

METHODOLOGY

1. The Inquest devoted a significant proportion of its time not only to the concept of a public event but also to the issue of methodology. The weight of evidence relating to this topic was such that the methodology utilised by Mr. Rod McCracken of Controlled Blasting Services of Controlled Blasting Services was the primary factor contributing to the death of Katie Bender.
2. The attempted demolition on Sunday 13th July 1997 of the Main Tower Block and Sylvia Curley House became an explosion rather than an intended implosion. The explosion was simply due to the volume of explosives used in the detonation. There was also a reconfiguration of those explosives which was a substantial departure from the original proposed methodology. An additional factor relevant to the large amount of steel and debris being projected across the lake in the direction of thousands of spectators was the lack of protective measures on those portions of the building exposed to the general public.
3. The methodology issue is primarily a factual matter. There is very little or no substantial factual controversy between the principal parties to the Inquest as it solely relates directly to the manner in which the explosives were applied to the Main Tower Block and Sylvia Curley House. There is no real dispute that the amount of explosives and the configuration of those explosives was not only a factor in the causation process but also in identifying the persons who caused or contributed to Katie Bender's death.
4. There were a number of factors which relate to the demolition procedure utilised by the demolition subcontractor, Mr. McCracken, which caused the death of Katie Bender. Those factors were: -
 - a. The difference in the method initially proposed and the methodology that was ultimately applied,
 - b. The increased quantity of cartridge explosives,
 - c. The reconfiguration of the blast,
 - d. The failure to use specialised cutting charges,
 - e. The failure to set a safety exclusion zone,
 - f. The lack of protective measures, and
 - g. The failure to test the methods used.

The significance of certain observations made by some of the on site visitors also requires consideration in the terms of the methodology employed by Mr. McCracken.

The Proposed Workplan and Methodology

1. The contract for the demolition of the Main Tower Block (Stage 1) was Exhibit 106. The contract for the demolition of Sylvia Curley House and associated structures (Stage 4) was Exhibit 107. Under the heading Investigation and Planning (Specification 5) there is a requirement for a workplan. It reads, "obtain approval of the workplan by both the regulatory authority and the Superintendent before commencing demolition or stripping work".
2. Specification 11 is headed "Demolition Plan".

"The contractor is to submit within 7 days of the letter of acceptance, a 'Demolition Plan' as required by the Code of Practice (the *ACT Demolition Code of Practice*).

"The Demolition Plan is to be submitted to the Superintendent for approval. The contractor shall not commence any work on the site until such time as the 'Demolition Plan' has been approved by the Superintendent and the relevant statutory authorities.

The Demolition Plan is to include: -

- a. Method statement for the removal/disposal of spoil and the removal and recycling of materials,
- b. Dust control plan,
- (c) Pollution control measures,
- (d) Noise control measures,
- c. Safety plan,
- d. Method of demolition,
- e. Demolition programme,
- f. Organisational chart for the project, and
- g. Other relevant information".

1. Both contracts clearly imposed upon Mr. Fenwick of CCD an obligation to file with PCAPL for their prior approval a detailed workplan and then having that plan certified by a structural a engineer (Specification 18 previously discussed) before starting any work on site. There is no escaping the fact that the work did commence without such documents being filed or the requisite approvals or certifications being obtained. The first real opportunity for PCAPL or TCL to inform themselves in an objective way about the proposed

methodology of CCD and CBS occurred only after the workplan was finally provided to PCAPL on 16th May 1997. It required the intervention of ACT WorkCover before the document was ultimately provided. The work had been continuing for almost three weeks before the arrival of the methodology plan.

2. Mr. Dwyer of PCAPL as the Project Manager and Superintendent was responsible to the principal (the Australian Capital Territory) for the proper administration of the contract. It is clear evidence that the work had commenced and was permitted to continue in clear breach of the contract. Mr. Dwyer had full knowledge that the work was being carried out. No matter how the submission is expressed by Counsel for PCAPL very clearly his client had failed to comply with the contract in permitting the work to go forward without Mr. Fenwick or Mr. McCracken providing a workplan or methodology. Any number of reasons may be available for the delay but there simply is no excuse for what occurred. It is not a satisfactory explanation to say that Mr. McCracken's methodology changed gradually between 29th May 1997 and 2nd July 1997. Even though the changed methodology was presented at a meeting with WorkCover on 2nd July 1997 the fundamental problem existed from about 23rd April 1997 when the work had commenced without a plan being submitted and approved not only by PCAPL but also the government regulatory bodies.

9. When the workplan was eventually submitted there were essential items of methodology absent. There was for example no information regarding:-

- a. The quantity and configuration of explosives to be used,
- b. The safe exclusion zone, except that there would be one at a time when all concerned knew there were going to be spectators in attendance,
- c. Protection to be employed to control flying debris other than items such as sandbags and carpets around the individual columns, and
- d. Any other type of explosives to be used as "kick charges".

10. The only mention of engineering advice was a statement that it would be obtained before any cutting of steel took place. The evidence is that when Mr. Adam Hugill of Northrop Engineers attended on the site in the period prior to 23rd May 1997 certain columns had been cut without engineering advice. Mr. Hugill was also critical the cutting of columns could give rise to an instability in the structure.

11. Any reader of the workplan would conclude that the methodology to be adopted was of the following nature: -

- a. Supervised pre – weakening of the steel columns in order to minimise the amount of specially designed shaped

- charges and therefore the overall quantity of explosive to be used,
- b. That the specially designed shaped charges would be placed at the top and bottom of each column after pre – weakening,
 - c. That in order to reduce air blast and fly, the location of each charge would be surrounded by sandbags and in some cases carpet although this was never identified, and
 - d. That no other type of explosive was contemplated.

