was a colliery in respect of which little was known. Mr Flett's view about draining the workings was provided in the following evidence:

Q. You deal with the draining of the Young Wallsend Colliery on page 20, paragraph 48, and do I get the impression that your preference was that it should be drained but they resisted the proposition; is that right or wrong?

A. No, I didn't have a preference. I - if they were going to take the miniwall extraction close to those workings I believe the workings should be drained. When they decided to .. leave what I believed was an adequate barrier I had no problem with not draining the workings. ⁷³

Mr McKensey had a similar view (T7107).

The availability of a barrier to protect the mine depended upon the reliability of the plan. Mr Flett's report did not refer to that issue. This can, in part, be

⁷² MFI 87 p.156/7

⁷³ W. R. Flett T4689

explained by the system established by the Chief Inspector with respect to Approved Plans. Mr Flett said:

"Mine plans are certified as accurate by the mine surveyor. The approved plan is also signed by the mine manager, signifying that he accepts the information contained in the plan. I rely on the mine surveyor to supply the correct information on the plans the mine manager has prepared and submitted. I have no qualifications in surveying." ⁷⁴

Part of the explanation also lies in the fact that Mr Flett approached his task hampered by certain assumptions. He held the belief, shared by a number of others, that plans which came from the Department were accurate. Referring to an occasion when Mr Romcke showed him the Top seam plan (RT 523, sheet 3), Mr Flett said:

"I looked at the plans and noted that the football shaped workings on the Gretley plan correlated with the plan marked "top" seam on the plans produced, which I accepted as a Departmental plan and as a copy of the record tracing. I recall the plan was on sepia paper. I accepted these were correct plans ..." ⁷⁵

Mr Flett, again like others, made a number of assumptions in respect of Clause 9 of the Methods and Systems Regulation. He assumed that the "cushion" within Clause 9 for inaccuracy would accommodate any inaccuracy that there may be in the mine plan. He said:

"As stated previously, besides the mine surveyor's certified plan, I had viewed what I believed were Department plans of the Young Wallsend Colliery workings and I had no reason to believe that any of these plans were inaccurate to the

⁷⁴ Ex.73.01 p.8 para.24

⁷⁵ *ibid* p.15 para.41

extent that the fifty metre exclusion zone provided by legislation would not provide a safe barrier and contain the water. I had no reason to query the accuracy of these plans. I accepted the mine surveyor's certification. I am unaware of any occasion in NSW mining practice where the fifty metre zone has not proved to be adequate. ..." ⁷⁶

That statement is somewhat at odds with the words attributed to Mr Flett by Mr Romcke (supra p.447). Mr Flett, according to Mr Romcke, suggested drilling ahead from 100m because of the age of the workings. Mr Flett, however, had no recollection of having made such a comment (T4717).

The district inspector, under the guidelines, was required to check the standard of the approved plan [Ex.17.01 p.13 of 13 para.3.8]. Referring to that obligation, the Director General's submission was:

"The role of the District Inspector is to check the "standard of plan". That role is to be contrasted with that of the mine surveyor and the mine manager who are obliged by the Guidelines to certify the accuracy of information shown on the plan." ⁷⁷

It was suggested that Mr Flett's function was "limited" by reason of this obligation (MFI 92 p.119). However, Mr Flett was obliged by the work instructions to produce a report in respect of the application [Ex.17.01]. The specific clerical function which was also given to him furnishes no basis for excluding from his consideration, if it be relevant, aspects of the proposal relating to the plan.

Mr Flett's review of the application, so far as it concerned inrush, is unsatisfactory. The Court accepts Mr Hall QC's identification of the salient

⁷⁶ ibid p.21 para.50

⁷⁷ MFI 92 p.119

facts. Mr Flett's report needed to review those issues, and did not do so. Neither the review of Mr Morgan (senior inspector), nor that of Mr McKensey, as Chief Inspector, corrected these shortcomings. A flawed strategy for dealing with the hazard was thereby approved.

Mr Hall's submissions on behalf of the relatives included the following:

"In the relatives' submission, the evidence makes clear that the approval in this matter was given without any *consideration* by the Department/Chief Inspector of the inrush hazard. The report submitted did not deal with the question of dewatering at all (T.8164) and did not provide any information as to the basis upon which the suggested location of the old workings was determined. The Chief Inspector/Department did not have access to any information to enable him/it to explore evaluate and assess these matters. In short, it simply gave approval without any knowledge of the *salient facts*." ⁷⁸

The following was put as a summary of the submissions in relation to the Department and its officers:

- "a. The S.138(1) power involves the exercise of Ministerial power by his delegate, the Chief Inspector. The proper exercise of the Ministerial power must to some degree depend upon Departmental assistance provided by its Inspectorate.
- b. Consistent with dicta earlier cited from Peko-Wallsend, the Departmental responsibility must ultimately be both that of the Director-General and the Chief Inspector, between whom was a clear line of responsibility operative, it is submitted, in relation to this matter. It is also submitted that both failed to ensure that a system or methodology was in place for the effective and proper discharge of the obligations

associated with the exercise of the statutory power.

- c. The *system* or approval process under S.138(1) was defective and inadequate. That systematic failure, it is submitted, materially contributed to the failure by the Chief Inspector to properly appraise and assess the Gretley application.
- d. In addition to systemic failure, there was, it is submitted, a failure by the Chief Inspector, and his officers to conduct a proper consideration of the Gretley application. In this respect, it is submitted that there was no consideration given to material matters directly relevant to whether the proposal to mine into the vicinity of the old workings was a safe and sound one. In the submission of the relatives, the *decision* to grant an approval in this case had no regard to matters essential to a proper evaluation. This directly led to an approval being given to an application which contained a fatal flaw. That defect in the application was readily ascertainable by a relatively simple and straightforward examination.
- e. The Department's approval of the Gretley application was a material cause of the disaster of 14 November 1996." ⁷⁹

The Court finds ample support in the evidence for these submissions.

8.13 The Variation Application

On 28 October 1994 Mr Porteous became the mine manager of Gretley, replacing Mr Romcke. It was soon apparent that time would not permit the draining of the Wallsend Borehole old workings. The decision was taken to alter the layout of the proposed panels by moving MW40 to the south-west. Instead of the separation between that panel, and the Wallsend Borehole workings being 16 metres, at its narrowest point (necessitating draining of

the abandoned colliery), it was to be 50 metres, and the workings were not to be drained.

That decision was made in November 1994 [Ex.63.09]. It was made, therefore, before the Department gave its approval in respect of the original layout for extraction of MW39-45 (5 January 1995) [Ex.14.07]. The Department was not furnished with a revised layout before approval. It was said, on behalf of Mr Porteous, that the new layout made mining in the vicinity of the Wallsend Borehole colliery safer than the original plan (R. M. Porteous T8948). Even so, the change plainly should have been formally communicated to the Department, so that the plan actually approved by the Chief Inspector was the plan which the company intended to execute.

The variation had consequences in relation to the Young Wallsend Colliery. By changing the orientation of MW40, the adjacent panels (MW41-42), which were parallel to it, likewise changed. The separation between the outer edge of MW42 and the Young Wallsend Colliery was thereby reduced. What was the distance between the proposed development, and the Young Wallsend Colliery, at its closest point? The answer to that question is complicated by the presence of the staple shaft referred to in the bottom seam sheet (RT 523, sheet 2) [Ex.13.22]. It will be remembered that one of the curious features of sheets 2 and 3 was that one only, sheet 2, (the bottom seam sheet) showed a staple shaft, and that in a location approximately 20 metres beyond any roadway shown in the top seam sheet. That disparity suggested two possibilities:

- Either the top seam sheet may be incomplete, in that it did not include the final 20 metres of roadway, and the staple shaft; or
- the staple shaft was not vertical, but inclined. Were it

inclined, that would explain the difference in the length of roadways in sheets 2 and 3; however, it would not explain the absence of any reference to the staple shaft in sheet 3 (the top seam sheet).

Ignoring for a moment the impact of the staple shaft, the change in layout as a result of the change in orientation of MW40 in November 1994, altered the barrier between MW42 and the Young Wallsend Colliery from approximately 80 metres to 64 metres. If one assumes that sheet 3 (the Top Seam sheet) was incomplete, and the staple shaft was vertical, then the workings in the Young Wallsend Seam extended approximately 20 metres beyond that shown on the plan. The 64 metre barrier, therefore, reduced to approximately 44 metres. On any view of Clause 9 (the Borehole Rule) it would be necessary to drill ahead. Hence, although the layout may have been beneficial, in terms of safety, in respect of MW40 (adjacent to the Wallsend Borehole old workings), there was an increase in risk on the other side of the development, adjacent to the Young Wallsend Colliery.

Mr Porteous gave the following evidence in respect of this issue:

- Q. As to that matter, what you recognised was that there was a discrepancy between the two roadways which were in vicinity of what was described as a staple and you assumed a staple shaft connecting the two seams is that right?
- A. I assumed there had been work done towards moving from the lower seam to the upper seam on an incline towards the workings which extended out from the - in a general football shape towards that, that single roadway.
- Q. Yes but see, could you answer my question. You noticed first of all a discrepancy between the two?
- A. Yes.

- Q. You recognised that the discrepancy needed to be explained?
- A. Yes.
- Q. You thought the explanation was that there had been a shaft driven from the lower seam to the upper seam on an incline?
- A. No, not driven, part driven.
- Q. Part driven?
- A. Because there was nothing on the upper seam plan that showed a connection.
- Q. I see. But see, as to that, you would acknowledge that it is a matter of interpretation?
- A. Yes.
- Q. As to which you may be right or you may be wrong?
- A. Yes.⁸⁰

Plainly this matter should have been drawn to the attention of the Department before the application was approved by the Chief Inspector on 5 January 1995 [Ex.14.07].

In August 1995, the mine proposed a further change to the layout. It wished to widen MW41 and 42 by a total of 8 metres, and widen MW44/45 as well. On this occasion Mr Porteous formally wrote to the Department. His letter included these words:

"... Resource recovery, increase in subsidence and pillar stability are matters which are considered below: ..." ⁸¹

There was no reference to mine safety. There was obviously an element of urgency. The letter ended with these words:

"It is intended to commence extraction in MW41 in the second week of September 1995. Your prompt attention

⁸⁰ R. M. Porteous T8985

⁸¹ Ex.14.08

would be appreciated.”⁸²

The application was accompanied by an amended Approved Plan [Ex.14.10]. The plan reproduced the outline of the Young Wallsend Colliery as the oval shape (that is, in a manner consistent with the Top Seam sheet (RT 523, sheet 3)). The barrier separating the altered alignment of MW42 and the Young Wallsend Colliery was reduced from 64 metres to 56 metres.

However, there was a need to address the issue concerning the staple shaft. If it were vertical, and extended from the extremity of the road as depicted on the bottom seam sheet (RT 523, sheet 2), then it would intrude into the Young Wallsend seam a further 20 metres beyond the outline shown in the approved plan. Were that so, the barrier separating the proposed development from the Young Wallsend Colliery, and from the danger of inrush, would be reduced to approximately 36 metres. In respect of that possibility Mr McKensey said:

Q. Once you get to that position then of course you have a situation of a hazard which is within the 50 metre zone of the old workings?

A. Yes.

Q. ... you would have expected the company to have recognised that issue?

A. Yes.

Q. And to have recognised that it was a safety issue, potentially?

A. Yes.

Q. And to have recognised that it called into operation the need for drilling?

A. Yes.

Q. And to have identified that issue in the application for variation to you, it being a relevant matter to the

- approval?
- A. Yes.
- Q. Of course none of those things happened?
- A. That's correct.⁸³

The application was dealt with by the district inspector, Mr Shacklady, on the same day it was submitted, 15 August 1995 (cf Exhibit 14.10 date on Approved Plan (15.8.95) and date on Mr Shacklady's report (15.8.95)). It appears that Mr Shacklady did not have the original file (T1444), although a copy may have been available at the Cardiff office which Mr Shacklady may or may not have consulted (cf T1445). Had he consulted the file, and specifically, had he looked at plan 4 depicting workings in the Bottom Seam, he would (or may) have appreciated the issue concerning the staple shaft. Mr Shacklady's short report did not refer to any safety issues [Ex.14.09].

The file passed to Mr Flett the same day. Mr Flett dealt with the matter at once. He wrote a short note, recommending approval, subject to a subsidence report. At the time Mr Flett dealt with the matter, he did not have the Departmental file with him. Mr Flett gave the following evidence:

- Q. You, not having the file there, did not have access to plan 4 which was the workings in the Borehole seam?
- A. That's correct.
- Q. And therefore did not have the means of appreciating what now appears on the screen from exhibit 13.02; is that right?
- A. That's correct.
- Q. Had you appreciated that then what would you have done?
- A. I think there's two ... things here that, as I said, it was my ... belief, whether it be right or wrong, that those roadways are connected together. Now, if that is by

an inclined drift the end of that ... roadway as shown here, believed to be the top seam, would still be 55 metres from ... the edge of that extraction area.⁸⁴

Whilst that may have been Mr Flett's belief, it was possible that the staple shaft was vertical, and intruded into the Wallsend Seam only 36 metres from the proposed development. The following question was put to Mr Flett: (T4750)

- Q. In approaching the matter from the point of view of dealing with potential safety problems that may arise from it, you would have to take account of those other possibilities and so would the Company?
- A. Yes.⁸⁵

The answer to the puzzle in respect of the staple shaft was not to be found in either sheets 2 or 3 (or both). Had the Department recognised the issue, and pursued it, it may have led to RT 523 sheet 1, and may have exposed the unsatisfactory basis for the depiction by the company of the Young Wallsend Colliery. However, the issue was not recognised. The application went to Mr McKensey who gave approval on 1 September 1995 [Ex.14.10].

The mine in its letter applying for the amendment should have identified the safety issues arising from the possible intrusion of the staple shaft into the Young Wallsend seam. It is clear that Messrs. Shacklady, Flett and McKensey, did not appreciate these issues at the time they dealt with the matter. The application gives every appearance of having been dealt with in a hurry, without adequate research, to meet the needs of the company.

⁸⁴ W. R. Flett T4750

⁸⁵ ibid

Having dealt with the role of the Department in the Section 138 process, the Court is now in a position to deal with the duties of Mr Robinson, who replaced Mr Murray as mine surveyor in late 1995.

9. THE REPLACEMENT SURVEYOR

9.1 Mr Robinson's Appointment

In May 1995 (that is 18 months before the inrush) Mr Robinson was appointed as a casual surveyor at Gretley. Mr Robinson had, before joining the Oakbridge Group, an unusual career. He began his surveyor's certificate course in 1979, while working four days a week as a trainee mine surveyor with BHP Collieries. He completed the course in 1982 [Ex.62.04 p.2 para.4]. In 1983 he qualified as a mine surveyor. He was appointed by BHP Collieries as an assistant surveyor at the Lambton Colliery. Mr Robinson remained at that colliery until 1985, obtaining the qualification of a mine deputy at the same time [Ex.62.04 p.2 para.6].

Mr Robinson thereafter worked for about two years as a miner, and shotfirer at various collieries. He then left the coal industry for a time, travelling around Australia and going overseas. He was out of the coal mining industry for about nine years although working underground in the construction industry and carrying out surveys. He found the work of a mine surveyor very different to survey work in the construction industry.

In 1995 Mr Robinson returned to Australia. He once more took up his profession as a mine surveyor. He worked casually for a number of collieries in the Hunter Valley before joining the Oakbridge Group as a casual in May 1995. Once with Oakbridge, he worked on a rotating basis at the Pelton, Ellalong, and Gretley mines [Ex.62.04 p.3 para.11]. At Gretley, Mr Robinson assisted the mine surveyor, Mr Michael Murray, or the surveyor's assistant, Mr Foley. Mr Robinson described himself during that period as "assisting the assistant" (T8675).

In September 1995 Mr Murray went on leave. The colliery is obliged under

the *Coal Mines Regulation Act 1982 (Section 44)* to have a mine surveyor. Mr Robinson was appointed mine surveyor during Mr Murray's absence. It was at this time that Mr Murray was diagnosed as suffering from cancer. He underwent treatment, necessitating periods of absence from work. Mr Robinson took his place as mine surveyor during his absence.

Mr Murray worked for the last time at Gretley on 21 May 1996. He died on 2 October 1996. The periods during which Mr Robinson was mine surveyor at Gretley before the inrush were as follows:

"... 25 September 1995 to 6 October 1995

18 December 1995 to 21 January 1996

30 January 1996 to 4 March 1996

1 April 1996 .. " (and continuing to the inrush and
beyond) ¹ (parenthesis added)

9.2 The Duty of the Mine Surveyor

When Mr Robinson began at Gretley in May 1995, the development of MW39-45 was already well underway. Approval having been given by the Chief Inspector on 5 January 1995, a number of panels had been extracted. Mr Robinson said this:

- A. ... If I can just add something else, there was another very important point in my mind which we talked about yesterday and that was the fact that the workings in miniwall 43, 41 and 42 had worked around Young Wallsend Colliery and up to Young Wallsend Colliery

¹

Ex.62.05 p.16 para.37

before I became the Surveyor at Gretley. ..." ²

The variation application (to widen the panels) was submitted to the Department on 15 August 1995 [Ex.14.08]. The plan which accompanied that application was certified by Mr Murray as mine surveyor on 11 August 1995 [Ex.14.10].

This was the context within which Mr Robinson assumed the role (from time to time) of mine surveyor. What research, if any, would one expect a person appointed to the position of mine surveyor to undertake in respect of a development which was then well advanced? Mr Price, the Chief Surveyor of the Group, gave the following evidence:

- Q. What would you expect Mr Robinson to do, if anything, in relation to acquainting himself with relevant material, what would he consult, what would he do?
- A. ... generally acquaint himself with the operations, the plans, day-to-day operations of the mine, be aware of where the surveys were and what it involved.
- Q. Would you expect him to look at the section 138 application?
- A. Probably not.
- Q. Or the variation?
- A. Probably not, only the conditions of the approval.
- Q. The approval plan?
- A. Not .. as such, just the conditions more than the approval plan. He'd have the ... entire mine plan.
- Q. Would you expect him to notice the Young Wallsend Colliery?
- A. Yes.
- Q. Would you expect him to in any way research that aspect, either by questions or by seeking out information?

A. No, I don't believe so.³

Mr Knight, on the other hand, defined the surveyor's duty in these terms:

A. I believe that the surveyor that is taking up the role as the statutory surveyor I presume can only do what is reasonable within a given time frame and I am not sure what exactly - what the time frame is. **But he has to assess for himself to what extent his predecessor has researched the particular project** and presumably being a section 138 application and having been approved by the department he would expect that there has been a fair degree of research already been carried out and he has to rely on that.
(emphasis added)

Mr Knight added:

A. But ultimately if he does have a concern about the information that he has available he would have to discuss that with his manager, discuss that with other officers within the mine to establish the degree of ... (confidence) that he can place in his predecessor's work. He may have personal familiarity with the standard of his work, he has to rely on that, and no doubt his manager would give him sound advice in that regard. If he has any concerns he has to then raise the issue with his manager. ...⁴

Mr Robinson knew Mr Murray well. They first met in 1981 [Ex.62.05 p.37 para.99]. They met again when Mr Robinson joined Gretley as a casual. Mr Robinson regarded Mr Murray as a "thorough and accomplished professional" [Ex.62.05 p.37 para.98]. Mr Knight's evidence continued as

³ K. Price T5413

⁴ R. A. Knight T6813

follows:

- A. ... To research it properly there is government department reports to view, ... that plan there also refers to a calculation book that probably would be worthwhile viewing on one of the cadastral boundaries. So that sort of research would take a considerable amount of time. so going back to what I said before it just really depends on what he can reasonably do in the time frame. ⁵

Mr Knight identified the circumstances which would give rise to a concern:

- A. Probably there would be concern about anything that is going on at the mine, in particular in that circumstance working up towards disused workings that are known to be full of water, there would be concern. ⁶

Mr Knight would expect a person assuming the position of mine surveyor to read the Section 138 application, and the variation application (T6815).

Mr Robinson did so [Ex.62.04 p.5 para.23].

Mr Knight also provided the following evidence, which is relevant to the circumstances in which Mr Robinson found himself. He said this:

- Q. But would you expect him for instance to address questions to the previous surveyor who is sick but available and occasionally comes into the office. Would you expect him to ask the previous surveyor, can you just tell me how it is you determine that this was the correct location and this was the precise extent of the old workings?
- A. Well, it depends in that circumstance whether he has

⁵ ibid

⁶ ibid

actually been appointed as the statutory surveyor. I mean, **if he is acting as an assistant to the surveyor it may be considered rather bold to question his superior** but if he has been appointed as the mine surveyor and is taking over that role by all means, he would be expected to question anybody that would have any information in relation to his job.⁷
(emphasis added)

Mr Robinson did not research the basis upon which Mr Murray had depicted the Young Wallsend Colliery. By Mr Knight's test, therefore, he failed to do that which prudence required.

Referring to Mr Knight's evidence, Mr Robinson said this:

- A. I believe Mr Knight is talking about a completely different circumstance to mine where a surveyor walks in, he's appointed surveyor, the other surveyor leaves, he's fresh, he doesn't know the operation and he has to familiarise himself with it all. I was afforded that luxury, if you like, of working with the Surveyor who was the Statutory Surveyor for several months before I was appointed and even when I was appointed, he was still there accessible for several months after that. So, I don't think we're comparing apples with apples here.⁸

Mr Robinson believed himself to be in a caretaker role. He said this:

- A. ... Michael Murray was there. The statutory surveyor that was still - he was ill. He was only coming in every now and again. But he was there. Michael was somebody that was, even in his illness he was conscious of what was going on at the mine. I visited him in hospital, at home, and he said what's

⁷ R. A. Knight T6814

⁸ M. Robinson T8662

happening, what are they doing? He was involved in the processes that were going on and in the times when I wasn't the statutory surveyor Michael was there on occasions and if he had any doubt, if he had any problem he would've brought it to everybody's attention, let alone mine who was filling his role when he wasn't there. So to - it wasn't the clean-cut swap that you're suggesting.⁹

Between May and October 1996, Mr Robinson had a conversation with the mine manager, Mr Porteous, along the following lines:

"I said: *"I'm still feeling a bit awkward about my position. I am only a casual and I'm in the job of Mine Surveyor because Michael Murray's sick."*

Richard Porteous said:

"You have the job because you can do it. I'm happy with the way you work. I have worked out a way in which, when Michael Murray comes back to work, you can stay on."

I took what Richard Porteous said to mean that when Michael Murray returned, I would continue as the statutory Mine Surveyor and Michael Murray would act as Project Surveyor, or that Michael Murray would be the statutory Mine Surveyor and I would be his assistant."¹⁰

(emphasis in original)

Now, of course, Mr Robinson had been appointed as mine surveyor during the periods already mentioned and from 1 April 1996 he was in that statutory position without interruption up to the inrush. Mr Knight's evidence, which the Court accepts establishes that a statutory mine surveyor in the position of Mr Robinson is to be judged by the standards of

⁹ ibid T8698

¹⁰ Ex.62.05 p.19 para.45

a mine surveyor of ordinary competence carrying out his duties with reasonable care. In Mr Knight's opinion, which the Court also accepts, Mr Robinson had the obligation to familiarise himself with the workings of the mine and to assess for himself to what extent his predecessor had researched the Section 138 application.

Mr Robinson does not seem at first at any rate to have accepted that he had this responsibility. He said he had no reason to doubt the accuracy of the plans of the Young Wallsend mine held in Gretley files [Ex.62.03 p.3 A.20]. Later he stated that he had no reason to doubt the accuracy of the work performed by Michael Murray in preparing plans showing Young Wallsend Colliery old workings in the Young Wallsend seam [Ex.62.04 p.5 para.24].

Mr Robinson said it was obvious to him that the issue of the depiction of the old workings had been thoroughly assessed and researched (T8700). However, when asked the basis for saying this was obvious, he said it was his faith in Michael Murray as well as his knowledge that "when people put workings on the plan, they do it accurately."

Mr Robinson was not aware of any efforts by Mr Murray to verify the accuracy of the Young Wallsend mine plans [Ex.62.03 p.3 A21]. He never saw a file at Gretley that was specifically related to the Young Wallsend Colliery (T8669). He never came across any surveyor's notes relating to the Young Wallsend Colliery (T8696). He did not agree that as the new surveyor it was his duty to give some thought to the basis upon which Mr Murray had depicted the Young Wallsend Colliery, except in the sense that he must become familiar with the workings in the mine. Reminded of the question, Mr Robinson said he had done that, and referred to the Section 138 process, assuming apparently that it must have been researched and

thoroughly assessed (T8696).

Thus, Mr Robinson seems to have proceeded as mine surveyor having no doubts or concerns about the location and extent of the Young Wallsend Colliery workings until September 1996. In his statement dated 25 February 1997 he set out what he decided to do:

"In September 1996, although I had no reason to query Michael Murray's work as referred to in paragraph 24 above I decided, acting as a professional mine surveyor, that I would endeavour to ascertain information which would reconfirm my acceptance of Michael Murray's work. I took the following steps referred to in paragraph 27 and 30 to 41 inclusive." ¹¹

In paragraph 27 of the same Exhibit Mr Robinson set out the steps he had taken at the surveyors' office at Gretley and his finding of the plan of the Young Wallsend Colliery workings in the "Top Seam". He made measurements which, to his satisfaction, confirmed that the position of these workings in the Young Wallsend Seam shown on the current mine plan was consistent with the workings of the Young Wallsend Colliery as shown on the Top Seam plan in relation to the lease boundary.

Mr Robinson then decided to seek the views of Mr Kevin Price, "the Chief Surveyor for Gretley" as to where he might be able to obtain further information on the Young Wallsend Colliery workings. Mr Robinson's actions in consequence of this decision and his approach to the Mines Subsidence Board, fall to be dealt with in the next Chapter. For the purpose of determining whether he fulfilled his responsibilities with respect to the safety of the mine from the operations being conducted in 50/51

panel in its development towards the Young Wallsend Colliery old workings, it is sufficient to note that Mr Robinson in the evidence quoted above recognised that "acting as a professional mine surveyor" he had the responsibility of "reconfirming" Mr Murray's work.

"Reconfirming" Mr Murray's work required Mr Robinson to examine the available material, including that held by the repository of mine plans, the Department. This was not done. Mr Hall QC submitted:

"Had Mr Robinson made one inquiry with the Department, the course of events, one may safely assume, would have been radically different. This is upon the basis that, once discovered, Exhibit 13.63 held, as it were, the vital missing piece of the jigsaw any mine surveyor of competence would have readily come to see and to appreciate from that plan that all other secondary plans derived from it had been built upon assumptions for which there was in fact no safe support. It is submitted that there is no adequate explanation, let alone justification, as to why Mr Robinson limited his inquiries to the MSB. The legislation clearly indicates that it is information held by the Department of Mineral Resources which is to be obtained for the purposes of compliance with the Clause 8 obligations." ¹²

This submission is accepted, as are the following:

- "a. That Mr Robinson's evidence should be judged by the standards of a prudent mine surveyor of at least ordinary competence exercising due care and skill. That standard was established by Mr Knight's evidence.
- b. From at least early 1996 Mr Robinson was the mine surveyor. Accordingly, he had the obligation as such to acquire an understanding as to the basis upon which the old workings had been depicted on the

plans being used by NWCC.

- c. Although Mr Robinson claimed that he had built up a *confidence* over time, it is clear from the evidence that he never set out to validate the basis upon which the old workings had been depicted and the so-called information that he acquired over time was neither primary material nor adequate to discharge the obligation that rested upon him as mine surveyor.
- d. Mr Robinson made no inquiry to ascertain the information that the company had employed in depicting the old workings and in fact did not, until early November 1996, turn his mind to the possible inaccuracy of the plans.
- e. There was never any discussion between Mr Porteous and Mr Robinson as to the accuracy of the plans until the question of inquiries of the Mine Subsidence Board arose in early November 1996 (T.8711).
- f. Given doubts as to the accuracy of the plans (in November 1996), the only one way to remove those doubts was to locate and examine the original record tracing.
- g. Given the notorious hazard of inrush and the potential catastrophic consequences if it occurred, it was a completely unacceptable risk for Mr Robinson not to sound a strong warning in early November (at the very latest) and recommend that development be suspended immediately pending proper inquiry and confirmation." ¹³ (emphasis in original)

The Court therefore finds that Mr Robinson's failure independently to investigate the basis upon which Mr Murray depicted the Young Wallsend Colliery workings on the Gretley mine plan was a breach of his responsibility as mine surveyor.

9.3 The Failure to Comply with Statutory Obligations

The *Coal Mines Regulation (Survey and Plan) Regulation 1984* Clause 13 requires the mine surveyor to prepare (or supervise the preparation of) a mine plan. The plan must conform to the *Surveying and Drafting Instructions* (Clause 13(1)), and must be produced every three months (to comply with Clause 13(3)(a)). The *Survey and Drafting Instructions 1984* require a particular format:

"2.3 Material: The plan shall be drawn on a suitable stable polyester material and shall be in the form of Annexure "A". ..." ¹⁴ (emphasis in original)

The *Survey and Plan Regulation 1984* makes the following provision:

"Mine record tracing

14. (1) An accurate copy of the mine working plan (to be known as the mine record tracing) shall be prepared by or under the supervision of the mine surveyor within 3 months of the preparation of the mine working plan or such other period as the Chief Inspector may direct."

The *Survey and Drafting Instructions* likewise specify the format for the Record Tracing (Annexure A), and that the reproduction "shall be on a suitable polyester material" (Clause 3.3). The obligation is to provide the Chief Inspector with the record tracing every six months (*Survey and Plan Regulations* Clause 14(3)). The regulations make provision for an exemption (Clause 23), and the *Instructions* for an extension of time (Clause 3.6), each to be given by the Chief Inspector upon application.

The last record tracing furnished by the mine to the Department before the inrush was in February 1995. It covered the period to 31 December 1994 [Ex.13.29B] [cf.Ex.62.05 Attachment A]. It was not until three months after the inrush (17 February 1997) that this position was corrected [Ex.32.03]. It appears that during much of 1995, and the whole of 1996, the mine was unable to produce either the mine plan or the record tracing, as required by the regulations (K. Price T5401). Surveys were undertaken during that period (M. Robinson T8638). The data was collected in both survey books and in a computer data base (M. Robinson T8638). Why, then, did the mine fail to carry out these important requirements? Mr Robinson identified the reasons in the following answer, provided to the inspectors:

**"Q13. Are Gretley's Record Tracings up to date?
If no - Why not? If yes - What is the date of the last
set of Record Tracings.**

- A. There are 16 record tracing sheets containing workings at Gretley Colliery. 10 sheets are up to date and 5 sheets are not. 1 sheet needs to be viewed to confirm its status. The date of the last record tracing is 31.12.94. In respect of the 5 sheets that are not up to date, the following reasons apply:
1. Disruption caused by the illness and subsequent death of M. Murray.
 2. Difficulties caused by changes in the computer system from Mindraft to Surpac and to Autocad and my inexperience in the use of this software.
 3. Advice to the Department of Mineral Resources concerning the situation with M. Murray and their subsequent consent for me to send 1;10,000 scale plans of the mine up to date in 1996.
 4. Demands on my time due to an application under Section 138 of the CMRA and my involvement and learning process in the development of the strategic mine plan and

budgeting processes." ¹⁵

(emphasis in original)

Mr Robinson acknowledged that the statutory obligations were important (T8637). The following was put by Counsel Assisting:

- Q. ... It is obviously important that the Mine has, as part of its permanent record, a succession of mine plans produced in accordance with .. that legislative requirement?
- A. I believe that the mine plan should be regularly updated as an accurate record of the workings of the Mine, yes. ¹⁶

The examination continued:

- Q. Not just recorded, in any old fashion in computers or anywhere else, but recorded in hard copy on polyester as required by the Regulations as a permanent record at the Mine?
- A. Yes. I believe that compliance with the Regulations - and that's what you're talking about, the updating of the mine plan in accordance with the Regulations - I do, yes, I believe it's important. ¹⁷

Mr Pala, a former manager of Gretley, gave the following evidence relevant to this aspect:

- Q. Assuming that there was a problem and it was in the nature of a computer problem that in some way though the information was fed into the computer, the survey information, there was some difficulty in reproducing that information or printing out that

¹⁵ Ex.62.03 p.2

¹⁶ M. Robinson T8637

¹⁷ ibid

information, then what would your response to that be, what would you do?

A. What did we do before computers?

Q. Sorry?

A. What did we do before computers would be my response.

Q. So you would ask that it be done manually whilst the problem in respect of a computer was addressed?

A. Yes.¹⁸

However, it was not done manually for a variety of reasons (cf M. Robinson T8639), including the forbearance of the Department. Ms Marjorie Roberts of the Department, she being the custodian of record tracings, recounted the following conversation with the mine:

"In January 1996, I made a telephone call to Gretley Colliery because their six-monthly update of their RT was late. I asked for the Mine Surveyor, Mr Michael Murray, but spoke to someone else, who I understand was another surveyor at Gretley. I cannot recall the person's name, except that it was not the present mine surveyor, Mr Robinson.

I said, "When will the Record Tracing be coming, because it's late?"

The person replied, "Michael is in hospital, with lymphoma. He might be there for months. We are converting our plans to a new computer system, because the existing program isn't working. Michael has begun the change-over, and I will be completing it when he gets, hopefully, out of hospital. He's the one who knows what needs to be done. We can't supply a record tracing until Michael comes back."

I said, "Well, I'll wait until Michael gets back, if it's just going to be a month. I'll call again in a month's time. I can wait until then if he's in hospital." "¹⁹

¹⁸ J. A. Pala T5668

¹⁹ Ex.32.01 p.3/4 para.10

It was, of course, not done. Ms Roberts made a request for "at least a 1:10,000 computer print out" [cf Ex.32.01 p.6 para.14]. Mr Robinson sent an updated plan drawn to that scale in February 1996, and in October 1996 [Ex.62.05]. The submission made on behalf of Mr Robinson suggested that the acceptance by Ms Roberts of the 1:10,000 plans "amounts to an exemption covered by Paragraph 3.6 of the Survey and Drafting Instructions". The submission added:

"It is our submission that Marj Roberts, if not exercising an actual delegated authority, was doing so in a defacto manner and had the apparent authority to do so." ²⁰

The submission is without substance. No exemption was granted. Ms Roberts agreed to accept a makeshift substitute until the situation had been corrected.

This episode reflects poorly upon the Gretley survey staff. No doubt the illness of Mr Murray was a substantial part of the problem. However, Mr Robinson, as mine surveyor, should have ensured long before February 1997 that the problem was addressed, if not by computer then manually.

There is a further aspect which should be mentioned. It was evident that many of the plans reproducing the Young Wallsend Colliery (including the record tracings [Ex.13.29 A & B]) were imperfect, failing to include roadways and other details contained in the Top Seam sheet [Ex.7.8]. This likewise reflects poorly upon the Gretley survey staff. It was said to arise from a computer software problem (MFI 89 Vol.1 p.245). Although the problem was recognised, it was not corrected. Over a number of years, plans, which were plainly inaccurate, were reproduced and circulated

[Ex.7.8], including the application under Section 138 to the Department [Ex.14.07]. The staff seemed to have had a lackadaisical approach to their important duties with no proper supervision by the mine managers.

Having completed an examination of the underlying causes of the inrush, the Court is now in a position to deal with the events immediately before the inrush occurred. Were there warning signs which were not heeded?

10 THE WATER ISSUE

10.1 The Issues raised by Submissions

In the weeks preceding the inrush there were reports of water in 50/51 panel, culminating in a report from a mine deputy, Mr McLean, on 13 November 1996, the day before the inrush, which included this:

"Coal seam is giving out considerable amount of water seepage at face C hdg" ¹

The submission made by Mr Hall QC was in these terms:

"In the submission of the relatives, the presence of water in MW Panels 50/51 was an obvious sign which, though brought to the attention of management, was effectively ignored, resulting in the loss of a critical opportunity to have prevented the disaster that occurred on 14 November 1996. In this regard, it is submitted, there were no mitigating circumstances providing either an explanation or justification for the lack of action. If those charged with the responsibility for safety had actively applied their minds to the significance of the entry of water (as they were bound to do), appropriate investigations would have led to the detection of the old workings as the source of the water." ²

The submission identified six ways in which the company, the mine manager, and certain undermanagers failed in their respective duties:

- "i. In failing to perceive the water infiltration as an abnormal or unusual condition which could affect safety in the mine.
- ii. A failure to undertake any inspections of the face of C

¹ Ex.6.02

² MFI 87 p.15 para.1.2.8

Heading on 13 November 1996.

- iii. A failure to monitor the presence of water in MW Panels 50/51.
- iv. A failure to alert men working in the Panels to be on the lookout for signs of water seepage.
- v. A failure to investigate and ascertain the source or explanation for the infiltration of water, and in this respect, a failure to consider the old workings as a source for the infiltration of water.
- vi. A failure to suspend mining on or before 13 November 1996 pending appropriate investigations, including a drilling probe ahead of the new workings.³

The company, and mine manager, on the other hand, asserted that Gretley was a wet mine (MFI 88 p.118), and that the water which was reported was in no way unusual. It is only with hindsight that it can be recognised as a symptom of the tragedy which lay in wait. Accordingly, they say that there was no breach of duty. The inrush was caused by an error in the plans. It was not the product of any absence of diligence by the company, or its officials, whilst mining was taking place.

To resolve these differences the evidence concerning water, and the company's response to it, must be examined with some care.

10.2 A Wet Mine

There is no question that Gretley is a wet mine [Ex.2.03]. Mr Anderson gave the following evidence:

³

MFI 87 p.15 para.1.2.7

- Q. In respect of the mine generally and dealing with water, how would you describe it?
- A. I'd describe Gretley as being a wet mine with areas that are very wet but typical for a mine that would be described as a long boot or a rubber boot mine.
- Q. Sorry, what is that expression?
- A. Well, that's just a mining expression to say that the mine has sufficient water where you can't wear short or leather boots, you have to wear rubber boots, that there's water laying around in areas that you can't guarantee from the time you step off the transport, that you are not going to end up with water up to say, calf level at some stage. ⁴

It was common ground, however, that 50/51 Panel was drier than other areas. Mr Shacklady, having retired from the Department, became an undermanager at Gretley shortly before the inrush. He made the following comparison between 50/51 Panels and other parts of the mine:

- A. Well Gretley is a very wet mine, all the districts are wet, the water percolates from one district to another because of the way it is developed. The funny thing about 50/51 and I always commented when I went in there, it is.. (a) pleasure to come into this district, it is the driest district in the pit. It was probably the only district in the pit without a pump. ⁵

This was the context within which observations were made. An increase in water was to be expected as the development got closer to the abandoned workings (Mr. J. Hanes T6728/9; Prof. A. J. Hargraves T6488). However, an increase in water did not necessarily signal that the mine was only a short distance away. Water, especially when under pressure, was capable of travelling considerable distances through coal (Prof. A. J. Hargraves T6525/6; MFI 95 Reply p.10 DR1.31). Having said that, the presence of

⁴ I. C. Anderson T1709

⁵ T. Shacklady T1278/9

water could not be ignored. An article "Water - A Hazard and a Nuisance" includes the following comment:

"Any water inflow in the vicinity of abandoned mines - whatever the water quality and whatever the indicated barrier width - should be considered a danger signal."⁶

The submission of Mr Hall QC drew attention to an important distinction, relevant in this context. It said this:

"There is a distinction to be made between the presence of water as itself a danger and its presence as a sign of potential danger. Thus, one witness said that the presence of water in panel 50/51 even if assumed to be from the old workings would not, itself, constitute a danger. That, of course, is true, but it is also true that it may well be a warning sign that mining is proceeding into the vicinity of old workings."⁷ (emphasis added)

Against this background, the evidence will now be examined.

10.3 The Observations of the Miners

After the inrush Inspectors from the Department interviewed miners and officials who were familiar with 50/51 Panel. The interviews included a number of standard questions addressed to each witness. The interview of Mr Nunns (a miner), for instance, included the following:

"ANDERSON: At any time did you ever observe any unusual or abnormal water seepage or inflows in 50/51 panel?"

⁶ Ex.76.04 p.63

⁷ MFI 87 p.7 para.1.1.2.(v)

NUNNS: No.

ANDERSON: Did you (make) specific observations for water seepage or water inflows in 50/51 panel?

NUNNS: No."⁸

The interview also contained the following:

"ANDERSON: During the month prior to the accident, did the amount of water present in the workings of 50/51 panel appear to you to be increasing?

NUNNS: No, I didn't see anything, no.

ANDERSON: In your experience, was the amount and extent of water present in 50/51 panel in the month prior to the accident typical of normal face conditions for first workings panels at Gretley?

NUNNS: Well actually I didn't see any water at all."⁹

Other witnesses responded to these questions in similar terms. Some witnesses observed water, but regarded what they saw as in no way unusual. It cannot be inferred from this evidence, however, that there was nothing to observe. At best one may infer that whatever changes were present were subtle, and required thought, and interpretation.

Two matters should be mentioned which are relevant to the failure of many witnesses to notice any real change. First, as already discussed, most

⁸ Ex.40.01

⁹ ibid

miners, and many officials, did not know that the old workings were full of water (supra p.433). Miners and officials were not told to be alert for changes, even subtle changes, in the presence of water.

Secondly, a number of miners were casual employees. There were 15 such employees at the mine on 14 November 1996 [P. J. Pritchard Ex.8.04 p.6 para.22]. Mr Porteous gave the following evidence relevant to this aspect:

- Q. In respect of any development in an underground mine, I suppose any mine, but especially an underground mine one is relying upon the miners to, first of all recognise those things which are abnormal in order that they can safeguard against them?
- A. Yes.
- Q. And indeed pass on that information to those who may be in a position to make decisions in relation to the continuance of production?
- A. Yes.¹⁰

The evidence of Mr Porteous continued:

- Q. The recognition of what is abnormal is dependent upon a recognition of what is normal for that particular mine?
- A. Yes.
- Q. And recognising what is normal comes with experience?
- A. Yes.
- Q. And if one is importing into the mine inexperienced personnel and deploying (them) in locations such as 50/51, then is there not to the risk and I do not suggest this is confined to Gretley, but perhaps a risk inherent in the system, of use of contractors, is there not the risk that one foregoes that line of defence, if you like, of using the eyes and ears of these individual

mine workers to first of all look after themselves and secondly report information to management?

- A. It depends on the experience of the people both in other mines and at the mine that they're at. They may be very experienced miners, but at one mine for a short period.¹¹

Some of the contractors were young men with little experience. The deceased, Damon Murray, for instance, was aged 19 years at the time of his death.

In the period shortly before the inrush, what observations were made concerning water? There were four reports of water in the first week of November 1996. They were:

- A statutory report of Mr McLean on 1 November 1996.
- A report by a mine deputy, Mr Bernard, to the undermanager in charge, Mr Alston, on 4 November 1996.
- A conversation between Mr McLean, a mine deputy, and the manager, Mr Porteous, on 4 November 1996 in the course of inspection by the district inspector, Mr Van Dijk.
- A further statutory report at the completion of Mr McLean's shift on 4 November 1996.

These reports were made ten days or more before the inrush. The Court will consider separately, in the next Chapter, the further report of Mr McLean on the day before the inrush.

¹¹ *ibid*

10.4 The Legislative Regime of Reporting

The Coal Mines Regulation Act 1982 establishes a regime whereby reports of conditions in the mine are passed from one level of management to the next. The mine deputy is allocated an area, known as a district. He is obliged before the commencement of each shift, and during the course of that shift, to carry out a number of inspections (*Coal Mines (Managers & Officials - Underground Mines) Regulation 1984, Clauses 63 and 64*). At the end of the shift the deputy must complete a report, known as a "statutory report" (Clause 65). A copy of the report is left underground. It is read, and countersigned, by the incoming deputy, and "shall be accessible to workers employed at the mine" (Clause 65(5)). A duplicate of the report is taken to the surface by the mine deputy, and provided to the undermanager. The undermanager is obliged to read and countersign the deputy's report (Clause 34(1)(c)).

The undermanager is then obliged to bring the notice of the undermanager in charge any matter arising from the deputy's report which "relates to the safe working of the mine or to any abnormal condition which may affect the safe working of the mine" (Clause 34(2)). Quite apart from that obligation, the undermanager is required to make inspections, and report to the undermanager in charge (Clause 40).

The manager, by Section 37(2)(i) of the *Coal Mines Regulation Act 1982* is himself obliged to read these reports, subject to the following proviso:

"37.(3) The manager of a mine shall be deemed to have complied with:

(a) * * * * *

- (b) subsection (2) (i) in respect of a report, record or other item of information referred to in that paragraph if:
 - (i) he ensures that it is read by a person appointed by him in writing (being a person having such qualifications as may be prescribed for the purposes of this subparagraph) immediately upon that person's becoming aware of the existence of the report, record or other item; and
 - (ii) he has taken steps to ensure that any matter disclosed in the report, record or other item which is of an abnormal or unusual nature and which could affect the safety of persons in the mine is promptly brought to his attention."

These elaborate provisions recognise the importance of timely information in accident prevention. The submission on behalf of the Relatives said this:

"... Many of the regulations under the CMRA requiring shift reports are premised upon the need to monitor and record on a regular basis physical conditions for change or other noteworthy aspects. They do so because long experience in mining establishes that changed conditions often are associated with a set of circumstances which, if ignored, may endanger either the workings in the mine or the safety of mining personnel or both." ¹²

10.5 Water in 50/51 Panel

The three roads associated with 50/51 Panel, (A, B and C Headings) were driven according to a sequence plan. They were completed progressively to the level of each cut-through, before extending the development towards the next cut-through.

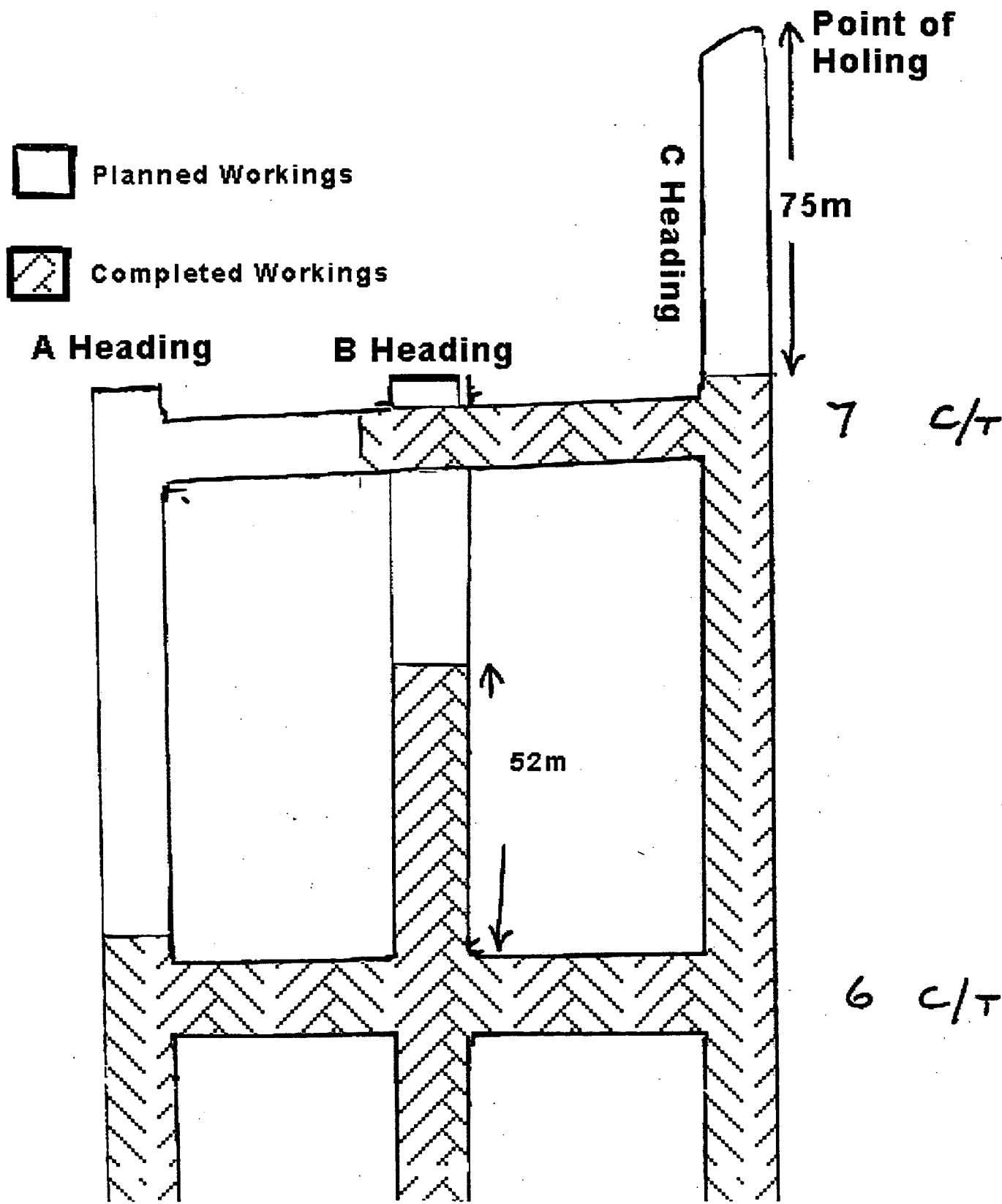
At the end of the day shift on 1 November 1996 the headings had been developed in the manner shown in Figure 5 (over), which is an adaptation of a diagram in Exhibit 6.02.

The point of holing is shown on Figure 5. It is a further 75 metres along C heading from 7 cut-through. The plan being used by the Gretley mine showed the old workings an additional 114 metres beyond the point of holing. In other words, at 7 cut-through, the mine imagined that the old workings were approximately 191 metres away (75 m plus 114 m), whereas in fact they were only 75 m away.

C heading is described as being "on the strike" (W. A. G. Hegarty T2504; M. J. Coffey T2108); that is, the heading more or less follows the contour of the land, and although not level, rises only gently as one moves from Cocked Hat Creek towards the old workings. The seam, however, dips from east to west; that is, from C heading towards A heading.

By 30 October 1996 day shift, the continuous miner had completed 7 cut-through between C heading and B heading (see figure 5). It then withdrew, and began work on B heading, driving it from 6 cut-through to 7 cut-through. It was not until the day shift on 5 November 1996 that B heading was completed, and had holed through to 7 cut-through [Ex.6.02].

FIGURE 5:
EXTENT OF WORKINGS AS AT NIGHT SHIFT 1/11/96



Hence, in the period 30 October to 5 November 1996 7 cut-through, between C heading and B heading, remained undisturbed. Because of the dip in the seam, there was the opportunity for water to accumulate in the hollow. Some of the water later observed in that location was, no doubt, generated by the roof bolting carried out before the miner withdrew. The increase in water after the miner withdrew, however, was due to causes other than coal production.

The deputy on the day shift in 50/51 Panel was Mr Alistair McLean. Mr McLean was then aged 50 years. He is an experienced deputy. He is very familiar with the Gretley mine, having worked there for 32 years (T1084). At the completion of Mr McLean's shift on Friday 1 November 1996 he submitted a statutory report which, under the heading "Any Other Matters", appeared: [Ex.6.02]

"Nuisance accumulation of water in C-B 7 CT"

The statutory form also made provision for comments upon "General safety & action taken". In that section Mr McLean's report included the words: [Ex.6.02]

"Satisfactory if care taken"

There was no coal production over the weekend (2 & 3 November 1996), although the area was inspected, including by Mr McLean. The statutory reports completed by deputies at the end of their shifts on that weekend do not refer to water.

On Monday 4 November 1996 a mine deputy, Mr Bernard, made an inspection of 7 cut-through in 50/51 Panel. Mr Bernard was on night shift,

and also involved in conveyor belt inspection. At the time he passed 7 cut-through he was accompanied by the night shift undermanager, Mr Pritchard (P. J. Pritchard T 9265). The inspection was made sometime before 7 am [Ex.6.02]. Mr Bernard had inspected the same area the preceding Friday, 1 November (the day Mr McLean made his observation and report). He was, therefore, in a position to observe the build up of water over the weekend.

Mr Bernard said:

- A. ... the first night I was in there that was only about one foot deep to the face. You could walk up and do an inspection at the face and actually not go over your boots and then on the second night - the second occasion there on the 4th that water had built up that you couldn't walk through it. There was a depth you couldn't get to the face.
- Q. What sort of depth - you would not know?
- A. Well, once it got to over - near over my boot heights I didn't go any further out. ¹³

Mr Bernard estimated that the depth of water on 1 November was 300 ml, whereas by the 4 November it had risen to 600ml (T352). Mr Bernard provided a statement to his Union which included these words:

"I refer to my earlier interviews in which I said that the amount of water in the workings of 50/51 panel appeared to be increasing. The panel was in good condition. It seemed to me that for a panel in such condition there was more water laying around the floor than I would have expected. There were no visible signs as to where the water was coming from." ¹⁴

¹³ C. A. Bernard T353

¹⁴ Ex.5.04 para.3

Mr Pritchard had the same impression. He described the water in 7 cut-through as being "about to the top of your boots or around about knee deep at the face" (T582).

Mr Pritchard added the following:

- Q. I see. Well, did you discuss with Mr Bernard the water which you both observed in that area?
- A. Yes, we looked at the water. We also looked at the rib line. It didn't appear to be coming out of the rib. It did not appear to be coming out of the clay band and I think my comments were that it could possibly be coming from - through the floor.¹⁵

Mr Bernard made no reference to the water in the statutory report he completed at the end of his shift [Ex.6.02]. It was not included because he did not regard the water as a safety problem [Ex.5.04 para.4]. However, he did believe that it was appropriate to draw the water to the attention of the undermanager in charge, Mr Alston (T384). Mr Bernard described that conversation in these words:

"... I said that the watermake in the section appeared to be unusual to the extent that there was no drippers, no actual source where you could see where the water was coming from."¹⁶

When giving evidence of his conversation with Mr. Alston on 4th November, Mr Bernard said:

- Q. Just doing the best you can, tell us what was said. He said, you said?
- A. Well, we were just discussing the section we've - I'd just come out, putting the shift reports in and I just - I

¹⁵ P. J. Pritchard T583

¹⁶ Ex.5.02 p.3

just said: There's a fair bit of water in the section for a place that's got no visible signs of water make and I think Mike Alston answered at the time: well, we are heading towards an old working and it's quite possible that the seam will be impregnated with water, which to me was a satisfactory answer because things like that is mining.

Q. Anything else said?

A. No, that was virtually where it was left. ¹⁷

Mr Bernard also provided the following evidence:

His Honour: So, what you had noticed was an unusual amount of water in a panel that was in good condition, is that right?

A. That's correct

Q. And no obvious explanation for that water?

A. That's right.

Q. Is that right?

A. That's right.

Q. So, I suppose that was present in your mind when you felt is proper to bring it to the attention of Mr Alston?

A. That's correct.

Q. Yes, and may I take it that as a deputy of your experience you were somewhat curious about the source of this water or its origin?

A. That's correct.

Q. Hence you raised it with the under manager?

A. That's right. ¹⁸

The examination was interrupted momentarily, after which Mr Bernard gave the following evidence:

His Honour: ... All I want to get from this witness is that in fact it is correct to say, as he said here, that he brought this to the attention of Mr Alston and Mr Pritchard, is that right?

A. That's correct.

¹⁷ C. A. Bernard T354

¹⁸ C. A. Bernard T384

- Q. Right. What I want to know is, did either of these gentlemen tell you or give you his opinion as to the source or origin of this water?
- A. I believe Mr Alston said to me at the time that we were heading towards old workings. It's quite reasonable to expect the seam would be impregnated from water as the old workings were full of water, and to me at that stage was an acceptable answer.¹⁹

Mr Alston had no recollection of this conversation (T470). Mr Pritchard, however, recalled seeing Mr Bernard speaking to Mr Alston at the end of the night shift (T587). He gave the following account of what he heard:

- Q. What did you hear Mr Bernard say?
- A. I didn't hear Mr Bernard say anything at all. I heard Mr Alston say to him that we were leaving a 50 metre barrier between 50/51 workings and the old workings, and Mr Bernard seemed to be content with that answer.
- Q. Well, that is all you heard?
- A. That's all I heard, yes.
- Q. You did not hear anything about what he had been referring to?
- A. Not that I can recall.²⁰

10.6 The Inspection by Mr Van Dijk

Later the same morning (4 November 1996), the mine manager, Mr Porteous, accompanied the District Inspector, Mr Van Dijk, underground for an inspection. The inspection began at about 9 am [R. M. Porteous Ex.63.10 p.5 para.16], and was completed sometime after midday [Ex.63.10 p.8 para.18]. After inspecting 52/52 Panel, Mr Van Dijk and Mr Porteous went to 50/51 Panel [Ex.63.10 p.6 para.16]. They paused at the

¹⁹ ibid T385

²⁰ P. J. Pritchard T587

crib room (in 6 cut-through), where Mr Van Dijk examined the book containing the deputies' statutory reports. Mr McLean's report of 1 November 1996 was included in that book [Ex.6.10].

Mr Porteous and Mr Van Dijk then walked along B heading about 80 metres to the face where the continuous miner was operating. Mr Porteous said this:

"... No excess water was visible in the panel. ..."

Mr Van Dijk and Mr Porteous watched the miner in operation. Mr Porteous spoke to Mr McLean. He recalled the conversation in these words: [Ex.63.10 p.6 para.17]

"I spoke to Mr Alistair McLean, the deputy and he said: **"There is water gathered in 7 cutthrough. We are not close to the old mine are we?"** I said: "We are not close to the old mine. It is about 200 metres away from here." Mr. Van Dijk was nearby at the time of this conversation. I said to Mr. McLean; "While we are here we will go up and look at this water." I said to Mr. Van Dijk: "Come on, let's have a look at this water". We then left the face area and walked back to 6 cutthrough which was about 80 metres away. ..." ²¹
(emphasis added)

Mr Porteous was asked about that conversation by Counsel Assisting. The examination was as follows:

Q. ... But in any event going back to Mr McLean's conversation on page 6, he was obviously expressing concern to you, do you agree?

²¹

Ex.63.10 p.6 paras.16 & 17

A. Yes.²²

Mr Porteous then thought better of that answer, and sought to amend it. He said this:

Q. And you would expect him as the Deputy to have, indeed it would be available in the crib room, a section plan of this panel; I think we have the exhibit here?

A. Yes, could I go back to the previous question. I didn't interpret any concern from Mr McLean. I interpreted a, simply a question of fact.²³

The examination continued:

Q. And they included a plan of the proposed development and showed quite clearly the relationship of the development to the assumed location of the Young Wallsend Colliery?

A. Yes.

Q. And Mr McLean as an experienced Deputy would have been fully aware of that?

A. I would have thought so.

Q. So that surely when he asked you a question: *There is water in 7 C/T, we are not close to the old mine, are we* - That is a question by him saying, are you sure these plans are accurate?

A. As I said earlier, I didn't interpret it in any way like that.

Q. Is there any other way to interpret it?

A. As a question of fact.

Q. But I mean, it is an inane question of fact if you assume an experienced Deputy who has a plan in front of him every day of his life, is that not right?

A. Well, I don't know what was going through his mind.²⁴

²² R. M. Porteous T9093

²³ ibid T9094

²⁴ ibid

Mr McLean was certainly familiar with the plan provided to him by Gretley. He said this to the inspectors:

"Q26 When did you learn of the existence of these old workings?

A26. At the beginning of the driveage of 50/51 panel when we were issued with the section plan.

Q27. How did you learn of the potential hazard that these old workings could have presented to the mine's workforce if holed into?

A27. It was an assumption that the old workings contained water." ²⁵

Returning to Mr Porteous, the examination continued:

Q. And that every day of Mr McLean's life as a Deputy in that panel he would be completing production reports in which he charts how much further they have mined and in relation to the overall development, is that right?

A. He'd be updating workings, I'm not sure if he was doing it every day of his life.

Q. See, what I am getting at is he would be very conscious of the plan of 50/51?

A. Yes.

Q. Consequently when he asks: *We are not close to the old mine, are we?* Is that not suggesting that is there any reason to suppose that that water which is in 7 C/T which I am drawing to your attention might be coming from the old mine which is closer than we think, that is what he is saying, is he not?

A. Well, I don't know what was going through his mind at the time.

Q. I suggest that that is the only reasonable construction you can put on his words, do you agree with that?

A. No, it's not, I took it as a question of fact and I

answered it as a question of fact.

Q. You reassured him by saying no, look, it's 200 metres away?

A. Yes.

Q. But you recognised that he needed reassurance, that this is some distance away, is that not right?

A. Yes, I told him it was 200 metres away because that was my belief.

Q. But can you answer my question: you recognised that he needed reassurance?

A. No, I answered, I gave an answer of fact.

Q. You see, I want to suggest to you, you recognised he needed reassurance and that because you recognised he had expressed concern, what do you say?

Q. No, he didn't express any concern to me.

A. As an indication of the importance of this matter you then said to Mr Van Dijk, all right, let's go and have a look at this water?

A. No.²⁶

Mr McLean gave the following evidence in respect of the same conversation:

Q. Well, before this in-rush do you ever remember having any concern at any stage up to the 14th or the end of your shift on the 13th, do you remember at any stage having any concern about water which may have its source in the old workings which were ahead of you?

A. No, I do not.

Q. Did the thought ever cross your mind that the plan that you had may be wrong?

A. No, it didn't cross my mind at all.

Q. Or inaccurate?

A. No.

Q. Or there may be unrecorded workings?

A. No.

Q. Or that you may be closer to the old workings than the plan suggested?

A. No.

- Q. You would acknowledge that if the words, which I put to you a moment ago, were said by you by way of a question to Mr Porteous, namely; we are not close to the old mine, are we. then they would suggest that those thoughts had crossed your mind?
- A. Those thoughts may have crossed my mind but I have faith in the plans that are issued to me because that is what I go by. If I decide that I am not - these plans are not of value or - or wrong then I wouldn't have much of a chance because I - these are plans that are given to me and I've been in that - that colliery for 17 years in the capacity as a deputy and found the plans to be accurate and good enough for me to work with.²⁷

The Court is in no doubt that Mr McLean, in his conversation with Mr Porteous on 4 November 1996, was expressing concern about the water in 7 cut-through, and whether it signalled that the abandoned colliery was closer than the plan suggested. Mr Porteous did not need to read Mr McLean's mind to discern that clear message. The misgivings of an experienced deputy about a serious potential hazard, namely inrush, ought to have made Mr Porteous pause, and reflect upon what was being said. Instead, he brushed Mr McLean's concern to one side, glibly referring to the plan. A warning went unheeded which, had it been taken seriously and investigated, may have exposed the inadequate basis upon which the Young Wallsend Colliery had been depicted.

After this conversation, Mr Van Dijk and Mr Porteous walked along C heading to 7 cut-through. Mr Porteous described what he saw in these words:

"... I saw that there was an accumulation of water in 7 cutthrough between C heading and B heading. The cutthrough slopes downhill from C heading towards B

heading, so that the water was deepest at the point where B heading was to join the cutthrough. I saw nothing unusual in this water and formed the opinion that it was no more than nuisance water which was no problem. Mr. Van Dijk made no comment to me about the water. ..." ²⁸

Mr Porteous also examined the face at C heading. He saw no sign of water coming from the face [Ex.63.10 p.7 para.17]. Mr Van Dijk estimated that the water was one metre deep at the face in 7 cut-through [Ex.56.01 p.9 para.42]. He added: [Ex.56.01 p.10 para.42]

"I did not observe a watermake of any sort. I observed that the water was not flowing."

It is surprising that Mr. Van Dijk made no comment to Mr Porteous. However, he believed the accumulation of water was unremarkable. He said:

"At the time, in light of:

- (i) the above circumstances;
- (ii) more than 25 years experience
- (iii) my knowledge and observations of Gretley as a mine that experienced some watermake in mining operations;

it was my opinion the water had gathered to the dip and that it had occurred as part of the normal mining process, that is from the continuous miner and roof bolting operations." ²⁹

Mr Van Dijk added:

" ... I did not associate the watermake that was evident in 7

²⁸ Ex.63.10 p.7 para.17

²⁹ Ex.56.01 p.10 para.43

cut-through with the Young Wallsend workings because the plan that Mr Porteous had shown me indicated that the location of the water in 7 cut-through was about 170 metres from the nearest part of the Young Wallsend workings." ³⁰

The following was put to Mr Van Dijk:

Q. Now, if you had an understanding that the water was considerably less in size and depth after the continuous miner withdrew?

A. Yes.

Q. And had built up over the weekend between 1 and 4 November, at least have been observed during that period, during which time no mining was being undertaken. First of all, can I ask you did you know that, did you have any understanding that that was the case?

A. No, I didn't know that.

Q. Had you known that would that have provoked any question or investigation on your part?

A. It certainly would have provoked a question as to the - the source of water, if I'd known there'd been an increase. ³¹

At the end of the day shift Mr McLean once again drew attention to the water in 7 cut-through, emphasising, by his choice of words, the build up since his report of 1 November 1996. He said:

"Large amount of nuisance water in C-B 7 ct." ³²

Once more the entry was made in the section of the report "Any other matters", rather than "General safety".

Mr David Pugh is a mine deputy. On both Friday 1 November 1996 and

³⁰ ibid para.44

³¹ F. J. Van Dijk T4430

³² Ex.6.02

Monday 4 November 1996 his shift overlapped with that of Mr McLean [Ex.49.01]. He was required to work after Mr McLean had completed his shift. On both days, in accordance with the statutory regime, he read Mr McLean's reports. He saw the references to nuisance water in 7 cut-through [Ex.49.01 para.5]. As a deputy, he was also obliged to inspect 7 cut-through. Whereas he was able to walk to the face on 1 November 1996, with the water half way up his rubber boots (which came three inches below his knees) (T3940), by the Monday he was unable to do so. He said this:

Q. When you made your inspection of the 4th, where did you walk?

A. On the 4th I started to walk down the centre, I then had to swing to the right hand side and made my way down the right hand rib until I got to the face. I was able to cross at the face on some slack coal.

Q. I see. the profile of the floor to some extent varies because of the passage back and forth of shuttle cars, is that right?

A. It does, yes.

Q. Just describe it for us, would you, the typical floor?

A. The floor is normally higher in the centre and both sides and drops away in the wheel tracks, very similar ... to a muddy road on a country property.³³

He gave the following description of the water, which the Court accepts:

Q. And you describe the water on this occasion (4 November) as almost over the top of the boots, is that right?

A. That's right.

Q. Can you just enlarge upon that description in terms of its location and size?

A. The ... width didn't vary of course, but it had backed up the ... cut-through. It was just short of the corner

so probably it had moved back from about 12 metres to about ... 17 to 18 metres. That's ... very approximate.³⁴

Mr Pugh made no reference to the water in the statutory reports he completed on 1 November and 4 November respectively. He did not see the water as giving rise to a safety issue [Ex.49.01]. Mr Pugh did not recall having applied his mind to the source of the water (T3938).

The company made the following submission in relation to the extent of the water in 7 cut-through, drawing attention to a plan [Ex.13.55] which identified precisely the dip between C heading and B heading:

"Although various witnesses gave evidence as to their estimates of the depth of water in 7 cut-through, Ex 13.55 shows that the difference in floor levels between the face of 7 cut-through just beyond B heading and the point at which water would overflow into C heading, is approximately 760mm. The evidence was that on 4 November, the water had accumulated to about half way between C heading and B heading. Accordingly, the depth of water must have been of the order of 400mm. ..." ³⁵

Taking the description of Mr Pugh as the appropriate measure, the Court believes it likely that the depth of water in 7 cut-through on 4 November 1996 was approximately 600 mm.

Mr Pugh acknowledged that the reference to the accumulation of nuisance water in the statutory reports of Mr McLean was unusual (T3939). There were, before the Court, many statutory reports by deputies [Exs.6.01 and 6.02]. The reports of Mr McLean of 1, 4 and 13 November (the last being

³⁴ ibid T3939

³⁵ MFI 95 Reply p.5 para.DR1.15(ii)

the report from the day before the inrush, which will be dealt with in the next Chapter) are indeed unusual. Superficially, the water was merely a nuisance. The accumulation in 7 cut-through to a level of 600 mm did not represent a safety hazard, as such. However, that was not the only issue. Did the water, and the build up of water, represent a "danger signal"? (cf Ex.76.04 p.63, *Water - A Hazard and a Nuisance*). What was its source? What, if anything, did it suggest in relation to the flooded old workings which lay ahead?

Mr McLean's report on 4 November 1996 was given to the undermanager, Mr Coffey [Ex.6.02]. Mr Coffey made no inspection of 7 cut-through (T2112). Mr Coffey gave the following evidence:

- Q. .. Did you apply your mind to the build up of water between 1 and 4 November?
- A. No.
- Q. Why not?
- A. I considered it to be a normal build up. ³⁶

The Court will shortly set out certain steps which were taken or planned in the days that followed. The issue is whether, on the evidence, these steps were a reaction to the reports of water, and a concern about the location of the Young Wallsend Colliery. The steps were:

- First, a proposal to drill ahead which, in November 1996, became part of the strategy for 50/51 Panel (although, tragically, was not carried out before the inrush)
- Secondly, contact by Mr Robinson with the Mine Subsidence Board seeking information to enable him

to confirm the position of the Young Wallsend Colliery
[Ex.62.04 p.7 para.31].

These steps, whether or not they were connected to the reports of water, were too little too late. Only Mr McLean appeared to give serious thought to the source of the water, and the wider ramifications it may have had in respect of the accuracy of the plan. Even Mr McLean, when he gave evidence, seemed somewhat embarrassed that he alone had applied his mind to these issues. He sought to discount his observations in various ways, which were not convincing. The Court is in no doubt that Mr McLean was a conscientious deputy who made careful observations. He said:

- A. I look at these things and take them day-by-day and investigate things. I write things in my report so that they are noticed.³⁷

The reports of Mr McLean, therefore, recorded the observations of an experienced deputy, and were deserving of greater attention than they were apparently given.

What should have been the response of management to the observations of Mr Bernard and Mr McLean in early November 1996? Mr Anderson, whose evidence is accepted, said this:

- Q. Do I understand from the evidence that you would seek to understand as best you could, the source of the water?
A. That's correct.
Q. You would apply your mind to the sorts of possible sources that you have outlined?
A. Yes.³⁸

³⁷ A. B. McLean T836

³⁸ I. C. Anderson T1722

Earlier in his evidence (T1714) Mr Anderson had identified a number of possible sources for the water. One was the Young Wallsend Colliery (T1714). Another possible source, though one thought by Mr Anderson to be less likely, (T1721) was the adjacent goaf area of MW43 (T1714). Mr Kininmonth when he gave evidence emphasised the workings assumed to be in the lower seam, which was 18 m below. At 7 cut-through the Borehole Seam workings were not far away (approximately 75 m) [Ex.22.6]. The water, especially under pressure, may have come from the lower seam.

Mr Anderson's evidence continued, referring to the contingency plan which he would have expected to see incorporated into a risk assessment:

- Q. Given the analysis which you have described, what then, that is that you conclude I gather, that as a matter of probability the old workings of Young Wallsend are the more likely source than any alternative source and specifically miniwall 43?
- A. Yes, what I would do and I hope would be a part of the contingency, would be just simply to wait; wait and monitor that water, minimum 24 hours, preferably 72 if you've got a weekend and just see whether the water make or the water entering the panel is remaining constant, it's decreasing or it's increasing. That may also assist you to understand the likely source as well...³⁹

Mr Anderson dealt with the possibilities that may have emerged from monitoring the water. He said this:

- A. ... If in fact the water is increasing I would suggest that would (be) a source of serious concern. The fact that

the water is remaining constant - the flow coming is essentially constant over such a period of time would suggest to me that either one of two possibilities, you've got a large reservoir at high pressure some reasonable distance away - when I say reasonable we're talking tens of metres, not hundreds of metres - or perhaps you're in the extremely unlikely situation where you've got a large volume in front of you but very low head, but very, very close, so in other words there's not much pressure driving it, but it hasn't go far to go and there's a large volume so it just keeps coming.

Q. When you say very, very close, what are you talking about?

A. Less than a metre. They are the two possibilities you could get from monitoring. I think that you'd have to consider the likelihood that you're so close to a low pressure, accumulation of water would be unlikely but you would have to prove it one way or the other. ⁴⁰

Mr Anderson added:

A. ... Either way, you've got a potential problem and that needs to be resolved. I would suggest that that's the time, if this was - no drilling program had been instituted, this would be a good time to start instituting a drilling program. ⁴¹

No one at the mine saw the need to monitor the build up of water in 7 cut-through with a view to determining its likely source, and whether there was a need to change the strategy in order to prevent inrush.

10.7 Proposal to Drill Ahead

The Chief Inspector (on behalf of the Minister) gave approval in respect of

⁴⁰ ibid T1723

⁴¹ ibid T1724

MW39-45 under Section 138 on 5 January 1995. The approval was given upon the basis of a proposal by the company which included drilling ahead in the vicinity of the Young Wallsend Colliery [Ex.14.01] (supra p.447). The Approved Plan endorsed by the Chief Inspector showed a bleeder heading within 50 m of the Young Wallsend Colliery [Ex.14.10].

At some point the decision was taken to alter the layout of MW44/45 (which had, by that time, been renumbered MW 50/51). Mr Alston, the undermanager in charge, was responsible for the new layout [Ex.7.04 p.8 para.14], and for the strategy to prevent inrush, (subject to the approval of the manager) [Ex.7.03 Q.12 & 13; T403; T622]. It is surprising, in these circumstances, that Mr Alston did not read the Section 138 application (T403) (cf MFI 87, p.59). He was, therefore, not aware that the company had said it would drill ahead (T404). His strategy to avoid inrush was simply a 50m barrier (T422). It was fundamental to the success of that strategy that the plan depicting the Young Wallsend Colliery should be accurate. Mr Alston said that he believed that the plan was accurate (T443), although his belief was based upon an assumption that others had done their job, rather than upon investigation (T443). He undertook no historical research (T422), nor research of any kind. He said this: (T443)

- A. No, it's not my responsibility to check out the accuracy of the plans.

Mr Hall QC, for the relatives, made the following submission, which is accepted:

"It may be that Mr Alsston (sic) was not required to challenge the plans. However, the fact that an under-manager-in-charge is prepared to have blind faith in them emphasises the importance of the mine manager having in place the necessary checks and balances when developing the mine

strategy. If the mine manager does not question them, it is clear that no-one below him in the management hierarchy is likely to do so." ⁴²

Mr Alston provided the following information to the inspectors in respect of the strategy (as finally developed) to avoid inrush:

"Q12. Were you aware of a strategy to ensure mine safety, from hazards presented by contents of these old workings? If so, what was this strategy?

(A) Yes.

a) To leave a 50m barrier between the bleeder roads and the closest point of the Young Wallsend Colliery workings, Young Wallsend Seam.

b) In discussions between myself and Phil Pritchard it was decided to commence drilling just in advance of our proposed workings. When I went on leave I left a note for P. Pritchard and M. Coffey for matters requiring attention which included drilling ahead in 50/51." ⁴³

In describing the evolution of that strategy, Mr Alston said:

Q. Anyway, so far as drilling ahead is concerned, if I can just concentrate on that for a moment, you refer to that as being a second part of the strategy, is that right?

A. That developed during the course of the driving of the panel, yes.

Q. That was a decision taken quite late?

A. That's correct, yes. ⁴⁴

⁴² MFI 87 p.22

⁴³ Ex.7.03 p.2

⁴⁴ M. F. Alston T401

Mr Alston's evidence continued:

- Q. Approximately when was that decision made, ... (bearing) in mind that you went off on 8 November, when in relation to that date?
- A. I think the first discussion probably took place a week or so prior to that, prior to my going on annual leave and the final decision was sort of made just before my going on annual leave, even though I was sort of still undecided as to the value of that borehole.
- Q. Up to that moment I think you say in your statement, that is a week or so before 8 November, you had not planned to carry out any drilling?
- A. That's correct, yes. ⁴⁵

Mr Alston left detailed instructions before going on leave on 8 November 1996. They were addressed to Mr Pritchard, who was to take his place as undermanager in charge, and to Mr Coffey (another undermanager). The instructions included the following, relating to drilling 50/51 Panel:

- "10) Put a long hole towards the inbye dyke in 50/51 ASAP, let Mark know the results
- 11) Might pay to put a hole in advance in 50/51 so we dont run into any surprises, just in advance of our workings not to hole" ⁴⁶

It was always planned to drill to the side of the development to confirm the location of the dykes (P. J. Pritchard T577). The planning minutes for the week commencing 5 November 1996 included such drilling [Ex.6.02]. However, drilling in advance was new. The question is: why did the mine, in early November 1996, decide that drilling ahead should be undertaken? The decision to drill ahead arose out of a discussion between Mr Alston and Mr Pritchard. Mr Alston having gone on leave, Mr Pritchard took the issue to the planning meeting which was originally scheduled for Tuesday

⁴⁵ ibid

⁴⁶ Ex.7.05

12 November 1996, and which was postponed until Wednesday 13 November 1996 (the day before the inrush). That meeting ratified the decision, and shortly thereafter minutes of the planning meeting were distributed, incorporating the following items: [Ex.6.02]

Drill to prove dyke at A6 and A7 when C/T finished
--

Advance drill 60m to prove ground to be driven
--

Mr Hall QC made the following submission:

"The submission made on behalf of the relatives is that the decision to drill ahead was something that arose because of a perceived need to do so and that this need was not related to the possible existence of geological structures. That perception, it is submitted, was that drilling ahead was necessary as a precaution in the interests of mine safety."⁴⁷

The submission made on behalf of the undermanagers (Messrs Alston and Pritchard) was encapsulated in the following heading, which appears in those submissions: (MFI 89 p.540)

"Water played no part in decision to drill"

What, then, was discussed between Mr Alston and Mr Pritchard which brought about the incorporation of drilling into the strategy? Mr Alston recounted a number of conversations with Mr Pritchard which were said to have taken place "at about the same time" [Ex.7.04 p.5 para.14]. Mr Alston fixed that time as being the end of October or early November 1996 [Ex.7.04 p.4 para.13]. He said this:

".. I had a discussion relating to the water in MW50/51 panel.

The conversation was to the following effect:

Pritchard: "The water is starting to build up in 6 C/T MW50/51." ...⁴⁸

At the end of October 1996 the development had reached 7 cut-through [Ex.6.02]. The Court believes it likely that the water described by Mr Pritchard, therefore, was the water in 7 cut-through which he had seen with Mr Bernard on the morning of Monday 4 November 1996. Mr Alston responded to Mr Pritchard by saying that he would expect a water build up. That they had had water in similar situations in a number of locations [Ex.7.04 p.5].

Mr Alston also recounted the following discussion with Mr Pritchard:

"At about the same time we also discussed the boring ahead in MW50/51. I believe that Mark Robinson was also present. The conversation was to the following effect:

Pritchard: "Have you thought about putting a bore hole in advance of the workings in MW50/51"

Alston: "I hadn't planned to. We are still a long way from the old workings. It would be useful to put the hole in to prove the ground in front of us."⁴⁹

He added:

"My recollection is that we decided to put the borehole in from 7C/T or 8C/T in C Heading and to extend the borehole to 10 metres beyond the bleeder road of MW51. I specifically did not want to hole into the old workings and have to deal

⁴⁸ Ex.7.04 p.4/5 para.13

⁴⁹ ibid para.14

with any water or gas that would issue from the hole." ⁵⁰

The location of 7 cut-through was 75 metres from the old workings. Had drilling been undertaken from that location (and progressively extended until the end of the development), the old workings would have been revealed, and the tragedy averted. The submission for the relatives was highly critical of what was described as the delay in implementing the decision to drill ahead. The submission was:

"The point here is that had drilling ahead been thought of and planned ahead (as, it is submitted, it should have been at the approval stage), then drilling ahead ought to have been implemented by early November 1996 at the latest. By leaving the decision on such an important matter to be taken, as it were, *on the run*, the company denied itself the opportunity of programming an important safety step in a timely and a professional manner and in a way which would have avoided the inrush." ⁵¹ (emphasis in original)

Mr Alston's statement identified the purpose of altering the strategy to include drilling ahead:

"The information from this borehole would allow me to adjust the position of C/T critical to the installation of the miniwall if needed, for instance if we struck another dyke or fault, at the same time, **giving us the added safety factor as to the presence of the old workings**. Drilling ahead was frequently used during my time at Gretley to assist in mine planning ..." ⁵² (emphasis added)

When giving evidence Mr Alston, said this:

50 ibid

51 MFI 87 p.63

52 Ex.7.04 p.6 para.14

- Q. But, is it correct to say that Mr Pritchard appeared to you to be prompted by the presence of water in making the suggestion that there should be drilling ahead?
- A. No, I don't believe that's the case. I can't recall any - any major concerns from Phil, I would have remembered that if I had of been.⁵³

Mr Alston was further examined on the alteration to the strategy:

- Q. I mean, before you take the step of drilling ahead, you need to be convinced that it is an appropriate step, is that right?
- A. Yes, or I can see the benefits myself, yes.
- Q. Yes. and if you had not contemplated it before and suddenly someone just makes the suggestion with no reason advanced for that suggestion, why would you change your mind?
- A. Essentially it was just an operational issue that was - we could consider to be reasonable mining practice to prove the ground ahead of us. I mean, it's a ... disturbed area, there was dykes running various different ways and I think subsequent drilling I think - I've been advised last week we actually struck a dyke in that area that we didn't know about.⁵⁴

The examination continued:

- Q. I mean, all those reasons that you have nominated were reasons which were available to you when you were formulating your strategy, is that right?
- A. That's right.
- Q. But you chose not at that time to incorporate as part of the strategy drilling ahead?
- A. That's right.
- Q. Instead half way, or more than half way up the

⁵³ M. F. Alston T461

⁵⁴ ibid T462

development, you decided to add in drilling, is that right?