THE LATER WORKPLAN AND METHODOLOGY

12. The differences in the workplan and the methodology as originally submitted were: -

- a. Cartridge explosives were used exclusively in quantities well exceeding the kick charge levels and no cutting charges were used,
- b. Mr. McCracken stated on 2nd July 1997 at the meeting convened by WorkCover concerning the Hospice that he intended using 130kg of explosives whereas he used 500kg's, about 385% more explosives than originally planned (see further paragraph 18 herein),
- c. The direction of the blast was reconfigured away from the Hospice to ensure its protection and consequently directed towards and across the lake. The damage to the dining room apparent on the video, the public compilation video, the public photographs and the lack of debris in the direction of the Hospice dramatically show that this configuration resulted in the blast being directed towards the lake where thousands of spectators had gathered,
- d. A lack of protective measures when sandbags, carpet chain wire and bund walls were proposed to be used,
- e. Backing plates were inserted into the webs and used without ever having been tested as a method,
- f. The quantity of explosives actually used with the backing plate methodology was never the subject of any testing by Mr. McCracken prior to the 13th July 1997. The only testing carried out was on a smaller column that was not under compression,
- g. The exclusion zone was determined by a means of rough opinion rather than specific calculation. It was never reassessed after the configuration nor after acknowledgement by Mr. McCracken to both Channel 10 and Mr. Dwyer that the columns may shatter and material may be directed away from the building,

- h. On the evidence of Mr. Ashley the half moon cuts were designed for an induced collapse not an implosion. On the evidence of Mr. Loizeaux and Mr. Rech the columns could

never have kicked out as planned. Mr. McCracken also included in the Appendix K response the diagonal cut diagram, representing it as an approved method of pre – weakening despite his agreement with Mr. Ashley that this method would not be used,

- i. The comments made by Mr. Ashley in that the building was liable to shatter became true on the day of the implosion,
- j. Specialised cutting charges changed from being the only proposed method of severing steel and the only type of explosive mentioned, to not being used at all, despite Mr. McCracken’s representation to the contrary only days prior to the implosion, and
- k. The general failure to comply with the ACT Demolition Code of Practice.

12. The methodology required a close and meaningful scrutiny by Mr. Fenwick (CCD) of the methodology being employed by Mr. McCracken. It was CCD who contracted with the ACT to demolish the Main Tower Block and Sylvia Curley House and who had recommended Mr. McCracken. The contracts with CCD made it clear the ACT was the principal and that PCAPL was the Superintendent. The contractor Mr. Fenwick CCD was legally bound to work in consultation with PCAPL.

Increased Quantity of Cartridge Explosives

14. Mr. McCracken was solely responsible for deciding the quantity of cartridge explosive to be used on each column of the buildings.

Mr. McCracken acknowledged his responsibility in this task. He was unable to produce any contemporaneous record detailing to any extent how much explosives were actually placed on each individual column. The failure to keep such records was said by Mr. McCracken to have been a deliberate decision and part of his normal practice not to keep such records.

15. Mr. J. Mark Loizeaux of Controlled Demolition Incorporated gave some important evidence on this issue. He said that most corporations do keep in-house secrets. He outlined at some length the importance of keeping detailed records of all projects for future reference. An example was the information publicly released about his implosion of the Hudson building in Chicago which contained specific details about the exact amount and the type of explosives used.

16. The overall level of record keeping by Mr. McCracken was inadequate. An example is the piece of cardboard with notes. There is also the documentation of Mr. Robinson regarding his dealings with Mr. McCracken particularly concerning insurance coverage.
17. The best method of determining the actual amount of explosives used by Mr. McCracken in this project is a combination of receipts from explosives suppliers indicating amounts of explosives purchased by him in the lead up to the implosions and what he told the police on 13th July 1997 within hours of the implosion. When Mr. McCracken was interviewed by the police in September 1997 he attempted to reconstruct on a plan the amount of explosives used on each column. This was not the most reliable guide as to the quantities actually used because his memory was not fresh and by that time he had already acknowledged on 15th July 1997 in a video walk around of the site that "I think I'm in deep shit here". No doubt by September 1997 he was downplaying his estimates of the amount of explosive he had used on 13th July 1997. Mr. McCracken's answers to questions in the later interviews of September and October 1997 were in my assessment evasive and defensive containing many exculpatory explanations given in a verbose manner. The answers lacked the specificity that was first apparent in his interview, given frankly, on the evening of the tragedy of 13th July 1997. Mr. McCracken declined to give evidence to the Inquest exercising his right to silence.
18. Mr. McCracken used at least 400kg of explosive. An amount of 175kg of explosive was purchased within 48 hours of the implosion. These figures take no account of any further explosives he may have brought with him or obtained from other sources due to his general lack of poor record keeping. On 13th July 1997 Mr. McCracken told police that he believed he had used between 480 – 500kg of explosives. He indicated that he had used between 1.8 - 2.2kg per column. Note the amount of explosives used in the 1998 car bombing at Omagh in Northern Ireland was estimated at 600kg's.
19. On the 1st September 1997 he indicated that he used between 5 – 8kg on each of the main bracing columns as per the plan set out in Exhibit 142. And he again confirmed a total of 500kg on the whole project. These totals are significantly greater than any figure previously mentioned by Mr. McCracken before the implosion and nearly four times greater than the amount that he advised the Hospice meeting on 2nd July 1997 that he was going to use. At the meeting on 2nd July 1997 convened at the instigation of ACT WorkCover he indicated to the persons gathered there that the amount of explosive was to be 130kg.
20. Mr. Loizeaux described the application of this quantity of explosive as "a huge excess of energy". Mr. Loizeaux's assessment is both consistent with the known consequences and with Mr. McCracken's own acknowledgement to Sergeant Brodie of the Australian Federal Police on 13th July 1997 immediately following the implosion that "its been an overcharge – clearly" and to the interviewing police later on in the evening "that like in hindsight now I would consider that the charges were too heavy...its obviously been too

powerful". Counsel for PCAPL describes the loading of the explosives as "the massive overload of bulk explosives".