A. That's right.

Q. I come back to it. Why the change?

A. Just a simple reassessment of .. issues and that something we could do to give us more information. Simple as that, nothing sinister.

Q. But what was the thing that in respect of which you felt the need for more information?

A. There was nothing that we saw that would give us any indication that we needed more information. It was just an idea, and ideas developed through the course of various areas in the ... (mine) and it was a good one. So we did it. ⁵⁵

Mr Alston was then asked about water in 50/51 Panel. He said this:

Q. But did you say earlier that you were getting water which you associated - - - ?

A. That was groundwater.

Q. - - - in your own mind with the ... (old) workings?

A. It could have been - coming from old workings, yes.

Q. **Is not that the thing that provoked the thought that we had better just prove this ground ahead?**

A. **It was part of it, I suppose, yes.**

Q. Well, what are the other parts?

A. Well, as part - as I said to you before, ... the ability to check the ground as far as dykes or faults or any geological areas it concerned. Just to prove the ground.

Q. But that was always part of it but a part you decided not to - - - ?

A. Yes. That was - that was one that developed, yes. It was an issue that developed.

Q. See, what I want to suggest to you, the only new element which would furnish a rational explanation for your decision three quarters of the way up ... (the development), to suddenly incorporate drilling is the accounts that you were getting of water, is that right?

A. The ... accounts that I was getting of water were - the

best of my knowledge, operational amounts of water and possibly some groundwater coming from the old workings. They weren't - they weren't alarming.⁵⁶
(emphasis added)

Mr Hall QC, in cross-examination of Mr Alston drew attention to the following evidence given by Mr Alston when examined by Counsel Assisting: (T402)

- Q. Could you just recount to me as best you can the conversation between you and Mr Pritchard on this subject, what did he say? He came to you and said ?
- A. Words to the effect basically if I'd planned on putting a borehole in advance of the workings in 50/51 and I think I replied that I hadn't planned to but it'd be useful to prove the ground in front of us and also **it would be some insurance** on - in the presence of old workings, but even though we had no intention or no reason to disbelieve the accuracy of the plans at that time.
(emphasis added)

Mr Hall later asked the following questions:

- Q. In ordinary parlance we speak of insurances involving questions of risk, do not we, insurance against risk?
- A. Yes, that's correct.
- Q. This was a step that you had suggested, amongst other reasons, as an insurance against risk?
- A. That's correct.
- Q. The risk that old workings might be closer than that which the plans in fact indicated, is that right?
- A. You could assume that, yes.
- Q. And even though that risk to you may not have been a high risk at the time, it was perceived by you as a risk, is that not right?
- A. As a minimum risk.⁵⁷

⁵⁶ ibid

⁵⁷ M. F. Alston T490

Mr Pritchard's account was quite different. His statement said this:

"I had a conversation with Mike Alston, the Production Manager and Undermanager-in-Charge, about drilling ahead in October 1996 when the panel was at about 6 C/T. The conversation was in words to the effect:

Pritchard: "Are there any plans to drill ahead."

Alston: "That's a good idea, we'll drill ahead but not to hole into the old workings. As a 50m barrier is to be left the boreholes will be maintained just in advance of the headings." " 58

The matter was again discussed on a journey to South Bulga Colliery on 7 November 1996 (T593), shortly before Mr Alston went on leave.

Mr Pritchard could not recall when in October 1996 he first raised the subject of drilling ahead with Mr Alston. He said:

- Q. You cannot recall by reference to the progress of the various headings and cut-throughs?
- A. No. It was just a conversation I had with Mr Alston one morning. 59

Mr Pritchard gave evidence two days after signing his statement [Ex.8.04]. In the course of that evidence he recounted a conversation with Mr Alston in the undermanager's office, in which he drew attention to a plan on the wall of the office. He said this:

- A. ... I indicated to Mr Alston that those old workings that

58 Ex.8.04 p.6 para.23

59 P. J. Pritchard T563

appeared to stop in a straight line and I asked him the question: was it possible that there were faults associated with those old workings on that bottom side, and he said that he wasn't sure, there was no - there was nothing that he had see but, I said: well, if ... there are faults there or there are spurs coming off those dyke areas, then there is a possibility that they could go into our workings, therefore those workings that we were .. doing for the miniwall 50/51 blocks, they would be cut short. It would then be uneconomical to drive those workings.⁶⁰

In answer to Counsel Assisting, Mr Pritchard said this:

- Q. Yes. But see, what I am putting to you is this. And I will put it bluntly. The version that you have given before lunch and now as to geology and the discussion that took place is a very different version from the version which appears in paragraph 23?
- A. That's correct.
- Q. Can you explain the differences?
- A. Yes, on the night of the 10th Mr Strathdee and Mr Rodney questioned me about this. At the time I said that was all that I could remember. I've sat around for the last two days waiting on coming in here and I have recalled a few things that I couldn't recall at the time.⁶¹

Mr Pritchard, at the commencement of his examination, had sworn that his statement was true and accurate (T560). He did not seek to amend the account he had given of his conversation with Mr Alston, although he was well aware of his right to do so. He in fact exercised that right by making a small amendment to another statement (T560).

Later in the Inquiry, Mr Pritchard was recalled. He said this:

⁶⁰ ibid T563/4

⁶¹ ibid T570

- Q. ... Now, did you see that the drilling ahead may provide any form of safety factor in respect of the presence of the old workings?
- A. No, I did not.
- Q. Sure about that?
- A. Yes, I'm sure.⁶²

Mr Pritchard, however, acknowledged the following:

- Q. It would only be a safety factor in respect of the old workings if there was some uncertainty as to their precise location?
- A. Yes.
- Q. Did you have any such uncertainty?
- A. No I did not.
- Q. At any stage?
- A. No.
- Q. Are you sure about that?
- A. Yes I'm sure.⁶³

Mr Pritchard was then asked the following questions:

- Q. But you had seen the plan of the old Colliery many times before that date?
- A. That's correct.
- Q. The thought had never previously occurred to you?
- A. No.⁶⁴

Counsel for the Australian Collieries' Staff Association, in their submission, urged the Court to find that, before the inrush, neither Mr Alston nor Mr Pritchard was concerned about water in 50/51 Panel, nor the reliability of the plan. They advanced a number of arguments. First, there was a problem of timing, if one attempts to infer that the reports of water were the

⁶² ibid T9267

⁶³ ibid T9268

⁶⁴ ibid

"trigger' for the incorporation of drilling into the strategy. They state this:

"The only interpretation of the evidence is that the first discussion between Mr Pritchard and Mr Alston took place well before the McLean report of 1 November 1996." ⁶⁵

Secondly, it was suggested that it would be incomprehensible for either man to ignore real problems, if they existed. They were both experienced, senior officials (MFI 89 Vol.2 p.577).

Thirdly, the submissions of the Staff Association made the following further suggestion:

"... It is submitted that if the undermanagers were going to conspire to put together a story about drilling ahead, then it would appear that the stated purpose for the drilling would have been to have established the extent of the workings in Young Wallsend Colliery. That being so, would not require any elaborate story about geology or the interpretation of faults or dykes. What it would have required would have been a simple statement to the effect that the plan to drill was to simply show that there were no workings from Young Wallsend Colliery within a 10 metres in-by limit from the bleeder or installation roads." ⁶⁶

The Court believes that there is no problem of timing. Mr Pritchard's reference to October was not persuasive [Ex.8.04 p.6 para.23]. He could neither say when in October nor identify the circumstances beyond the fact that it was "one morning" (T563). Mr Alston fixed the time of his discussion with Mr Pritchard as "the end of October or early November 1996" [Ex.7.04 p.4 para.13]. Moreover, the conversation with respect to drilling occurred "at about the same time" as the discussion about water [Ex.7.04 p.4

⁶⁵ MFI 89 Vol.2 p.577

⁶⁶ MFI 89 Vol.2 p.577/8

para.14]. The Court believes it likely that the water discussed at "about the same time" was the water in 7 cut-through seen by Mr Pritchard (with Mr Bernard) on 4 November 1996 (supra p.524). Thereafter the matter was raised for a second time with Mr Alston on 7 November 1996 on the way to South Bulga. The next day Mr Alston left a note suggesting that drilling be undertaken, so that the mine did not "run into any surprises" [Ex.7.05].

In addressing the remaining submissions, it is instructive again to ask: what was the purpose of drilling ahead? On that issue Mr Alston and Mr Pritchard did not speak with one voice. Mr Alston, whilst insisting that his primary concern was geology, did acknowledge a secondary purpose. Drilling would operate as an "insurance" against the risk that the plan was wrong. The presence of water had brought to his mind the possibility, although he thought it minimal, that the old workings were closer than the plan indicated (T463). However, Mr Pritchard would have none of that. For him there was no secondary purpose. The objective related to geology, and nothing else.

The Court rejects Mr Pritchard's assertion that the purpose of drilling ahead was related only to geology. First, Mr Pritchard himself (like Mr Alston) identified the strategy to avoid inrush in these terms: [Ex.8.03]

"Q12. Were you aware of a strategy to ensure mine safety, from hazards presented by (the) contents of these old workings? If so, what was this strategy?

(A) Yes. The strategy was to leave a 50m barrier and to drill just in advance of our proposed workings.

Drilling ahead could only be described as part of a strategy to prevent inrush if its purpose (or at least part of its purpose) was to rule out the presence of unrecorded workings.

Secondly, there were significant differences between Mr Pritchard's statement, and his evidence (cf MFI 89 Vol.2 pp.553-555). His explanation for the change was unconvincing. The Court believes the change is more likely to relate to the results of the drilling programme in March 1997, which were then emerging (and which discovered a dyke spur) (cf M. F. Alston T462), than to a recollection by Mr Pritchard of his conversation with Mr Alston.

Thirdly, Mr Pritchard's version is not supported by Mr Alston. Mr Alston made no reference to a discussion concerning the shape of the Young Wallsend Colliery, and what it may suggest in respect of the ground which lay ahead. Indeed, he specifically disavowed any such suggestion. He said: "There was nothing that we saw that would give us any indication that we needed more information." It was simply an idea (T463). Mr Pritchard himself, it might be noted, did not provide the planning committee with any such explanation when he suggested to the meeting that drilling should be undertaken (P. J. Pritchard T599).

Fourthly, a number of miners and officials knew about the proposal to drill ahead, and had some understanding of the purpose. Mr Hegarty, a deputy, believed the purpose was 'to detect any potential hazard' such as unrecorded workings (T2516/7). Mr B. F. Brown, a miner, believed the purpose was "to ascertain how far the workings were ahead" (T685). Mr Franklin, who was in the crib room in 50/51 Panel when the inrush occurred, recounted his conversation with Mr Coffey when he emerged from the mine in these terms:

- A. ... after the accident when I stormed into the office ...
when we come out of the pit.

- Q. Tell me about that, what happened?
 A. Well, I just went in there and said: Bloody hell.
 Q. This is on the day of the accident?
 A. The ... accident, yes.
 Q. You went into Mike Coffey's office?
 A. Yes, and I said: How come - - -
 Q. This was immediately after?
 A. Yes, immediately after we were brought out of the pit I went in there and said: How come if we're so bloody close to the old workings while (sic) weren't there test bores done and he said - he showed me on the map and he said: Well, here we are here, we .. should be at least a hundred metres away and we were going to start boring that weekend which was a couple of days later. We were going to start boring even though we were supposed to have been a hundred metres away, **we were going to do safety bores to make sure that everything was correct.**⁶⁷ (emphasis added)

Finally, the note left by Mr Alston for Mr Pritchard (and Mr Coffey) provides some indication of the purpose of drilling. Relevantly, the text of the note was as follows: [Ex.7.05]

"Might pay to put a hole in advance in 50/51 so we dont run into any surprises, just in advance of our workings not to hole"

Mr Hall QC, for the Relatives, made the following submission which is accepted:

"The phrase *any surprises* is quite different to the earlier specific reference to a dyke. The phrase *not to hole* suggests drilling to proceed and stop just short of the old workings. In other words, there is no suggestion that dykes are to determine the extent of drilling ahead."⁶⁸ (emphasis in original)

⁶⁷ F. J. Franklin T3806

⁶⁸ MFI 87 p.68

It is unnecessary for the Court to determine whether other matters, apart from water, and the possibility that the plan may be inaccurate, may also have influenced the incorporation of drilling into the strategy.

The picture which emerges from the evidence, therefore, is as follows:

- First, the issue concerning drilling ahead was handled by the undermanagers (T459). Mr Porteous was not informed. Indeed, he did not know of the proposal to drill ahead until after the inrush (T9083).
- Secondly, there was an impediment to the adoption of drilling ahead as part of the strategy to prevent inrush. Mr Alston, the undermanager in charge, did not see the need for it. It was not part of his strategy to prevent inrush. Even when the issue was raised by Mr Pritchard in early November 1996, Mr Alston remained unconvinced. He gave the following evidence in the context of his note to Mr Pritchard [Ex.7.05] before he went on leave: (T459)

Q. The words you have used there are not an instruction so much as a suggestion?

A. Yes, I still wasn't convinced about the - the value of that hole.

- Thirdly, Mr Pritchard, on the other hand, was concerned about water. The Court believes that he did recognise the possibility that the plan may be inaccurate. However, he was not yet in charge, and would not assume control until 8 November 1996, when Mr Alston went on leave.
- Fourthly, meanwhile Mr Alston gave no direction to suspend mining,

and monitor the build up of water, as he ought to have done (cf T494-498). He did not discuss the matter with the manager. Instead, mining proceeded. On 5 November 1996 B heading was completed to 7 cut-through, thereby liberating the water which had accumulated. The symptoms of the problem, or possible problem, disappeared from sight.

- Fifthly, the concern felt by Mr Pritchard, therefore, never became alarm because the problem was not adequately investigated. Indeed, Mr Alston did not apparently inspect the water himself (T461). When, before his departure on 8 November 1996, Mr Alston last inspected 50/51 Panel cannot be determined (T461). He did not complete a daily report with respect to the general safety of the mine after each inspection, notwithstanding the Regulation which provided for that to be done (*Clause 56, Managers & Officials Regulation 1984*) [Ex.6.02; T498]. One could only agree with the following comment by Mr Hall QC, on behalf of the relatives: (MFI 87 p.23)

"It is submitted that Mr Alston's breach of the Regulation reflects an alarmingly casual attitude, made all the more serious when he is in a position of leadership."

- Sixthly, part of the reason for the apparent lack of concern by Mr Alston may be a conversation with Mr Robinson, where he provided certain reassurance in respect of the location of the Young Wallsend Colliery following the investigation of that issue by reference to material provided by the Mine Subsidence Board. The Court will now deal with that aspect.

10.8 Two Competing Versions

Shortly before the inrush Mr Robinson approached the Mine Subsidence Board for assistance. He wished to confirm the position of the Young Wallsend Colliery old workings [Ex.62.04 p.7 para.31]. He spoke to Mr Hartley. There are serious differences between the account given by Mr Robinson, and that of Mr Hartley as to what was said, and the assistance provided. To resolve these differences the following issues will be examined:

- First, why did Mr Robinson approach the Mine Subsidence Board?
- Secondly, what did he say when he spoke to Mr Hartley?
- Thirdly, what plans were supplied by Mr Hartley as a consequence of Mr Robinson's request?

Mr Robinson said that he decided in late October 1996, for no particular reason (T8767), to check the location (but not the extent) of the Young Wallsend Colliery [Ex.62.05 p.56 para.140]. He had, in the past, carried out similar checks elsewhere in the mine (T8766). Indeed, he had done so in relation to the Young Wallsend Colliery itself (T8766; Ex.62.04 p.5 paras.26 & 27). A professional surveyor is trained to check and re-check work which they and others have done in the past (T8777).

Having decided to make such a check, Mr Robinson felt the need for further information [Ex.62.04 p.6 para.28]. He wished to undertake a check which was independent of anything previously done by the former mine surveyor, Mr Michael Murray [Ex.62.04 p.6 para.28]. The chief surveyor of the Group, Mr Price, suggested that Mr Robinson should approach the

Mine Subsidence Board [Ex.62.04 p.7 para.30] That suggestion was made in a telephone call towards the end of October 1996 [Ex.62.04 p.7 para.30].

On 30 October, or perhaps 31 October, 1996, but not later, according to Mr Robinson, (MFI 89 Vol.1 p.203) he spoke to Mr Hartley of the Mine Subsidence Board. His recollection of the conversation was as follows:

"... I said: "We are working towards the Young Wallsend Colliery and I would like to confirm the position of the Young Wallsend Colliery old workings. Do you have any information on those old workings?"

He said: "We do."

I said: "Can I have a copy of what you have."

He said: "Yes. Okay."

I said: "Good. I will send someone in to pick it up when its ready." ⁶⁹

It was Mr Robinson's recollection that the conversation was not interrupted whilst Mr Hartley checked the material which the Board had on file [Ex.62.05 p.56 para.139]. At no stage was he asked why he needed such plans (T8785). Mr Robinson also said this:

"No reference was made by either of us in that conversation to water problems at Gretley or any suggestion that I was being pressured by management in any way." ⁷⁰

Mr Robinson also said:

⁶⁹ Ex.62.04 p.7/8 para.31

⁷⁰ ibid

"I categorically deny that there was ever any problem concerning water in the MW 50/51 panel at Gretley of which I was aware prior to 14 November 1996." ⁷¹

Shortly thereafter Mr Robinson asked his assistant, Mr Alan Blakeney, to pick up the roll of plans from the Mine Subsidence Board [Ex.62.04 p.8 para.32]. Mr Blakeney did so on Monday 4 November 1996 (MFI 89 Vol.1 p.205), during the morning (T5147).

When Mr Robinson unfurled the roll, (which he did alone) there were four plans, namely:

- Two seam sheets in the 1:4,000 series, which together depicted the Young Wallsend Colliery in the Young Wallsend Seam.
- The Top and Bottom seam sheets (sheets 2 and 3 of RT 522)

Sheet 1 was not included. Mr Robinson said this:

"I am absolutely certain that I only received four sheets and that none of those four sheets were what is known as Sheet 1 of RT 523." ⁷²

On 5 November 1996, Mr Robinson used the computer [Ex.62.11] to compare the location of the Young Wallsend Colliery, as shown on the mine plan, with the location shown on the 1:4,000 seam sheets (using an ISG Grid on the seam sheet) [Ex.62.04 p.10 para.41]. The two did not match precisely. There was a 7 m discrepancy. On the 1:4,000 series plan

⁷¹ Ex.62.04 p.4 para.19

⁷² Ex.62.04 p.10 para.36

the old workings were 7 m further away from the proposed development than shown on the mine plan [Ex.62.04 p.11 para.41].

Neither sheets 2 nor 3 was used by Mr Robinson in the course of making his investigation. They were put to one side [Ex.62.04 p.9 para.34]. Mr Robinson said this:

"I remember being pleased that I

- had a plan that had been signed and prepared by the Department of Mineral Resources; and
- had been able to obtain that plan independently." ⁷³

Shortly thereafter, Mr Robinson mentioned his investigation to Mr Porteous [Ex.62.04 p.11 para.43], and the undermanager in charge, Mr Alston. He said to Mr Alston words to the following effect:

"I have checked the position of the Young Wallsend Colliery workings using a plan I got from the Mines Subsidence Board and it ties in with the information that Michael had. We've got a 50 metre barrier so everything's fine." ⁷⁴

According to Mr Robinson's recollection the conversation then moved to other matters, including the subject of drilling ahead [Ex.62.04 p.16 para.53].

The evidence of Mr Hartley differed from that of Mr Robinson in a number of respects. It was Mr Hartley's recollection that Mr Robinson telephoned him in the first week of November 1996 [Ex.3.03 p.3 Q.11], not at the end of October (T201). He provided the following answers to the inspectors:

⁷³ ibid para.39

⁷⁴ Ex.62.04 p.16 para.53

"Q13. Did he say why he was seeking this information?

A13. Yes, he stated that mine management were in a hurry to get the information as there was a water problem at the mine.

Q14. Were you able to establish the specific area of Gretley mine that Mr. Robinson was interested in?

A14. Yes, the Young Wallsend mine in the Young Wallsend seam.

Q.15 Did Mr. Robinson say there was a problem at the mine?

A15. Yes, that there was a water problem." ⁷⁵

Mr Hartley described the information he provided as follows:

"Q17. What plans and/or information did you give Mr. Robinson?

A. A copy of a 1 in 4000 office plan of the Young Wallsend seam that identified the Young Wallsend mine (plan number Wallsend U5-450-1 and 2 sheets of the Young Wallsend seam) and copies of available microfiche prints relating to the Young Wallsend mine (5 sheets in all)" ⁷⁶

The interview continued:

"Q19. Did Mr Robinson say that he had any doubts regarding the accuracy of the known plans of the Young Wallsend mine?

A19. No, he didn't express concern regarding the accuracy of the Young Wallsend mine plans but he did have concerns

⁷⁵ Ex.3.03 p.3

⁷⁶ ibid

about the water problem." ⁷⁷

Mr Hartley gave evidence as to the substance of his conversation with Mr Robinson, which was in these terms:

A. Mark rang and requested information on the Young Wallsend Colliery and the Young Wallsend seam. He requested did we have any information on the Young Wallsend ... seam to assist in identifying that position. I said we did have information. I asked him why do we need that information and in - he replied - and this is where I get into trouble in regard to wording - that there had been a water problem and he was trying to locate the position of the old workings in the Young Wallsend ... seam.

Q. Did you reply?

A. I replied, "We have information." Mark stated that he had a plan that ... was a tracing of the original record tracing which did not have survey information on it. I said that we have a mapping system here that may assist the location of that Young Wallsend seam in the Young Wallsend workings. Mark said, "I will need it with an ISG grid on it." I went to the cupboard to ensure that the maps that we had in-house had the ISG grid on it. I went back to the ... phone, to Mark, at the same time I believe. He wanted to know whether we had the original RT or a plan with information on it that would assist him. I went to the RT cabinet, there were plans there. ⁷⁸

The evidence continued as follows:

Q. When you say the RT cabinet, what was that?

A. That's the RT cabinet that has all the microfiche of the record tracings that are relevant to our organisation.

Q. Did you know the record tracing number?

A. I got the record tracing number off the 1 : 4000 map

⁷⁷ Ex.3.03 p.4

⁷⁸ G. Hartley T156

series that were produced by the Department of Mineral Resources. At the right hand side of that map it has a listing of all the coal mines within that 4000 series and the relevant RT number.

Q. Was he still on the phone at this time?

A. Yes.

Q. Yes. So, you went to the cabinet and what did you do then?

A. I went back to the phone and advised Mark that I'll give him whatever information that we had. Mark was happy with that and he was to pick it up, or somebody from Gretley will pick that information up from the Department - or from the Mine Subsidence Board. ...⁷⁹

Shortly after the telephone call Mr Hartley spoke to his superior, Mr Hansen, a Risk Engineer with the Board. Mr Hartley said this:

Q. You had this conversation, if you could continue?

A. And I just happened to state to Graham that there was mention of a water problem and that they were looking for plans of the Young Wallsend Seam and the Young Wallsend Colliery from us, as an organisation.⁸⁰

Mr Hansen recalled the conversation. It took place "about a fortnight before the accident" (T225). His recollection was as follows:

Q. What was the general content as you remember?

A. It was to advise me that somebody from the Gretley Colliery had been into the office to obtain some mapping information.

Q. Anything else said?

A. It was mentioned that there had been a - a problem with water, no more detail than that and that is the main reason I remember the conversation because some years ago the Colliery had had a problem with

79 ibid

80 ibid

water in another section of the mine in completely different circumstances and I just remember thinking at the time: gee, that's ... (bad) luck, I hope it's not a similar sort of thing to what happened last time. But just one of those things that your ... (mind) connects two things - quite independent things together.⁸¹

Mr Hartley also spoke to Mr Jonathon Smith, a survey draftsman in the same office (T164). Mr Smith said this:

Q. I think you say that neither in that conversation with Mr Robinson nor by any other means, that is conversation with Mr Hartley, did you become aware of any suggestion of water problems at Gretley, was that right?

A. No. Mr Hartley mentioned to me one day that Mr Robinson had mentioned to him there was a water problem - there had been a water problem with Gretley or he had said there was a water problem with Gretley. I just said - I said to him that I - I worked in the mining industry and I said where you were near old workings that sometimes you could have a water problem and I just - I was just working at my desk and just passed it off - - -

Q. When did that conversation take place?

A. I could not recall.

Q. Was that before or after the in-rush at Gretley?

A. It was definitely before the in-rush.

Q. Before the in-rush?

A. Yes.⁸²

Mr Robinson telephoned the Board shortly after he received the plans. He spoke on this occasion to Mr Smith. Mr Smith provided the following answers to the inspectors from the Department in respect of that conversation:

"A11. Yes, following a return telephone call from Mr.

⁸¹ R. G. Hansen T226

⁸² J. Smith T268

Robinson early in the second week of November 1996, either the Monday or the Tuesday.

Q12. What did Mr. Robinson discuss with you?

A12. Mr. Robinson asked me to tell Mr. Hartley that he had digitised plans given to him by Mr. Hartley and they were within 5m horizontal accuracy of the plans held by Mr. Robinson."

The interview also included the following:

"Q15. Did Mr. Robinson mention any problems being encountered at Gretley mine?

A15. No." ⁸³

Mr Robinson's account of that conversation does not differ significantly from that of Mr Smith [Ex.62.04 p.12 para.45].

Following the inrush Mr Hansen advised Mr Hartley to make a file note of the contact with Gretley, and what was supplied (T167). Mr Hartley made the following note dated 18 November 1996:

"Approximately 2 weeks previously I supplied to Mark Robinson surveyor, Gretley, a copy of the Board's 1 : 4000 seam sheet and a copy of the microfiche relating to Young Wallsend abandoned workings. Apparently he was verifying the position of these workings. Mark rang back advising that the workings supplied by the Board, when compared to Gretley's position of Young Wallsend collieries, were five metres' difference. Mark was advised that our plans were prepared by the "let-in process". This accuracy needs to be checked.

SGO G. Hartley 18.11.96" ⁸⁴

⁸³ Ex.4.01 p.3

⁸⁴ Ex.3.07

Mr Hartley was criticised for this note (MFI 89 Vol.2 p.300). It was said to be misleading, and to reflect poorly upon him. It combined his conversation with Mr Robinson, and that of Mr Smith. It made no reference to there being a water problem at Gretley, or Mr Robinson being under pressure from management (MFI 89 Vol.2 p.279). However, there is no substance in these criticisms. Mr Hartley was not bound by the rules of evidence. He was not obliged to differentiate between information known to him through personal contact with Mr Robinson, and that derived from having spoken to Mr Smith. The Court will return to the note later in this analysis.

What, then, are the points of difference between the two accounts? They are:

- First, there is a difference as to what was said. Mr Hartley asserted, and Mr Robinson denied, that Mr Robinson referred to a problem with water at the mine, which management was in a hurry to resolve.
- Secondly, there is a difference as to when the conversation took place. That difference is important. Mr Hartley suggested that the conversation occurred in the week beginning 4 November 1996. By the morning of 4 November Mr Bernard had made his report to Mr Alston concerning water in 7 cut-through, and Mr Pritchard had suggested drilling ahead. However, submissions made for Mr Robinson asserted that the conversation with Mr Hartley occurred no later than 31 October 1996 (MFI 89 Vol.1 p.203). If that were right, then management's attention had not yet been drawn to the water in 50/51 Panel. If there were a reference to water during the

conversation, therefore, it must have been a reference to water somewhere else.

- Thirdly, there is a difference between the two accounts as to the assistance provided. Mr Hartley asserted, and Mr Robinson denied, that RT 523 sheet 1 (in three sheets) was provided.

The company urged the acceptance of Mr Robinson rather than Mr Hartley. It did so on the basis that Mr Hartley was mistaken. Counsel for the company, Mr Steirn SC, in the course of an objection, said this: (T8789)

Mr Steirn: I object to that, your Honour, because there is no suggestion that Mr Hartley, in fact, did lie. He may well have truly believed that what he said occurred. It may well be a transposition, an association of ideas, very much like the honest but mistaken witness identifying somebody who he or she believed, in fact, committed a particular offence. It is a phenomenon which is well known both in civil courts and criminal courts. You cannot assume Mr Hartley is lying, your Honour.

The Australian Collieries' Staff Association, on behalf of Mr Robinson, however, said this:

"Hartley's evidence contained numerous inconsistencies, contradictions and half-truths and, on one point at least, a deliberate lie. He presented as an unreliable witness whose evidence needs to be approached with caution. It is submitted that where Hartley's evidence conflicts with Robinson's, the evidence of Robinson should be preferred."⁸⁵

Later in the submission the suggestion of one deliberate lie was transformed into three deliberate lies (MFI 89 Vol.2 p.330).

The Court will examine the attack upon Mr Hartley, and then return to the issues which separate Mr Robinson's account from that of Mr Hartley.

10.9 The Attack upon Mr Hartley

It is instructive to begin with the question which the submission on behalf of Mr Robinson poses, namely, why should Mr Hartley lie? (MFI 89 Vol.2 p.330). Indeed, since Mr Hartley's evidence is supported by Messrs Hansen and Smith, the question must be amended: why should Messrs Hartley, Hansen and Smith deliberately lie to the Court?

The submission for the Australian Collieries' Staff Association attempted to suggest a motive. The following was said, in relation to Mr Hartley:

"From the evidence it is clear that the error in the mine plans was discovered either on the day of the accident or the following day and the evidence is that McKenzie quarantined the plans in the Department on that Friday. The publicity that surrounded the matter also mentioned plans. It is not difficult to see that a person such as Hartley, who has provided plans to the surveyor in the weeks before the accident, may become very concerned as to just what the situation may have been and that has over the passage of time decided that the failure to provide sheet 1, may in some way have been linked to the disaster or he may have thought that he would be subject to some criticism." ⁸⁶

Mr Hartley claimed that his conversation with Mr Hansen, when he informed him of Mr Robinson's call, was in Mr Hansen's office (T167). Mr Hansen, however, thought the conversation occurred on the floor of the mapping section (T225). In the context of that difference, the following submission was made on behalf of Mr Robinson:

"While, at first sight, this conflict in evidence between two witnesses may appear insignificant, taken with other material, it tends to add weight to the suggestion that the Mine Subsidence Board witnesses have coloured their evidence to protect themselves and their employer." ⁸⁷

It was asserted that Mr Smith's evidence was inconsistent with that of Mr Hartley on the question of whether Mr Hartley had mentioned his conversation with Mr Robinson before the inrush. The following submission was made:

"... This inconsistency in Smith's evidence must also be considered against the evidence that there was concern evident within the Mine Subsidence Board at the prospect that it could be seen to have contributed to the disaster by supplying inaccurate or misleading plans." ⁸⁸

Finally, the Association's submission catalogues what are said to be the "lies" of Mr Hartley. Significantly, the list does not include the reference to a water problem at Gretley, which Mr Hartley recalled Mr Robinson mentioning during the course of their conversation. The submission does, however, attribute a motive to Mr Hartley in giving false evidence. It said this:

"The question may be asked why should Hartley lie as to the discontinuance of the use of the disclaimer stamp, the giving of the oral warning and the giving to Robinson of sheet 1. As to the first two matters, the Mine Subsidence Board faced criticism and possibly liability as a result of Hartley's failure to follow the practice he instituted of affixing the disclaimer stamp to all plans supplied." ⁸⁹

⁸⁷ *ibid* p.278

⁸⁸ MFI 89 Vol.2 pp.290/1

⁸⁹ *ibid* p.330

The submission then deals with the uncomfortable evidence of Mr Hartley that he provided RT 523, sheet 1:

"As to the issue concerning whether or not sheet 1 had been supplied, there is evidence that, following the in-rush, Hartley, in company with senior officials of the Mine Subsidence Board, had examined the relevant plans, having heard through the media that misleading plans had contributed to the tragedy. Presumably, that examination in those circumstances would have revealed the fact that by supplying sheets 2 and 3 without sheet 1, the Mine Subsidence Board could have deprived the Gretley manager and staff of the opportunity of discovering the fatal mistake and, as a result the Mine Subsidence Board was further exposed to criticism and liability." ⁹⁰

The submission concluded with these words:

"These circumstances provide adequate reasons for Hartley to do all that he could to avoid having to admit that he failed to give Robinson sheet 1 and that he departed from his usual practice of stamping the seam sheet with the disclaimer. It is significant that, where there is objective evidence, such as the size of sheets 2 and 3 held in the Gretley survey office and the lack of sheet 1, this objective evidence supports Robinson rather than Hartley." ⁹¹

These submissions are rejected. Mr Hartley impressed the Court as a truthful witness. His evidence is accepted. Mr Hansen and Mr Smith were likewise truthful witnesses. Their evidence is also accepted. Where Mr Robinson's evidence conflicts with that of Mr Hartley, Mr Hartley's evidence is preferred.

⁹⁰ ibid

⁹¹ ibid p.330/331

The motives attributed to Mr Hartley were not put to him when he gave evidence. Though he was vigorously challenged on a number of issues, it was not suggested that he was lying, nor that he had a motive to lie. It was not suggested to Mr Hansen or Mr Smith that they were colouring their evidence in order to protect themselves or their employer.

The motives attributed to the Board witnesses are simply implausible. It is now known that when a search was made immediately after the inrush of the company's survey office at Gretley, no copy of RT 523, sheet 1, was found. Further, there is no acceptable evidence that any one at the mine had ever examined sheet 1. That ultimately emerged (*supra* p.305), notwithstanding assertions from the company and the Staff Association to the contrary in their respective submissions. The company and the Staff Association, relying upon the evidence of Mr Coffey, asserted that the former mine surveyor had examined sheet 1, and, indeed, had a copy in his possession during at least 1993 (*supra* p.282). Mr Hartley, at the time he provided his answers to the inspectors [Ex.3.03] (January 1997), had no means of determining what research had been undertaken by the mine into the Young Wallsend Colliery. He cannot be expected to have known whether the mine had a copy of sheet 1, or what it had in its possession. He therefore could not have appreciated the significance which supplying sheet 1 (or not supplying it) had in the context of this inrush. Without that knowledge it cannot be supposed, realistically, that Mr Hartley knew that he "may in some way have been linked to the disaster" or "thought that he would be the subject of criticism". Moreover, the concern soon after the inrush about misleading plans, related not to sheet 1 but to sheets 2 and 3 (T. Abbott T4137ff; K. Price Ex.58.04 p.3-4). Mr Hartley readily acknowledged that these sheets were supplied.

There was said to be concern evident within the Mine Subsidence Board

at the prospect that it "could be seen to have contributed to the disaster by supplying inaccurate and misleading plans" (MFI 89 Vol.2 pp.290/1). This submission is surprising, since the defence of Mr Robinson underwent some refinement during the course of the Inquiry. Mr Robinson provided a statement dated 25 February 1997 [Ex.62.04] in which he denied having mentioned to Mr Hartley a water problem at Gretley before the inrush. Having sat through the evidence of Messrs Hartley, Hansen and Smith, Mr Robinson then provided a further statement. It included the following:

"I have tried to reconcile my clear recollection that I made no reference to water regarding Young Wallsend Colliery or MW50/51 development panel with Mr Hartley's evidence and I confirm that I did not make such a reference to water. It is possible in the course of my conversation with Mr Hartley that I may have mentioned water management issues regarding a serious problem that had occurred at the Glendale area at Gretley and is unrelated to Young Wallsend Colliery or MW50/51 development panel. It is also possible that I may have mentioned that this work I was doing required my immediate attention." ⁹²

When giving evidence, Mr Robinson was asked the following questions referring to the water problems in the Glendale area of the mine:

His Honour: Why would you have mentioned that to him?

A. Because it was very topical at the time, it was something that I was busy with at the time.

Q. Did that have anything to do with the maps that you were seeking?

A. No.

Q. Who brought it up, the matter of water?

A. I don't recall there being any conversation about water.

Q. You do not recall any conversation about water at all; is that right?

- A. No, no.
Q. And you are assuming that because he mentions it he has confused that with something you might have said about water at Glendale; is that right?
A. Yes, yes.⁹³

Since the only relevance of Mr Hansen's evidence, and that of Mr Smith, was to corroborate the statement by Mr Hartley that Mr Robinson had mentioned a water problem before the inrush, one would have expected the submissions made on behalf of Mr Robinson would have accepted the disinterestedness of these persons and that each was giving a truthful account of what had occurred. However, the submission, as mentioned, asserted that they too were colouring their evidence to protect themselves and their employer (MFI 89 Vol.2 p.278).

If Mr Hartley had been concerned about his position, one would have expected that the file note made soon after the inrush would have betrayed that concern. Indeed, had Mr Hartley not been a truthful witness, he may have backdated the file note. It was, however, not backdated. It did not draw attention to sheet 1, in respect of which it was said Mr Hartley had some anxiety. It simply said that he supplied "a copy of the Board's 1:4000 seam sheet and a copy of the microfiche relating to the Young Wallsend Colliery abandoned workings" [Ex.3.08].

The Court finds, therefore, that Mr Robinson did refer to a water problem at Gretley in his conversation with Mr Hartley. However, that finding does not resolve all issues between Mr Hartley and Mr Robinson. Although there was reference to a water problem, was Mr Robinson referring to Glendale rather than 50/51? The resolution of that issue rather depends upon when the conversation took place. Although Mr Hartley is accepted as a truthful witness, is it possible that he is mistaken in his recollection that the

conversation took place in the week beginning 4 November 1996? Is there any chance that his truthful recollection that RT 523, sheet 1 was supplied may be wrong? To deal with these issues the Court will now examine what prompted Mr Robinson to approach the Mine Subsidence Board, and when that approach was made.

10.10 Mr Robinson's Approach to the Mine Subsidence Board

Mr Robinson said this:

"In September 1996, although I had no reason to query Michael Murray's work as referred to in paragraph 24 above I decided, acting as a professional mine surveyor, that I would endeavour to ascertain information which would reconfirm my acceptance of Michael Murray's work. ..." ⁹⁴

Mr Robinson made a comparison between the top seam sheet (RT 523, sheet 3), and the mine plan to confirm the location of the Young Wallsend Colliery in relation to the lease boundary [Ex.62.04 p.6 para.27].

By late October 1996 the development of 50/51 Panel had reached 7 cut-through [Ex.6.02]. Mr Robinson said:

"I then thought that I would not find any other survey or mining plan information at Gretley that Michael Murray would not have already taken into account in the work that he had done." ⁹⁵

Mr Robinson added:

"Towards the end of October 1996 I telephoned Kevin Price

⁹⁴ Ex.62.04 p.5 para.26

⁹⁵ ibid p.6 para.28

or he phoned me and I said words to the following effect:

"We are working towards the Young Wallsend Colliery. I want to confirm the position of the old workings. Where can I get any more information about Young Wallsend Colliery?"

He said:

"Try the Mine Subsidence Board."

I said:

"Good." " " 96

Mr Robinson telephoned Mr Hartley "shortly thereafter" [Ex.62.04 p.7 para.31].

Why, at the end of October 1996, did Mr Robinson feel the need for further information to carry out an additional check upon the location of the Young Wallsend Colliery? Mr Robinson said:

- A. ... what I was doing when I checked the position of Young Wallsend Colliery was normal practice. It was something - the type of thing which I did and Surveyors do all the time. If I had put that depiction on myself years before I still would have gone and checked it, that's the kind of thing that we do ... 97

Mr Robinson, in the course of his evidence, furnished a number of examples. He said:

- A. ... For example, miniwall 37/38 which was adjacent to our current workings in 44/49, when I took over were

96 ibid p.7 para.30

97 M. Robinson T8776/7

working alongside those workings. I got the plan and I measured a number of times to the goaf which contained water to make sure that we had the barrier that was required. I did that on that occasion. When we were working towards the lease in miniwall 41/42 I got out the plan and checked the position of the lease, the barrier there. When we back-holed miniwall 40 I got out Michael's work and I checked where we were going to back-hole there and checked that information. We were working towards the lease boundary of coal lease 13/43, I got that out and checked that. Then Young Wallsend Colliery came up as the next issue we were workings towards so I decided to check the position of that, and that's what I did. ...⁹⁸

However, work on the roads associated with 50/51 Panel began in approximately mid September 1996 [cf Ex.6.02; Ex.13.75]. Why was the check made six weeks later, at the end of October or early November 1996? In answer to Mr Hall QC, Mr Robinson provided the following evidence:

- Q. What prompted you in October '96 to seek some external or make some external inquiry about this?
- A. Because I believed that that was the prudent thing to do consistent with the way that I worked at Gretley. I had made - already made one check which was consistent and that was the top seam plan. It didn't have an ISG grid on it and I thought(t), well, if I can get a plan that's got an ISG grid it would be an excellent check, also something independent, something that Michael hadn't used, something externally from the mine that I done on my own behalf, was a good survey check so that's why I did what I did.⁹⁹

Mr Hall put the question again. Mr Robinson answered:

⁹⁸ M. Robinson T8699

⁹⁹ ibid T9294/5

- A. It was the fact that it was a current issue, it was something that was coming up at that time. We were many hundreds of metres away from Young Wallsend Colliery and I believe that was the prudent time to make that check. If one was to address every potential survey check, if you like, immediately you would never get anything currently done. If it was - it wasn't even required. I had no doubt at all, I believed the workings were correct and consistent with my practice I addressed the current issue and made I believe an independent survey check.¹⁰⁰

When did Mr Robinson contact the Board? The submission for Mr Robinson was as follows:

"... Robinson's evidence in his statement (Ex.52.04 parr.31) is that he rang Hartley shortly after speaking to Price toward the end of October 1996. By reference to Robinson's diary for 30 October 1996 (Ex.62.10) and the evidence of Price contained in his statement (EX.58.03 parr.65) which has corroborated Price's diary for 30 October (Ex.58.06), the overwhelming inference is that Robinson spoke to Hartley at the Mine Subsidence Board on 30 or 31 October 1996."¹⁰¹

However, the diary entries do not provide a satisfactory basis for the inference which the submission suggests. Mr Robinson's diary [Ex.62.10] contains an entry on 23 October 1996, which Mr Robinson explained in the following passage:

- A. It reads, "KP talked to RP re DARZL minutes of last meeting question mark on our future mine plans Cardiff industrial area. Plans required for MSB".¹⁰²

100 M. Robinson T9295

101 MFI 89 Vol.1 p.203

102 M. Robinson T8760

DARZL refers to the Development and Re-Zoning Liaison Committee which was established to co-ordinate various Government and local authorities which have an interest in the development and extraction of coal (T8760). Mr Robinson's evidence continued:

Q. So what does that relate to?

A. I think it relates to a request that Kevin Price had had from a DARZL meeting that he had been to asking for information on our proposed workings underneath the Cardiff industrial area and that they required some plans to show those future proposals.¹⁰³

The entry on 30 October 1996, which is relied upon, was in these terms:

[Ex.62.10]

{	MSB - YW COLLIERY	}	
	CADASTRAL PLANS		FUTURE PLANS.

In respect of that entry, Mr Robinson said:

Q. That relates to the same thing, I assume?

A. No.

Q. What does that relate to?

A. I'm not a 100 per cent sure but it could relate to a phone call that I had with Kevin Price where - it is outlined in my statement and he suggested that the MSB would be a suitable place to obtain more information or what I was after regarding the position of Young Wallsend Colliery. I also required cadastral information from the Mine Subsidence Board and that refers to maybe the cadastral plans and future plans may refer to the previous issue of the Cardiff industrial area.

Q. So, you will see the bracket is around both matters?

A. Yes, they all relate to the MSB.

Q. But you will see that the bracket is around both matters and then the words, "future plans" written alongside?

A. Yes. ¹⁰⁴

Mr Robinson also gave the following evidence:

Q. But Mr Robinson, the future plans were plans which involved the development of the area on the other side of the Young Wallsend Collier(y), that is to say, the western side, is that right?

A. The future plans of Gretley did include - - -

Q. Could you just answer that yes or no, is that right?

A. That is right but that is not what future plans regarding the Cardiff industrial area, that's kilometres away.

Q. That may be but was the proposal at that time to develop the Gretley Mine in a number of different locations, one of which was to the west of the Young Wallsend Colliery, the other being in an area which is in the Cardiff or beneath the Cardiff industrial area?

A. Yes. ¹⁰⁵

Mr Robinson claimed that he did not discuss the Young Wallsend Colliery, in the context of future plans, with Mr Price (T8761). Although Mr Price's diary for 30 October 1996 refers to the Young Wallsend Colliery [Ex.58.06], it is silent as to what was discussed. Mr Price said this:

Q. So there is no description as such as to what it was in respect of Young Wallsend which was on Mr Robinson's mind?

A. No.

Q. Nor what you said to him at that point?

A. No, no. ¹⁰⁶

¹⁰⁴ ibid T8760/1

¹⁰⁵ M. Robinson T8761

¹⁰⁶ K. Price T5425

Mr Price's recollection was that they discussed several matters, including Gretley's plans for future mining which were required by the Mine Subsidence Board [Ex.58.03 p.27 para.65]. Mr Price believed that Mr Robinson had also asked where he might obtain information to confirm the position of the Young Wallsend Colliery. He thought that request formed part of the same conversation on 30 October 1996 [Ex.58.03 p.28 para.65].

There is, however, other evidence which the Court believes provides a better indication of the timing of the conversation which took place. Mr Hartley said this:

- A. The conversation was from a phone call in early November, the exact date I am sure it was in the first week of November. ... ¹⁰⁷

At the time Mr Hartley composed the file note (18 November 1996) he discussed with Mr Smith when the request had been made by Mr Robinson (that request having been discussed with Mr Smith at the time) (T269). Mr Smith said this:

- A. ... By the process of elimination with regard to he knew when the **Melbourne Cup week** was and when a few things we said, well, it was definitely in the first week of November. ¹⁰⁸ (emphasis added)

The file note written on 18 November 1996 begins with the words "approximately 2 weeks previously" [Ex.3.07], which would suggest approximately 4 November 1996. Mr Smith also spoke to Mr Robinson in December 1996 concerning the request to the Board for assistance. The

¹⁰⁷ G. Hartley T155

¹⁰⁸ J. Smith T270

conversation, according to Mr Robinson, was in these terms:

"He said:

"There is a file note that says info was given on the week beginning 4 November 1996."

I said:

"Well that would tie in with the computer file I created showing the outline of Young Wallsend Colliery and that file is dated 5 November 1996. ..." ¹⁰⁹

The Court does not accept that there was delay in picking up the plans. Mr Robinson, according to Mr Hartley, said that the plans were required "in a hurry" [Ex.3.03 p.3 A13]. The Court infers, as a matter of probability, that Mr Robinson spoke to Mr Hartley on Monday 4 November 1996.

Mr Blakeney said that he took delivery of the plans "in or about the first week of November 1996" [Ex.60.01] in the morning (T5147). The submission on behalf of Mr Robinson suggested that Mr Blakeney must have picked up the plans on the morning of Monday 4 November 1996 (MFI 89 Vol.1 p.205). The Court accepts that that is a reasonable inference.

The report of Mr McLean of Friday 1 November 1996, by itself, had it come to the notice of Mr Robinson, would not have caused alarm. It does not furnish a reasonable basis for inferring that Mr Robinson felt the need to check the position of the Young Wallsend Colliery. Since Mr Blakeney was directed by Mr Robinson to pick up the plans from the Mine Subsidence Board on the morning of Monday 4 November 1996, it is asserted that Mr

Robinson could have no knowledge of Mr McLean's statutory report of 4 November 1996. It was not handed to the undermanager until the afternoon [Ex.6.02]. Again, that submission is reasonable. It is unlikely, moreover, that Mr Robinson would have become aware of the conversation on the morning of 4 November 1996 between Mr McLean and Mr Porteous before he gave instructions to Mr Blakeney. Mr Porteous did not emerge from the mine with Mr Van Dyke until after midday [Ex.63.10 p.8 para.18].

However, early on the morning of 4 November 1996, Mr Bernard made his report to Mr Alston concerning the water in 7 cut-through (supra p.524). Mr Pritchard saw the same water, which he discussed with Mr Alston [Ex.7.04 p.5 para.13; supra p.525]. The Court has inferred that on the same morning, and probably in the same conversation, Mr Pritchard suggested drilling ahead (supra p.557). Mr Alston said, in respect of that discussion, the following:

"At about the same time we also discussed the boring ahead in MW50/51. I believe that Mark Robinson was also present.

... " 110

Mr Alston also said this:

- Q. ... Now, you having had the discussion with Mr Pritchard concerning drilling ahead to prove the ground, did you thereafter discuss it with anyone else?
- A. I think Mr Robinson was may be available - may be in ear shot during that conversation.

Mr Alston added:

Q. I see. Well, just if you could first of all in the case of Mr Robinson, did you say anything to him about the issue?

A. I believe that Mark was just in - in the vicinity - - -

Q. He happened to be there?

A. Just in the vicinity which - where most people were at that time in the morning.

Q. Yes. Did he say anything in relation to it, do you remember?

A. Not that I can recall, no.¹¹¹

Mr Alston was then asked:

Q. Did he do anything in relation to this issue?

A. Not - - -

Q. Not that you were aware?

A. He wasn't required to.

Q. I think you may know that he made an inquiry of the Mine Subsidence Board?

A. Yes, I'm aware of that.

Q. Was that, on your understand(ing), in any way related to this discussion you had had with Mr Pritchard?

A. Not that I'm aware of, no. I think he did that off his own bat.¹¹²

Mr Robinson certainly knew about drilling ahead before the inrush, although he said that he acquired that knowledge when he spoke to Mr Alston after his investigation of the material provided by the Mine Subsidence Board [Ex.62.04 p.16 para.53].

The Court has made the following findings of fact in relation to the events of 4 November 1996:

- That on the morning of 4 November Mr Bernard (in company with Mr Pritchard) observed the build up of

¹¹¹ M. F. Alston T479

¹¹² M. F. Alston T479/80

water in 7 cut-through, which he later reported to Mr Alston, then undermanager in charge

- That on the same morning Mr Pritchard discussed the water with Mr Alston and suggested drilling ahead.
- That Mr Robinson was present during these discussions, or a significant part of them.
- That later the same morning Mr Robinson telephoned the Mine Subsidence Board, seeking plans which would enable him to confirm the location of the Young Wallsend Colliery
- That in the course of that conversation Mr Robinson spoke to Mr Hartley and said that Gretley had a water problem

These being the facts, the Court is left with the choice between two hypotheses. The first is that Mr Robinson's inquiry of the Mine Subsidence Board was made for no reason except in fulfilment of his professional duty, and that if he did mention water (which he denies), then he must have been referring to the water problem at Glendale, since he had no knowledge of any water problem in 50/51 Panel.

The alternative hypothesis is that the events are connected. The water to which Mr Robinson referred in his conversation with Mr Hartley was not Glendale. It was the water which he had heard discussed by Mr Pritchard (and possibly Mr Bernard) when drilling ahead was debated on the morning of 4 November 1996. Mr Porteous, with commendable frankness, said this:

- Q. The other matters I have drawn to your attention, Mr Bernard sees 50/51 on 4 November, he speaks to Mr Alston and Mr Pritchard; Mr McLean puts in his report of 1 November and speaks to you on 4 November and

then puts in his report on 4 November drawing attention to water. Roughly the same time, end October early November Messrs Alston and Pritchard are having a conversation where Mr Pritchard is suggesting that "it might be a good idea to drill ahead." Then you have Mr Hartley's evidence which you heard saying Mr Robinson rings him and says:

Well, can I have all the plans you've got in relation to Young Wallsend Colliery.

Asked why:

We've got a water problem at the colliery.

Now, in terms of an issue arising in relation to water, in terms of that conversation, in terms of coincidence in time you will acknowledge that it is a remarkable coincidence?

- A. I have to acknowledge that, it struck me the same way.¹¹³

That question included a reference to the reports of Mr McLean, which the Court believes would not have influenced Mr Robinson's actions. Excluding these reports, the coincidence, nonetheless, remains.

The Court prefers the second hypothesis. It believes, as a matter of probability, that these events are connected. Mr Robinson witnessed Mr Pritchard urging Mr Alston (who needed persuading) to drill ahead on 4 November 1996. He heard the reference to water in 7 cut-through. He recognised that drilling ahead was being suggested because there was the possibility that the plan may be inaccurate. He, therefore, decided to check the plan. He rang the Mine Subsidence Board that morning (4 November 1996) and spoke to Mr Hartley. In the course of that conversation he referred to a water problem at Gretley. He was referring to 50/51 Panel, not Glendale.

Mr Foley is a surveyor's assistant at Gretley. He worked with Mr Robinson. He provided a statement which is entirely consistent with Mr Robinson having returned to his office to check the position of the Young Wallsend Colliery, because he recognised, from the discussion that he had heard, that there was an issue in relation to the old workings which needed to be resolved. Mr Foley said:

"I can recall a conversation in late October/early November 1996 with Mark Robinson in the survey office at Gretley. ... I can recall that Mark Robinson had a paper plan attached to the digitising board and my recollection is that such plan was a copy of the then current mine plan on a scale of 1:2000. Mark pointed at the depiction on the plan of the Young Wallsend Colliery workings in the Young Wallsend Seam and said to me words to the effect:

"What is this?" " " 114

Mr Foley, of course, recognised that Mr Robinson well knew that he was pointing to the Young Wallsend Colliery. He interpreted his question as a request for further information [Ex.59.01 p.3 para.9]. Mr Foley added:

"An exchange then occurred to the following effect:

I said:

"They are the old workings of the Young Wallsend Colliery".

Mark said:

"Where did the details of the workings come from?"

I said:

*"The information we have is in the filing cabinet". ...*¹¹⁵

Mr Robinson went to the plan room. He returned with the top seam sheet (RT 523, sheet 3) (T5174), which he studied. Mr Robinson then said this: [Ex.59.01 p.4 para.10]

"This isn't good enough for me". "

Mr Robinson and Mr Foley thereafter had a discussion as to where further information might be obtained. Mr Robinson decided to approach the Mine Subsidence Board because, amongst other reasons, the mine had a good relationship with Mr Hartley [Ex.59.01 p.4 para.11]. Mr Foley's account is also consistent with the conversation which Mr Hartley remembers having had with Mr Robinson. According to Mr Hartley's recollection Mr Robinson said this (obviously referring to the top seam sheet):

- A. ... Mark stated that he had a plan that ... was a tracing of the original record tracing which did not have survey information on it. ...¹¹⁶ (supra p.564)

10.11 The Plans provided by the Mine Subsidence Board

What plans were provided by Mr Hartley to Mr Robinson? The Court believes, as a matter of probability, that RT 523, sheet 1 was included in the plans made available to the mine by the Mine Subsidence Board. The Court takes this view for a number of reasons.

First, Mr Robinson's request to Mr Hartley was simple: "Can I have a copy of what you have?" [Ex.62.04 p.8 para.31]. Mr Hartley agreed to that

¹¹⁵ Ex.59.01 p.3/4 para.9

¹¹⁶ G. Hartley T156

request [Ex.62.04 p.8 para.31]. Now, the Board had a series of microfiche. They included RT 523, sheet 1, as well as sheets 2 and 3. If Mr Hartley did what he said he would do, then Mr Robinson would have been given sheet 1.

Secondly, Mr Hartley gave the following evidence:

- Q. Do you remember how many microfiche there were?
A. At the time, no. At the time, no. On looking at the microfiche they're all left in a drawer, we - I took our every single one that had the number 523 on it and on looking back at the number there were five.
Q. There were five microfiche?
A. Yes.¹¹⁷

A person no doubt may mistakenly pick up less than the complete set of microfiche when withdrawing them from the cabinet. However, RT 523, sheet 1, because of its size, had been copied onto three microfiche. In the cabinet, therefore, there were the five microfiche, as Mr Hartley stated. Three related to sheet 1, and the remaining two to the bottom seam (sheet 2), and the top seam (sheet 3) respectively. It is most unlikely that one could pick up less than the complete set, and yet leave behind the three which happened to make up sheet 1.

Thirdly, there is no basis for suggesting that Mr Hartley, perhaps intending to be helpful, edited what was there, supplying only those he thought were relevant. If there had been a selection of material, based upon the assumed needs of the Gretley mine, one would have expected only the top seam sheet (sheet 3) to have been supplied, and perhaps sheet 1. However, Mr Robinson acknowledged that he received both the top and

bottom seam sheets (sheets 3 and 2). Mr Hartley, moreover, was not familiar with RT 523 (T160). He could not recall an occasion when he had been required to deal with it before (T160). He, therefore, had no basis upon which he might select some sheets, and exclude others. The microfiche themselves are not really capable of being sorted without first being printed, since they are small, and the details obscure [Ex.3.05]. Mr Hartley did not himself print the microfiche. Rather he handed them to someone else with a direction that they be printed, and left out for the mine to collect (T157). It is unlikely that the person who performed that mechanical task would have taken it upon himself or herself to exclude part of the material, withdrawing sheet 1.

The submissions made on behalf of Mr Robinson point to two matters which, they suggest, cast doubt upon the suggestion that sheet 1 was supplied. Mr Hartley believed that the microfiche plans supplied were on A3 paper (T202). It was said that the plans of sheets 2 and 3 in the possession of the Colliery after the inrush were on A4 paper (MFI 89 Vol.2 p.273). However, nothing turns on this difference. Mr Hartley made it clear that he was describing normal practice (T202). As mentioned, Mr Hartley did not himself copy the microfiche.

The second argument rests upon the fact that no copy of sheet 1 was found in the possession of the mine after the inrush. Mr Robinson was not at the mine when the inrush occurred. It was asserted that Mr Robinson had no opportunity to conceal sheet 1 (MFI 89 Vol.2 p.272).

Mr Robinson, in fact, arrived at the mine on the day of the inrush between 8.00 am and 8.30 am [Ex.62.05 p.29 para.73]. It is, therefore, not accurate to suggest that there was no opportunity to conceal. However, the Court does not believe that the absence of sheet 1 was the result of

concealment. It is probable that the three sheets making up RT 523, sheet 1, were discarded within moments of their being supplied by the Board. The evidence of Mr Foley is consistent with that inference [Ex.59.01 p.5 para.14]. The print out of the microfiche of sheet 1 was poor [Ex.3.06]. The reproduction of the red workings is obviously unreliable. One can readily see why, as a plan, it may be thought worthless. To make sense of these three sheets one would need to join them together. Mr Robinson's purpose made that unnecessary. He was looking for a plan with an ISG grid (T9294/5) and, of course, there was no such grid on sheet 1. There was a grid, however, on the 1:4000 seam sheet. Moreover, his concern was only the location of the old workings. He was in no doubt about their extent [T8803]. He was not undertaking a general investigation into the abandoned workings. It is curious, however, that Mr Robinson retained further copies of sheets 2 and 3. In the Court's judgement, that oddity does not displace the probability arising from the other matters to which reference has been made.

10.12 The Duty of Mr Robinson

As stated above, Mr Robinson, having heard the discussion between Mr Pritchard and Mr Alston concerning drilling ahead, recognised that there was an issue as to the accuracy of the depiction of the Young Wallsend Colliery, and resolved to investigate the location of the old workings.

What was Mr Robinson's duty, as mine surveyor, in such circumstances? Mr Knight, whose evidence is accepted, said this:

- Q. Now, if I can just move from that to another situation, I would ask you to assume that at a later stage, for whatever reason, the particular mine surveyor did have concerns about the material that had been relied

upon in respect of the depiction of the colliery and wanted to understand that material and to determine it for himself.

A. Yes.

Q. What do you believe was his duty at that point in time?

A. To advise his manager of his concerns, discuss it with him and then take up the research, whatever research he would have to do to satisfy himself of that situation.¹¹⁸

When Mr Robinson approached the Mine Subsidence Board he defined his purpose in these words:

"I was attempting to confirm the location of the Young Wallsend Seam workings in the Young Wallsend Colliery, as opposed to the extent of such workings. ..." ¹¹⁹

Why did Mr Robinson limit his investigation? He said:

Q. Why is it that you confined your focus simply to the location and not the extent?

A. I had no doubt about the extent. The workings there were, I believed, complete and accurate.

Q. But you had no doubt either about the position?

A. That's correct.

Q. You were simply double checking that because that was the professional thing which a Surveyor does?

A. Yes.

Q. Why did you not also extend that professional task to the extent of the Young Wallsend workings?

A. I suppose I didn't consider it, I believe, at that time or at any time before the accident or you know - I don't recall ever being concerned about the extent of the workings or the position of the workings. They were correct as far as I was concerned.

Q. Yes, but you chose to re-examine the position

¹¹⁸ R. A. Knight T6815

¹¹⁹ Ex.62.05 p.56 para.140

- because that was, you thought, a prudent thing to do?
- A. If anything was going to be amiss, if you like, it would be the, I believe, the position. With - I didn't believe it was possible but in using the computer file which contained the mine plan, one does a lot of - using the drafting software, a lot of functions such as move, copy, stretch, rotate, all these various functions over a period of time. It was virtually impossible that one could move a whole set of workings and I didn't believe that I had done that; that I had changed anything but I believed it was correct but by confirming what I believed to be correct, that was a good check.
- Q. What I am suggesting is that you plainly should have also carried out a check on the extent?
- A. As I've explained to you yesterday, with the extent of the information and the knowledge that I had, I did not have a doubt as to the extent so I don't agree with that proposition.
- Q. I will not put it again but not having a doubt did not stop you doing the other check, I am just puzzled as to why you stopped where you did rather than examine all relevant issues to the particular matter you were looking at rather than simply one issue?
- A. The effect of what I did was check the extent. I confirmed the extent of the workings adjacent to Young Wallsend - to miniwalls 50/51 and their position by checking the outline on the seam sheet.¹²⁰

The Court has already determined that well before November 1996 Mr Robinson was under a duty to ascertain the basis upon which Mr Murray had depicted the Young Wallsend Colliery, and the adequacy of the research which underpinned that depiction (supra p.500). It is plain that Mr Robinson did not appreciate that he was under that duty. He assumed that he could rely upon Mr Murray having properly done his job.

However, by November 1996 Mr Robinson did recognise that there was an

issue. He went part of the way in resolving that issue. He satisfied himself that the position of the Young Wallsend Colliery was accurate. However, he should not have stopped his investigation at that point. Once there was doubt in his mind, it was his duty, first, to inform the manager, and secondly to resolve that doubt completely (or disclose to his superiors that it was incapable of resolution, because of the paucity of material). An opportunity to make good the defects of Mr Murray's research, and his own, was therefore lost.

The Court is now in a position to deal with the events of Wednesday 13 November 1996, the day before the inrush.

11 THE DEPUTY'S REPORT

11.1 The Issues Arising from Mr McLean's Report

Mr McLean was a deputy on the day shift on Wednesday 13 November 1996, the day before the inrush. His shift began at approximately 6.30 am (T846). Shortly after 3 pm (that is, a little over 14 hours before the inrush) he handed his statutory report to the day shift undermanager, Mr Coffey. On any view, Mr McLean's report was unusual. It included these words: [Ex.6.02]

"Coal seam is giving out considerable amount of water seepage at face C hdg."

Mr McLean, unfortunately was not interviewed immediately after the inrush. The replacement of the district inspector, Mr Van Dijk, by a team of investigators, headed by Mr Abbott, necessarily delayed the interviewing process. Further delay was occasioned by Mr Abbott's resignation once the Judicial Inquiry had been announced. Mr Anderson having been appointed to replace Mr Abbott, a request was made to Gretley on 2 January 1997 to provide information concerning the availability of employees who had worked in 50/51 Panel. Mr Pritchard responded the next day on behalf of the mine [Ex.21.21]. He provided a schedule of witnesses, and their availability. In the case of Mr McLean, the schedule indicated that he would be available "from 27 January 1997" [Ex.21.21]. What the letter did not say, and should have said, was that Mr McLean was available in early January, and would not go on leave until mid January.

As a consequence, Mr McLean was not interviewed by the inspectors until 30 January 1997 (T1917). When interviewed, he was asked by the inspectors to describe how the seepage appeared to him. Mr McLean said this:

"A39. In hindsight it was not a considerable amount, it was a trickle. It would've been a considerable amount if the place had been a dipping place because after two or three shifts it would've had to be pumped." ¹

Mr McLean, at the end of the shift, discussed his report with the undermanager, Mr Coffey. He described that discussion to the inspectors in these words:

"A22. We discussed the amount of water which I had written in my report. I handed my report to Mr Coffey in the surface undermanager's room and he questioned the stated amount of water on my report. I stated that **it wasn't a considerable amount but was a trickle** coming from under the miner at the face." ² (emphasis added)

Mr McLean, when giving evidence, repeatedly said to this Court that, in describing the water seepage as "considerable", he had used the wrong word (T873; T1035; T1181).

Mr Coffey's recollection of his conversation with Mr McLean was as follows:

"Coffey: "Alister what's this?"

At the time I was holding up his report and pointing to the reference to water seepage. McLean came back into the undermanager's office and said to me words to the effect:

McLean: "It's not anything to worry about. It was only a trickle. When the miner was broken down, I noticed a trickle of water at the rear of the miner. I said to Len the miner driver; "You've left your sprays cracked on." Len said; "No I

¹ Ex.15.01 p.7

² ibid p.4

haven't." So we moved the miner back to see where the seepage was coming from. Len and I went to the front of the miner and saw water seepage coming out of the floor." ³

The company, in these circumstances, made the following submission:

"19.7 Mr McLean consistently said in evidence that what he wrote in his report was either incorrect, or, more importantly, conveyed the wrong impression as to what he had observed. He gave evidence to the effect that he was not "very good with words". We submit that whatever else can be said about his testimony, his performance in the box demonstrated the truth of that piece of evidence.

19.8 In our submission, there is no basis, on the evidence, for any suggestion as to why Mr McLean should be lying in the testimony which he has given before this Court." ⁴

Mr Hall QC, however, put this:

"... In the relative's submission, whatever was said by Mr McLean did not have the effect of contradicting that which he had written, and even taking Mr McLean's evidence at the highest, that is, that he did qualify the word *considerable* with reference to a trickle of water, that did not provide any basis or excuse for Mr Coffey's inaction." ⁵

³ Ex.19.04 p.15 para.49

⁴ MFI 91 Vol.2 p.440/1

⁵ MFI 87 p.26

11.2 The Day Shift on 13 November 1996

At the end of the night shift of 12/13 November 1996 the face had advanced 55 metres along C heading. The Young Wallsend Colliery, according to the plan, was 134 metres away. In fact, unbeknown to those working in the area, it was only about 20 metres away.

Mr McLean, as a mine deputy, was obliged to inspect, inter alia, the face of C heading before production resumed. According to his report, he did so at 7.15 am. He said this:

- Q. And do you remember your observations of the face at that time?
- A. Yes, I observed the faces, I observed an accumulation of water coming out of the face, a trickle of water coming out of the face.
- Q. This is your inspection at the commencement of the shift?
- A. That's my commencement, yes.

He added:

- Q. And where was it in relation to the face that you observed this water?
- A. I observed water initially coming from underneath the miner at the back of the miner.⁶

The trickle was flowing (T848). It was one inch wide, or perhaps $\frac{3}{4}$ inch wide (T848).

Having completed the inspection, Mr McLean was then joined by the crew. Almost at once the continuous miner broke down (T849). The crew was

⁶ A. B. McLean T847

given other work whilst arrangements were made for the miner to be repaired. Mr McLean said he was in and out of C heading while the fitter repairing the miner, Mr Riley, was working on it. Mr McLean was asked:

- Q. During your movement back and forth into C heading, do you remember making any observation in respect of water?
- A. I made an observation reflecting back to the water - the water was still - it was still **running** there.
(emphasis added)

Mr McLean's observations of the face, in the meantime, were as follows:

- Q. That gives you a point of reference. When between say 7.30 and 12 o'clock would you have gone back into the heading and made the observation of the water again?
- A. During the time that Mr Riley was fixing it. It may have been 10 o'clock or 11 o'clock.
- Q. Had it changed in appearance in any way?
- A. No, I don't believe it did.
- Q. Still flowing?
- A. It was still trickling.⁷

Mr Collins, a miner driver, discussed the presence of water with Mr McLean a number of times during the course of the morning (T744; 862). Mr Collins said this:

"He said something along the lines of: where's that water coming from? There was a run coming out from underneath the miner and we sort of checked around. I thought it was - after we retracted the miner and checked again I thought that it was a build-up of water after the job was washed down, after the fitter had washed the job down. We saw no evidence of any more water coming out from underneath the

miner." ⁸

Mr Riley overheard Mr McLean speaking to Mr Collins. His account of their conversation was in these terms:

- A. Well, they were walking past me.
- Q. What is your recollection of what was said?
- A. Well, Mr McLean came in and he said - he said, "Where's all the water coming from?" And to my knowledge Lennie replied that - he said, "Maybe the sprays on the miner aren't turned off properly." And then they walked past me. And then I heard Mr McLean state that the water was coming out of the face and shortly after that they left the area. ⁹

Mr McLean, that morning, spoke to two other miners concerning water. Mr Stewart recalled the following:

"Yes. The day before the fatality. He said: "There's water in the face". I said "Well, I can't see any". That's the only thing I know about water." ¹⁰

Mr Stewart identified the context in which these remarks were made. The conversation took place after production had resumed. Mr Stewart said this:

"Yes, the last car was filled and had gone out and I drove in to be filled but they decided that they'd strap and I walked up to the miner and he was there and he said "There's water in that face" and I said "I can't see any". I just couldn't work out

⁸ Ex.11.01 p.43/4

⁹ L. R. Collins T809

¹⁰ Ex.10.01

how he could say that." ¹¹

It appears that Mr Bernard Brown also spoke to Mr McLean. He provided the following information to the inspectors:

"The shift before the accident there was a little more water than usual, I did have a discussion with somebody but I cannot recall who but there was talk about a little more water than usual, it would be somebody working in the face but whether it was the deputy or was one of the .. (men) I just do not recall whether I did have a discussion with someone." ¹²

Mr Brown later acknowledged that it could have been Mr McLean that he spoke to [Ex.9.01 p.52].

Once production resumed, the appearance of the face was changed. Mr McLean said this:

- Q. And what did you notice, if anything, as a result of that sequence having been carried out?
- A. Well, the machine had cut a sequence that required the straps to be - the skelps - straps to be put to the roof which was carried out, the machine was moved back and I had an inspection at the face to see if the water was still there and the water had appeared to dry up. ¹³

However, in answer to Counsel Assisting, Mr McLean added :

- Q. And that process of percolating through the face and down and collecting at the lowest point and then

¹¹ ibid

¹² Ex.9.01

¹³ A. B. McLean T856

starting its journey down the floor of the heading naturally takes some time?

A. That would be correct.

Q. So that when you cut the face you naturally disturb that process and remove a body of coal; is that right?

A. That's correct.

Q. So that really before you can draw any inference can I suggest, as to the presence or absence of water, you would need to wait awhile for that process of accumulation to begin; would you not? Do you understand what I am putting?

A. Yes, I understand how - what you're saying, and you're saying that because the face had been freshly cut, the - the water had been dispersed among the coal and loaded out.

Q. That is right?

A. That is correct.

Q. The disappearance of the water as such does not suggest, does it, that the source of water that you had seen evidence by a trickle of water had disappeared. Rather it suggests that the source of water had been disturbed to the point where it may take time to accumulate again, if it is present, before it runs away, is not that right?

A. If it - if it was - yes, that's - you're correct in your assumption.¹⁴

At approximately 1.00 pm Mr McLean spoke by telephone to Mr Coffey, who was on the surface. He did not mention water [Ex.19.04 p.14 para.48]. The crew ceased cutting coal at approximately 2.15 pm (T712). The face had advanced approximately 12 metres (from 55 m to 67 m). It was then only 7 metres away from the old workings. Mr McLean's statutory report recorded his last inspection as having taken place at 2.20 pm [Ex.6.02]. The report form includes a printed declaration which is in the following words:

"I, the undersigned, have inspected the whole district(s)

assigned to me for this shift and I certify that this report is a full and accurate report of the inspection(s) carried out by me." ¹⁵

Under the heading "General safety and action taken", Mr McLean made the following entry:

"Satis if care taken" ¹⁶

Under the heading "Any other matters" Mr McLean included the words set out at the beginning of this Chapter which, for convenience, are repeated:

"Coal seam is giving out considerable amount of water seepage at face C hdg." ¹⁷

The solicitors retained by the company interviewed Mr McLean on 6 December 1996. The company resisted production of the interview on the basis that it was a privileged document. After argument, the Court ordered its production. Ultimately, it was produced. The interview included the following question directed to Mr McLean, and his response:

"I will just highlight to you that there is a notation on the document which says, and I will just read out for the purpose of this exercise, "Coal seam is giving out considerable amount of water seepage at face of C heading". Could you just explain if you could what that comment really meant?"

That comment means as it says, the coal seam was giving out an amount of water, perhaps on hindsight this was not considerable but there was water coming out, it was not

¹⁵ Ex.6.02

¹⁶ *ibid*

¹⁷ *ibid*

large, it was a trickle of water." ¹⁸ (emphasis in original)

When interviewed by the inspectors (30 January 1997) Mr McLean described his conversation with Mr Coffey in these words:

"... I stated that it wasn't a considerable amount but was a trickle coming from under the miner at the face." ¹⁹

The inspectors thereafter asked Mr McLean the following question:

"Q45. You report the water seepage as considerable but later state that it was a trickle. Which description is correct?

A45. It was a trickle." ²⁰

Mr Anderson then asked the following question:

"Q46. Why did you report the seepage as considerable?" ²¹

Mr McLean, according to Mr Anderson, appeared to have considerable difficulty in answering that question. Mr Anderson described his demeanour in these words:

Q. Now, do you remember Mr Maclean's (sic) demeanour at that point?

A. Yes, I did. He screwed up his eyes and crossed his arms together and rolled his head back and breathed in and out quite loudly and I formed the opinion that he was having some difficulty in formulating his reply

¹⁸ Ex.15.06 p.2

¹⁹ Ex.15.01 p.4

²⁰ ibid p.8

²¹ ibid

and I advised him that this was an important question, so I did not want him to rush it. I'd like him to consider his opinion ...²²

The interview was adjourned to enable Mr McLean to consider his response, and to discuss it with Mr Stothard from the CMFEU, who was assisting him. The interview resumed after five minutes. The response provided by Mr McLean was as follows:

"A46. See my earlier answer."²³

Mr McLean, when asked about this episode, remembered that the interview was interrupted. However, he thought the interruption occurred somewhat later, and in relation to a different question (question 50) (T902). The Court accepts, however, Mr Anderson's evidence that the interview was interrupted at question 46. Question 46 was obviously awkward. The answer ultimately furnished ("See my earlier answer") is the sort of answer one brings back to the conference table, rather than a spoken response.

When, in relation to the shift, did Mr McLean complete his report? Mr McLean could not recall (T1128). What was his usual practice? Mr McLean's evidence on this issue was not consistent. He provided the following answers to the inspectors:

"Q11. When must you make this report?

A11. At the end of the shift before you leave the section."²⁴

²² I. C. Anderson T1642

²³ Ex.15.01 p.8

²⁴ Ibid p.3

In answer to Counsel Assisting Mr McLean said this:

- Q. Mr McLean, you know full well it was written at the end of the shift, do not you?
- A. To be quite honest - to be quite honest I - I - I'd say more strongly that it was towards the end of the shift but there may have been a possibility because I had time to go down to the - down to the crib room and look at my books and start writing my - start writing my production sheets up.²⁵

When cross-examined by Counsel for the company, Mr McLean said this:

- Q. But it is likely, is it not, that you filled in all of it or virtually all of it before the end of the shift?
- A. It could be possible.
- Q. Possible or likely?
- A. It might be likely.²⁶

When re-examined by Counsel Assisting, Mr McLean gave the following evidence:

- Q. I will put the question, Mr McLean. You have told us more than once that you are not sure when you completed that particular box at the foot of your report, correct?
- A. Correct.
- Q. It could have been 12 midday, it could have been the end of the shift?
- A. Correct.
- Q. Assuming it is either time, when I think about it, assuming it is either time, it is after you have witnessed the water disappear once the cutting process has taken place?

²⁵ A. B. McLean T870

²⁶ ibid T1092

A. That's correct.²⁷

11.3 The Conversation with Mr Coffey

Having arrived at the surface Mr McLean went to the undermanager's cabin at approximately 3.10 pm [Ex.19.04 p.15 para.49]. Without comment, he handed in his statutory report and production report. He then turned to leave, and was almost at the door when Mr Coffey, the undermanager, called him back [Ex.16.04 p.2 para.8; Ex.19.04 p.15 para.49].

The company's interview with Mr McLean in December 1996 included the following description of the conversation with Mr Coffey which ensued:

"At the end of the shift I come in and I hand this report plus my during production report on to Michael Coffey at his desk and I come in from the end of the shift. I was walking out the door and Mick called me back and said, "What's this water? How much water is coming out of there?" I said, "It was coming out as a trickle". It says considerable there but it was not squirting out like (sic) the face like water pistols it was just seeping out the face."²⁸

Mr Coffey, in answer to the inspectors, gave the following account of the same conversation:

"When Mr McLean put this report on the undermanagers desk and I read it and countersigned it. I called him back into the office and questioned him about this report. I ascertained from our conversation that he had noticed a trickle of water coming from under the continuous miner when the unit had been broken down that morning. He said that the water was issuing from the floor at the face.

²⁷ ibid T1188

²⁸ Ex.15.06 p.3

He said when production recommenced the crew cut a couple of cars and he had again inspected at the floor. There was no longer any water issuing from the floor. He reiterated a couple of times that it was only a trickle.

As I was speaking with Mr McLean I asked him how far the miner was up. 65m? He said No. 67m measured. I brought the 50/51 plan on the undermanagers office wall up to date and scaled off the distance to the old Young Wallsend workings as approx 130m. Mr McLean stated that we should expect more seepage as the section mined closer to old Young Wallsend workings. I also informed him that we would be drilling from 8 c/t on afternoon shift the following day to prove solid ground for setting out the installation face and bleeder headings.

I had also spoken to Mr McLean on the phone at about 1 p.m. He did not indicate that there was any problem at that time." ²⁹

Somewhat later, Mr Coffey provided a statement. The statement set out his recollection of his conversation with Mr McLean. Having drawn Mr McLean's attention to the words of the statutory report, the conversation, according to Mr Coffey, proceeded as follows:

"... McLean: "It's not anything to worry about. It was only a trickle. When the miner was broken down, I noticed a trickle of water at the rear of the miner. I said to Len the miner driver; "You've left your sprays cracked on." Len said "No I haven't." So we moved the miner back to see where the seepage was coming from. Len and I went to the front of the miner and saw water seepage coming out of the floor." " ³⁰

Mr Coffey then turned to the mine plan. He marked the position of the face

²⁹ Ex.19.03 p.7

³⁰ Ex.19.04 p.15 para.49

according to the advances made during the day shift. He then measured the distance to the Young Wallsend colliery. It was approximately 130 metres [Ex.19.04 p.15 para.50]. The conversation with Mr McLean resumed, and was in these terms according to Mr Coffey:

"... Coffey: "Was there any roll in the seam?"

McLean: "Not that I noticed"

Coffey: "Any broken roof?"

McLean: "No, it's OK."

Coffey: "What distance did you finish at, was it 65m?"

McLean: "No, 67m measured"

Coffey: "That makes us about 123m away from Young Wallsend Colliery. Where exactly was the water coming from and how much water was there?"

McLean: "The seepage was only a trickle coming from the floor at the face. After we had cut a couple of cars we could not find any seepage at all. It had disappeared completely."

Coffey: "So, what's this considerable?"

McLean: "I thought this would be a nuisance, making the wheeling roads muddy if the seepage continued. We should expect to get some water as we had in MW 41/41/43 developments." "31

Mr Shacklady, another undermanager, was present throughout this conversation. He was the undermanager on the next shift. He provided the following information to the inspectors as to what he had heard:

"I was present during a conversation between Mr McLean and Day Shift Undermanager Mr Coffey at the changeover of day and afternoon shift. Mr McLean said the water went when the miner started cutting.

I was re-assured by Mr McLean's comments." ³²

Mr Shacklady later furnished a more detailed statement [Ex.16.04]. He stated that his attention was drawn to the conversation by the reference to water [Ex.16.04 p.4 para.8]. His recollection of the conversation thereafter was in these terms:

"McLean: "There was water coming out of the floor at the side of the miner."