21. The amount of explosives finally used significantly exceeded all prior indications by Mr. McCracken, whether orally or in documentary form, as to the amount of explosives he intended to use. This is best illustrated by the following brief chronology from which it is readily apparent that the amounts increased dramatically over the final few days.

23/4/97 Mr. McCracken advised Mr. Smith (DGU) that there was steel in the columns and that the type of explosives to be used would be "shaped charges & PETN". No quantities were mentioned.

5/5/97 Mr. McCracken told Mr. Smith when applying for his licenses that he "probably wouldn't need more than 250 kilograms in total".

16/5/97 Workplan provided to PCAPL, WorkCover and DGU. No mention of cartridge explosives or kick out charges, no quantities mentioned. Only type of explosive specified was "specialised shaped charges".

Late June Undated drawings from PCAPL file that appear to be precursors of Drawings A & B. Notes "Approx. 150 kilograms of explosives to be used".

2/7/97 Meeting with WorkCover about Hospice. Mr. McCracken advised those present that he would be using 130kg in total made up of 112kg of cartridge type explosives and 18kg of "PE4" explosive. WorkCover inspectors were of the belief that these figures related to both buildings.

4/7/97 Drawings A & B, included in the Appendix K response. Note quantities for Main Tower Block: LG floor – 1.3kg/column and ground floor – 0.75kg/column; and for Sylvia Curley House ground floor – 1.1kg/column and 1st floor – 0.70kg/column. Based on Mr. McCracken's indication that there were in total 250 columns, 150 in the Main Tower Block and 100 in Sylvia Curley House. The amount referred to in Exhibit 144 add up to a total of 243.75kg (153kg for Main Tower Block). There is no distinction as to the amount of explosives noted as between internal or external columns.

10/7/97 The Canberra Times of 11th July 1997 indicated that "Mr. McCracken said yesterday that the 225kg of explosives to be detonated has all been laid, spread throughout the Tower Block and Sylvia Curley House in 280 positions" (see copy in Mrs. Kennedy's diary, Exhibit 534). That article included a picture of a single column with at least 7 separate charges attached to it.

11/7/97 Mr. McCracken told Mr. Mazzer that for the Main Tower Block he had used: LG floor – 1.7kg/column and ground floor – 1.3kg/column. This totals 224.5kg for the Main Tower Block alone.

11/7/97 Mr. McCracken purchased another 100kg of Riogel.

12/7/97 Mr. McCracken purchased another 75kg of Riogel.

13/7/97 Mr. McCracken told police he used a total of 480 – 500kg of Riogel.

22. Mr. McCracken stated that his overall plan had changed four or five times. But at no stage did he formally advise anybody of the final amount of explosives used or the changes in the quantity that he had made. Mr. McCracken never advised anybody that he had completely abandoned the use of specialised shaped charges which he originally had advised would be used exclusively for the demolition task.

23. Mr. Loizeaux described it in this manner: -

"A change in quantity or a change in basic approach towards the explosives operation would certainly be a significant change, changing the risks associated with the adjacent improvements and the general public, linear charges do not throw large pieces of debris as bulk charges might so anything that would impact (upon) safety or the roles of regulatory agencies or the contractors representatives should certainly be brought to their attention and dealt with accordingly.

24. Mr. Loizeaux indicated that he would expect a change in quantity of as little as 10% would require a formal notification to the relevant parties.

25. Mr. McCracken's failure to formally advise anybody of these changes particularly in light of the significance of them and his knowledge that there would be a large crowd in attendance in itself constitutes gross negligence on his part.

26. There were a number of persons in a position of responsibility who would be sufficiently aware of the significant changes that Mr. McCracken was making to his methodology to have initiated some enquiries about the reasons for the changes and what were the issues of public safety as a consequence of the changes. These persons were present at the meeting on 2nd July 1997 involving the Hospice when Mr. McCracken said he was going to use 130kg of explosives. The persons in my view who would have had some appreciation of the changes, despite having no notification of any amendment to the workplan, were Messrs. Fenwick, Dwyer, Lavers and the inspectors of WorkCover.

27. Mr. Fenwick as the principal contractor and Mr. Dwyer as the Project Manager were both present and observed a cutting charge test being made on 25th June 1997 and the subsequent loading of cartridge explosives on 9th July 1997. Accordingly they must have been aware of the absence of cutting charges and the sharp increase in cartridge explosives being utilised on the site at least after 2nd July 1997. The failure to observe these fundamental matters, even by persons of limited experience who had been on the site and inspected it on an almost daily basis, was negligent. Mr. Dwyer should at the very least have enquired or informed himself as to what was the configuration and the volume of explosives being utilised on the blast. The acquisition of such critical detail by the Project Manager and Superintendent stands out as a matter of basic commonsense especially after the 2nd July 1997 meeting and the WorkCover involvement.