Either Mike Coffey or myself then said words to the effect

"Were the sprays left on on the miner?"

McLean: "No." " ³³

Once Mr McLean left the office, Mr Shacklady addressed the following question to Mr Coffey:

"... Shacklady: "When are we going to drill in 50/51?"
Coffey: "When we open 8 c/t" " ³⁴

Mr Coffey did not inspect the face of C heading 50/51 Panel (T2127). He believed there was no point. The water had disappeared (T2127). Nor did he notify the acting undermanager in charge, Mr Pritchard. In his judgement, no action was called for (T2127).

³² Ex.16.03 p.6 Q31

³³ Ex.16.04 p.3 para.8

³⁴ ibid p.4 para.9

Mr Shacklady, during the course of the afternoon shift (which was a maintenance shift), went underground. Indeed, he went to 50/51 Panel. However, he did not inspect the face at C heading. He did not believe it necessary to do so (T1328; 1371). He did, however, speak to the afternoon shift deputy, Mr Hegarty. Mr Hegarty told him that there were "no problems" (T1328). In the handover from Mr Shacklady to the undermanager of the night shift, Mr Pritchard (who was also the undermanager in charge) no reference was made to Mr McLean's report (T633). Mr Pritchard did not look at Mr McLean's report before the inrush (T648).

The submission of Mr Hall QC, made on behalf of the relatives, trenchantly criticises Mr Coffey, Mr Shacklady and others who later dealt with (or should have dealt with) Mr McLean's report. The submission included the following:

"It is clear that the statutory scheme failed in this case. Legislation, by itself, will not cure all problems. It depends upon the vigilance and competence of those who are bound by it to implement it. **Mr McLean's last report was the critical opportunity, tragically missed** by those whose duty it was to investigate the matter being brought to attention. The regulatory system of reporting was an adequate one. It was the human factor - lack of diligence and competence - which resulted in its failure." ³⁵ (emphasis added)

Before dealing with the obligations of Messrs Coffey, Shacklady and others, and whether they were in breach of those obligations, it is first necessary to determine the following issues of fact:

- First, what did Mr McLean in fact observe in C heading on 13 November 1996?

- Secondly, what was said by Mr McLean, when questioned by Mr Coffey, about his report? Is the evidence of Mr McLean, and that of Mr Coffey, (reproduced above), as to what was said, an accurate reflection of what, in fact, passed between them?

11.4 What did Mr McLean observe?

Dealing with the first of these issues, the Court does not accept that Mr McLean used the wrong words in his report. He quite deliberately chose the phrase "considerable amount of water seepage at face" because those words accurately described what he saw. The Court takes this view for a number of reasons.

First, Mr McLean discussed his report with Mr Porteous soon after the inrush (T9186). Nothing said by Mr McLean on that occasion suggested that his report was wrong (T9191). When interviewed by the company's solicitors three weeks after the inrush (6 December 1996) [Ex.15.06], and reminded of the words in his statutory report, Mr McLean's first words were: "That comment means as it says ... "[Ex.15.06 p.2]. The rest of his answer purports to qualify that response. However, in the Court's judgement, that qualification owes more to Mr McLean's appreciation of the awkward nature of his report for the company, his employer, than a recollection of what he saw.

Secondly, Mr McLean was plainly a competent and experienced deputy. He was obviously familiar with the requirements in respect of statutory reports. Each one of us, on occasions, chooses words which express less than exactly what we mean to convey. However, Mr McLean did not suggest simply a poor choice of words. He gave the following evidence in

response to a question from Counsel Assisting:

- Q. In your report the description you gave, the word that somehow is recorded there is the very opposite to the word that you should have chosen?
- A. Yes.³⁶

It is simply implausible that a person of Mr McLean's experience would make such an error.

Moreover, Mr McLean's comments to those members of the crew working alongside him during the shift (especially his observation to Mr Stewart: "There's water in that face") are consistent with the words which he ultimately used in the statutory report.

Thirdly, the Court does not accept, as a possible explanation for an inappropriate choice of words, the suggestion that the report was written at a time before production recommenced, and, therefore, before the water had dried up. The Court believes it probable that the report was written at the end of the shift. However, even if the report were written earlier, it was certainly written at a time after production had resumed (T1188). The words in the report, therefore, were chosen at a time when Mr McLean was aware that the water was no longer visible. His choice of words was influenced, no doubt, by his recognition of the fact that the water would probably reappear once production ceased (T858).

Fourthly, if Mr McLean's report were, for some reason, wrong, and Mr Coffey countersigned it before his conversation with Mr McLean as he claims [Ex.19.03 p.7 A.33], then upon his becoming aware of the error one

³⁶

would expect that as a reasonably careful undermanager he would require Mr McLean to correct the report. The fact that the copy left underground described a more serious condition of the face could not result in harm; indeed, it might be expected to prompt a more careful surveillance of the face.

11.5 What did Mr McLean say to Mr Coffey?

Turning to the second issue: what did Mr McLean say in response to Mr Coffey's questions about his report? Resolving that issue will be assisted by an appreciation of the way in which Mr McLean viewed the water seepage which he described in his statutory report.

Plainly he regarded what he saw as abnormal or unusual. That much is conceded by the company in its submissions (MFI 91 Vol.2 p.439 para.19.2, 19.3). However, the company asserted that Mr McLean did not see the water as presenting a safety problem, actual or potential:

"Whatever the meaning of what Mr McLean wrote; whatever Mr McLean intended to convey to any reader of what he wrote; we submit that if Mr McLean regarded the matter as one involving either an immediate or even significant potential danger to the safe working of the mine, it beggars belief that, with his background and wealth of experience, he would have simply placed his report on Mr Coffey's desk and turned to walk away. It follows that his very actions [or at least, his very inaction] in simply leaving it on the desk is the most powerful evidence of all that he was not professionally concerned." ³⁷

The company added:

"... turning to walk out of the room is not the behaviour of a man who was concerned about any present or potential safety implications of what he had observed and recorded in his statutory report." ³⁸

There is some force in these submissions. The statutory report completed by Mr McLean specifically made provision for a comment upon safety. Mr McLean completed that section by describing safety as "Satis(factory) if care taken" [Ex.6.02]. Moreover, Mr McLean was under a duty to report without delay any matter which came to his notice which, in his opinion, was likely to constitute a danger to persons employed in the mine (*Coal Mines Regulation (Managers & Officials - Underground Mines) Regulation 1984, Clause 45(1)(c)*). The water came to his notice at the commencement of the shift. Indeed, the submission for the Australian Collieries' Staff Association included the following observation, which is accepted:

"...McLean's actions however were to commence production after observing the conditions in the panel for over 5 hours. McLean would not have permitted production to commence nor would the miners have commenced production if they had believed that there was any imminent danger or peril.

...³⁹

Mr McLean permitted his men to remain in C heading, and the face to advance a further 12 metres [Ex.6.02]. It is, therefore, accepted that he saw no immediate danger arising from the presence of water.

The Court believes, nonetheless, that Mr McLean was concerned by what he saw. His conversations with Messrs Collins, Stewart and Brown during

³⁸ ibid para.19.5

³⁹ MFI 89 Vol.2 p.455

the shift demonstrate that concern (supra p.597, 600). He saw the link, or possible link, between the water and the old workings, and recognised that it may be a symptom of danger. He was right to do so. Attention is again drawn to the following passage from the article *Water - A Hazard and a Nuisance*:

"Any water inflow in the vicinity of abandoned mines - whatever the water quality and whatever the indicated barrier width - should be considered a danger signal." ⁴⁰

The danger seen by Mr McLean on 13 November 1996 was the same danger which he had drawn to Mr Porteous' attention on 4 November 1996 (supra p.528). Did the presence of water suggest that the plan may be inaccurate, and the old workings closer than depicted? Mr Hern, a miner, gave the following evidence, his attention having been drawn to the words used by Mr McLean in his report:

- Q. Then what questions you have already said would come to your mind in this situation would you think you would have raised, based on your experience?
- A. Are we sure where the old workings are? ⁴¹

Mr Coffey, when presented with Mr McLean's report, had the same concern. He immediately turned to the mine plan, and measured the distance between the face, as established during the day shift, and the Young Wallsend colliery [Ex.19.03 p.7].

Mr Hall QC drew attention to Mr Shacklady's reaction to the conversation which he overheard between Mr McLean and Mr Coffey. The submission

⁴⁰ Ex.76.04 p.63

⁴¹ MFI 87 p.44

said this:

"... What is significant, it is submitted, is that in para 9 of Exhibit 16.4 Mr Shacklady says that when Mr McLean left the office one specific item of conversation which then ensued with him commenced with the question from Mr Shacklady: *When are we going to drill in 50/51?* (question 9). ..." ⁴²
(emphasis in original)

Mr Shacklady was not sure why he asked Mr Coffey about drilling ahead within minutes of Mr McLean's departure (T1308). He said this:

- Q. But your question, you think, may have been provoked by the words that you read in Mr McLean's report?
- A. Possible. ⁴³

The Court believes that Mr Shacklady, too, made the link between the presence of water, and the possibility (which drilling was designed to safeguard against) that the plan may have been inaccurate.

Mr McLean clearly took some care in completing his statutory reports. The submission for the relatives made the following observation in respect of Mr McLean's reports of 1, 4 and 13 November 1996:

The entries in the three reports confirm that Deputy McLean did not use stock or standard phraseology to record his inspections but that he employed descriptive terms peculiar to each inspection." ⁴⁴

⁴² MFI 87 p.44

⁴³ T. Shacklady T1308

⁴⁴ MFI 87 p.25

When interviewed by the company on 6 December 1996, Mr McLean responded to a question relating to his statutory report as follows:

"On that document, basically the document, correct me if I am wrong, but it is really just to identify any problems which may be seen by yourself or noticed by yourself which could be causing problems underground with the crew?

That is correct. Yes. **but also safety of the mine "**⁴⁵
(emphasis added)

In the context of his report of 13 November 1996, Mr McLean gave the following evidence as to his purpose in describing what he saw:

- Q. So that it has been drawn to the attention of those who read these reports who are further up in the chain of command there is a condition down there that is unusual - could represent a sign of trouble ahead, correct?
- A. Yes.
- Q. That is why you put this entry in this report about seepage of water, correct?
- A. Yes.
- Q. So that in that sense it is put in in the interests of potential safety in your report?
- A. Potential safety is a general observation.
- Q. Or to put it the other side of the coin because it could represent potential danger and you wished to have management's attention drawn to it, correct?
- A. I put it in as a general observation, yes.
- Q. Because it could represent potential danger, correct?
- A. Yes, correct. Go on.⁴⁶

What significance should attach to Mr McLean's placing the report on Mr Coffey's desk, without comment, and turning to leave? Walking out simply

⁴⁵ Ex.15.06

⁴⁶ A. B. McLean T1032

meant that Mr McLean did not recognise an immediate threat to safety. It does not mean that he did not see a potential threat to safety. For the reasons given, the Court believes Mr McLean did see such a threat. However, he was content to allow the system in respect of statutory reports to deal with his observation, and concern. Mr McLean said this:

Q. You were about to leave when Mr Coffey, you said, asked a question about it, correct?

A. Yes.

Q. You see when you wrote in your report as to this water seepage, you wrote it with the intention that it would be taken up by whosever responsibility it was to investigate it and determine whether or not certain steps should be taken in relation to it, correct?

A. Yes.⁴⁷

The Court accepts that Mr Coffey immediately recognised that the words used by Mr McLean described an abnormal situation, and one which had the potential to threaten the safety of the mine (T2107). He, therefore, recognised a need to investigate what Mr McLean had in fact seen (T2107). Hence, he called Mr McLean back and questioned him.

The Court does not accept Mr McLean's assertion that, when questioned, he, in effect, withdrew his report, saying that the water seepage was not considerable [cf Ex.15.01 p.4]. The Court also does not accept Mr Coffey's assertion that Mr McLean said (referring to the description of water): "It is not anything to worry about." It is significant that those words do not appear in Mr Coffey's first account of this conversation, to the inspectors [Ex.19.03 p.7] (cf MFI 87 p.39).

Nonetheless, the Court believes that something must have been said by

⁴⁷ ibid T1033

Mr McLean which qualified the words in his report, or the impression which they created. Something was said which, in Mr Coffey's mind, transformed the report from something which no-one (including Mr Coffey) could ignore, into something which Mr Coffey (and Mr Shacklady) chose to ignore. Perhaps the surest guide to what was said is the earliest statement of Mr McLean, taken three weeks after the inrush by the company's solicitors, although, even in this statement, it is apparent that Mr McLean was already in retreat. The relevant part of the statement is as follows:

"At the end of the shift I come in and I hand this report plus my during production report on to Michael Coffey at his desk and I come in from the end of the shift. I was walking out the door and Mick called me back and said, "What's this water? How much water is coming out of there?" I said, "It was coming out as a trickle". **It says considerable there but** it was not squirting out like (sic) the face like water pistols it was just seeping out the face." ⁴⁸ (emphasis added)

The Court does not accept that the words highlighted were said. It is probable that there was a reference to a trickle, and a discussion about whether the sprays of the miner had been left on (as Mr Shacklady recalled). Mr McLean no doubt referred to the fact that the water appeared to have dried up once production resumed.

Four aspects of Mr Coffey's conduct were the subject of comment:

- First, the adequacy of his investigation, in terms of his questioning of Mr McLean.
- Secondly, was there a need for further investigation? Should Mr Coffey have inspected the face himself, or arranged for Mr Shacklady (who was about to

commence his shift) to do so? Should the water have been monitored?

- Thirdly, should Mr Coffey have notified the undermanager in charge?
- Fourthly, Mr Coffey having made a determination that no action was called for, should he have made a report which would then have been available to those on subsequent shifts?

These matters will be dealt with in turn.

11.6 The Adequacy of Mr Coffey's Investigation

Dealing with the first aspect, Mr McLean's report, it will be noticed, used the present tense ("... coal seam **is giving** out considerable amount of water seepage ..."). That signalled a continuing situation, as Mr Coffey acknowledged (T2215). Mr Hall QC made the following submission:

"... but the period over which Mr McLean made his observations and exactly what he saw on those observations was easily ascertainable by a few short questions based on information recorded in the report, questions however which were not asked by either Mr Coffey or Mr Shacklady.

Once again, the unquestioning mind on this issue is demonstrated ..." ⁴⁹

Mr Coffey gave the following evidence, in the context of Mr McLean's report:

Q. No, but it was important for you in your investigation

- to determine, first of all, how much water, correct?
- A. Mm.
- Q. Please answer if you would?
- A. Yes, sorry.
- Q. Secondly, the flow rate?
- A. Yes.
- Q. Is that right?
- A. Yes.
- Q. The flow over time?
- A. Yes.
- Q. And depending upon those matters, the possible source?
- A. Yes.⁵⁰

Mr Coffey's questioning of Mr McLean did obtain some of the detail of Mr McLean's observation. However, it is instructive to examine what was not uncovered. Mr Coffey did not determine when Mr McLean had first observed the water (7.15 am). Nor did he learn that the seepage had continued over the next five hours until production resumed at midday (T2124). Mr Coffey, indeed, was under the impression that the water had first been noticed shortly before the continuous miner was repaired (T2125). Mr Coffey drew comfort from the fact that the water had disappeared when cutting began (T2122). He inferred that it was a local phenomenon which would not continue (T2122). He did not ascertain that Mr McLean had completed his report after production had resumed, and, therefore, after the water had dried up (T2126). Although Mr Coffey said that such knowledge would not have affected his response (T2127), the Court believes it should have done so. The inclusion of a reference to considerable water seepage in circumstances where the water had disappeared would surely have suggested that Mr McLean, at least, believed, accurately as it happens, that it would reappear once production was suspended. The following was put to Mr Coffey:

- Q. Did you know that it was not going to reappear?
- A. No, but the - this - a copy of this report is left in the deputy's station and the next deputy reads it, countersigns it, so he knows what's been reported and what to look for.
- Q. Yes, but you did not see any obligation to specifically alert him and say, look, this has been reported, be sure to specifically monitor this over the next shift?
- A. Actually, my concern had been that they were going to look for something that wasn't there.

The examination continued:

- Q. I see. So what harm would that do?
- A. No harm, it's just that, you know, they're looking for something that's not there, they've been misled, that's all.⁵¹

Turning to the second issue, whether there was a need for Mr Coffey to investigate further, Mr Anderson was asked the following question, his attention having first been drawn to the interview [Ex.19.03 p.7 Q33] (supra p.605) in which Mr Coffey recounted the substance of his conversation with Mr McLean:

- Q. Now take the situation if you would of an undermanager receiving the written report of 13 November from Mr McLean and receiving that information in answer 33, what response would you expect of a undermanager given that supply of information?
- A. I would expect him to go down to the mine in 50/51 panel on his shift and .. (inspect) the face and that area himself to ascertain whether it was considerable or whether it was a trickle.⁵²

⁵¹ ibid T2127

⁵² I. C. Anderson T1854

Even had Mr McLean said that the seepage was "not anything to worry about. It was only a trickle ... " [Ex.19.04 p.15 para.49] Mr Anderson believed that an inspection "to verify just exactly what the situation was, whether it was considerable, whether it was a trickle" was called for (T1855).

Mr Anderson also gave the following evidence:

- Q. Would there in addition given all of this information been in your view the need to monitor the question of water seepage from that point onwards?
- A. Yes I think that's a legitimate expectation.⁵³

It was important that the mine should reflect upon, and seek to understand, the phenomenon which Mr McLean was reporting. Mr Anderson said this:

- Q. When you spoke earlier of monitoring the flow of water and determining whether it was increasing, decreasing or remaining constant, what do you mean by a flow of water?
- A. Well, if you leave the face in a static situation, in other words, it's mined, you've pulled the machine back, you don't attempt to clean it up in any way, you just leave it as it is and just let the forces of mother nature take over, water if it's been created in the area will ultimately come to a particular point and make its own way out. Whether that's a trickle or a flow it doesn't matter, you would be able to observe that and it's just a simple observation of two or three people saying, well, that's the flow we're seeing, it appears to be the same as it was yesterday, you might make some simple measure if you wanted to, by measuring the width of it, or the depth of it, it may not be significant enough to do that by some subjective, preferably objective measure as to yes, the water flow is the

same or it's less or it's greater.⁵⁴

Mr Anderson then gave the following evidence:

- Q. But a trickle of water described as perhaps an inch wide and whatever deep but continuous over a number of hours, is that capable of explanation simply by reference to natural seepage in the seam?
- A. Yes, it is but it depends upon the history of the seam. If in fact, as I was saying before, the seam was an aquifer, that would be a common occurrence everywhere in the mine. If it wasn't an aquifer then you'd have to be looking and relying upon your experience of the local conditions. Now, the only caveat I put on that is that it's existence in the proximity of old workings may well put it into a category of its own so, by itself, you may be able to explain it away by, that's what we normally expect around here. However, in the presence of old workings you have to consider it in a different category that it may well be from another source.
- Q. I see. Assuming that you found that having monitored the trickle of water that it continued and appeared not to abate, what then?
- A. Well, as I said, the two possibilities are that you've got a high head of water some distance away, forcing through the coal, or that you've got something extremely close to you but a low pressure. Either way, you've got a potential problem and that needs to be resolved. I would suggest that that's the time, if this was - no drilling program had been instituted, this would be a good time to start instituting a drilling program.⁵⁵

Mr Hall QC, drawing Mr Anderson's attention once more to Mr Coffey's conversation with Mr McLean [Ex.19.03 p.7 Q33], asked the following question:

⁵⁴ ibid T1723/4

⁵⁵ ibid T1724

- Q. Given the information that I have asked you to assume was available to an undermanager, that is answer 33 plus the signed statutory report, would that have been a circumstance in your judgment having regard to the old workings that would have led to such a decision being taken in this circumstance, that is pause, hold operations and make an assessment?
- A. Yes.⁵⁶

Mr Anderson's evidence is accepted. Mr Coffey's investigation of the observations of Mr McLean was superficial. Having recognised from Mr McLean's report the symptoms of danger, they were dismissed too readily. The submission made on behalf of the relatives made the following general observation:

"It is submitted that in several instances persons in the mine management hierarchy demonstrated, by their answers to questions in the course of the hearing, an attitude of mind which appeared to make assumptions and act on them without questioning whether or not they were valid. Similarly, on several occasions, conclusions appear to have been readily arrived at (eg, that no investigations of a particular matter were required) rather than maintaining an open or a questioning mind. A tendency towards closure rather than maintaining a questioning and open mind is an attitude fraught with danger."⁵⁷

The response of Mr Coffey to Mr McLean's report is an illustration of that tendency. Because Gretley is a wet mine, Mr Coffey was prepared to assume that a trickle of water was of no consequence. Because the Young Wallsend Colliery was 130 metres away, according to the plan, considerable seepage at the face (manifesting itself in a continuous trickle) was likewise of no concern (T2235).

⁵⁶ ibid T1855

⁵⁷ MFI 87 p.18

However, something more than a superficial assessment was called for in circumstances where mining was taking place in the vicinity of old workings, known (or in Mr Coffey's case, assumed) to be full of water. The terms of Mr McLean's report were startling, and different. They were the observations of an experienced deputy. The panel was known to be the driest in the mine. How long had Mr McLean observed the considerable seepage at the face? What was the flow rate of the trickle? Had the water reappeared after production ceased? What was the likely source? If the Young Wallsend Colliery was a possible source, what did that suggest? Might the plan be wrong?

None of these questions was asked nor answered. Mr Coffey, as an undermanager, was obviously not responsible for the mine plan. He had plainly not undertaken the research into the depiction of the old workings. He believed that the depiction of the old workings was accurate (at least to within a couple of metres) (T2097). However, that belief was based upon faith rather than knowledge. As suggested by Mr Hall QC, he ought to have been prepared to question that faith, when confronted by a report as disturbing as that of Mr McLean of 13 November 1996. At the very least, he ought to have inspected the face, or arranged for its inspection. The maintenance shift (where there would be no production before midnight) provided an ideal opportunity to monitor the face, and the flow of water, if it were to reappear.

11.7 Notification of the Undermanager in Charge

The third aspect of Mr Coffey's conduct, which was the subject of comment, was his failure to bring to the notice of the undermanager in charge (Mr Pritchard) the substance of Mr McLean's report. Mr Hall QC, on behalf of the relatives, asserted such a failure (MFI 87 p.29). The

Australian Collieries' Staff Association, on behalf of Mr Coffey, however, denied that there was any such failure. Mr Coffey had questioned Mr McLean, and satisfied himself that his observations were not a matter of concern (MFI 89 Vol.2 pp.487ff). The company joined in the Association's denial (MFI 91 Vol.2 p.436ff).

The obligation of an undermanager to notify the undermanager in charge is dealt with in Clause 34 of the *Coal Mines Regulation (Managers and Officials - Underground Mines) Regulation 1984*. That clause forms part of a general scheme which imposes obligations to read statutory reports upon various levels of management. Those obligations can be discharged by delegation to a competent person, subject to a proviso. The proviso, in each case, requires arrangements to be made with the person appointed as delegate to bring to the attention of the person making the delegation certain classes of information.

The manager, as part of the statutory scheme, is subject to the following obligation:

"Section 37(1) ...

(2) without limiting the generality of sub-section (1), the manager of a mine shall:

(i) subject to sub-section (3)(b), read each report ..."

The sub-section (3)(b) is in these terms:

"37(3) the manager of a mine shall be deemed to have complied with:

(b) sub-section (2)(i) in respect of a report ... if

- (i) he ensures that it is read by a person appointed by him in writing (being a person having such qualifications as may be prescribed ..) immediately upon that person's becoming aware of the existence of the report ... and
- (ii) he has taken steps to ensure that **any matter disclosed in the report** ... which is of an abnormal or unusual nature and which could affect the safety of persons in the mine is promptly brought to his attention."
(emphasis added)

The obligation upon the undermanager in charge is in similar terms, repeating much of the language of Section 37 of the Act. The relevant provision is Clause 32 of the *Managers and Officials - Underground Mines Regulation*:

"32(1) An under-manager in charge at a mine shall, with respect to each report, record or other item of information entered in a book required to be kept at the mine for the purpose and which relates to a part of a mine within the under-manager in charge's jurisdiction, either

- (a) read it personally; or
- (b) ensure that it is read forthwith by some competent person and that there is promptly brought to the under-manager in charge's notice **any matter disclosed by the report**, record or other item of information which is of an abnormal or unusual nature and which could affect the safety of the mine."

(emphasis added)

It will be noticed that Clause 32(1)(b) (like Section 37(3)(b)(ii)) requires notice of "any matter disclosed by the report" rather than the report itself.

Clause 32(2) on the other hand, although said not to affect the generality of sub-clause 1(b), is in these terms:

"32(2) Without affecting the generality of subclause (1) (b), an undermanager in charge at a mine **shall ensure that any report** relating to the detection of methane in abnormal quantities in a part of the mine within the under-manager in charge's jurisdiction is promptly brought to the under-manager in charge's notice."
(emphasis added)

In the ordinary course, the "competent person" given the task of reading the reports by the undermanager in charge will be an undermanager. One would expect, therefore, that the obligation of the undermanager would match exactly the obligation of the undermanager in charge (or, at least, not be less than such obligation) or otherwise the undermanager in charge may be in default.

However, curiously there are differences in the drafting of Clause 34 and Clause 32. Under Clause 34(1)(c) the undermanager is required to examine and countersign the reports of deputies within his jurisdiction. Clause 34(2) then deals with the obligation to pass on information to the undermanager in charge in certain circumstances. It makes the following provision: (Clause 34(2))

"34(2) An under-manager at a mine shall, in respect of any part of the mine within the under-manager's jurisdiction, bring to the notice of the under-manager in charge for that part of the mine **any matter arising from a report** referred to in subclause (1)(c) which relates to the safe working of the mine or to any abnormal condition which may affect the safe working of the mine."
(emphasis added)

Clause 34(3) is in terms identical to Clause 32(2).

The company, in its submissions, drew attention to the difference between the phrase "any matter disclosed by the report" in Clause 32(1) (and also Section 37(3)(b)(ii)), and the phrase "any matter arising from a report" in Clause 34(2) (MFI 91 Vol.2 p.436). It made the following submission:

"We submit that the Under-Manager is clearly given, under Clause 34, an element of judgment in relation to his treatment of the report he receives from a deputy under his jurisdiction. Clause 34(2), in our submission permits an Under-Manager to exercise his judgment in deciding whether or not to bring to the notice of more senior officials any matter arising from a deputy's report, so that he is not required to pass up the line to the Under-Manager-in-Charge (or the Manager) every matter which a deputy may regard as being of an abnormal or unusual nature." ⁵⁸

The submission made on behalf of the relatives, on the other hand, suggested a different construction of Clause 34(2). It said:

"It can be seen that by this scheme the under-manager has no role to play, as for example, by cross-examining or questioning the deputy in order to determine whether the report is one which warrants action. It is clear from the terms of Regulation 34(2) that the under-manager has no role to play in questioning the deputy with a view to deciding whether the statutory report on the abnormal condition should or should not be acted upon. That is the prerogative and the prerogative only of the under-manager-in-charge and it is he, and he alone, who must read all reports and records including the statutory reports of deputies (or have read for him and then promptly have them brought to his attention). See Clause 32." ⁵⁹

⁵⁸ MFI 91 Vol.2 p.437 para.18.13

⁵⁹ MFI 87 p.48

Matters reported by the deputy may call for an immediate response. It is appropriate that the undermanager should interrogate the deputy to elucidate issues which may otherwise be unclear. If the matter must be reported, and dealt with by the undermanager in charge, his task will be made easier if the undermanager has already made a preliminary investigation. The Court sees nothing in Clause 34 which would inhibit that commonsense position.

Moreover, there can be no doubt that the undermanager is called upon to make a judgment. The deputy simply describes what is seen or detected by making certain tests. The undermanager must then characterise what is seen. He must decide whether it relates to the safe working of the mine, or an abnormal condition which may affect the safe working of the mine. If the report is not clear, it is appropriate that the undermanager should seek further information from the deputy to assist in his making that judgment.

However, that exposition does not answer the question which arises in this case. Mr McLean's report, as a matter of English, was quite clear. He observed the coal seam giving out a considerable amount of water seepage at the face in C heading. On any view, these words described an abnormal condition which may affect the safe working of the mine. That much was conceded by Mr Coffey (T2107). Had Mr McLean disappeared through the door before Mr Coffey had read the report, so that there was no opportunity to question him further, Mr Coffey would concede, no doubt, that he would have been obliged under Clause 34(2), to draw the matter to the notice of the undermanager in charge. The issue is whether the position is any different in circumstances where the undermanager is able to question the deputy? Is he nonetheless obliged to refer the issue to the undermanager in charge as "a matter arising from a report" no matter what his investigation may disclose? Such an obligation would not preclude his

providing the undermanager in charge with the additional material he has solicited, which the undermanager in charge may find useful in deciding what should be done. Is it open to the undermanager, on the other hand, to take the view, as Mr Coffey did in this case, that the additional material is such that it contradicts or neutralises the information in the deputy's report, such that he need not trouble the undermanager in charge with the matter at all?

The submission of the Australian Collieries' Staff Association was as follows:

"It would be pointless to interpose an undermanager between the deputy and the undermanager-in-charge if the undermanager is required to refer all reports touching on safety to the undermanager-in-charge, particularly bearing in mind that the same qualification is required for both positions. There is no reason to suppose that an undermanager-in-charge's judgment is likely to be better than an undermanager's - particularly when the undermanager has had the opportunity to discuss the deputy's report with the deputy (and may even have inspected the place as if he felt that this was required). On Hall's submission the undermanager would be superfluous but for reading reports and passing them on. This with respect is absurd." ⁶⁰

However, that submission overlooks the structure of the Act. The Act and Regulations recognise a hierarchy. The hierarchy is a reflection of the qualifications and experience of personnel who work in the mine. The mine manager must have certain qualifications, (Section 36(4)) including what the industry still refers to as a "First Class" Certificate of Competency (cf Section 6(1) *Coal Mines Regulation Act 1912*). Undermanagers are obliged to have the "Second Class" Certificate of Competency (S40(3)). One would

ordinarily expect an undermanager in charge to be more experienced than his fellow undermanagers. A deputy must have a "Third Class" Certificate of Competency (Section 42(2)).

The requirement under the Act is that the manager personally read all reports, subject to his right to delegate. The right to delegate is itself circumscribed, in that it must be subject to the condition that those who read the report on the manager's behalf bring to his notice, for his assessment, specific matters which he would have seen had he performed the task himself. The matters covered by the proviso are obviously important, namely matters disclosed by reports which are themselves abnormal or unusual, and which could affect the safety of the mine.

The system of delegation is simply a recognition of the inability of the manager and undermanager in charge to read every document and report generated by the mine. Others, on their behalf, must undertake that task. However, the system of reporting would be undermined if successive tiers of management were to deprive those with higher qualifications and experience, who are subject to personal obligations, of the information gathered by personnel making direct observations of the mine.

Accordingly, where a deputy describes in his report a condition which is unusual or abnormal, and which may affect the safe working of the mine, that matter must be drawn to the notice of the undermanager in charge by the undermanager under Clause 34(2). In the Court's judgment there is no material difference between the phrase "any matter disclosed by the report" (Clause 32(1)), and the phrase "any matters arising from the report" (Clause 34(2)). Both phrases recognise that in the ordinary course a deputy's report, and most reports, will cover a number of issues, and some only may give rise to concern.

Here, once Mr Coffey characterised Mr McLean's report as one which (as a matter of ordinary English) described an abnormal condition, and one which may affect the safe working of the mine, he was obliged to notify the undermanager in charge. It became a matter "arising from the report". Mr Coffey went on to investigate (by asking Mr McLean questions), and, himself formed a different view. That was a view arising from his investigation, rather than the report. It would, no doubt, be helpful to convey that view to the undermanager in charge as well.

To construe the Clause in this way ensures that the obligation of the undermanager in charge to obtain information, once he has delegated the task of reading reports, matches the obligation of the undermanager to provide that information (cf MFI 91 Vol.2 p.438 paras.18.14 & 18.15). The construction for which the company and the Association contend creates a disparity between the information which the undermanager in charge is obliged to solicit, if he is to successfully delegate his obligation, and the information which the undermanager is obliged to provide, if he is the person (as he ordinarily would be) who is selected to provide such information. The obligation upon the undermanager to give notice to the undermanager in charge in fact covers a wider field than the obligation referred to in Clause 32(1)(b) (in that it covers any matter which relates to the safe working of the mine). However, there is no difficulty in the undermanager's obligation to give notice, being wider.

The fourth aspect of Mr Coffey's conduct (supra p.614) related to his not having made any note or report of his conversation with Mr McLean. The following was put to undermanager in charge, Mr Pritchard, relating to the exchange of information between the afternoon shift undermanager (Mr Shacklady) and the nightshift undermanager (Mr Pritchard):

A. I believe if the afternoon shift undermanager had looked at it and he had found it the same as Mr McLean had reported it, then he would have told me about it.

His Honour: Well, whether he would have or not, it was his job to tell you, was it?

A. I believe it was, yes.

Q. And why not in writing?

A. I would probably do that, yes.

Q. I mean why should he not put in a report that the water at the face appears to be the same as Mr McLean reported on?

A. I've got no idea, your Honour, why he did not do that.

Q. No, but would you agree that he should do it, that there should be a record of the state of affairs as he has left it?

A. If he had investigated it and found it the same as Mr McLean's, yes. I would have expected a report to that matter.

The examination continued:

His Honour: Well, suppose he had investigated it and found that it did not seem to be as bad as Mr McLean had thought, should not he be making a record that he had in fact done that and come to that conclusion?

A. I haven't seen any record to that effect.

Q. No, I know but there just seems to me to be a gap there. Mr McLean makes that report and then nothing happens, as far as reporting is concerned, in the succeeding shift, is that right?

A. Yes.

Q. That does not seem to you to be right though, does it?

A. No, I would have expected it to be investigated.

Q. Not only investigated but a record made of the results of the investigation?

A. Yes.⁶¹

It was even more important that Mr Coffey, who had questioned Mr McLean, and who had decided that there was nothing of concern, should

make a brief report. That report would then have been available to later shifts. Such a report would have drawn attention to Mr McLean's report, and the judgment made by Mr Coffey in respect of it. It may have provoked others to examine that judgment, and its relevance to the conditions they were encountering on their shifts. The communications system within the mine included a production book in which undermanagers recorded matters of importance relating to their shift. An entry could have been made in the production book, so that those who followed knew that the matter had not been overlooked, and knew what had been determined by any investigation which had been undertaken (cf MFI 89 Vol.2 p.473).

11.8 The Inspection of Mr Hegarty

The afternoon shift began at approximately 2.30 pm (T1270). The deputy was Mr Hegarty, who had considerable experience, having joined the Gretley mine in 1982 [Ex.27.01 p.16]. He was also the check inspector for the mine (T2467).

Mr Hegarty's attention was not drawn to Mr McLean's report [Ex.27.01 p.14]. Nonetheless, as a mine deputy, he was obliged to read the report of the outgoing deputy (*Clause 54, Managers and Officials - Underground Mines Regulation 1984*). He did so, initialling Mr McLean's report upon the copy which was kept underground [Ex.6.10]. He described his reaction to the report in these words:

- Q. Did it alarm you when you read it?
- A. It - it made me sit up and take notice put it that way.
- Q. Startled you to some extent?
- A. No, wouldn't say startled but it certainly - it was just sort of a - an obvious comment which you'd have to take notice of.
- Q. An unusual comment?

A. Well, it is unusual. I hadn't had that comment before.⁶²

Mr Hegarty provided the following information to the inspectors, when interviewed:

"ANDERSON: Given the location of the old workings in the vicinity of 50/51 panel did you consider the report of considerable water seepage as important?"

HEGERTY: The report of what I would consider considerable water seepage I would've thought was of some significance, yes."

Mr Hegarty thereafter gave the following evidence, his attention having been drawn to that answer:

Q. And when giving that answer what did you have in mind?

A. Well, one wonders, I guess, where the water's coming from and why it's suddenly there. You go and have a look first to see if there's any obvious reason. I wasn't there at the time he made that report and I - you know - but it was, as I say there, it was of some significance, yes, yes.⁶³

Mr Hegarty also said:

"ANDERSON: Did you investigate Mr McLean's report regarding the seepage?

HEGERTY: I did.

ANDERSON: And what did you find?

⁶² W. A. G. Hegarty T2946

⁶³ ibid T2499

HEGERTY: I found a trickle of water running down out of C heading which I didn't think was considerable." ⁶⁴

The trickle was as "fat as (his) thumb" (T2502), "an inch or something like that" wide (T2502). There was no obvious source (T2502), although it appeared to be coming out of the floor [Ex.27.01 p.13]. Mr Hegarty made a thorough investigation of the face, but could find "no other signs of seepage" [Ex.27.01 p.13]. The trickle of water continued throughout the entire shift (T2506). Mr Hegarty said this: (T2507)

A. I don't believe the rate of flow varied during the shift and it's similar to other trickles I'd seen in the place.

Mr Hegarty's report at the end of the shift made no reference to Mr McLean's report, or to water [Ex.6.02]. He gave his reasons to the inspectors as follows: [Ex.27.01 p.16]

"ANDERSON: Could you explain why you didn't make comment on your report at the end of the shift with respect to what Mr McLean had observed?

HEGERTY: I considered the water that was running down the place normal for the workings in that area."

It is surprising that Mr Hegarty made no reference to Mr McLean's report, and his own findings. Given that Mr McLean's report was "significant" (to use Mr Hegarty's words), and disturbing, one would have expected some comment. Had there been a comment, those on later shifts would have had their attention drawn to Mr McLean's report, which they may otherwise not

have read.

It was asserted (as a matter of overwhelming probability) that the nightshift deputy, Mr E. S. Batterham, would have seen Mr McLean's report. It was said that there is a practice amongst deputies (followed by Mr Batterham) of looking back through the statutory reports made since their own last report (MFI 90 p.9). Mr Batterham worked on the nightshift on 11/12 November 1996 [Ex.6.10]. Had he followed that practice, he would have seen not only Mr Hegarty's report, but that of Mr McLean as well.

The Court is not persuaded, however, that Mr Batterham necessarily saw Mr McLean's report. He may or may not have done so. The statutory obligation upon a deputy is framed in the following terms under Clause 54(2) of the *Managers and Officials - Underground Mines Regulation 1984*:

"54(2) A deputy to whom a deputy's district has been assigned for a shift shall, before commencing duty, become acquainted with any report made under subclause (1) in respect of the preceding shift in the shift in the district and shall initial and date that report."

Had Mr Batterham simply looked at Mr Hegarty's report, in compliance with his statutory obligation, he would not have learned of Mr McLean's observations because, as mentioned, Mr Hegarty had chosen not to include any reference to those observations in that report. Since Mr Coffey also, when completing his statutory report under Clause 58(2), and the production book, had chosen not to include a note of his "investigation" into Mr McLean's report, nothing in either of those documents would have alerted Mr Batterham. It is noteworthy that Mr Pritchard, the undermanager in charge, when he came on duty as the night shift undermanager, only

read Mr Hegarty's report (being the preceding shift), and not that of Mr McLean (T647).

11.9 Mr Shacklady's Role

Mr Shacklady was the undermanager on the afternoon shift, replacing Mr Coffey. As mentioned, he was present in the undermanager's office when Mr McLean presented his report, and was questioned by Mr Coffey (supra p.605). In response to Counsel Assisting, Mr Shacklady said:

- Q. Were you reassured by Mr McLean's explanation about - - - ?
- A. I took it as it was said, the water had disappeared, there was no problem with the water.
- Q. Was that something that reassured you?
- A. Yes.
- Q. I mean, if that was not the case you would immediately recognise that there is a problem, is that right?
- A. If that hadn't been the case, yes.
- Q. And the problem may be connected to the old workings?
- A. Not necessarily.
- Q. But possibly?
- A. Possibly.
- Q. And certainly would have to be closely investigated?
- A. It would have to be looked into, yes.
- Q. You see, I am just trying to understand how it was that you could have been reassured on the basis of the conversation you set out on page 3 of your statement 16.04, when there were, I suggest, so many questions left unanswered?
- A. Once Alistair said the water disappeared when the miner started cutting I carried on reading the red book. I partially turned off to the conversation that was going on. I was assured there were no problems once he said that.⁶⁵

Commenting upon that evidence, Mr Hall QC, for the relatives, made the following submission, which is accepted:

"It is submitted this evidence reveals a mind ready to dismiss a potentially important matter without any real inquiry. ... a mind ready to think the best rather than the worst of a situation which might be important. After all, the deputy had signed off on a statutory report." ⁶⁶

As set out above, the water reappeared soon after production had ceased, and continued throughout the shift (W. A. G. Hegarty T2506). However, Mr Shacklady never became aware of that fact, first, because he made no inspection himself (although he went to the crib room 50/51 Panel at 6 cut-through), and secondly, because he did not discuss the issue with Mr Hegarty. Counsel Assisting asked the following question, referring to the conversation between Mr Shacklady and Mr Hegarty in the crib room at 6 cut-through:

- Q. You see, I am just wondering, did not you think it was worth at least a question to Mr Hegarty saying: well, look, did you see that report of Mr McLean and his reference to considerable seepage, what did you see?
- A. No, I didn't.
- Q. But it is an unusual report from Mr McLean, is not it?
- A. Well, like I pointed out previously once Alistair said the water had disappeared it - it - I didn't think much more about it. ⁶⁷

Elsewhere, Mr Shacklady said:

- Q. Did Mr Hegarty say anything about a trickle of water?
- A. No. I asked Mr Hegarty were there any problems and

⁶⁶ MFI 87 p.18/9

⁶⁷ T. Shacklady T1327

- he said no, no problems, all the jobs are in hand.
- Q. But you did not direct his mind specifically to water?
- A. No.
- Q. And he did not say anything about water?
- A. No.
- Q. He did not say anything about the fact that he had noticed a trickle of water?
- A. Nothing whatsoever.
- Q. if he had said that, would that have - - - ?
- A. I would probably have said: well, let's go and have a look.⁶⁸

Counsel Assisting asked Mr Shacklady to assume the matters which Mr McLean had observed on the dayshift of 13 November 1996, as set out above, and thereafter put the following:

- Q. In other words, what I am putting to you is that true it is interrupted by a washing down process at 10 am or thereabouts, this trickle of water which he saw as coming from the face and the result of seepage from the face, had continued for a number of hours, at least between 7.30 and midday. Now, if you had known that, would that in any way have affected your judgment?
- A. You could assume it would have done, yes.
- Q. Pardon?
- A. Possibly.
- Q. Well, what would that suggest to you, that description?
- A. It - it would suggest that - we had a - an inflow of water from somewhere.
- Q. From somewhere. And if you had known that it would have been important to investigate?
- A. I would have gone and looked at it, yes.
- Q. And to try and determine the source; is that right?
- A. Yes.⁶⁹

⁶⁸ ibid T1328

⁶⁹ . ibid T1323/4

The examination continued:

Q. So that do I take it from your evidence that had you known the matters which I put to you about this trickle of water and so on, then you would have made it your business to go and personally inspect the face on that evening?

A. You could assume that, yes.⁷⁰

Although the responsibility for recognising the issue arising from Mr McLean's report, and responding appropriately, was primarily that of Mr Coffey, being the person to whom Mr McLean handed that report (T1324), nonetheless, Mr Shacklady also had a responsibility as the undermanager on the next shift. He inherited the problem. He acknowledged that Mr McLean's report was a "highly significant report" (T1367). He knew that Mr Coffey had not been underground, and made his own inspection, following the presentation of that report (T1325). He knew that the only investigation made by Mr Coffey was a brief conversation, approximately 2 minutes with Mr McLean (T1371). He should have recognised that he did not have enough information to conclude that there was no problem. Much would depend upon whether the water reappeared once production was suspended. In these circumstances, he ought to have inspected the face himself. At the very least, he ought to have quizzed Mr Hegarty about what he had found. He did neither.

11.10 The Nightshift of 13/14 November 1996

The inrush occurred during the course of the nightshift (5.31 am on 14 November 1996). The shift began at 11.30 pm (T632). The undermanager for the shift was the undermanager in charge, Mr Pritchard. He arrived late

⁷⁰

ibid T1324

(approximately 11.50 pm) (T632). An adjustment had been made to his hours because he intended to remain at work after the completion of the shift, in order to attend a meeting (T632). Mr Shacklady remained at work until his arrival (T632).

Mr Shacklady was under the following obligation under Clause 34(1)(b) of the *Managers and Officials - Underground Mines Regulation 1984*:

"34(1)(b) at the end of each of the under-manager's shifts, communicate to any person succeeding to any of the under-manager's duties all information which the under-manager has obtained during the shift and which is relevant to the safety of the oncoming shift; and ..."

Mr Shacklady spoke to Mr Pritchard upon his arrival at the mine. His recollection of the conversation was as follows:

"Shacklady: "This is where the men are. A team in the wall, one team in 52/53 and a team in 50/51. No one outbye - we are 4 men short. No problems encountered."

Pritchard: "OK" " 71

Mr Pritchard gave the following evidence:

- Q. You did not know, either at the beginning of the shifts or at any stage during the shift, of Mr McLean's report from the previous production shift; is that right?
- A. No, I did not, no.
- Q. Nor had you been told about its contents?
- A. No, I had not.
- Q. Had you discussed with anyone at the

commencement of the night shift of the 13th about the presence of water?

- A. No, I discussed with Mr Shacklady what the problems were in each section and Mr Shacklady informed me that there were no problems in miniwall 50/51. I also saw the - the deputy's report form afternoon shift which was still on the desk prior to me hanging it up.⁷²

Mr Pritchard had been appointed undermanager in charge by Mr Porteous a matter of days before the inrush. On 11 November he replaced Mr Alston who had gone on leave (T632). Upon assuming the position he had not formally spoken to the undermanagers at the mine, appointing them his delegates for the purposes of Clause 32 of the *Managers and Officials Regulation 1984* (supra p.630) (T646). Mr Hall QC, on behalf of the relatives, asserted that in these circumstances Mr Pritchard was obliged, by the terms of Clause 32, to personally read all reports. He therefore ought to have read Mr McLean's report of 13 November 1996 (MFI 87 p.74). The submission continued as follows:

"... His failure to read the report on arrival was ... inexcusable. There was no warrant in the Regulation for him to rely merely upon Mr Shacklady's word. He, after all, was the under-manager-in-charge.

It is submitted that it was insufficient for an under-manager on the night shift to have regard only to the afternoon shift statutory reports as the afternoon shift was only a maintenance shift. It is submitted that, even apart from any statutory obligation, a diligent under-manager would have regard to the statutory reports coming off the last preceding production shift."⁷³

The submission made by the Association, on behalf of Mr Pritchard,

⁷² P. J. Pritchard T633

⁷³ MFI 87 p.74

however, said:

"This line of questions by Hall QC is to suggest that between 11 and 13 November, the time when Pritchard assumed the mantel (sic) of undermanager-in-charge, he would be required to in effect re-delegate responsibility for that part of the regulation again to those undermanagers who had previously been given that responsibility by the previous undermanager-in-charge, Alston. The Regulation does not set out a prescribed manner or form in which the undermanager-in-charge must ensure certain material is read. It is our submission that there was no obligation on Pritchard to re-issue further delegations upon his attainment of the undermanager-in-charge's role but rather to ensure compliance with the Regulation. Further it is submitted, that he would be entitled to rely upon the existing arrangement which were adequate to ensure compliance." ⁷⁴

It was reasonable in the circumstances for Mr Pritchard to rely upon existing arrangements, involving undermanagers whom he believed were competent (T646). It would certainly have been good practice, nonetheless, for Mr Pritchard to have read the reports of the last production shift. However, the primary duty to pass on information about matters which may affect safety on his shift rested with Mr Shacklady (cf MFI 89 Vol. 2 p.456). Because Mr Shacklady (like Mr Coffey before him) had wrongly dismissed Mr McLean's report, he failed to alert Mr Pritchard to that report, and to Mr Coffey's "investigation". Had Mr Pritchard been told of Mr McLean's report, he may have linked Mr McLean's observation with the water he had seen ten days earlier in 7 cut-through. He may in those circumstances have examined the area himself.

There can be no real doubt, incidentally, that the water which had accumulated in 7 cut-through between the first and the fourth of November

1996, and the water which Mr McLean observed the day before the inrush came from the old workings (I. C. Anderson T1713/4; cf Professor B. K. Hebblewhite T6350/1). Attempts were made to suggest other possible sources. None was plausible.

In 50/51 panel Mr Batterham was the nightshift deputy. He inspected the face of C heading whilst the rest of his crew remained in the crib room (J. R. McCallum T3746). There were seven members in the crew. One of the crew members, Mr Franklin, described the practice followed on the nightshift (including on the night of the inrush) in these terms:

"... Wayne Nichols and myself are usually miner drivers. Other usual drivers are Dave Hardman and Darren Atkins. Dave and Darren went into other units that night. I had a bad back and I said I was feeling pretty good and I might have a drive of the miner. So I drove the miner for the first half of the shift and John Hunter said he would drive it for the second half. The young bloke, Damon, was going to upskill his bolting. Wayne Nichols is one of the car drivers and the other driver was John McCallum. We also had a fitter and deputy.

Normally Ted Batterham (Deputy) drives the shuttle car for two crib breaks. But since we have had a new fitter he also liked to drive. Ted would drive for 1.5 hours and fitter drive 1.5 hours." ⁷⁵

The fitter referred to was Mr Mark Kaiser.

One of the crew members, Mr Nichols, described the practice in respect of crib breaks as follows:

Q. I think the shift was divided in terms of who would be engaged in production, is that right?

- A. Yes - used to break up for crib and that, yes.
- Q. What was the arrangement in terms of manning at the face?
- A. There's always four men at the face when someone else was at crib.
- Q. When were the crib breaks and how long were they?
- A. We used to start at three. It was the first break and it would go till - it might have been - we'd have an hour and a half for crib and there was three - three crib breaks.
- Q. So the first one was at three, an hour and a half. When is the next one?
- A. It would've been 4.30 or they might - sometimes we'd change it, might've went earlier.⁷⁶

Mr Franklin drove the continuous miner at the beginning of the shift [F. J. Franklin Ex.45.02]. He described his impression of the panel to the inspectors:

- "ANDERSON: There was no water problems?
- FRANKLIN: No.
- ANDERSON: Face was cutting well, wasn't soft in any way.
- FRANKLIN: No, it didn't seem to be soft at all. ..."77

At approximately 2 am one of the shuttle cars lost power (T3788). Mr Franklin said this:

"... And at the stage the miner was completely turned off. There was no noise of roof cracking, hissing of gas or water seepage or anything. It was dead silent. Because actually, I sat on the machine for about half a minute or so and I just looked around hoping that they were going to solve the

⁷⁶ W. C. Nichols T3786/7

⁷⁷ Ex.45.03 p.8

problem and drive back in and then when it looked like the, you know, well I thought I'll jump off the machine and walk up and see what the hell was going on. And that's when we found out that we had a dead car cable. ..." ⁷⁸

A replacement cable was obtained by Messrs Franklin and McCallum at about 3 am [F. J. Franklin Ex.45.02 p.3]. Production resumed at approximately 4 am (W. C. Nichols T3790). Mr Hunter took over from Mr Franklin as the driver of the continuous miner. Mr Kaiser drove one of the shuttle cars. Mr McCallum drove the other. Mr Damon Murray performed roof bolting, whilst Mr Batterham was the deputy [F. J. Franklin Ex.45.02]. The rest of the crew retired to the crib room. Mr Nichols, having driven the shuttle car between approximately 4 am and 5.20 am, described the conditions in these words:

- Q. Did you notice anything unusual in this period?
- A. No. Nothing.
- Q. Nothing at all?
- A. No.
- Q. Specifically, you did not notice any water?
- A. No.
- Q. Did you observe the ribs for instance?
- A. Yes, the ribs are good, yes.
- Q. No water coming through the ribs?
- A. No.
- Q. No sign of seepage?
- A. No.
- Q. Did not appear wet?
- A. No.
- Q. The road that you were driving on, was that muddy or difficult to travel?
- A. Just the normal puddles here and there. ⁷⁹

⁷⁸ ibid

⁷⁹ W. C. Nichols T3790/1

At 5.20 am, Mr Nichols parked the shuttle car in 7 cut-through. He made his way down B heading to the crib room (at 6 cut-through). He described what happened as follows:

- Q. You arrived at the crib room roughly at what time?
 A. 5.30 cause I asked Steve Brown what the time was and he said it was 5.30.
 Q. 5.30. How long after that was it that something happened?
 A. 10 seconds.
 Q. 10 seconds?
 A. Mm.
 Q. You were standing up?
 A. Yes.
 Q. What did you notice first of all?
 A. A bit of water coming underneath the trapdoor in the stopping. Just a little bit running through.
 Q. Yes?
 A. Then 10, 15 seconds later the door just burst open.
 Q. Right?
 A. And a lot of water just come rushing through.
 Q. Much force?
 A. It was hard to stand up. You had to hand hold of things to stand up.⁸⁰

Earlier in the shift water had been evident in the Cocked Head Creek area (T3792). Messrs Nichols and Franklin, who were in the crib room, immediately assumed that the water which had entered the crib room must have come from the Cocked Hat Creek area (T3792). They boarded a vehicle, and drove to that area to investigate [W. C. Nichols Ex.44.02 p.2]. They saw Mr Bernard, who was in his own vehicle, and who was also investigating "a wall of water" which had entered the crib room at Cocked Hat Creek [C. A. Bernard Ex.5.01 p.4]. Mr Bernard had already reported the matter to Mr Pritchard, the undermanager in charge, who was on the surface [Ex.5.01 p.4]. Mr Pritchard, had immediately telephoned the crib

room in 50/51 panel, and spoken to Mr McCallum. Mr Pritchard's recollection of the conversation was as follows:

"... Pritchard:	"John, where is the deputy?"
McMcCallum:	"Up at the face."
Pritchard:	"Is there any problem in there?"
McCallum:	"There is a bit of water coming through the bottom of the stopping."
Pritchard:	"Have you been to the face lately?"
McCallum:	"I only went up to the corner."
Pritchard:	"Did you see anyone?"
McCallum:	"No."
Pritchard:	"Could you go back to the corner and see if you can see anyone."
McCallum:	"Do you want me to go to the face?"
Pritchard"	"No, I don't want you to go to the face. I only want to you to go to the corner. If you can't see anyone, get the hell out of there." ⁸¹

At the time Mr Pritchard gave that instruction he did not appreciate that there had been an inrush. He said this:

- Q. On your understanding Mr McCallum had already gone to the location which you were sending him back to again?
- A. Yes. But when - when Mr McCallum walked up there I just took it from his statement that men were at the face. What I asked him to do was to go back to the

corner and see if there was anyone on the car. I would have expected someone to be on the shuttle car or someone coming back from the face at that time.

- Q. I see. So, at that stage you had no appreciation of the tragedy obviously which had occurred?
- A. No, I did not. Had I known I would have asked - told Mr McCallum to get out of the section.
- Q. You also had no appreciation that Mr McCallum was alone?
- A. No, I did not.⁸²

Mr McCallum left the crib room to investigate the whereabouts of the crew.

He described what happened in these words:

- A. I went back up but this time I went around the corner a bit further because I could see the car and I thought maybe it wasn't too far away and I could be up in top of the - on top of the car without having to walk against the force of the water, just to see if I could have a look up a bit higher and see anyone but I didn't get as far as the car. Next thing I know I was on my hands and knees facing B heading.
- Q. How far along 7 cut-through do you think you got? No idea?
- A. Couldn't say. It seemed like I - I was close to the car and then - I don't know whether I was or not. But I couldn't breathe and I just crawled back around the corner until I could sort of - when I got around the corner I seen the lights of the transport shining up the road and I sort of staggered out of there and staggered along the ribs and I started going back down the heading and that's when I seen Clive, the deputy, and he said that it was bad air and we had to get out and in the meantime he'd turned the transport around and we got out of there.⁸³

Having met up with Mr Franklin and Mr Nicholls, Mr Bernard joined their

⁸² P. J. Pritchard T623

⁸³ J. R. McCallum T3754/5

vehicle. Together, they returned to 50/51 panel where they saw Mr McCallum as he staggered down B heading. Mr Bernard provided the following description:

"At this time I could see a wobbling light coming down the travelling road. I started to drive further in. At this stage I thought of gas. I stopped the transport and my safety lamp immediately went out. I got a bad mouthful of something. I reversed the transport into the opposite side of the crib room. I instructed Wayne and Jay to warn MW52/53 men to get out.

They informed me they could not get through. The man seen with the wobbling light (affected with the gas, John McCallum) collapsed into the back of the transport. Wayne and Jay went to jump into another transport parked at the crib room. I told them you won't get out in that so they jumped in with me and we left the area and proceeded directly to MW52/53." ⁸⁴

Mr Pritchard, meanwhile, had decided that he should go underground to investigate [Ex.8.04 p.14 para.39]. When he reached Cocked Hat Creek he was told by Mr Jay Franklin that four men were missing. He instructed Mr Franklin and the crew of miniwall 52/53 to leave the mine [Ex.8.04 p.14 para.40]. He then proceeded to 27 cut-through where he met Mr Bernard and Mr Ray Thompson [Ex.8.04 p.14 para.40]. Mr Bernard said this: [Ex.8.04 p.15 para.40]

"... "Four men are missing. It looks like they have holed the old workings. I have asked Mike to call for the Mines Rescue.
..."

Mr Pritchard instructed Mr Bernard to remain by the telephone whilst he and Mr Thompson went to 50/51 panel. Mr Pritchard described what happened thereafter in these words:

"As we approached 4 C/T MW 50/51 we saw a stationery PJB with its headlights on indicating that the engine was still running. We continued inbye checking the stoppings as we went and taking gas readings. The PJB was at the crib room and no one was found, so we turned the motor of the vehicle off and closed the trap door in the stopping at the crib room at 6 C/T. We then proceeded inbye to 7 C/T where we found water rushing across 7 C/T. As we rounded the corner into 7 C/T, the CH₄ went up to 3%, so we retreated out of the section, checking the C/Ts between 'B' and 'A' headings on the way out. We then went back to 27 C/T where we met the Mines Rescue Team. I reported to them what I had found and where I had found it." ⁸⁵

The tragedy was complete. The Mines Rescue Team began its work, seeking to determine whether there were any survivors. The Court will now examine the rescue effort.

12 THE RESCUE

12.1 Chronology of Events

The inrush occurred at 5.31 am. That time can be fixed with reasonable certainty because the continuous miner and shuttle cars each recorded the time that power was lost [Ex.63.04 Appendix 18]. It took some time for those underground to realise that there had been an inrush. Ultimately, Mr Bernard notified Mr A. Lysaght on the surface, asking him to contact the Mines Rescue Service. The logs of the Mine Rescue Service establish that it received the call from Mr Lysaght at 6.05 am [Ex.69.02 p.1].

The Mines Rescue Service has a protocol introduced by the Regional Manager of the Newcastle Station, Mr Murray Bird [Ex.69.01 p.1 para.4]. Once informed of an emergency, trained personnel are called out. Some are directed to the mine, and others to the rescue station. On the morning of the Gretley disaster, 28 personnel were notified, 18 being sent to the mine, and the remainder to the station [Ex.69.01 p.2 para.7].

Mr Trotman of the Rescue Service arrived at Gretley at 6.20 am, and remained in charge until the arrival of Mr Bird at 6.36 am [Ex.69.01 p.2 para.8]. An operations base was established.

At 6.40 am, Mr McLean, the day shift mine deputy at Gretley, and a former Rescue Brigadesman, proceeded to 27 cut-through to establish a Fresh Air Base [Ex.69.01 p.2 para.9]. Three rescue teams assembled, and entered the mine, the first at 6.45 am, the second at 7.00 am and the last at 7.50 am [Ex.69.02 p.1].

At 8.10 am, Mr Porteous notified the Police [R. M. Porteous Ex.63.06]. By that time, the Police had already been told of a possible "cave-in at

Gretley". Acting Superintendent Watson of the Ambulance Service heard a news bulletin at 8.00 am which suggested that four persons had been injured in a mine collapse [A/sup T. Watson Ex.64.01 p.1 para.5]. Since Acting Superintendent Watson would ordinarily have expected to be told about such an emergency, he made enquiries, and directed that the Police be told [A/sup T. Watson Ex.64.01 pp.1-2].

Both the Police and the Ambulance Service, once told, responded immediately. Indeed, the Ambulance Service arranged for the Westpac rescue helicopter to attend the scene. It arrived at the mine at 8.35 am.

At 8.15 am, the first mines rescue team reported that it had found two bodies in C heading outbye 7 cut-through [Ex.69.01 p.3 para.12]. A minute later (8.16 am) the second team found the remaining two bodies in C heading inbye 4 cut-through [Ex.69.01 p.3 para.12].

The operation, therefore, ceased to be a rescue. It became a matter of recovering the bodies. Mr Porteous, as the mine manager, directed that the mine be evacuated [A. A. Ryan Ex.71.01 p.3]. The Coroner was informed [S/C Broughton [Ex.67.01 p.4 para.15]. Arrangements were made for Police skilled in investigation and photography to attend the scene. Detective Sergeant Hunt and Detective Senior Constable Hockey later came to the mine, and joined the recovery team. Detective Senior Constable Hockey was in fact an experienced mine deputy before becoming a Police Officer [A. A. Ryan Ex.71.01 p.5].

Mr Bird of the Mines Rescue Service took charge of the recovery team [Ex.69.01 p.4 para.13]. Mr Ryan, a district inspector from the Department was also part of the team. Mr Ryan said:

"The team had a meeting at about 9.30 a.m. and discussed

the risks involved. A major concern was the volume of water still flowing into the 50/51 panel, and the potential of a build up of water preventing entry or, for that matter, exit from the panel. Another concern was that if too much delay occurred the water may prevent the recovery of the deceased. The potential of another inrush was also considered and could lead to the bodies being swept away to other parts of the mine.

With these points in mind, it was agreed that we would optimise the time available in obtaining evidence and photographs for subsequent reports but if there was a threat of additional water ingress then the bodies would be recovered if at all possible. We believed the anxiety of relatives and friends of the deceased would be slightly eased if this task could be performed." ¹

The recovery team went underground at 10.45 am [Ex.71.01 p.5]. Mr Ryan described the conditions in these words:

"... We were unable to access the travelling road into 50/51 panel because water had built up in a depression in the road and would have been almost 2.0 metres deep. Access on foot was available through the stopping which had been repaired across 50/51 panel belt between nos. 1 & 2 cut-throughs, 'C' Heading.

Once through the stopping, it was immediately obvious that the roadway was remarkably free from the usual loose coal and dust normally found in conveyor roadways especially when they are in the return. There was little doubt in my mind that water had travelled down this road at very high velocity although, because of the "tide" mark on the ribs where stone dust had been washed off, it was probably less than 600 m.m. deep. I noticed that a vent tube was on the belt and against the stopping." ²

Once the Police had completed their investigation and photography, the

¹ Ex.71.01 p.5

² ibid

bodies were recovered, and the team proceeded to the surface. It arrived at the portal of the mine at approximately 12.30 pm [Ex.71.05 p.8].

The scene at the surface was confused (F. J. Van Dijk; T4582; MFI 85 p.7 para.11.7.1). The relatives of the deceased had been at the mine throughout the morning, and were naturally distressed. Some relatives wished immediately to see the body of the person to whom they were related. Different groups spoke to different Police Officers in the course of the morning and, to some extent, received different advice (cf MFI 85 p.7 para.11.8.1). The Police instructions in such circumstances are in these terms:

"... As soon as possible, arrange for the identification of the body/bodies. An employee/workmate at the mine if deemed suitable by Police is considered appropriate for this purpose. There would be no objection to family members viewing the body at the scene, or later at the mortuary." ³

Sergeant Hunt, however, who had been part of the recovery team, decided that it would be inappropriate for the relatives to view the bodies at the mine itself. The submission for the Police Service said this:

"However distressing for the relatives it might have been, it is submitted that the decision taken by Detective Senior Sergeant R. P. Hunt [ex 68.1) was the correct one. When the bodies reached the portal, it was not known which body was in which bag and it would have been most inappropriate to ask the relatives to look in each bag to attempt to identify the bodies. Further, it would have been inappropriate for the faces of the bodies to be cleaned before the pathologist had at least looked at them." ⁴

³ Ex.66.03 p.2 of 21 para.30.17

⁴ MFI 85 p.8/9 para.11.8.2

The Court believes that, in the circumstances, Sgt. Hunt did make the correct decision. Each of the deceased was taken to the Newcastle City Morgue and was formally identified later the same day [Detective Sergeant R. P Hunt Ex.68.01 p.5 para.18].

12.2 Commentary upon the Rescue Effort

Shortly after the incident a "combined Emergency Services Debriefing" meeting was held at the Mines Rescue Station [Ex.66.04]. The purpose of the meeting was to review the rescue, and to learn from any mistakes. A memorandum prepared by Mr Bird after the meeting made the following general comment:

"... response had been well handled, that all emergency services had worked very well together and that the operations base functioned well. ..." ⁵

Mr Bird, in his statement to the Court, elaborated upon that brief comment. He said:

"In all respects, the response of the Station and personnel to the emergency occurrence was timely and effective. Taking into consideration the relevant travelling times, there were no delays at all in response times. It is my belief that had there been a chance of saving the missing persons, then this would have been achieved by our quick and efficient response. It is also my belief that all mines rescue personnel involved in the operation including those personnel at the mine pit and those personnel at the Station, are to be highly commended." ⁶

⁵ Ex.66.04 p.1

⁶ Ex.69.01 p.4 para.16

When giving evidence Mr Bird said this:

- Q. In terms of other rescues that you have been involved in, was this one better or worse or, how would you rank it?
- A. This would have to be the quickest response I have seen since I've been full time in Mines Rescue. There were a number of reasons why it could be this quick and it was pertaining to an inrush in that it's not a fire, an explosion, a heating, something that may have a secondary blast, it was more a case of we've got some raw information provided we could keep people out of that small hazardous area, we could act very quickly. It was very quick and efficient.⁷

The debriefing meeting, however, identified a number of issues which needed to be addressed. They included: [cf Ex.66.04]

- First, the late notification of the Police, and the Ambulance Service.
- Secondly, the desirability of the relatives of the deceased viewing the bodies at the mine rather than the morgue.

The Police and the Ambulance Service, each made it plain that they preferred early notice of an incident where there was the prospect that they may become involved. The minute of that meeting included these comments:

"Police:

To be called as early as possible even if they may not be required. This allows a Police representative to be located in the operations base to observe operations and to initiate any

ancillary resources or the Coroner, as may be required.

Ambulance:

To be notified as early as possible even if they are only put on standby. They do understand that their services may not be utilised for some hours later but they would prefer to have as early a notification as possible." ⁸

Inspector Thompson of the Police Service, when giving evidence, said:

Q. Did you have a view as to whether or not the police ought to have been notified?

A. Yes, I felt the police should have been notified earlier. There was four persons allegedly trapped at that early stage of the game and I believe that had we have been notified we certainly would have been there to co-ordinate some activities at the mine.

Q. All right. Well, what sort of activities would you have co-ordinated?

A. Well, with these disaster you need to look ahead of time as to what may be needed, what resources may be needed and you organise to get those things or organise where you can get them from if they are needed. So, things like physical evidence, additional resources that the mines may not have, it might be a helicopter, a tractor, it could be all sorts of things that need to be resourced. So, they're the sort of things that you need to look at with these particular disasters.

Q. Ambulance?

A. Ambulances, yes, fire brigades, things that might be required to be on stand by. ⁹

There can be no question that the Police and Ambulance Service should have been alerted earlier. The failure to alert either was the consequence of an oversight. The protocol for the Mines Rescue Service made provision for the notification of Police, so that they would know emergency vehicles

⁸ Ex.66.04 p.2

⁹ Insp. A. W. Thompson T4462

were proceeding to the mine with lights and sirens [Ex.69.01 p.1 para.5]. A misunderstanding at the rescue station caused this aspect to be overlooked [Ex.69.01 p.1 para.6]. The protocol has since been altered to prevent such a misunderstanding in the future. This was a minor blemish on an otherwise highly professional response by the Mines Rescue Service.

In respect of the mine, Inspector Thompson spoke to Mr Coffey soon after his arrival. He furnished the following statement as to that conversation:

"I said to Mr Coffey "Can you tell me why the police weren't informed earlier?" He then referred to Duty card No 1 which had been removed from the Gretley Colliery Emergency Procedure Manual which listed call out procedures and upon reaching the area with the heading 'Police' he looked at me and nodded his head and then placed his head in his hands. It was clear to me that he was distressed and emotional." ¹⁰

The diary entry of Mr Bird made shortly after the inrush included the following:

"I spoke with Richard Porteous in relation to notifying the police and ambulance. This originally occurred at approximately 6.50 after team 1 was despatched from the surface." ¹¹

Mr Bird explained the circumstances in which he made that comment in the following evidence:

Q. I rather understood from your evidence that at about 10 past 8, once it was plain to you that sufficient time

¹⁰ Ex.66.01 p.2. para.8

¹¹ M. Bird T4507

had elapsed without having recovered any sign of people being alive, that the time had come for Mr Porteous to notify the police and that he then went away and did so?

- A. Two - two phases to this, one was I was surprised they weren't there and it was a comment along that line, "have the police been - and ambulance been notified". It wasn't "you should notify", it was more a question comment which Richard was on his way out to talk to - have a pit top meeting and he said: "no, I haven't yet", and it was left at that. At the 10 past 8 was when we started to say time has protracted too far, maybe we'd better move down this track.¹²

Dealing with the second issue, the confusion at the mine portal as the recovery team came out of the mine, Mr Bird gave the following evidence which is accepted:

- Q. The next matter, which I think we have dealt with at some length, is the issue of the emergence of the group from the portal and a confusion according to some witnesses over the issue of whether or not the relatives could view the bodies of the deceased, and you dealt with that in the debriefing note; is that right?
- A. That's correct.
- Q. Now, I think that is a summary of various comments that have been made and some of them, you would acknowledge, have some validity - - - ?
- A. Yes, they do.
- Q. - - - without detracting from the overall efficacy of the rescue effort?
- A. That is the critical point and that is that on the day there were some 300 to 500 decisions and actions made. They are a handful of things that could've, in most cases, been done a bit better. But that is why I made those comments on rescue and the rescue operation as such. I thought overall it was a very good quick job.¹³

¹² *ibid* T4508

¹³ *ibid* T4506

Does the Police Instruction, permitting the viewing of bodies at the scene, require amendment? The NSW Police Service, apparently contemplate some amendment to the Instruction, although it intends to retain the discretion of the Police Officer in control to permit identification in an appropriate case. The submission for the Police Service made the following comment, which is accepted

"Section 30.17 of the MIESOP (the Police Service's Major Incident/Emergency Operating Procedures) on this point presently reads:-

"There would be no objection to family members viewing the body at the scene, or later at the mortuary."

At the Combined Emergency Services De-Briefing (ex 66.4) it was suggested that the MIESOP should be amended to delete the sentence quoted above and instead, insert:-

"Preferably family members should view the body at the morgue."

In his evidence, Inspector Thompson was asked his view on the suggested amendment and he thought that the police should be left with a discretion to allow viewing/identification of a body at the scene. Inspector Thompson's view is supported, however, the proposed amendment would still allow a discretion for viewing/identification to take place at the scene, where appropriate. Further, it emphasises that the preferred option is for identification to take place at the morgue. However, in some cases it may be both appropriate and suitable for that process to occur at the scene and it is therefore proper for some discretion to remain with the police." ¹⁴

Having completed its examination of the causes and circumstances of the inrush, the Court is now in a position to deal with the three "Subsidiary Issues" identified in the Introduction to this Report (supra p.80).

13 THE INVESTIGATION ISSUE

13.1 The Conduct of an Investigation by the District Inspector

During the proceedings an issue arose as to whether it was appropriate for inspectors from the Department to investigate accidents where the Department itself may have been implicated, as one of the possible causes. Such a situation may give rise to an apparent conflict of interests, and hinder the conduct of an objective investigation into all possible causes. A further issue arose concerning the actual investigation by the Department into the inrush at Gretley.

A mine accident may be caused by one or other (or all) of the following:

- (i) Actions or omissions by the company and/or its employees;
- (ii) Action or inaction by inspectors of the Department;
- (iii) An approval by the Department of an application in circumstances where approval ought to have been withheld, or conditions ought to have been attached, (cf B. McKensey T7267).

The last two matters would require an examination of the conduct of the Department, and of the inspectors concerned. The Chief Inspector of Coal Mines acknowledged that an inspector may not have a strong vested interest in looking at his own actions (T7268). He further acknowledged that to get a fair and objective investigation, the investigators needed to be remote from the incident (T8040).

In the past, the Chief Inspector has advocated the System Safety Accident Investigation (SSAI) approach to investigating accidents. That approach

proceeds on the premise that all accidents are based upon a systems failure by management, and that no fault or blame attaches to the individuals (T1648). The investigation is made by a team, and a report is made at the conclusion of the investigation.

In his summing up and recommendations on 31 March 1992 at the Inquest into the deaths of three coal miners at Western Main Colliery, the Coroner referred to the fact that the SSAI team had been headed by the district inspector of that mine. He recommended that the district inspector should not be the leader of the investigation team. On the contrary, the team leader should be a person without any connection with the particular mining company, and any present connection with the inspectorate. The Coroner also stated that he had concerns about the district inspector being a team member. It would be more appropriate, in his view, if the district inspector were to submit his own report to the Chief Inspector, and to the investigation team. The district inspector should be available to the team at any time, so that it could utilise that officer's knowledge and expertise. The Coroner also recommended that in investigating any mine collapse, the team should always investigate the district inspector's performance, and that such investigation should be included in the report no matter what the findings. [Ex.17.14]

Mr R. J. Kininmonth, a former senior inspector with the Department, who assisted the Court as an investigator, gave evidence that in his view it was important that the district inspector conduct the investigation of incidents at mines for which that district inspector was responsible (T1779). He believed that the status and influence of an inspector is important to the overall safety of the industry, and that the district inspector must be seen to be independent. District inspectors are rotated, and are not attached to a particular mine. They are supervised by the relevant senior inspector,

and ultimately by the Chief Inspector. The possibility of a conflict of interests (which he believed would be occasional) should be recognised by the senior inspector, and the Chief Inspector. As the senior inspector attends the mine when a fatal accident occurs, that senior inspector has supervision over the matters which the district inspector should be addressing. (T1780). The current senior inspector, special duties, Mr I. C. Anderson, however, favoured the principle of an independent investigation (T1747). He was not aware of any investigation conducted by a district inspector which examined the approval process. Yet the approval process, in many cases, furnished the context within which an accident had occurred.

There was no evidence of a departmental officer examining the Department, and its role in terms of causation, during the time that Mr McKensey has been the Chief Inspector of Coal Mines (with the possible exception of the Endeavour incident on 28 June 1995). Mr McKensey gave evidence that he had never specifically directed such an examination (T8040).

No doubt the district inspector has the advantage of familiarity with the mine, and its management. He will also be familiar with the circumstances of the mine, and any characteristics peculiar to it. It is desirable that this expertise should be available to any investigation. There was evidence that members of the inspectorate have strongly resisted any suggestion that district inspectors not conduct investigations into accidents occurring at mines within their region. (T4763, T7229).

Inspectors have expressed concern that if they stand aside from an investigation at a mine within their region, that they may be acting contrary to Section 91 of the *Coal Mines Regulation Act 1982*. This section provides

that the district inspector, and the district check inspector, to whom notice of an accident or dangerous occurrence at a mine has been given, shall visit the mine as soon as practicable, and complete their examinations and inspections as expeditiously as the circumstances permit. The notice referred to is that required under Section 86 whereby, when an accident occurs at a mine, being an accident which causes the death of, or serious bodily injury to, a person, the manager of the mine shall, inter alia, give oral notice of the accident to the district inspector, and the district check inspector and, within 24 hours, send a written notice to each of them.

Part 3 Division 6 of the Act deals with the 'Investigation of accidents and dangerous occurrences'. Section 94 provides that the Minister may direct an inspector to make a special report with respect to an accident or dangerous occurrence. The Minister may also direct the Court to hold a formal investigation, as has occurred here. Mr McKensey, in his evidence, drew a distinction between, on the one hand, the district inspector and check inspector visiting the mine in question as soon as practicable after the receipt of the notice, and completing their "examinations and inspections" under Section 91 of the Act, and, on the other, conducting an investigation into the cause and circumstances of an accident or dangerous occurrence (T7267). Mr Van Dijk, who was the district inspector for the Gretley mine at the relevant time, stated that, in his view, it was appropriate for him to undertake the primary role of ascertaining whether the mine was safe to operate, and whether it could be allowed to continue to operate (T4598). This appears to be a sensible approach, as the district inspector may properly perform such an assessment without the intrusion of a conflict of interests.

The Department submitted that there were three functions which were appropriate for the district inspector to perform pursuant to Section 91 of

the Act:

- (i) There may be a need to secure physical evidence.
- (ii) There may be a need to commence initial evidence collection and interviewing of witnesses with reasonable dispatch; or
- (iii) There may be a need, as a result of an accident, for some urgent assessment of the situation and, perhaps, the bringing of some remedy through Section 61 or 63 to restore safe conditions before work recommences.¹

The distinction drawn by Mr McKensey between "examinations and inspections", on the one hand, and the conduct of an investigation into the cause and circumstances of an accident, on the other has some validity. It will be noticed that Section 91 of the Act does not appear in Division 6, which is expressly concerned with the 'Investigation of accidents and dangerous occurrences', and the Act does not require that the district inspector associated with the mine in question must participate in any investigation which is undertaken, although curiously the *Coroners Act 1980* (Section 55 and Schedule I) does appear to assume that the district inspector will be involved in an investigation.

13.2 The Investigation at Gretley

After the inrush on 14 November 1996, Mr McKensey established an investigation team. Its leader was Mr T. Abbott, a senior inspector for the Wollongong and Lithgow districts. District inspector Mr G. McDonald,

¹

MFI 92 p. 172 para.C13

Professor Roxborough of the University of NSW, and Mr J. Joy of Minerisk, (described as a professional investigation facilitator) were also members of the team. Mr Van Dijk was retained as the district inspector for Gretley during the investigation. He provided support to the team [Ex.54.01]. The investigation team began its work on 19 November 1996.

At a meeting with the mine manager, Mr R. Porteous on 25 November 1996, it emerged that information supplied by the Department had been used for planning the workings within the MW50/51 panel. Mr McKensey decided, after consultation with the Minister, that all plans and records held by the Department relating to the mine should be secured, and that an outside consultant, Coopers & Lybrand, should be used to audit those records [Ex.54.01]. The consultant would also review the Department's general procedures for handling mine record tracings and investigate the specific issues relating to the mine record tracings of Young Wallsend Colliery in the light of the disaster [Ex.20.01]. As a consequence of these arrangements, after 19 November 1996, it was not intended by the Chief Inspector that the district inspector associated with Gretley should conduct further investigations into the cause and circumstances of the accident. These actions were entirely appropriate. Finally, on 28 November 1996, the Minister announced that the Court would conduct this Inquiry.

The displacement of the District Inspector by a team appeared to give rise to some disquiet on the part of inspectors. The Court was urged to give some consideration to the way in which investigations into fatalities and serious occurrences should proceed in the future. The need to review existing procedures is demonstrated, in the Court's view, by the experience of Mr Anderson, who acted as an investigator to assist the Court in this Inquiry.

Mr Anderson is a well qualified mining engineer. In June 1990 he was

appointed to the position of senior inspector. He is currently employed by the Department as senior inspector special duties. [Ex.21.01]. Mr Anderson was seconded to act as an investigator for the Inquiry, and directed by the Chief Inspector to provide support and assistance to Counsel Assisting the Court (T8039). Mr Anderson did so. He also gave evidence in the proceedings. Mr Kininmonth, a mining engineer, and former senior inspector, was also appointed an investigator. He likewise gave evidence.

Messrs Anderson and Kininmonth were informed by lawyers acting for various parties (though not members of the CMFEU) that witnesses should be given a period of 24 hours notice to answer questions, and that the questions should be provided to them in writing. This request was based upon legal advice said to have been obtained by the Coal Mine Managers Association in relation to Section 62(d) of the Act.

Section 60(1)(a) of the Act provides, *inter alia*, that an inspector may require certain persons to answer such questions as the inspector thinks fit to ask. Section 62(d) provides that a person shall not lawfully fail to comply with the requirement made under Section 60(1)(a) within a period of 24 hours of the requirement being made. The Act does not contain any express requirement that the questions asked by an inspector pursuant to Section 60(1) should be provided to the relevant person in writing.