28. There is no doubt that these were technical issues but why would they simply be ignored or taken for granted given that Mr. Dwyer and Mr. Fenwick had been briefed by Mr. McCracken on the various changes. Why, then, did they not ask or enquire about the reasons for the changes in the methodology programme. As technical issues and as I have previously stated they were well outside any knowledge held by Mr. Dwyer in respect of the type, quantity and use of explosives but he had been shown over the site on a number of occasions and seen the explosives placed against the columns of the building. Mr. Dwyer controlled the site for PCAPL. Surely he was not doing his duties in a vacuum. It is all very

well to make a submission that it was not for Mr. Dwyer to second guess the experts but basic commonsense as the Project Manager and Superintendent who had been on the site since early to mid April would at least dictate that he should inform himself in a constructive and objective way as to the nature of the demolition methodology. This function was a clear responsibility for the site manager.

29. Mr. Lavers, whose responsibility was to advise those organising the public event on technical matters and conceding that was not his strict true brief on the demolition site, was present on 10th July 1997 when Mr. McCracken told Mr. Tim Noonan of the Australian Broadcasting Corporation that he was using a total of 230kg of explosives involving 500 separate Riogel charges, the size of which was demonstrated in his presence and on which he commented. This figure was almost double what he had been told would be used as recently as the meeting at the Hospice on 2nd July 1997. It should have alerted Mr. Lavers to the need to make some further enquiries of Mr. McCracken (or Mr. Fenwick or at least Mr. Dwyer) as to the reasons for this significant increase in the quantity of explosives and its possible impact on public safety. In the course of his role in advising those organising the public event on technical matters a failure to enquire or inform himself could amount to negligence. The amount of explosives used by Mr. McCracken was more than double the amount Mr. Lavers was aware of on the 10th July 1997. Mr. Lavers had a lesser supervisory role but the lack of adequate enquiries being made on his part as to why so much extra explosives were being used was a contributing factor but not sufficiently causally connected to the death of Katie Bender.

30. There is no doubt that the same sort of similar failures and criticism can also be attributed to ACT WorkCover which has been discussed under the heading of The Role of the Regulatory Agencies. In my view the lack of attention to this detail by WorkCover inspectors was a contributing factor yet not causally connected to the death of Katie Bender.

the Reconfiguration of the Blast

31. The reconfiguration involved: -

- a. Substituting cartridge explosives for specialised cutting charges,
- b. Increasing the quantity of those cartridge explosives,

- c. Inserting backing plates between the explosives and the seal, and
- d. Directing the blast towards the lake where the spectators had gathered with little or no protection between them and the blast.

It should be noted that Appendix K makes a specific requirement that cartridge explosives are not to be used in the cutting of steel.

K5 EXPLOSIVES

Particular attention should be paid to the following: -

- a. Use only the correct explosives for a specific task, e.g. cartridged explosives are not suitable for cutting steel.
- b. Use a higher powder factor than normal. It is better to overcharge than undercharge to positively ensure the intended result. A structural member that is not cut, removed or weakened as intended can cause a structure to twist.
- c. Conduct a small test to ascertain the strength/suitability/powder factor of an explosive for its designated task.
- d. Provide adequate cover around the charges to prevent/minimise fly of debris and airblast.

16. The possibility that these changes may involve debris being ejected beyond the site and across the lake was well within the knowledge of Mr. McCracken and Mr. Fenwick. I have some doubts as to whether Mr.

Dwyer would have had such knowledge (yet see paragraph 33(c), 58 and 59 hereof).

17. Mr. McCracken of Controlled Blasting Services knew that there was a risk of debris being ejected for the following reasons: -

- a. He conceded the possibility that fly may not be confined within the building for directions other than the Hospice ("in respect of the location of the Hospice, charges on the Northern side of Sylvia Curley House will be positioned to eliminate the possibility of adverse fly material towards the Hospice. The balance of charges will be placed to contain any fly material within the buildings where possible to do so"),
- b. He had conducted test blasts with lower quantities of explosives that had blown through the web and fragmented the steel,
- c. Mr. McCracken told Mr. Dwyer on 9th July 1997 when explaining the methodology to him that some debris would be ejected away from the building. Surely this

would have excited Mr. Dwyer's concerns as to the possibility of the debris being ejected beyond the Hospital bounds,

- d. Mr. McCracken told Mr. Messenger of Ten Capital on 10th July 1997 that the columns would shatter which he expected them to do, (this advice was provided earlier by Mr. Ashley),
- e. When interviewed by the police on 13th July 1997 Mr. McCracken agreed that the force of the implosion was targeted in the direction of where Katie Bender was standing. Mr. McCracken further told the police that because of the risk of being struck by flying debris he was not prepared to permit anybody to observe the demolition from anywhere on the Peninsula on the lake side,
- f. In most cases there were no protective measures between the steel and the public to prevent the flying debris leaving the site (see the photograph at Exhibit 84B generally but in particular 137 – 10 – 1 and 2) see also (Exhibit 132 and statements concerning the lack of chain wire Exhibits 164 and 165),
- g. Mr. McCracken had abandoned the use of specialised charges that to his knowledge would reduce fly where other charges would not, and
- h. Mr. McCracken told Mr. Mazzer on 11th July 1997 the charges were on the inside of the columns so it blows the column forward away from the Hospital. So all movement of any material, apart from the sandbags that were going (to) surround it, will go forward so that if there is a bit of shrapnel it will fly in the same direction to where no one is standing.

If Mr. McCracken had any concerns that a piece of steel would be transmitted across the lake into the crowd of spectators he would not have proceeded with the blast. Mr. McCracken's confidence of a successful demolition is reflected in his comments to the various visitors in the week before the demolition.