It appears to the Court that any requirement that an inspector, in interviewing persons described in Section 60(1)(a), should have to provide that person with questions in writing would seriously hamper the expeditious conduct of interviews, and the obtaining of what may be important evidence as to the causes and circumstances of an accident. It creates difficulties for any follow up questions that may arise from a response, thereby creating a further delay. It also detracts from the

interview process by converting it into interview by correspondence. The Court finds that such an interpretation of Section 62(d) would be contrary to the scheme of the Act which is to provide for, and facilitate, an expeditious investigation into the causes and circumstances of any accident at a mine. Section 62(d), however, has an important function to perform. At any interview, if a person does not know the answer to a particular question, but would be able to provide an answer by being able to, for example, review documents, they are able to do so by being afforded a 24 hour period, thereby facilitating, rather than hindering, the conduct of the investigation. The Court finds that the Act does not require the inspector to provide questions in writing, and that a blanket 24 hour period pursuant to Section 62(d) does not apply before any response is given. However, it may be appropriate, given the understanding of the Coal Mine Managers Association, that the Act make it clear in express terms that no such requirement applies.

Messrs Anderson and Kininmonth provided instruction to Counsel Assisting concerning the approval process undertaken by the Department pursuant to Section 138 of the Act, and a commentary to Counsel Assisting on the application by the company for approval to mine miniwalls 50/51 in September 1994. Conference notes were prepared which, in fairness, were made available to the parties [Ex.21.03 & Ex.21.04]. Messrs Anderson and Kininmonth, as mentioned, ultimately gave evidence. Some of that evidence was critical of the Department, and certain Inspectors.

Mr Anderson's evidence, in response to questions asked, suggested that those who had died on 14 November 1996 had been sent to work without essential precautions having been taken both by the Department, and the company. His review was critical of Mr Flett's performance (T2707). He considered that the Department's analysis did not go as far as was

necessary to determine flaws in the company's system, and that this had contributed to the disaster (T2708). He concluded that Mr Flett had not undertaken a rigorous and independent review of the Manager's proposal (T2710). Mr Anderson was critical of the Department too, in not having required, as a condition of approval, a risk assessment be conducted since the Manager had apparently not seen fit to undertake such an assessment (T2862). The Inspectorate had failed to analyse the application put forward by the Manager, and to address the issues that would have been covered by such a risk assessment (T2866).

At the request of Counsel Assisting, to assist in his preparing the opening of the Inquiry, Mr Anderson also prepared notes of his assessment of the causes of the disaster at Gretley [Ex.21.02]. These notes, again in fairness, were made available to all parties. Mr Anderson identified a failure by management to conduct a wide, deep and professional analysis of the hazard that the Young Wallsend Colliery presented to this mine as being a primary cause of the disaster. He also identified as a secondary cause of the disaster "a failure by the Department to effectively review and analyse the 138 application". Mr Anderson suggested, inter alia, that the district inspector had simply repeated the manager's proposal without a rigorous and independent review, thus permitting a flawed system to be approved. He referred to both the senior inspector, and Chief Inspector, as having been involved in the approval process.

Having given evidence, Mr Anderson received two anonymous telephone calls. Mr Anderson did not recognise the voice of the person on either occasion. In the first call, the person said words to the effect that Mr Anderson was not a very popular person in the Department. On the second occasion the caller said words to the effect that what Mr Anderson was doing in Court was "ratting" on his "mates" (T2959).

On 1 August 1997, whilst the Inquiry was underway, Mr Anderson wrote to his superior, Mr McKensey, seeking an assurance that he would not be disadvantaged in his employment by reason of his involvement in the Inquiry [Ex.28.16]. He had, after all, been invited by Mr McKensey to assume the role of investigator assisting the Inquiry. There are a number of statutes, Commonwealth and State, which make it a criminal offence to penalise an employee upon the basis of evidence provided to an Inquiry (cf *Commonwealth Royal Commissions Act 1902 S6N*, *Independent Commission Against Corruption Act 1988 S94(1)*). Mr McKensey, however, declined to give such an assurance [Ex.28.16] (T8043). He provided a number of reasons for his refusal to do so, none of which appeared to the Court to be cogent, or to justify that refusal.

Mr McKensey said that when he directed Mr Anderson to work as an investigator for the Inquiry he presumed, incorrectly, that Mr Anderson would confine his attention to the actions of the colliery. It would be Mr Kininmonth who would examine the role of the Department. Mr McKensey believed it inappropriate that a Departmental officer should have the task of determining whether fellow officers, both junior and senior to himself, had acted appropriately.

Mr McKensey accepted that in any given accident the Department may have played a role, in that it may either have given approval, or its supervision of a particular mine may have been one of the causes, no doubt indirect, of the tragedy. He accepted that there was a need to examine these issues amongst others (T8040). Mr McKensey found it unusual that an Inquiry into a disaster should involve a person appointed as an investigator, who happened to be a Departmental officer, examining the Department's role in the disaster. As to whether it demonstrated a real

problem in the Department's ability to investigate itself, he said that it would depend on the circumstances. He also said that it was very awkward for someone to investigate his peers and his employer (T8070). Mr Kininmonth, who was no longer employed by the Department, should have investigated those issues (T8070). The Department in its written submission to the Court, submitted that an inspector such as Mr Anderson should not be placed in a position of criticising his employer.

In fact, neither Mr Anderson nor Mr Kininmonth investigated the Department. Departmental officers were not interviewed. Rather, Departmental witnesses were invited, through their legal representatives, to provide statements. However, Mr Anderson was called as a witness. He had played an important role during the investigation, and it was plainly appropriate that he should describe to the Court what he had done. He had interviewed witnesses (with Mr Kininmonth), and had gathered documents relevant to the tragedy. Once called as a witness, it was inevitable that Mr Anderson would be invited to express his views on other issues relevant to the Inquiry. As a former mine manager, and a qualified mining engineer, it was plainly appropriate that he be asked questions which were relevant to each of those specialities. Similarly, as a person familiar with the Department's approval process, he was in a position to describe that process, and comment upon the Department's actions in approving the Gretley application. It is a misconception to imagine that once appointed as the investigator, and therefore involved as a witness, Mr Anderson's evidence could somehow be quarantined, and certain topics forbidden. Further, Mr Anderson, unlike Mr Kininmonth (who had retired from the Department in 1988) was familiar with the Department's current guidelines, and their application. Again, it was inevitable that he should be invited to give evidence relevant to those matters. No doubt such questions are awkward. They are a test of the witness' integrity because there is,

inevitably, the temptation to moderate criticism of one's colleagues. However, that is a different issue. It was predictable and inevitable that such questions would be asked.

It was suggested to Mr McKenney that the evidence clearly demonstrated the need for some external body to have the responsibility of investigating coal mine disasters. Only an independent body could feel free of the inhibition which may arise in the mind of a member of the Department who will, in due course, return to his place of work. Mr McKenney said he supported in principle the proposition that if something is to be investigated properly it should be done by people who are independent from the issue (T8071). In this, Mr McKenney is clearly right. The question must be how such a body should be constituted, and what should be its role?

The experience of Mr Anderson suggests that the Department, under its current structure, is not capable of investigating its own conduct.

13.3 Investigations in the Future

What, then, should be done? There is no reason why a District Inspector should not continue to investigate matters other than fatalities and serious occurrences. Where there is a fatality, something more is called for. A death in a mine accident will inevitably involve a Coronial Inquiry. The Department's investigation, therefore, is likely to be the subject of scrutiny by that Inquiry. The Coroner's Inquiry, moreover, will examine the issue of fault. It is obliged to consider whether there is evidence of an indictable offence causing or contributing to the death of the deceased. If there is such evidence the Inquiry must be terminated. It is also likely that, in a percentage of cases, the mining company will endeavour to deflect criticism from itself by pointing to the role of the Department in the events

leading up to the mishap. That involvement may take the form of an approval given to the colliery in respect of its system or equipment, or the apparent acquiescence by inspectors in the practices of the mine, where such practices have been observed by mine inspectors.

Further, the investigation of a fatality is likely to require more by way of resources than simply the district inspector. As mentioned previously, whoever undertakes the investigation should, so far as possible, be removed from the events which are likely to come under scrutiny.

What, then, are the alternatives? The following were canvassed during the course of the Inquiry:

- First, that the investigation of fatalities and serious occurrences should be taken out of the hands of the Department, and given to the Workcover Authority.
- Secondly, as an alternative, there be established within the Department an autonomous unit with at least one full-time officer who reports directly to the Director General, whose charter is to investigate fatalities and serious occurrences.
- Thirdly, that the Chief Inspector should appoint a team of inspectors who have no association with the mine which is being investigated, to carry out the investigation.

The first alternative, the Workcover Authority, plainly has certain advantages, although it also has a number of disadvantages. The Workcover Authority is already involved in the investigation of accidents in the workplace under the *Occupational Health and Safety Act 1983*, and

related legislation. It has been responsible for a number of successful prosecutions under that Act [Ex.95.02 & 95.03]. However, if it were to investigate mining fatalities, it would obviously require trained personnel. It would be necessary to recruit persons with the qualifications of a district inspector to carry out investigations. Such persons would not be involved in routine mine inspections, or in giving approvals under the *Coal Mines Regulation Act 1982*. They would, therefore, not be hampered by the potential for a conflict of interest.

The second alternative, an autonomous unit within the Department, also addresses the concerns which have been raised in respect of conflict of interests. It is a regrettable fact of life in the coal industry that there are sufficient deaths, and serious occurrences each year, to justify dedicating at least one officer (perhaps at the level of senior inspector) to the task of investigating such occurrences. However, one individual would not be enough for most investigations, and especially the more serious investigations. Once mine personnel are seconded to assist the person in charge of the investigation unit, there is the risk that the effectiveness of the unit will be diluted. Those seconded may align themselves more readily with the Department than the investigation task, and may therefore be reluctant to criticise colleagues or the Department itself.

The third alternative, the appointment of ad hoc investigative teams involves the same problems, although it does not necessarily provide the assurance of independent and dispassionate supervision which is likely to come from a person in charge of an autonomous unit.

There is a compromise, suggested by Mr Van Dijk in the course of his evidence. It has some merit. In the context of the Gretley investigation which he began, before being replaced by the team headed by Mr Abbott,

he said this: (T4598)

- Q. To put it shortly, you were unhappy with that and believe that you should have remained as the investigator and, indeed, there was a statutory obligation on you to undertake that role?
- A. There is a statutory obligation for me to conduct examinations and inspections under section 91 of the Act.
- Q. Do you believe had you conducted the investigation to its conclusion you would have critically examined, for instance, your own actions in visiting the 50/51 panel on 4 November?
- A. No, I believe that there was a conflict of interest and that there should have been a - a separate investigation or part of an investigation to - to look into my role.

The statements taken by Mr Van Dijk soon after the inrush were comprehensive, and helpful. With hindsight, it is a pity that Mr Van Dijk was not permitted to complete his task. Mr McLean would then have been interviewed sooner rather than later. The Court believes, using this experience, that it would be an advantage to permit the District Inspector to carry out his inspection in accordance with Section 91, taking such steps as are necessary to ensure that the mine is safe, and to complete a preliminary investigation by gathering in documents relevant to the fatality, and taking preliminary statements. His investigation should neither be concerned with his own role as a mine inspector nor with the approval process by the Department, though he should provide a statement as to his involvement with the mine, and the approval process. Once complete, the inspector should turn over the material he gathers to the party responsible for the next phase of the investigation. The Court favours an autonomous unit to conduct that phase. The autonomous unit may accept the statements of the district inspector, or choose to solicit additional information from the persons already interviewed, if that is appropriate. The

unit may obviously carry out additional inquiries. It should examine, as a matter of routine, any involvement by the Department in the events which may indirectly have led to the tragedy. By this means the Coroner will be assisted, and the Department will also benefit from a critical evaluation of its performance.

13.4 The Release of Investigation Reports

The final issue relates to the dissemination of reports prepared by the Inspectorate as a result of the investigations conducted into accidents at coal mines. The Department does not make available written reports as a matter of course, even though the inspectors go to some trouble to prepare such reports.

Mr J Tapp, the Northern District check inspector for the CFMEU, gave evidence concerning the steps he was required to take to obtain copies of the reports relating to the incident at Endeavour Colliery. Notwithstanding that Mr Tapp was a party to the actual investigation (T7279), he ultimately had to make a Freedom of Information application to obtain the Reports (T7280).

A report was prepared by the two experts from the United States of America (T7275); Messrs Anderson and Shacklady of the Department also prepared a lengthy report complete with detailed recommendations (T7276); Mr Koppe of the Department prepared a report dealing with mechanical issues (T7276) as did Mr Hodson in relation to electrical matters (T7276). Mr McKensy gave evidence that these reports did not go to the Minister, notwithstanding that the reports of Mr Anderson and Shacklady were directed to the Minister, through himself, and the Director General (T7276). The Department prepared an abbreviated version of

aspects of each report, which was then made available for discussion at a seminar held in Mudgee. This document, however, did not include recommendations (T7277).

Mr McKensey said that he was concerned about distributing the reports because there was some conflict between them as to the ignition source relating to electrical cables (T7277). While he did not consider that there was anything wrong in relation to public debate where professionals differ, it was better to try and resolve such differences internally and publish a report that reflected the result (T7280). As to why a document under his signature in relation to the Endeavour Report would not include a series of recommendations by various people in their reports he stated:

"I haven't got an answer to give you." ²

Mr McKensey also agreed that his report did not resolve the differences. He agreed that it appeared to ignore them (T7280). He agreed that it was true that investigation reports by inspectors were submitted to him with recommendations, and that they were not available to the public. He also agreed that there was no point to this (T7280). Many of the recommendations (if not most) have never been implemented.

The Court can see no reason why a member of the public should not be able to obtain a copy of reports that are prepared, including the recommendations contained within them (subject only to the possible exclusion of recommendations of prosecution). Such reports should be provided, together with the recommendations, to the industry, including coal mining companies and relevant trade unions. It should not be

necessary for persons wishing to obtain reports to have to go to the lengths of making a Freedom of Information application, particularly in the case of actual participants in the investigation.

14 PROSECUTION

14.1 The Policy of Non-Prosecution

Safety within the coal-mining industry is governed by the *Coal Mines Regulation Act 1982* and the *Occupational Health and Safety Act 1983*. The *Coal Mines Regulation Act 1982* is prescriptive. It seeks to specify with some particularity the duty of each level of management, and of the Department. The *Occupational Health and Safety Act 1983* post dates the *Coal Mines Regulation Act 1982*. The approach is different. The employer is obliged to ensure a safe place of work and a safe system of work.¹

The *Coal Mines Regulation Act 1982* is defined as "associated occupational health and safety legislation" in the *Occupational Health & Safety Act 1983*. Part 4 of that Act provides for the interaction between the associated legislation and the principal Act. It is apparent from these provisions that both the *Coal Mines Regulation Act 1982*, and the *Occupational Health and Safety Act 1983*, apply to the coal industry.

However, at the time Mr McKensey began his term as the Chief Inspector of Coal Mines (April 1990) there was a perception (said to be based upon a Ministerial statement, and a decade of Departmental practice) that the *Occupational Health and Safety Act 1983* did not apply to the Coal Industry, and that no action would be taken in terms of that Act for offences within the coal industry.²

Accordingly, soon after his appointment, the Chief Inspector, and the Director General, Mr Rose, gave consideration to the application of the

¹ B. R. McKensey T6979-80

² ibid T6974-5; T7182; T7187

Occupational Health & Safety Act 1983 to the Coal Industry. They determined that the Act did have application. Since the Act was consistent with the underlying concept and direction of the Roben's Report (U.K.) (requiring corporate responsibility and absolute commitment from top management),³ they considered that its application to the coal industry could be beneficial. It would assist in changing the culture of the industry, and in achieving the levels of safety sought (T6976-7). Industry was so informed (T7187.)

Failure to comply with the provisions of the *Coal Mines Regulation Act 1982* (or the Regulations, rules and schemes introduced pursuant to that Act) is a criminal offence (SS160-162). It is an aggravating circumstance where the failure is wilful. S166(2) is in these terms:

"166(2) Where, in relation to an offence against this Act committed in respect of a mine, the court by which a person is convicted of the offence is of the opinion that the offence is one which was likely to, or did:

- (a) endanger the safety of persons employed in the mine;
- (b) cause serious personal injury to any such persons; or
- (c) cause a dangerous accident,

and that the offence was committed wilfully by the personal act, personal default or personal negligence of the person convicted, the court may, instead of imposing a monetary penalty, sentence that person to a term of imprisonment not exceeding 12 months."

Failure to comply with the *Occupational Health and Safety Act 1983* is likewise a criminal offence. Conviction under that Act may attract a

substantial monetary penalty.

Mr McKensey was appointed Chief Inspector of Coal Mines on 30 April 1990 [Ex.28.01 p.4 para.24]. At the time of this Inquiry, therefore, he had held that position for seven years. In that time there had been 33 deaths in the coal industry in New South Wales. Yet, no mining company had been prosecuted under either the *Coal Mines Regulation Act 1982* or the *Occupational Health & Safety Act 1983*. One prosecution only has been launched (March 1991). It was against a mine deputy, and was unsuccessful.

Throughout that period (1990-1997), moreover, there was no documented prosecution policy. There is still no such policy (MFI 92 p.180). The Review of Mine Safety in New South Wales [Ex.17.16] by Ms Susan Johnston was critical of the absence of such a policy. The report included the following:

"As indicated, a range of stakeholders expressed concern at what they saw as confused Inspectorate approaches to enforcement of safety breaches. Several company stakeholders from varying levels expressed the view that the Inspectorate was too 'laid back' in this regard. This view was generally shared by union representatives.

"The Inspectorate seem reluctant to take action. There have been serious incidents where they did very little."

"As a Mine Manager I expect the people who come to the mine to be bastards, I want them to be unreasonable if needs be - I don't want them not to care." " 4

(emphasis in original)

⁴ Ex.17.16 p.44

The report also included the following comment, attributed to unnamed Union representatives:

"Some union representatives also suggested that the Inspectorate would be more appropriately housed in another Department. The view was that the Department of Mineral Resources (DMR), as an agency which was primarily interested in fostering the mining industry, had shown itself to be unwilling to take a tough line with industry on safety issues even when this appeared to be more than necessary." ⁵

Elsewhere, the report said this:

"Several Inspectors expressed concern that Departmental policy on enforcement and prosecution was either vague or contradictory, and that this lack of clarity hampered the Inspectors in their being able to send clear signals to industry." ⁶

The submission made by the CMFEU to the Inquiry was in these terms:

"The CFMEU supports the proposition that there should be a more active pursuit of prosecutions in the coal mining industry. The evidence that there is a no prosecutions policy in the Department is disturbing. The findings of the Review of Mine Safety in NSW (Ex.17.16) also support the need for greater enforcement of safety obligations in the coal mining industry." ⁷

⁵ ibid p.45

⁶ ibid p.50

⁷ MFI 90 p.12

14.2 Attempts by the Department to Draft a Prosecution Policy

In about July 1992 the Department did set about developing a "Draft Enforcement Policy." That was to be a joint policy applicable to both the Mines Inspection and the Coalfields Branch of the Department. It was, therefore, to apply to all mines, not just coal mines. Responsibility for the policy was given to a committee, known as the Mineral Resources Operations Committee which was chaired by Mr. I. Campbell.⁸

A document titled "Responsible Enforcement of Mine Health and Safety Legislation" was prepared by the Mines Inspection Branch, and tabled on 14 September 1992. On 27 April 1993 three further documents (a Policy Statement, Procedural Note and a Guidance Note) were tabled and discussed. In June and July 1993 draft copies of the documents were sent to a number of industry representatives for comment, and various responses were received. The responses were favourable (B. McKensey T7166).

In addition, the Branch Management Team (consisting of people who reported to the Chief Inspector of Coal Mines) discussed the adoption of an Enforcement Policy on a number of occasions during 1993.

In 1995 a Departmental restructure caused Mr Campbell's position to be made redundant. The Mineral Resources Operations Committee was thereafter abandoned. Unfortunately, at that time, some three and a half years after the first draft, the policy remained unratified.

The Draft Policy, Procedural Note and Guidance Note have now been

⁸ Ex. 28.04

included in the Handbook of Safe Mining, which is produced for the guidance of non-coal mines in NSW. However, no similar initiative (or even the formulation of a draft policy) has been undertaken by the Coalfields Branch [Ex. 28.04 para 22.]

For the purposes of this Inquiry Mr McKensey assembled a folder of documents relating to the Mineral Resources Operations Committee, and its consideration of prosecution policy.⁹ Mr McKensey was asked why it had taken so long to evolve a prosecution policy, and why it was never finalised. He identified the problems as being the formulation of a joint policy, where the two branches of the inspectorate, and the culture of the two industries, were so different (T7135; T7157); the issues raised in a letter from Mr Fearon dated 20 June 1995, which were pertinent and serious, and which needed to be addressed before finalisation of any policy (T7174); the demise of the Mineral Resources Operations Committee; the ongoing dilemma of resource allocation priorities (T7134); and the fact that by 1995 the issue was in the hands of the Executive of which Mr McKensey was not a member (T7176). Counsel Assisting suggested to Mr McKensey that he did not give the matter any greater priority because he, the Chief Inspector of Coal Mines, had some hostility towards the development of a such a policy, and that because prosecutions really had no relevance to his approach to his duties.

Q. See, what I want to suggest to you is this. That an examination of that material from the outset and at various stages in its slow progression demonstrates an attitude on your part of resistance and opposition to prosecution?

A. I don't accept that.

Q. And ultimately you were saved by the bell when the

Department restructured?

- A. I don't accept that.
- Q. And the fact that you had no interest in prosecution is manifested by the fact that you took no further initiative to see that the issue is progressed thereafter until an external inquiry condemned the approach by the Department in the Susan Johnston report?
- A. Mr Kirby, I think that is a trite summation and it does not take any account of the things that were going on or the work load that is on me in that period of time.
- Q. Tell me what was going on that prevented you from saying: look here, we were absolutely on the threshold of getting this thing finally on the road, all the comments we got from industry was that it was a good thing, cannot we progress it to the next stage?
- A. I certainly had that opportunity to take this matter up with my superiors at any time and that was put in a list of the other things that I had to do in responding to the statutory duties I had, the restructuring of the Department, the cutting of the budgets and the restructuring of the budget, the shortage of inspectors and all the other things that were going on. I could have done it but it was a question of the things that I was forced to do and the work load on me as a question of whether I did that or I got involved with other things that were pressing and I think to put it as - put simply as you have is a trite over-simplification.¹⁰

Mr McKensy insisted prosecutions were relevant and had a place.¹¹

What place, then, did prosecution have within the McKensy's approach?

¹⁰ B. R. McKensy T7176-7

¹¹ ibid T7177

14.3 The Current Prosecution Policy

Although there was no documented policy, and although no one was actually prosecuted (apart from one mine deputy), Mr McKensey insisted that there had been a prosecution policy throughout (MFI 92 p.148). It was an informal policy, but one well understood by the inspectorate. Mr McKensey described that policy as follows:

"Inspectors use different methods to gain compliance with regulations and improvements in safety arrangements. I have encouraged Inspectors to, as far as possible, adopt a "minimum effective response" approach. The aim of this approach is to get the result required by using only the minimum amount of pressure necessary and thereby ensure the maximum extent of minesite "ownership" of the ongoing solution.

Whilst there is a considerable variation in the way this works in practice, five steps can usually be observed." ¹²

The five steps referred to by Mr McKensey included the following:

"STEP 1

24. At mines where there is a good working relationship between the Inspector and Mine Management, during site inspections minor problems, either breaches of regulations or potential hazards, are jointly identified. The Manager undertakes to have the identified problems rectified within an acceptable time frame. The inspector on the next visit checks to ensure the work is completed as agreed.

STEP 2

25. In a similar situation to that above except the

Inspector has concerns that the Manager is unlikely to follow up properly for one of many reasons, such as:

- Manager has not done so in the past
- Mine is undermanned
- Mine is pushing hard for increased production
- The means to do the job are not readily available
- There appears to be a lack of commitment to safety.

In this case the Inspector would confirm the arrangement in writing to the Manager clearly setting out all the matters to be attended to and the dates agreed that they would be completed by.

The Inspector would program special visits to the mine to verify completion ... " 13

Steps three and four concern situations where the inspector forms the view that something at the mine may become dangerous in the future, and is not satisfied that it will receive immediate attention [Ex.28.04 para.26/7]. In that circumstance the inspector may issue an improvement notice under Section 63. In the past five years there have been 45 such notices [Ex.28.04 para.28]. Many were issued after accidents had occurred.

In respect of prosecution itself, Mr McKensey identified the current policy as follows:

"Prosecution would be considered in the following circumstances:

1. Where the disregard of legislative requirements may have been a primary cause for loss of life or significant personal injury.
2. Where repeated representation and interventions (such as the issuing of improvement and prohibition notices pursuant to Section 63 of the C.M.R.A. have failed to result in legislative compliance and safety improvement." ¹⁴

Mr McKensey described the policy as one of "graduated response". He said this:

"I think that we certainly believe in a - a graduated response, that we look for willing compliance and we encourage willing compliance. Where we're not getting the willing compliance we have a graduated response. **I see prosecution as the last card in the pack and it is the expectation or fear of prosecution which I think needs to be there and aware within the industry so an Inspectorate can be ... effective.** I think an Inspector - where there's a - a realisation that a prosecution can and will occur, means that the Inspectors can operate with a power base that is appropriate. There have been many prosecutions in the past that the industry have not perceived as being reasonable and fair and in my view have had a detrimental effect on the impact the Inspectorate has had on the industry and I've certainly been in the industry when those things have occurred and have seen them as a Mine Manager. So I believe prosecutions are the last card in the pack and must be used if there is clear, wilful - wilful behaviour of people that has led to or is likely to lead to someone being placed in danger. I think that's an imperative position, **where there's wilful behaviour and I think where there is repeated negligent behaviour of a high order** and where there is a breach of regulations which is directly a clear breach of regulations which has directly led to someone's death then we should

be then certainly taking legal action.¹⁵

(emphasis added)

On the implementation of the policy, Mr McKensey said:

"Prosecution is the last resort, and I think you do prosecutions to ensure that people recognise that you will do them. You do them where there is very clear and unequivocal evidence that the behaviour of people is unacceptable. **Either it's wilful or it's to the extent of seriously negligent, or, if repeated other overtures just have gone unheeded.** Now, I haven't seen a case where repeated overtures have gone unheeded. You know, I haven't seen the case where an inspector goes through and ups ante by talking and writing then stop work, and those sorts, where we haven't been successful. We have been. I haven't seen the case, other than early in my career, where I believe a manager had been clearly intent on not doing what was agreed and we took action against that man but he had at least in that case not caused anyone to be placed at risk. He'd evacuated his mind to do what he did; we took action; we had the company take action against him. Now, the negligent one is - likewise, it's much harder, it's more subjective. But I haven't seen the case where there was a prescriptive regime that would've prevented it but was totally ignored. Now, I think there is a case currently that we're looking at that is that. But it's - I would think - sub judice at this stage.¹⁶

(emphasis added)

Throughout his evidence Mr McKensey repeatedly asserted that prosecution did, indeed, have a role to play within his approach to safety. The role appeared to be one of general and specific deterrence, as "inspectors value the threat of possible prosecution as a potential

¹⁵ B. R. McKensey T7131/2

¹⁶ B. R. McKensey T6989

sanction".¹⁷ However, as Mr McKensey recognised, in order effectively to deter unacceptable conduct it is necessary to ensure there is in fact an expectation that prosecutions will be launched in appropriate cases.¹⁸

Now, as set out above, under the *Coal Mines Regulation Act 1982*, the wilful nature of a breach is an aggravating circumstance (S166(2)). However, under the formulation of Mr McKensey, it is determinative. There is no warrant for that gloss upon the legislation. That is not to suggest that every breach of the Act or Regulations warrants prosecution. It does not. Prosecutions are expensive. They are time-consuming, and, no doubt, they are a distraction from other duties which may have greater immediate relevance to safety. Plainly, a judgment needs to be made. The Court's concern is that hitherto that judgment appears not to have been made appropriately. Serious breaches causing death or severe injury have not been prosecuted. The sanctions within legislation which the Department has a duty to enforce have effectively been ignored. Companies and their officers have not been held accountable in circumstances where plainly it was appropriate that they should be accountable.

14.4 Analysis of Various Fatalities

Material was produced by the Department relating to various fatalities which have occurred since 1990. The material related to 25 incidents causing death and, in some cases, multiple deaths [Ex.17.14]. Almost without exception, the documents revealed significant breaches of the Act, and Regulations or an obvious failure to take reasonable care for the

¹⁷ Ex. 17.05 U.K., Robens Report on Safety and Health at Work of 1972

¹⁸ B. R. McKensey T6987-8

safety of workmen. The following is a selection of incidents drawn from this material. The selection has not been made in order to identify the worst cases. There are many other cases as bad, and some worse. The material discloses, however, that in most instances there was either no consideration, or insufficient consideration, given to the prosecution of those responsible:

Newstan 26 June 1991

On 26 June 1991, in a material shunt at the bottom of the drift at the Newstan Colliery, a machineman sustained fatal injuries. He was crushed between the rib and the steering wheel of a dual drive Mark I MPV (a vehicle). The victim was apparently moving the MPV forward off the ramp whilst seated in the driving seat. The seat faced in the opposite direction to the direction of travel. The rib had been undercut over time. This allowed the driver's compartment to enter the undercut, with the result that he was trapped (T7200).

The matter was dealt with by way of a Systems Safety Accident Investigation Report (SSAI). It involved a risk analysis of the operation, and a design risk review on the machine (T7201); [SSAI Ex. 17.14].

Areas of concern identified by the investigation included instructions given to the driver as to how to drive this type of machine; the driver's awareness of potential problems in not facing the direction of travel; and an apparent lack of protection afforded a driver from protruding objects entering the driver's compartment of the machine (T7200) .

Mr McKensey recalled that as a result of the accident:

- A. This shunt was put out of action, I think - my recollection, it was put out of action, there was a redesign in another area and it wasn't used until it had been sorted out. There was the issue of the overhan(g) and the angle of coming into the place, that was both issues. The machines were taken out of service and modified, so, those issues were addressed.¹⁹

The modification included protection for the driver to prevent his being crushed. Mr McKensey's acknowledged that the case involved a prima facie breach of the *Occupational Health & Safety Act*. However, he was of the view that the case did not warrant prosecution:

- Q. (B)ut in this case though, you acknowledge that there was apparently a failure to ensure the workers' health by ensuring a safe system of work and safe plant and a safe place of work they being specific obligations upon the employer, you say, I gather that the circumstances did not warrant, in this case, prosecution action?
- A. In my view, they did not, I accept that there was an employee; it was at work and there's a prima facie case for a breach of the OH and S Act and my assessment of the situation was that we would gain more from proceeding the way we did than launching an Occupational Health and Safety action.²⁰

¹⁹ B. R. McKensey T7203

²⁰ ibid T7207

Oakdale 30 March 1993

A contractor sustained fatal injuries when his head was crushed between the mine roof and the driver's compartment of a Eimco 913 LHD machine. The deceased was the driver of the Eimco. He was in the process of loading out a fall of roof stone at the work site; there were no witnesses. The body was discovered slumped over the driver's seat. The Eimco had been back blading, ie: pulling stone back from the fall by inverting the bucket and reversing away from the fall to form a ramp which the Eimco could negotiate later to allow roof support work to be carried out from the Eimco bucket. The stone dragged back by the back-blading operation considerably reduced the floor clearance at the lip of the floor cavity. It was at this point where the accident occurred as the deceased was reversing the Eimco under the lip. The Eimco was not fitted with any protective device to prevent the driver's head from coming into contact with the mine roof.²¹

Again, Mr McKensey acknowledged that this case involved prima facie breaches of the statutory obligations under the *Coal Mines Transport Underground Mines Regulation* and the *Occupational Health and Safety Act 1983* (T7217-9).

However, the matter was dealt with by way of System Safety Accident Investigation [Ex.17.14 Annexure J]. A Safety Alert was also published. The Chief Inspector wrote, as well, to all underground mine managers, and equipment manufacturers regarding the safe operation of free steered vehicles. Representations were made to the NSW Coal Association about an industry working party to address the issues

²¹

Ex. 17.14

surrounding contractors [Ex.17.14].

There was an obvious similarity between this incident and that at Newstan. Mr McKensey gave the following evidence:

- Q. And the - if I could just go briefly to the summary, the SSAI summary, you will see . . . it contains a diagram which illustrates how it came about and it is rather similar to Newstan?
- A. There are similarities, yes.
- Q. All right. But - and of course it occurred sometime after Newstan when you would have hoped that the lessons of Newstan might have been learnt by the industry?
- A. That's correct.
- Q. Did that not suggest to you that perhaps this was a case where prosecution may be appropriate?
- A. In each of the - - -
- Q. To reinforce the lesson?
- A. In each of these cases you see systemic - systems errors. I'm not - my view is you have to address the system. Now I have formed the view that taking prosecution action against a company does not address the systemic errors that are in the industry.
- Q. I am not suggesting you do it ... (in) substitution for the initiatives you took but in addition?
- A. Well that was the view and the view that people being seen to prosecute was not going to encourage supportive action of people using their initiative with our guidance to solve these systemic errors.²²

Saxonvale 27 April 1993

On 27 April 1993 Mr Williams, a fitter, received fatal injuries when the Quell fire suppression canister he was recharging exploded. The fitter had linked the fire suppression canister to a nitrogen bottle via a high pressure hose and associated regulators and gauges. The high pressure hose system had no pressure relief device, contrary to the Australian Standard.

Action taken in relation to this matter included a review of the relevant Standards legislation, an industry awareness campaign, an industry requirement that similar installations be fitted with a pressure relief device, the issue of a Safety Alert, and a System Safety Accident Investigation.

Mr McKensey said this:

- Q. And there would appear from that description to have been a clear breach, an indefensible breach of the Occupational Health and Safety Act, would you agree?
- A. I could - yes, I can agree with that. My view that I took at that time, that there was more to be gained by going the path we did than the prosecution.
- Q. Well that means every time, every time there is an incident - no doubt there is a lot to be gained by sitting down and giving someone an assurance in advance, "You will not be prosecuted, now let us have a look at your whole operation." What surely should happen is that the particular case is dealt with on its merits and you the Inspectorate should move through the mine and look at all its systems in a thorough going way and demonstrate the shortcomings of those systems and perhaps not prosecute them where there are breaches but nonetheless, draw them to their attention immediately. And indeed, encourage them in the belief that ... if they demonstrate that they ... do recognise their wrongdoing, that they do see that

there are lessons in it for their own operation and that they are attempting to address those problems and can be seen to be doing so as exemplified by a number of particular improvements, then these are matters which can be put before the court in due course by way of contrition and reduction of penalty. Is that an approach open?

A. That is an approach that is open.

Q. And what you are putting forward is a circumstance where in every case you say, well look there are these tremendous benefits and therefore I cannot afford to forego those benefits and therefore I just rule out prosecution - - -?

A. No, that's not what I'm saying at all. I'm saying that where there is a clear case of where the failure and serious failure of applying (sic) with the regulations and the other provisions that we've talked about, we will prosecute.²³

Howick 2 March 1992

On 2 March 1992, a contract coal truck driver was fatally injured when crushed between an out of control RFW service truck and the rear of parked coal truck. Control of the service truck had been lost as it descended a service ramp to a coaling area.

An System Safety Accident Investigation was conducted which included the finding that:

"Loss of control of the RFW truck was the direct result of both transmission and other braking systems being ineffective. This in turn resulted from an almost total breakdown of effective maintenance systems at the mine."²⁴

²³ B. R. McKenney T 7245/6

²⁴ Ex.17.14 Annexure I

There are nine "Judgments of Need" in the SSAI Report. The first judgment finds that there was:

".. a need for the mine to develop and implement an effective maintenance program incorporating as absolute minimum requirements equipment manufacturer's maintenance recommendations and an effective system for the detection, recording and rectification of non-scheduled maintenance findings resulting from equipment defects." ²⁵

The other "needs" included such matters as operator training systems, the implementation of appropriate maintenance engineering, a review of operations controls on the movements, and parking of equipment in coaling areas.

Action taken in relation to this matter included a SSAI Summary being circulated to industry. The mine adopted and implemented a new "5 Star safety system" for the entire mine.

Examination on the failure to prosecute this matter proceeded as follows:

Q. So that there were gross breaches by that Company, you acknowledge, and though you say that they - was exemplified by a five star system which they adopted, they pulled their socks up, nonetheless, they were never prosecuted for what would appear to be clear breaches under the Occupational Health and Safety Act. Is that right?

A. There was - there was a prima facie case under the Occupational Health and Safety Act and there was no prosecution launched.

Q. Did you give thought to prosecution in that case?

A. I don't recall.

- Q. I mean, it is a pretty extreme case, is not it?
- A. They're all pretty extreme cases and the extent of failure of systems in the industry is so evident in all of them the focus has been to try to improve those systems.²⁶

In the matters outlined above there were no recommendations on file from inspectors to prosecute. In some other cases prosecution was recommended, and yet still no action was taken. In other cases members of the Inspectorate noted on the investigation files that prima facie breaches of the legislation had occurred, and recommended a prosecution under the *Occupational Health & Safety Act*. However, nothing was done (T7181; T7184-8; T2061).

These examples demonstrate that the Department did respond to each fatality in a number of different ways. The lessons arising from each fatality were not ignored. The initiatives were, in each case, commendable (seminars, safety alerts, Industry Guidelines, SSAI Reports). However, they did not include the prosecution of any company. The following was put to Mr McKensey:

- Q. But, see, my point is that they are not mutually exclusive - you can do both?
- A. I would agree and that will happen.²⁷

The approach of the Department of Mineral Resources stands in contrast to the Workcover Authority, which also has certain responsibilities under the *Occupational Health & Safety Act 1983*.

²⁶ B. R. McKensey T7216/7

²⁷ ibid T7207

The Draft Prosecution Policy of the Workcover Authority includes the following:

"5. GENERAL PROSECUTION PRINCIPLES

- 5.1 Workcover will bring prosecution proceedings to punish and deter offenders and to indicate that, in appropriate cases, legislative responsibilities will be enforced through the Courts.
- 5.2 Workcover is committed to a policy of prosecuting **whenever** serious breaches of the legislation take place. Serious breaches are those where there has been a fatality involved, potential risks existed for serious injuries or accidents, there has been a repetition of the offence, there are clear breaches of the Act, there is a community expectation that the defendant should be prosecuted, it is in the public interest to commence prosecution proceedings and so forth." (emphasis in original)

The Department of Mineral Resources has a duty to enforce the legislative intent of Parliament as expressed in the relevant legislation.²⁸ By enacting the *Occupational Health and Safety Act 1983*, and the *Coal Mines Regulation Act 1982*, Parliament has dictated the approach to be taken in relation to industrial safety in NSW.

²⁸

cf. Submission of company in MFI 91 Vol.2 paras. 23.3 p.453 & 23.9 p.455

In 1994/95 Workcover prosecuted 378 occupational and safety matters. Convictions were obtained in 92.2% of all matters heard by the Court, and a total of \$1.22M in fines for safety breaches were imposed. The level of costs awarded was approximately \$380,000.²⁹

In 1995/96 Workcover finalised 297 prosecutions. Convictions were obtained in 95% of all prosecutions heard by the court.³⁰

Workcover has also successfully prosecuted an employer where minor injury or no injury occurred, but high potential risk existed. In one such matter a worker was absent for one day when he was overcome by exposure to chlorine gas. The risk of such an incident had existed for a long period of time, and had been tolerated by the defendant company. A fine of \$50,000 was imposed.³¹

Mr McKensey, in the course of his evidence, appeared to recognise the need for change in his Department's approach to prosecution. The submission made on behalf of the Director General also appeared to acknowledge the same need. It said this:

"... the enforcement policy of the Department is being totally revised as a consequence of the Mine Safety Review Report and as a consequence of the rigorous and astute questions asked by Mr Kirby QC in the present inquiry....."³²

²⁹ Ex. 95.02 Workcover Authority Annual Report 1995

³⁰ Ex. 95.03 Workcover Authority Annual Report 1996

³¹ Ex. 95.02 Workcover Authority Annual Report 1995

³² MFI 92 p.180 para.C15

The Court believes there is an urgent need for change. There should be a Prosecution Policy. There should, in appropriate cases, be prosecutions. It is important that the industry knows when it makes decisions that it is accountable under the law for those decisions.

15 THE AFTERMATH

15.1 The Danger of Explosion

When the holing-in to Young Wallsend Colliery occurred, a substantial amount of water flowed into the Gretley mine. A seal has now been erected in C heading of MW 50/51, separating the old workings from the mine. As the old workings are no longer filled with water it is likely that gases will build up. The gases are potentially explosive. An issue, therefore, arose as to whether there was the potential for harm, either to the surface area via the shafts of the old workings, or to the Gretley mine itself. If such potential exists, how might it best be managed?