- 16. Mr. Fenwick of CCD was certainly aware of this detail set out in the above points at (b), (f) and (g). Mr. Fenwick was further aware of these risks described at points (a) and (e) because of his supervisory responsibilities.
- 17. The following comments can be made of the responsibilities of Mr. Dwyer. Those responsibilities did not include and could not have included supervision of the demolition methodology of the demolition contractor or subcontractor. Mr. McCracken was performing specialist work. The

assessment of technical matters such as the quantity of explosives, type of charge used, the space between the backing plates and the web were not matters for the Superintendent or a Project Manager, however, the Project Manager and Superintendent was in a position to require and to ensure that the contractor and subcontractor were complying with the appropriate codes

of conduct. Otherwise what is the purpose of having a Superintendent or Project Manager on a demolition site if they were not going to control, supervise, direct or manage the persons retained to undertake the demolition task. It is certainly more than being a simple conduit of information.

18. It is not possible for Mr. Dwyer and PCAPL to now walk away from that responsibility as the site controllers on the basis that they had no experience in or understanding of technical issues regarding the use of explosives. It is all very well to claim that the contractor and his specialist implosion subcontractor held demolition licences which required the completion of an approved course or other experience or training to satisfy WorkCover NSW. This surely does not give the contractor and the subcontractor complete liberty to do as they please without some form of control or supervision by the corporation contracted to the principal. The greater burden in respect of this supervisory responsibility rested squarely with Mr. Cameron Dwyer (PCAPL).

37. The submission made by PCAPL now seeks to diminish its role and distance itself from their proper responsibilities. PCAPL was selected initially in December 1996 and confirmed in January 1997 that it was to control the activity on the site. PCAPL cannot minimise its involvement to any extent in its dual role as the Project Manager and Superintendent. To accept such a contention would be a complete departure from the weight of the evidence and further to do so and to accept such a proposition would mean that Messrs. Fenwick and McCracken were virtually at total liberty to undertake the work unchecked and in any manner suitable to them.

The Failure to Use Specialised Cutting Charges – The Substitution of Cartridge Explosives for Cutting Charges

38. On 5th March 1997 Mr. Rod McCracken attended the tenderers meeting on the site and walked through and inspected the buildings. The evidence suggests that Mr. McCracken suspected as early as that time that the concrete columns may have had RSJ's encased within them. There is a recording in his diary that he rang Cameron (Dwyer) on 6th March 1997 and wrote that it looked like "the hospital may have RSJ encased in concrete".

39. On 8th April 1997 Mr. McCracken became aware that Mr. Fenwick (CCD) had won the hospital contract.

40. Mr. McCracken first went onto the site to commence work on Monday, 21st April 1997. Two days later, Wednesday 23rd April 1997, he had confirmed the presence of steel within the columns and had met with Mr. Smith from the Dangerous Goods Unit. During that meeting he told Mr. Smith he intended using shaped charges and gave a concise and accurate description of how those charges worked. At the time of those conversations the date for the implosion had been fixed for 9th June 1997. Mr. McCracken told Detective Johnsen that he had never before used such cutting charges.

41. On or about 5th May 1997 the implosion date was subsequently changed to 25th June 1997. On 23rd May 1997 this date was again changed to 2nd July 1997.
42. The evidence suggests that the first enquiry Mr. McCracken made about the availability of these specialised shape charges was by facsimile to the US firm OEA Aerospace (formally Explosive Technology) on 28th May 1997. The reply from a OEA Aerospace dated 6th June 1997 indicated that depending on the quantities required it could take between 4 and 6 months to produce the product if not already in stock and even if in stock up to 30 – 60 days to have the charges ready for shipment. Shipping was described as being expensive and slow.
43. It is apparent from this chronology that at the time Mr. McCracken lodged his workplan on 16th May 1997, indicating that he would be using specialised shaped charges, the schedule date for the implosion was then 25th June 1997 only six weeks away. Mr. McCracken had still made no enquiries about shaped charges and did not do so for another 12 days. This is critical evidence omitted by Counsel for PCAPL.
44. Counsel for PCAPL attempts to assign the blame and responsibility to others. Counsel frequently alters, varies or modifies his expressions so as to cast doubt on the integrity of others who may have had some involvement in the process thereby seeking to reduce and protect the impact on his client and further lessen damage to its integrity. That approach may be well suited to the adversarial process but not to the fact – finding role of the Coroner. The comments as to this role should be considered in the segment dealing with the "Function and Role of the Coroner" and elsewhere in the Report.
45. Counsel for PCAPL ignores at paragraph 199 of their submissions what occurs in the time between the commencement of the work and the occupancy of the site on or about 23rd April 1997 to what ultimately happened on 16th May 1997. There is no assuming of any responsibility for what occurred in this period of time by PCAPL. There is an attempt to sheet home to Mr. McCracken and to WorkCover responsibility for these actions on the basis that WorkCover and later Mr. Loizeaux considered the workplan as appropriate. Mr. McCracken was entitled as the demolition specialist to change his methodology from time to time. That may very well be the case but the simple fact of the matter is Mr. Dwyer as the Superintendent and Manager of the project was and should have known or taken steps to ascertain precisely what Mr. McCracken was doing as the project advanced. The submissions made by Counsel for PCAPL are sound in substance but are selective and lack the necessary chronological detailed narrative to give the reader a proper view of the events as they unfolded from the time the contract was let, when the site was occupied until the morning of the actual demolition on 13th July 1997. The submissions by Counsel for PCAPL need to be approached with caution.
46. The delivery times referred to in the response from OEA Aerospace obviously ruled out that source for cutting charges for this project. On 7th –

8th June 1997 Mr. Appel attended the site at Mr. McCracken's request to discuss his methodology. During that visit Mr. Appel formed the belief that Mr. McCracken had not yet decided on the explosives he intended to use. Within a few days of this visit Mr. Appel made some enquiries on Mr. McCracken's

behalf with Mr. Sean Miller about obtaining cutting charges. These enquiries ultimately proved fruitless.

47. On 30th May 1997 Mr. McCracken had made some general enquiries about cutting charges with Mr. Murray of Applied Explosive Technology. The 30th May 1997 was the same day that Mr. Ashley made his first and only visit to the site. It was this once only visit upon which he eventually based his advice about the method to be used to pre – weaken the building. Between 30th May and 20th June 1997 Mr. McCracken had further discussions with Mr. Murray about cutting charges but did not place an order. On 20th June 1997 Mr. McCracken finally requested Mr. Murray to quote him a price for the supply for 500 to 700 cutting charges. Mr. Murray provided that quote the same day.
48. Mr. Murray attended the site for the first time on 25th June 1997 and again on 27th June 1997 where he tested and demonstrated cutting charges to Mr. McCracken in the presence of Messrs. Fenwick and Dwyer. Mr. Dwyer took some photographs before and after the cutting charge tests. This evidence is extremely relevant to Mr. Dwyer's state of knowledge. Mr. Dwyer at least has some knowledge of the activities of what was happening on the site with Mr. McCracken in relation to the demolition project with respect to cutting of columns and the use of explosives.
49. On 1st July 1997 Mr. McCracken deposited \$10,000.00 into the AET account when he placed an order for cutting charges with Mr. Murray to supply the same charges that had been demonstrated. Indeed both Mr. McCracken and Mr. Murray told police that these were successful. No fly resulted from these tests. Mr. Murray produced the steel from the first of those tests. Mr. Loizeaux also inspected this steel and gave evidence that in his opinion the only reason the charge did not completely sever the steel was because of misalignment in setting the charges rather than any failure of the charges themselves.
50. Despite expressing satisfaction with the tests and having no other possible source of obtaining such specialised cutting charges Mr. McCracken then waited a further 4 days from 27th June 1997 to 1st July 1997 before placing a final order and then only after Mr. Murray advised him on 1st July 1997 that that was the last day he could order and still have a good chance of getting the goods on time. Mr. Murray indicated that the order was for "option A" referred to in his quotation of "1st July 1997". This order would have allowed Mr. McCracken to use cutting charges on 42.5 columns. Mr. Murray said the usual time to fill such an order would be 5 – 8 weeks but he accelerated this process by pulling out all stops and would have been in a position to deliver the explosives on 8th July 1997 and the casings on 9th July 1997. This would have permitted Mr. McCracken to have progressively placed the charges on the columns as they were being made. Mr. Murray advised Mr. McCracken of this on 8th July 1997 when Mr. McCracken phoned him and told him he was running out of time and he would use the charges on a later job. When asked what he would do instead Mr. McCracken said he would "use Riogel, whatever".
51. The validity of Mr. McCracken's excuse of 8th July 1997 that he was "running out of time" as a reason for not using the ordered charges does not bear close examination. Mr. McCracken had firmly committed himself by that time to a method of cutting the steel that was completely incompatible with the use of cutting charges. This commitment had been made by Mr. McCracken before

Mr. Murray set foot on site, let alone tested and offered to provide cutting charges for the demolition. The Ashley drawings of the "half moon cuts" were provided to Mr. McCracken before Mr. Murray's visit on 25th June 1997. These cuts were not compatible with the use of cutting charges and were only consistent with his proposal to use cartridge explosives to kick the columns out. In fact Mr. McCracken's diary indicates that on 30th June 1997, the day before he placed the order with Mr. Murray, he had started loading explosives in the Main Tower Block and had men cutting columns in Sylvia Curley House. The diary entries relating to the loading of the Main Tower Block continue on 1st and 2nd July 1997 by which time his diary records "ground floor almost loaded, except around lift area".

52. This factor together with his failure to mention any extensive use of cutting charges at the meeting on 2nd July 1997 leads to the conclusion that by the time he placed his order on 1st July 1997 Mr. McCracken had decided not to use cutting charges at all. His subsequent decision to use them on the few basic columns in the Main Tower Block on 4th July 1997 together with his demonstration to Mr. Messenger of Ten Capital TV on 10th July 1997 as to how the cutting charges would be used can therefore be seen only as an intentional deceit. This is particularly so as the charges he ordered were never designed to be used on the bracing columns, had not been tested on them and he had in any event told Mr. Murray on 8th July 1997 that he was not going to use them.
53. According to Mr. Dwyer, he became aware "at least six weeks roughly, before the implosion" that Mr. McCracken had decided against using cutting charges. If Mr. Dwyer held such knowledge some 6 weeks before the demolition without taking any further action to at least inform himself of the reason for the change in circumstances then it seriously reflects poorly on his management and supervisory skills. Mr. Dwyer offers no reasonable or plausible explanation for his inaction or lack of ability to identify or address this issue.
54. Mr. McCracken's explanation to the police on 13th July 1997 was untrue. This series of facts demonstrates that he was obliged to redesign the explosives methodology only after ascertaining that he could not get linear cutting charges either from the United States or Mr. Murray in time. It was an attempt to mislead the police as to when it was that he had changed his plan and to minimise his responsibility for such a change.
55. Mr. Fenwick put forward the same explanation to the police when he said "if he cut the column another way, those cutting charges would be ineffective. So the delays in the cuts, the columns were not cut until he knew what he was going to do". According to Mr. McCracken's diary the half moon cutting to the Main Tower Block commenced on 25th June 1997 and the fact must have been known to Mr. Fenwick. Mr. Fenwick's men commenced cutting backing plates on 23rd June 1997. Mr. Fenwick knew that these plates were only going to be used in combination with kick charges. From 23rd June 1997 therefore, on the basis of his own answer, Mr. Fenwick must have known that Mr. McCracken had committed himself to the cartridge explosives/kick out method from that time forward.
56. Accordingly, when Mr. Murray arrived on 25th June 1997 for the first time and in the presence of Mr. Fenwick to test the cutting charges, Mr. Fenwick would have had a duty to at least ask or interrogate Mr. McCracken as to which method he was infact going to use. This was because Mr. Fenwick knew by

that time that the method of cutting that had already commenced and the preparation of backing plates was inconsistent with any use of cutting charges. He failed to discharge this duty.