The purpose of sealing C heading is to prevent the intrusion of gas into the Gretley mine itself. (T9253). The mine manager, Mr Porteous, gave evidence that if the seal were not completely airtight, and gas escaped, and diluted into the explosive range, and were it to come into contact with an ignition source, there was the potential for explosion. Also, if the seal were breached, there was also the danger of asphyxiation for persons in the immediate vicinity (T9254).

So far as the surface is concerned, Mr Pala, a former manager, gave evidence in relation to the potential for explosion on the surface. Assuming gas within the drained Young Wallsend colliery workings were to escape from under the capping of the shafts, and assuming, further, that the gas is of a high percentage concentration (70-72%), then it is likely that the fringe of gas would burn, were it to come into contact with an ignition source. The reaction would, to some extent, depend upon the pressure of gas, and the rate of emission (T5795). Mr Pala considered that the possibility of an explosion was very remote. For there to be an explosion there would need to be somewhere for the gas to accumulate, whereas it

would dissipate into the atmosphere, as it escaped from under the cap. The most likely outcome, therefore, was that it would burn at the fringes, similar to gas burning on a stove (T5796). The sample of air taken in miniwall 51/52 on 25 November 1996 at the point of holing into the old workings, revealed a methane reading of 72% [Ex.57.05].

15.2 Investigation after the Inrush

By letter dated 14 January 1997, Mr W. R. Flett, senior inspector, expressed concern to the manager at Gretley in relation to the safety of the old Young Wallsend colliery shafts following the inrush. Mr Flett believed that the fill/water in the shafts had slumped, and that there could be a possible build up of explosive gases in the shafts. A meeting was held between management of the mine, a representative of the Mine Subsidence Board, a representative of the Lake Macquarie City Council and Mr Flett and Mr Van Dijk of the Department on 18 February 1997. Following this meeting the contractor who had originally filled the shaft was asked to provide details in relation to the original fill materials. Surveyors were engaged to identify the precise location of the shafts in relation to existing surface structures. A drilling contractor was engaged to ascertain, by drilling, the extent of any fill remaining in the shaft. [Ex.93.02].

On 11 July 1997 a meeting was held between representatives of the mine and the proposed drilling contractor, Mr Flett and Mr Cowan of the Department, and Mr Holland of the Council. There was a discussion as to preferred options for test drilling, and methods of further filling the shafts, if required.

Mr A. W. Ramsland for the Director General of the Department by letter of 19 September 1997 advised the company that, pursuant to Section 239(2)

of the Mining Act 1992, the Minister had amended the relevant mining lease relating to Gretley Colliery holding so as to include the following condition: [Ex.93.03]

"The lease holder must:

- (a) cause the abandoned shafts of the Young Wallsend Colliery to be filled and sealed to the satisfaction of the Minister; and
- (b) cause such filling and seals to be properly maintained

so as to prevent any noxious, explosive or inflammable gases accumulating in such shafts, or escaping from them into any part of the subject area or the excepted lands overlying the subject area."

On 24 September 1997 a risk assessment, in respect of accessing the shafts, was presented by the mine manager to a meeting between the Department and the company. Mr Van Dijk asked the mine to consider the use of an inert gas in the shafts to ensure that possible methane problems were further addressed. Agreement was reached that the actual work of accessing the old shafts would be carried out when there were no men in the mine [Ex.93.03].

At a meeting on 20 October 1997 between Messrs Flett, Van Dijk, and Anderson of the Department, with representatives of mine management, and the Newcastle Mines Rescue Station, there were discussions as to safety, accessing the shafts, and drilling through the shaft capping into possible explosive mixtures for the purpose of ascertaining the extent of fill. They also discussed the need for additional fill material in the shafts. The same meeting considered the adequacy of the present underground seal

in C heading outbye the point of the inrush from the old workings. Since the sealed area was no different to any other sealed area in the mine (such as in the Wallsend Borehole workings or goaf areas), it was considered that the present seal was adequate. Nevertheless, mine management indicated that it was evaluating the option of placing an explosion proof seal in this area, completely isolating the old workings, apart from a water trap in the seal [Ex.93.03].

Mine management have been required to prepare a management plan for the opening of the shafts and refilling them, if necessary, which was to be by pumping a flyash mixture into the shafts. The initial fill would use a flyash/cement mixture to ensure that there was a solid plug at the base of the refill material [Ex.93.03].

Before the work proceeds, there will be community consultation with residents of the area. The drilling contractor is on notice to carry out the work as required at short notice and, in the interim, there will be monitoring for methane gas in the area on a weekly basis [Ex.93.03].

The Court is of the view that if an explosion-proof seal is not installed, monitoring should continue, such that safety of the community and the underground workings, is assured.

16. CAUSES OF THE TRAGEDY

The evidence before the Inquiry has demonstrated serious shortcomings in the performance of the Department of Mineral Resources, in the context of Gretley, and that of the mining company, The Newcastle Wallsend Coal Company Pty Ltd. In the case of the mining company, the shortcomings were widespread. They appear to affect every level of management, namely successive mine managers, mine surveyors and certain undermanagers. They are dealt with in detail throughout the Report and are collected in the Summary of Findings. Those which appear to the Court to be most important and clearly linked, directly or indirectly, to the tragedy are as follows:

- First, the Department was responsible for the creation of RT 523, sheets 2 and 3, which misinterpreted sheet 1. The failure properly to interpret sheet 1 was the consequence of a lack of care on the part of the Department. Once created, these plans sat like a loaded gun in the archives of the Department, to be distributed from time to time to mining companies. A potential problem would become an actual problem, unless it were recognised beforehand.
- Second, there was a failure by the then mine surveyor (the late Mr Murray) properly to research the Young Wallsend Colliery before depicting the colliery on the mine plan, and in the section 138 application to the Department.
- Third, there was a failure by the mine manager, Mr Romcke, to determine the basis upon which the colliery had been depicted, and to recognise that the

task had not been properly performed.

- Fourth, there was a failure by Mr Porteous, who succeeded Mr Romcke as mine manager, to discharge the same obligation, namely to determine the basis upon which the old colliery had been depicted, and recognise that it had not been properly researched.
- Fifth, there was a failure by both Mr Romcke and Mr Porteous to prevent inrush by devising an appropriate strategy, and in failing to use the technique of risk assessment to assist them in determining that strategy.
- Sixth, there was a failure by the Department properly to appraise and evaluate the application by the company under s138. A flawed system was approved.
- Seventh, there was a failure by the new mine surveyor, Mr Robinson, to investigate the basis upon which his predecessor had depicted the Young Wallsend colliery, and to recognise that the issue had not been properly researched.
- Eighth, Mr Robinson in November 1996 did recognise that there was an issue concerning the depiction of the Young Wallsend colliery, but failed properly to investigate that issue.
- Ninth, in early November 1996 Mr Alston, the undermanager in charge, failed properly to investigate reports of water in 50/51 panel made to him by various deputies.
- Tenth, that on 13 November 1996, the day before the inrush, Messrs Coffey and Shacklady, both

undermanagers, failed properly to investigate the issues raised by the report of Mr McLean, a mine deputy, and failed to inform the undermanager in charge, Mr Pritchard, of the contents of that report.

17 RECOMMENDATIONS

Section 98 of the Act provides that the Court of Coal Mines Regulation shall make a report to the Minister stating the causes of the accident and its circumstances. The Court is permitted to add any observations which it thinks right to make. This is clearly an invitation to make, inter alia, recommendations in relation to the investigation, and particularly safety.

In the view of the Court the evidence disclosed a number of shortcomings in the legislation, Act and regulations, and administrative guidelines which require urgent consideration if the industry and the community is to be spared a tragedy similar to that which befell these unfortunate men on 14 November 1996. The following recommendations are made.

MINE SURVEYING

Views emerged on aspects of mine surveying which were disturbing and wrong. They were views said to be widely held by both mine surveyors and mine managers. The following assumptions were made in respect of certain plans:

- First, that any record tracing obtained from the Department could be relied upon as being accurate.
- Secondly, that whatever appeared on a certified plan could be relied upon as being accurate.
- Thirdly, that old plans were generally accurate, except perhaps for a "handful of metres".

None of these assumptions is warranted. Each plan must be taken at face value, and its reliability determined rather than assumed.

RECOMMENDATION 1

That steps be taken by the Department and the Coal Mining Qualifications Board to correct these views. Consideration should be given to the means by which the Industry can be re-educated on these matters (whether by alteration of syllabuses, alerting teaching institutions, seminars, safety alerts, amendment to the *Surveying and Drafting Instructions for Coal Mine Surveyors (Underground) 1984*, or other such means.

PLANS OPEN TO DOUBT

The *Surveying and Drafting Instructions for Coal Mine Surveyors (Underground) 1984*, Clause 2.6 (dealing with certification) makes provision for a surveyor to endorse the plan where he or she is in doubt as to the position of the workings. Such an endorsement is also good practice in respect of plans or drawings not required to be certified, where the surveyor has such doubts. Yet, few surveyors endorsed plans, even where they regarded aspects of the plan as open to doubt.

RECOMMENDATION: 2

That the Department take steps to encourage mine surveyors more freely to identify by endorsement aspects of plans or drawings produced by them which are open to doubt.

HISTORICAL RESEARCH

Historical research into an abandoned colliery is capable of providing insight. However, it requires a degree of skill, and knowledge of possible source material. Those skills, and that knowledge, are not taught in courses in respect of surveying or mine management.

RECOMMENDATION 3

That the Department take steps to ensure that historical research is included in the syllabuses issued by the Coal Mines Qualification Board for mine management and mine surveying, and that teaching institutions are so advised.

ARCHIVAL MATERIAL

Late in the Inquiry the Department obtained from State Archives the file maintained by the Inspectorate during the last years of the Young Wallsend Colliery [Ex.17.17]. That file, as one would expect, was invaluable in the interpretation of the mine plan. Had it been available to the Departmental draftsman who was required to interpret RT 523 sheet 1, sheets 2 and 3 would not have been drawn in the form in which they were produced. Had it been available to Gretley surveying staff, the error in sheets 2 and 3 would have been apparent.

RECOMMENDATION 4

The Department catalogue all relevant files and archival material (including surveyors' notebooks) associated with Record Tracings of abandoned workings.

PREVENTION OF INRUSH

Clause 8(3) of the *Coal Mines Regulation (Methods & Systems of Working - Underground Mines) Regulation 1984* requires the manager, in fulfilling his duty to prevent inrush, to have regard to such information as may be available from the Department. The abandoned workings of the Young Wallsend colliery were recognised by Gretley as a potential source of inrush. Successive mine managers relied upon the mine surveyor to view the original record tracing or mine plan. The Court has found that the mine surveyor did not do so. Expert evidence suggested that had he done so the unreliability of sheets 2 and 3 would have been apparent.

RECOMMENDATION 5

Clause 8(3) of the *Methods & Systems of Working - Underground Mines Regulation* be amended to include:

- (i) that the manager or his competent delegate view the original of all relevant plans held by the Department in respect of the abandoned workings.
- (ii) that the manager or his competent delegate seek out and view all relevant files (whether held by the Department or by state archives) relating to the abandoned workings.
- (ii) that the manager prepare a comprehensive report on the material examined pursuant to (i) and (ii) above (such as the report suggested in Appendix I).
- (iv) that the expression "competent delegate" of the manager may include a risk assessment team, or a suitably qualified member of it.

RISK ASSESSMENT

Risk assessment is a useful discipline. It ought to have been employed by Gretley in the context of the Young Wallsend Colliery. Had it been employed, it probably would have exposed the inadequate research and the false assumptions which lay behind the depiction of the old workings. The use of risk assessment is already widespread in certain areas (such as the introduction of new machinery). It should be required in respect of the prevention of inrush.

RECOMMENDATION 6

That Clause 8 of the *Coal Mines Regulation (Methods & Systems of Working - Underground Mines) Regulation 1984* be amended to require the manager to arrange for a risk assessment to be undertaken whenever mining operations give rise to the possibility of inrush.

RECOMMENDATION 7

That such risk assessment should examine, amongst other issues, the reliability of existing plans and the practicability of draining the old workings, (which should be the preferred option).

RECOMMENDATION 8

That the Department, as part of the Section 138 process, review the adequacy of the risk assessment.

Risk Assessment contd.**RECOMMENDATION 9**

That the guidelines used by inspectors under Section 138 be amended to require such a review.

THE BOREHOLE RULE

It was apparent that Clause 9 of the *Coal Mines Regulation (Methods & Systems of Working - Underground Mines) Regulation 1984* (the "Borehole Rule") was widely misunderstood. Many believed that it was only necessary to drill ahead when intruding upon an area 50 metres from old workings, measured from the perimeter of the plan. That view assumes that the plan is accurate, or substantially accurate. The accuracy of the plan, however, is an issue which must first be determined. It is only appropriate to take the perimeter of the plan as the point from which the 50 metres is measured where the position of the old workings is known with reasonable certainty. Where the location is known with little confidence, research and analysis must be undertaken to determine the likely extent of the old workings. In that circumstance, drilling in excess of 50 metres will be required.

RECOMMENDATION 10

That an Industry Committee give consideration to the reformulation of Clause 9 to make it clear that the perimeter of the plan should only be used for the purposes of measuring the 50 metres referred to where the position of the old workings is known with reasonable certainty, and that such committee consider the means by which the outline of the old workings may be established with reasonable certainty.

THE BOREHOLE RULE: WORKINGS ABOVE AND BELOW

The separation between the Young Wallsend seam at Gretley (being the upper seam) and the Borehole seam (the lower seam) was 18 metres. It was suggested by certain witnesses that the 50m mentioned in Clause 9, *Methods & Systems of Working - Underground Regulation* was not a horizontal or in-seam distance, but formed a sphere around the workings. The 50 m appears to refer to the horizontal plane, i.e. the seam being worked. That view is consistent with the precaution required, namely boreholes in advance and flank boreholes. The issue concerning the proper construction of Clause 9, nonetheless, drew attention to the absence in that clause of any specific reference to accumulations of water above or below the seam being worked. Such accumulations may impact upon the active seam, especially where there is a pressure head, and where the separation is not substantial.

RECOMMENDATION 11

That an Industry Committee give consideration to Clause 9 being amended to specifically address accumulations of water in disused workings or seams above and below the seam being worked.

BOREHOLE RULE: DRILLING PATTERN

Clause 9 of the *Coal Mines Regulation (Methods & Systems of Working - Underground Mines) Regulation 1984* (the Borehole rule) does not specify a drilling pattern other than that it must include at least one borehole in advance, near the centre of the workings, and sufficient flank boreholes on either side of the workings. Certain inspectors expressed the view that the drilling pattern was not their concern. It was a matter for the mine manager. The Court believes that view to be inappropriate. The Department should, in the interests of safety, review the drilling pattern proposed.

RECOMMENDATION 12

That Clause 9 be amended by obliging the manager to prepare drilling rules to be submitted to the district inspector for confirmation prior to the commencement of drilling . These rules are to include as a minimum:

- (i) a quantification of the volume and pressure of the impounded water being drilled towards, or a quantification of the pressure, volume, toxicity or explosiveness of gases being drilled towards.
- (ii) a drilling pattern designed to ensure that a safe zone always exists between the disused workings and the active workings.
- (iii) control measures such as stand pipes and blow out preventors to ensure any deliberate or inadvertent holing will not result in an uncontrolled release of water and/or gas.
- (iv) training programmes for all employees.
- (v) methods to permanently fill and seal drill holes if the need arises.

The district inspector, before giving confirmation of the rules, may amend or supplement the rules for the purposes of ensuring safety.

RESPONSIBILITY FOR DRILLING

Clause 37 of the *Coal Mines Regulation (Manager & Officials - Underground Mines) Regulation 1984* requires the undermanager to ensure compliance with Clause 9 of the *Methods & Systems Regulation* (the Borehole rule). Clause 9 is included in Part III of the *Methods & Systems Regulation*, which is concerned with the prevention of inrush. It is the manager who has the obligation to prevent inrush. He should also have the obligation to ensure compliance with Clause 9, it being recognised as an important precaution in the prevention of inrush. In the case of Gretley, the manager was unaware of discussions between undermanagers concerning drilling ahead, and was less than completely aware of the reasons why it was thought desirable. Had the manager been responsible for drilling, the outcome may have been different.

RECOMMENDATION 13

Clause 37 of the *Manager & Officials - Underground Mines Regulation* be deleted from the duties of an undermanager, and inserted in the duties of the manager in the same Regulation.

THE SECTION 138 APPROVAL PROCESS

The approval process failed in respect of the Gretley application for two reasons. First, the inspectors relied upon the certified plan. The system was defective in that it did not require them to question the information which appeared on it. The central issue raised by the application, in terms of safety, was thereby removed from scrutiny. Secondly, the inspectors approached their task seeking not to interfere unduly with the discretion of the mine manager, he having the primary responsibility for mine safety. Although unquestionably the mine manager does have the primary responsibility for formulating a strategy to deal with known hazards, the inspectors' role must be to question that strategy, examine the assumptions upon which it is based (including any in respect of the plan), and seek, by dialogue and the imposition of conditions, to enhance safety. The Department's approach to issues of safety should be as rigorous as that presently adopted in respect of subsidence.

RECOMMENDATION 14

That the guidelines used by inspectors in the assessment of a Section 138 application be amended to emphasise these aspects of their role.

RECOMMENDATION 15

That paragraph 2.2.6 of the guidance notes should be amended to make it consistent, as far as proposed precautions are concerned, with other sections;

SECTION 138 APPLICATIONS AND FIRST WORKINGS

The intrush occurred in C heading 50/51 Panel. C heading was part of a three heading development, referred to as first workings. The heading were driven to permit the installation of the miniwall, which would then extract large blocks of coal (second workings). There is no obligation under S138 to seek the Department's approval for first workings. The Department's supervision, through the approval process, when properly performed, is an important safeguard. Since first workings are intimately associated with the extraction which will follow, the approval process under Section 138 should extend to first workings.

RECOMMENDATION 16

That Section 138 of the Act be amended so that first workings associated with longwall, miniwall and pillar extraction should require approval as part of the S138 process.

TIME LIMITS IN RESPECT OF SECTION 138 APPLICATIONS

Mistakes were made in a variation application by Gretley lodged in August 1995. They appear to have arisen from the extreme haste with which the application was processed. Vital safety issues were overlooked by both the company, and the Department.

Consideration should be given to imposing a statutory minimum time to review Section 138 applications. Unseemly haste can be attached to these applications due to:

- (i) late submission; and
- (ii) the need for urgent approval to avoid loss of time, production and jobs.

Whilst these matters are important, they must be subservient to safety. The process of review should be sufficient, but not hurried. The Inspectorate should be able to review an application without external pressures. A minimum time constraint on review would force companies into longer term planning. As a result they too should benefit from a more considered approach to applications. A discretion should be given to the Chief Inspector, in exceptional circumstances, to vary the period, upon written application by the company.

RECOMMENDATION 17

That Section 138 of the Act be amended so that

- (i) a minimum review period of 4 months be specified for all Section 138 applications.

Time limits in respect of Section 138 Applications (cont.)**RECOMMENDATION 17**

- (ii) all variations to a Section 138 approval, other than those specified as of a minor nature, be submitted to the Inspectorate for review; and
- (iii) a minimum review period of 1 month be specified for applications to vary approved Section 138 plans.
- (iv) that the Chief Inspector be given the power to vary the period upon written application by the mining company, provided always that the time designated by the Chief Inspector shall be sufficient to consider all aspects of mine safety.

YOUNG WALLSEND COLLIERY

The Young Wallsend colliery, having been substantially emptied of water as a result of the inrush, poses a potential hazard, both in respect of the surface and underground. That hazard, in each area, is being addressed. Nonetheless, issues remain which will require continuing assessment.

RECOMMENDATION 18

That the Department supervise the implementation of a management plan which deals with the remaining hazards associated with the Young Wallsend colliery, both underground and on the surface.

WORKINGS IN A NUMBER OF SEAMS

The Gretley mine was working in the Young Wallsend Seam. It believed that the Young Wallsend colliery had worked both the Young Wallsend Seam and the Borehole seam. The mine plan of Gretley showed only the workings which the mine believed were the workings of the Young Wallsend colliery in the Young Wallsend seam. Arguably, under Clause 13(3)(b) of the *Coal Mines Regulation (Survey & Plan) Regulation 1984*, the mine plan ought to have shown both seams. Unquestionably it would have been an advantage had it done so.

RECOMMENDATION 19

That Clause 13 of the Survey & Plan Regulations be amended to make it clear that the mine plan should show (at least by dotted outline) workings in other seams, whether abandoned or otherwise.

SPECIAL BARRIER

The issue of whether, in the allocation of the mining lease to the Gretley Colliery, the Department ought to have imposed a special barrier around the Young Wallsend Colliery, received little attention during the course of evidence. It was, nonetheless, the subject of voluminous submissions by the company after the close of evidence. The suggestion was that in the allocation of a lease there is the opportunity for the Department to research, from amongst its own archives, any abandoned workings within the area to be allocated, and to impose a special barrier if that research suggested some uncertainty as to the position or extent of such workings.

RECOMMENDATION 20

The Court does not believe that it is in a position to make a recommendation. The issue was not fully investigated before it. Nonetheless, an Industry Committee should investigate the utility and feasibility of requiring the Department to make such an investigation, and to impose such a barrier.

SECTION 12 OF THE ACT

Evidence before the Inquiry established that the Inspectorate was not complying with Section 12 of the Act which provides as follows:

"Annual reports by inspectors

12(1) Each inspector appointed under section 7(1)(c)-(h) shall, at such time or within such period as the Chief Inspector may direct, make an annual report of his official activities during the preceding year to the Chief Inspector.

(2) The reports referred to in subsection (1), as summarised by the Chief Inspector, shall be furnished by the Chief Inspector to the Minister."

This Section is considered important and a source of necessary information for the Minister.

RECOMMENDATION 21

That the Inspectorate be required by the Director General to comply with all of the provisions of Section 12.

INVESTIGATION

Part 4 of the *Coal Mines Regulation Act 1982* sets out (inter alia) the powers of inspectors in relation to entry and inspection of coal mines and provides for examination and inquiry of persons associated or connected with a mine. The powers given by Section 59 of the Act are wide, as are supplementary powers given by Section 60 of the Act.

Section 60(1)(a) is a very important provision which enables an inspector investigating an accident to obtain information at an early stage while the relevant events are fresh in the minds of those sought to be interviewed and before such persons become liable to interference. Other provisions give the person interviewed protection, against use of his answers in evidence against him, subject to certain exceptions.

The inspectors investigating the Gretley accident were met with a demand that such questions as they desired to ask be put in writing and the interviewee be permitted to answer in writing. These demands, made on behalf of some witnesses, were said to be upon legal advice that they were entitled to have the inspector's questions handled in this manner. Similar demands have apparently been made in other investigations.

The result was that the interview process was seriously affected. Instead of it having the immediacy it clearly required this was prevented and the process taken out of the hands of the inspectors who no longer had control over it. In the result the inspectors were unable to deal by way of further questioning with answers not to the point of the questions or with answers which raised other matters which required, perhaps, clarification.

In the Court's view, the demand that the above procedure be followed was

Investigation contd.

without legal justification. Nothing in the Act supports it at all. However, the Court considers the matter important to the proper adequate and immediate investigation by inspectors of the subject matter of Sections 59 and 60.

RECOMMENDATION 22

That the Act be altered to provide that persons interviewed by inspectors pursuant to the provisions of Sections 59 and 60 of the *Coal Mines Regulation Act 1982* are required, unless excused by such inspector, to reply orally and forthwith to all questions put to them by such inspectors.

**INVESTIGATION OF DEATHS, SERIOUS BODILY INJURIES AND
DANGEROUS OCCURRENCES**

The Department's role, and that of the district inspector, where there is a fatality, serious bodily injury or dangerous occurrence should be examined. There are, at present, two inhibitions to such an examination. First, there is the natural reluctance of officers of the Department to examine critically their own actions, or those of colleagues. Secondly, where they overcome that reluctance, and make such an examination, there is an obvious conflict of interests.

RECOMMENDATION 23

That in respect of fatalities, serious bodily injuries and dangerous occurrences there should be an investigation by the district inspector which should include:

- (a) the gathering of documents;
- (b) obtaining statements from relevant witnesses;
- (c) a statement from the district inspector as to his involvement with the mine and the approval process;
- (d) a report.

RECOMMENDATION 24

That there should be established an autonomous unit within the Department responsible for the investigation of fatalities, serious bodily injuries and dangerous occurrences, and that such unit should examine the role of the Department and inspectors of the Department in the circumstances leading up to the fatalities, serious bodily injuries and dangerous occurrences.

Investigation of fatalities, serious bodily injuries and dangerous occurrences cont.

RECOMMENDATION 25

That the autonomous unit should report directly to the Director General rather than the Chief Inspector, and have at least one full-time officer at the level of senior inspector, together with appropriate secretarial assistance.

RECOMMENDATION 26

That such unit should, in consultation with the Chief Inspector, be provided with such additional assistance from inspectors within the Department and/or consultants, as is required.

RECOMMENDATION 27

That members of the autonomous unit should have the powers of an inspector under the *Coal Mines Regulation Act 1982*.

RECOMMENDATION 28

That the district inspector upon receipt of a Notice under Section 86 of the *Coal Mines Regulation Act 1982*, shall forthwith give a copy of such notice to the autonomous unit.

Investigation of fatalities, serious bodily injuries and dangerous occurrences cont.

RECOMMENDATION 29

That the autonomous unit shall thereafter investigate all fatalities, and such serious bodily injuries or dangerous occurrences as the unit believes warrant investigation, provided that the Chief Inspector may at any time request that the unit investigate a particular serious bodily injury or dangerous occurrence.

RECOMMENDATION 30

That the district inspector, upon completion of the investigation, should provide such unit with the material referred to in (i), provided that:

- (a) the autonomous unit may liaise with the district inspector during the course of the district inspector's investigation;
- (b) that the autonomous unit may itself begin its investigation of a fatality, serious bodily injury or dangerous occurrence during the currency of the investigation by the district inspector.

RECOMMENDATION 31

That the report of the autonomous unit in respect of a fatality, serious bodily injury or dangerous occurrence should be made public, subject to the right of the Director General, in circumstances of a proposed prosecution, to defer publication of the report, or aspects of the report, pending such prosecution.

Investigation of fatalities, serious bodily injuries and dangerous occurrences cont..

RECOMMENDATION 32

That where a person from the Department provides assistance to the autonomous unit, or provides evidence to a Court or Inquiry, it shall be an offence to disadvantage such person in their employment by reason of such assistance or evidence, as the case may be.

REPORTS BY DISTRICT INSPECTORS

District inspectors prepare reports in respect of mining accidents and dangerous occurrences. The reports are often detailed, and take some time to prepare. They usually incorporate recommendations. They are submitted to the Chief Inspector. They are not published, nor available to the public. Procuring copies of the Inspectors' reports in respect of the Endeavour Inquiry took unusual persistence on the part of a person who had been involved in the investigation, (being the district check inspector). That person was ultimately required to make an application under the Freedom of Information legislation.

RECOMMENDATION 33

The reports of inspectors in respect of mining accidents, and incidents should be available upon request. The Department may, if it chooses, make it clear that it does not formally adopt or endorse the comments and recommendations of the inspector.

EXAMINATIONS AND INSPECTIONS - SECTION 91

The Section requires an inspector and a check inspector to whom notice has been given of an accident or a dangerous occurrence at a mine to visit the mine as soon as practicable after receipt of the notice and to complete their examinations and inspections as expeditiously as the circumstances permit. Certain inspectors hold the view that section 91 requires nothing more than attending the mine and looking at what is to be found in connection with the accident or dangerous occurrence. This would be a less than valuable exercise.

RECOMMENDATION 34

That Section 91 of the Act be amended to require the inspector concerned to furnish a full report of his examination and inspection including conclusions and recommendations to the Chief Inspector.

CLOSING OF SHAFTS IN ABANDONED MINES

The potential hazards of abandoned shafts that have not been filled correctly, either at the time of abandonment or subsequently, have been highlighted by the Inquiry. Section 121 of the Act only refers to providing closed shafts and outlets with approved plugs, seals, barrier or enclosure. Permanent filling of abandoned shafts should be provided for in legislation.

RECOMMENDATION 35

Add to Section 121(1):

- (c) if required by the district inspector such shafts and entrances shall be permanently sealed.

DRILLING OF BOREHOLES

Section 135 of the Act relates to boreholes used to prove coal. During the Inquiry, boreholes were proposed to "prove the ground" ahead of workings. It is uncertain if this Section applies to Clause 9, *Methods & Systems of Working* boreholes.

RECOMMENDATION 36

Section 135 should be amended to cover the drilling of boreholes to prove ground.

ASSESSORS

Section 152 of the Act sets out the jurisdiction of the Court. Section 151 specifies those parts of the jurisdiction which require the participation of assessors. An investigation under Section 95 neither requires nor permits the appointment and participation of assessors.

The predecessor to the present Act, the *Coal Mines Regulation Act, 1912-1953*, by section 33 required the appointment of assessors to assist the Court in all proceedings before it. Such assessors were required to be persons having practical experience in coal-mining and to be appointed from persons nominated by those interested in the proceedings. The assessors had the power to advise not to adjudicate, and the Court had the right to consult the assessors collectively or individually in public or in private.

In the experience of those familiar with the history and work of the Court, the value of the assistance of such experienced persons as assessors was indubitable. Why then were they excluded from Section 95 investigations? Reference to the second reading speech of the Honourable D. P. Landa (Minister for Energy, Minister for Water Resources and Vice President of the Executive Council) on the Coal Mines Regulation Bills on 6 April 1982 in the Legislative Council (Volume 168 of Parliamentary Debates at page 3425), suggests that the failure to provide for assessors in Section 95 investigations was nothing less than a draftsman's error, not noticed by those in charge of the Bills. At page 3424 of his introduction of the Bills in the second reading speech, Mr Landa said:

"The Minister may direct a Court of Coal Mines Regulation to hold an inquiry into the cause and circumstances of the

Assessors contd.

incident ... Where the Minister directs the Court to hold an inquiry the judge will be assisted by two assessors having practical mining experience. Similar provisions for reports and inquiries are provided for by the 1912 Act."

RECOMMENDATION 37

That Section 152 of the Act be amended to include investigations under Section 95 among those matters in Section 151 which require the appointment of an assessor or two or more assessors.

PROSECUTION POLICY

No mining company (or senior official) has been prosecuted under either the *Coal Mines Regulation Act 1982* or the *Occupational Health & Safety Act 1983* since April 1990. The Court suspects that before 1990 the position was little different. Since 1990, however, there have been more than 33 deaths, and a number of serious incidents. Many of the fatalities involved gross negligence, and breaches of the law. The Department's inaction is in part the consequence of its not having a documented prosecution policy. The Court believes that such a policy is now being drafted. An attitudinal change is also required. Prosecution has a place in securing mine safety. The statutes create offences. Mining companies and senior officials must be made aware, by timely prosecution, that they are accountable under the law for their actions.

RECOMMENDATION 38

That the Department formulate a prosecution policy.

RECOMMENDATION 39

That the Department encourage inspectors to identify serious breaches of the law where they are perceived.

RECOMMENDATION 40

That inspectors be given training in conducting investigations, and gathering evidence, with a view to such evidence being used in a prosecution, if appropriate.

Prosecution Policy contd.**RECOMMENDATION 41**

That the Department, subject to the terms of its policy, prosecute such breaches.

RECOMMENDATION 42

That the Chief Inspector report to the Minister of Mineral Resources on an annual basis as to prosecutions undertaken.

CONSIDERATION OF PROSECUTION

The inspectors, and the Court, are each given powers to compel witnesses capable of giving relevant evidence to give such evidence. The answers provided to the inspectors, or evidence given to the Court under compulsion, is not admissible in evidence in court proceedings against the person providing such evidence (subject to an exception not here material). Some, but not all, of the evidence before the Court would be inadmissible upon this basis. A careful assessment is required to determine whether there is admissible evidence of offences having been committed.

RECOMMENDATION 43

In respect of The Newcastle Wallsend Coal Company Pty Ltd that the papers be referred to the Crown Solicitor with a view to his determining whether offences have been committed under Sections 15 and 16 of the *Occupational Health and Safety Act 1983*.

CONCLUSION

At the first sitting of the Court I said:

"Clearly the public importance of the investigation concerned with the sudden and tragic deaths of the four men requires that every effort be made to place before the court all available evidence which will enable a decision to be made by it on the causes and circumstances of the accident. Nothing less than a full and searching investigation will satisfy the interests of the public and the more acute and personal interests of the relatives of the unfortunate deceased men."

I am able to report that a full and searching investigation has been conducted. This resulted in almost 10,000 pages of evidence and hundreds of exhibits being produced. Counsel who appeared were assiduous and their helpful final written submissions ran to over 2,000 pages. I am grateful to them for their efforts. I am particularly grateful for the thought, care and exceptional devotion to his task of Senior Counsel Assisting, Mr David Kirby QC.

I should express appreciation to Mr Steve Davidson, the Registrar of the Court, and to his successor, Mr Ian Fathers, for their important administrative work including the handling of the exhibits and the organisation of courts and court sitting times.

The time occupied by the investigation Sir, greatly exceeded what was thought would be needed before it was embarked upon. However, the Court hopes that its findings and recommendations will make all worthwhile and contribute to the future safety of those who labour in the underground mines of this State.

Yours faithfully



J.H. STAUNTON
acting Judge

COURT OF COAL MINES REGULATION

23 June 1998

APPENDIX I

DRAFT REPORT OF MINE MANAGER FOR THE IDENTIFICATION OF THE LOCATION AND EXTENT OF OLD WORKINGS

(Produced as part of Exhibit 61.05 by Mr P. Hall QC.)

1. Inquiry and information guidelines

- 1.1 Will the proposed workings in the mine exist in the vicinity of any disused workings (hereinafter referred to as *old workings*)?
- 1.2 If 1.1 is answered affirmatively, has inquiry been undertaken and completed in order to establish
 - (a) the location; and
 - (b) the extentof old workings?
- 1.3 If 1.2 is answered affirmatively, identify by appropriate description the information obtained for the purpose of the inquiry therein referred to.
- 1.4 In relation to each item of information referred to in 1.3, specify the source from which such information was obtained (the colliery's archives, Departments of Government, neighbouring colliery archives or other sources).
- 1.5 In relation to each item of information referred to in 1.3, specify:

- (a) Which, if any, items of information are primary sources of information (record tracings, mine working plans, mine surveyor's notes or otherwise); and
- (b) Whether the same has been certified or by other means authenticated as accurate.

1.6 In relation to each item of information referred to in 1.3 which is not a primary source of information referred to in 1.5(a) (reproductions, copy documents or otherwise):

- (a) Is the primary source of information for that reproduction, copy etc available?
- (b) If the primary source is available, has it been inspected?
- (c) If the primary source is not available, is there other information available which corroborates, verifies or otherwise provides support for the reproduction or copy as sufficiently reliable information for the purposes of Clauses 8(1), 8(2), 8(3) and 9 of the *Coal Mines Regulation (Methods & Systems of Working - Underground Mines) Regulation 1984*?
- (d) If 1.6(c) is answered affirmatively, identify by description each item of information which provides such support.
- (e) In the case of either 1.6(a) (primary source available for reproductions etc) and/or 1.6(c) (information providing support for reproductions etc), does such information (along with other information) enable an accurate determination to be made as to:
 - (i) the location; and
 - (ii) the extent

of old workings? If yes, identify the information.

1.7 Does any of the information referred to in 1.5 enable an accurate determination to be made as to:

- (a) the location; and
- (b) the extent

of old workings? If yes, identify the information.

2. Report on inquiry into old workings

2.1 Note 1. Has the location and extent of old workings been identified?

2.2 Note 2. State the means by which the old workings and their extent have been located.

2.3 Note 3. Based on the information identified above, I/we certify:

2.3.1 A complete examination of such material has been undertaken by me/us in consultation with the mine surveyor.

2.3.2 I/we am/are satisfied that all available information within the meaning of Clause 8(2) of the above Regulation has been obtained and examined and that there is no other such information available.

2.3.3 Based on my examination of the information, I certify:

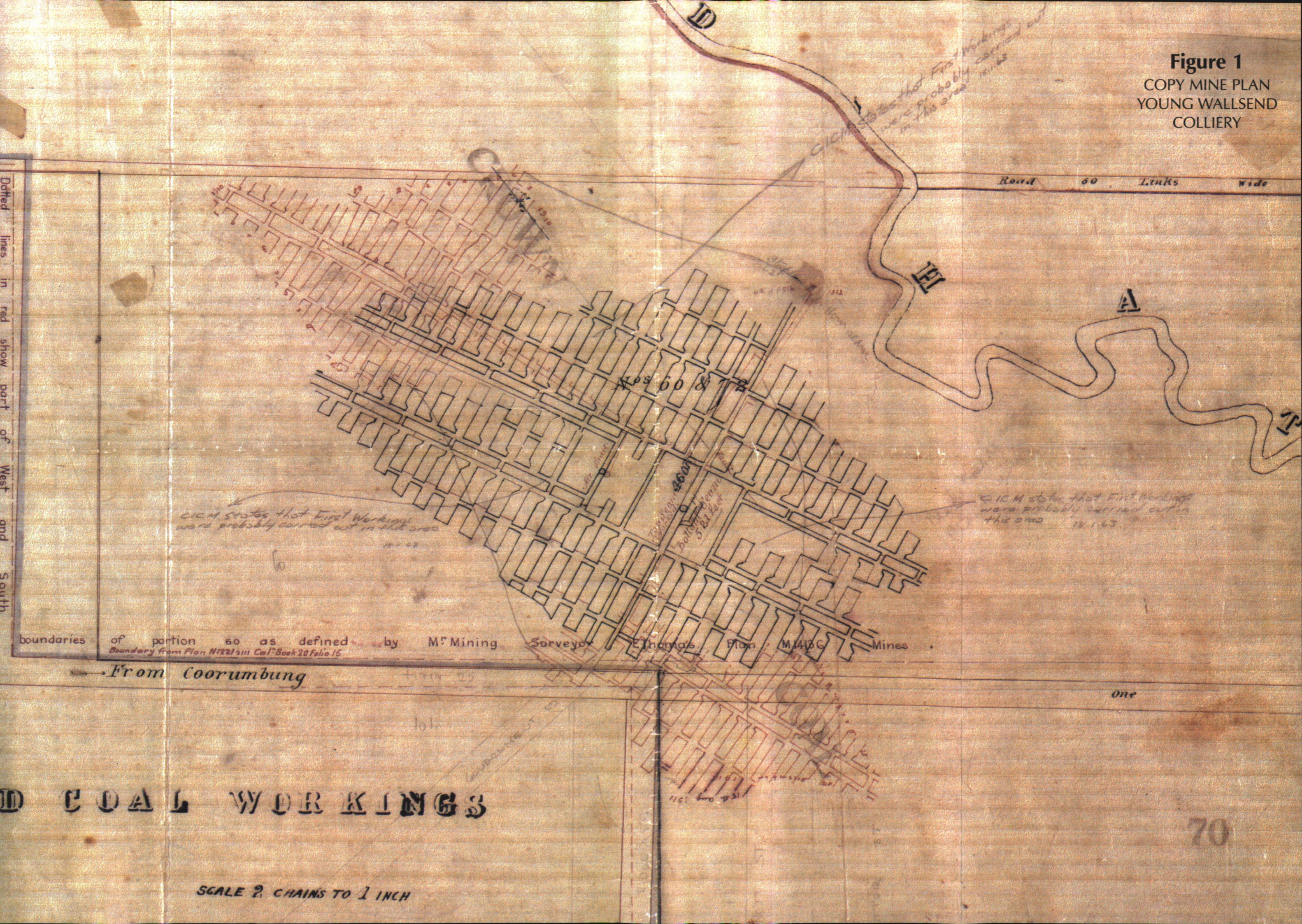
- (i) That the information does permit the location and extent of the old workings relevant to the Section 138 application to be accurately determined.

- (ii) That the location and extent of all old workings in the vicinity of the proposed mine workings have been accurately determined and have been accurately depicted in mine working plan number , dated and signed by me, a true copy of which is annexed to this report and marked 'A'.

Dated

Mine manager

Figure 1
COPY MINE PLAN
YOUNG WALLSEND
COLLIERY



Dotted lines in red show part of West and South

boundaries of portion 60 as defined by M^r Mining Surveyor E. Thomas Plan M1436 Mines

From Coorumbung

COAL WORKINGS

SCALE 2 CHAINS TO 1 INCH

70