57. There is a specific reference in the Appendix K document sent by PCAPL to WorkCover concerning the restricted use of cutting charges. Mr. Fenwick failed on 4th July 1997 to take any steps to ensure that even this restricted use of cutting charges in fact took place. The lack of supervision he exercised over his subcontractor is graphically illustrated by his absence from the site from the morning of Friday 11th July 1997 until 10.30am Sunday 13th July 1997. This was a critical period of time in the demolition process. This absence coincided with the final loading of the cartridge explosives and significantly with the purchase and loading by Mr. McCracken of an additional 175kg of Riogel.
58. Mr. Fenwick and Mr. Dwyer were both familiar by 13th July 1997, by their presence at the test sites in late June 1997, with the appearance and application of cutting charges. It must have been obvious at least to Mr. Fenwick and possibly to Mr. Dwyer that there were no indications of the presence of any such charge having been placed in either of the buildings on or before 13th July 1997. Neither man raised any questions about this failure to use cutting charges. There is no evidence that Mr. Fenwick ever made any enquiries about the method Mr. McCracken was using in lieu of cutting charges. The enquiries about the method made by Mr. Dwyer on 9th July 1997 should have alerted him immediately to the real possibility of fly material being ejected from the building.
59. Mr. Dwyer told the police that Mr. McCracken had abandoned the use of cutting charges at least six weeks prior to the implosion. He further told the police that on becoming aware of the changes to the original plan

(particularly the non-use of cutting charges) he asked Mr. McCracken if the building could still be imploded safely and was advised it could. Given this fundamental change in method and his knowledge that a large-scale public event was being organised Mr. Dwyer was bound to go further than mere reliance on the assurances of Mr. McCracken. Mr. Dwyer must have been at least disturbed therefore when Mr. Murray attended the site to test cutting charges in late June and their use was being proposed on 4th July 1997. Mr. Dwyer certainly had knowledge as to what was happening in late June 1997. The clear indecision being exercised by Mr. McCracken as to the explosives to be used was a matter of vital importance. Mr. Dwyer should have at least requested an updated workplan be filed. The performances by Mr. Dwyer of his duties in this particular phase of the process is disappointing and his evidence is unconvincing and less than satisfactory.

60. The failure to use any cutting charges on 13th July 1997 was: -
- a. An abandonment of the initially proposed method as set out in the workplan submitted on 16th May 1997,
 - b. A revision of that original plan as set out in the Appendix K response on 4th July 1997,
 - c. A departure from the public presentation to Mr. Messenger on 10th July 1997, and

- d. The approved "half moon" cutting method was inconsistent with the use of such charges in any event.

61. The following circumstances in my assessment demonstrates gross negligence by Mr. Rod McCracken in his methodology: -

- a. A failure to take steps at an early stage to obtain the correct explosives in time,
- b. Having tested and ordered charges that would cut the steel as planned either failing to use those charges rather than bulk charges (in combination with appropriate pre – weakening) or failing to delay the implosion until those charges could be obtained and applied as Mr. Loizeaux stated would have been a prudent practice,
- c. A failure to properly advise at least Mr. Fenwick or Mr. Dwyer of the extent of his departure from his original plan, and
- d. A failure to ensure that the method ultimately used had been properly tested and assessed as safe.

62. The uncontradicted expert evidence of Mr. Loizeaux was that it would have been preferable to have used the cutting charges rather than the bulk charges. Mr. Loizeaux stated that such charges were safer and were "100% used" amongst experienced demolishers of steel structures in 1997 and 1998.

63. Mr. Fenwick and Mr. Dwyer, to a lesser extent, knew what cutting charges were and how they worked. Both men were either actually or constructively aware of the contents of the workplan. The same comment applies in respect of their knowledge of the Appendix K response. It seems to me that they should have taken steps to determine why the original method was not being used and that the method proposed on 2nd July 1997 and the method ultimately used on 13th July 1997 were properly tested and assessed as safe. What sort of an answer did Mr. Dwyer expect when he asked Mr. McCracken whether the process was still safe. Mr. McCracken was not going to denigrate his own work as an expert by denying that the process was not safe. It was insufficient for Mr. Dwyer to rely on the assertions made by Mr. McCracken as to the safety factors and to do so was either naive or stupid or both. Mr. Fenwick as the contractor, and Mr. Dwyer were both exercising supervisory responsibilities. They were doing so in full

knowledge that a large public event was to occur. The failure particularly by Mr. Fenwick and to a lesser degree by Mr. Dwyer to allow these departures from the workplan to go uncorrected amounts on the evidence to negligence.

EXCLUSION ZONES

64. There was never any doubt that a large crowd would attend the hospital demolition having regard to the advance publicity and the significance of the building to the Canberra people. An email had been sent on 4th July 1997 by Section Publications to no less than 48 organisations in the ACT Public Service. It was just another example of the Gary Dawson/Chief Ministers Department promotional push. The setting of an exclusion zone, became a critical step in the demolition process. It was a step designed to fix the safe limits beyond which the public could gather to view the spectacle. There was always the possibility that something may go wrong with material being projected from an implosion site. The emission of projectiles from such a demolition using the implosion method was well documented and was even substantiated in the video material tendered at the Inquest including the promotional tape produced for the Loizeaux group. It is clear from this promotional tape that notwithstanding the considerable safeguards that are made from time to time by this expert on each project there is the risk that projectiles will be emitted from such a demolition.

65. It was reasonable therefore that persons who were without technical knowledge or expertise could assume the exclusion zones were being fixed by those personnel with the detailed technical knowledge and accordingly, it would be safe for persons to gather in whatever numbers outside the exclusion zones as spectators. Many persons had confidence in Mr. McCracken's ability to discharge his functions as a specialist implosion expert safely and competently. The responsibility for safety issues generally and the setting of exclusion zones clearly lay with Mr. McCracken. Mr. McCracken accepted this responsibility. Mr. McCracken said that he would be responsible for explaining and indicating a safety zone for the amount of explosives to be used. Mr. McCracken continued: -

A. "Did you have overall responsibility for safety issues?"

A. Yes, Yes.

A. And what was the procedure with those safety issues?
Who's involved?

A. Safety issues are that when someone asked me "where would be a safe viewing distance?" we had a look around, we thought that on the other side of the lake would be ok, and that where they suggested originally – was too close, that we'd move out into the park".

Not only was there a responsibility in setting the zone but a necessity to communicate that exclusion zone to those involved in the project in a clear and precise way. This was not done. It was vague and imprecise.

66. Mr. Loizeaux confirmed this responsibility ultimately rested with the shotfirer when he was asked about the "blaster" being in charge having the final say: -

"He is the only person who actually controls what is happening in terms of (the) detonation of explosives. He has to look at the material he is blasting. He has to look at the likelihood of fly of debris, he has to look at his protective measures that he has put into the project and he must determine the minimum exclusion zone. The regulatory authorities can always increase that zone and frequently do in order to use existing building lines, streets, etcetera, as lines of sight whereby local authorities, police officials, if you will, can see the line and keep people back as they would in a parade. I should say, however, that once the blaster has determined his minimum zone if the client has a problem with that zone for whatever reason as I mentioned in response to an earlier question you raised they may request a smaller zone".

Mr. Loizeaux cited his experience with Hollywood movies making particular mention of the Mel Gibson film, Lethal Weapon 3.

67. The submissions made by Counsel for the Territory in my view succinctly encompass the relevant considerations on this topic of the exclusion zone. Save for some minor departures those submissions will be adopted by me as they accurately summarise the evidence.

68.

- a. Mr. Dwyer, Mr. Lavers and Mr. Fenwick said a 200 metre exclusion zone was fixed in consultation with Mr. McCracken. The evidence of Sergeant Brodie confirms that Mr. McCracken was aware of and participated in the setting of a 200 metre zone. Mr. McCracken said that there were virtually daily meetings with Mr. Dwyer and apparently others where issues including the exclusion zones were discussed.
- b. A month before the implosion a decision was reached that the Hospice could remain occupied when he wrote to Mr. Dwyer. Those involved on the project were entitled to proceed upon the basis that Mr. McCracken had given adequate planning in this area. In June 1997 Mr. Dwyer asked whether the lake needed to be cleared. Mr. McCracken said it was not necessary. Clearly Mr. McCracken knew boats would appear on the lake at implosion time.

69. It is necessary to go to certain questions and answers provided by Mr. McCracken in his record of interview with the police. It would appear on the evidence that Mr. McCracken never infact calculated an appropriate exclusion zone. At the highest he only gave rough estimates as a reaction to the suggestion of others. He first rejected a

suggestion put to him that spectators be permitted to stand just outside the site perimeter fence. Mr. McCracken rejected that suggestion because he acknowledged that "there was a possibility of flying material there". Mr. McCracken further said: -

"At no stage and especially in the direction that I could see it was going to go, would I say someone could stand behind the fence out on the area of the Peninsula on the edge of the lake. The safest way...was behind the structure and that anyone who is going to stand around the edge of the lake within 100 metres of it obviously had a chance of being hit by a brick".

70. Mr. McCracken was asked: -

- A. "With this implosion what did – prior to this implosion taking place, what was the worst possible case scenario that you could have seen if something had have gone wrong? Did you give any consideration?"
- A. Virtually what had happened today that the building – my main worry was two things. One would be noise and the other would be that the structure wouldn't break up completely because of the way it was manufactured or put together, especially Sylvia Curley because it was – it was not bolted up – it was bolted but it was also bolted and welded and there was no way the beams can snap from the column. The beams would bend before you snap them away and virtually what's happened that part of the structure stood up. That was the worst – I didn't have a problem with the people. I just thought they were so far away that we would never have had a problem with the people. And that the site, I think, I have written it on the bottom here, that the site is well isolated. I mean normally we don't go any where near that distance away or we have never had trouble in 30 years".

This was a significant answer. Mr. McCracken had no difficulty with people being on the other side of the lake. It is also significant because Mr. McCracken is actually acknowledging in the result what he had been told by Mr. Gordon Ashley i.e. the building would buckle but not break up or shatter. It is important then also to consider his answers at question 545, 546 and 551 where he adopted a suggestion put to him by others about the far side of the lake should be an exclusion zone for spectators on the basis that it "should be a relatively safe distance to be able to view it from". The difficulty one finds with these three answers is the uncertainty and the lack of precision in setting a precise distance and certainly it would appear that his opinion was qualified in some way.

71. A distance of 500 – 700 metres is referred to by Mr. McCracken in two particular exhibits tendered to the Inquest. This distance would appear to be purely an estimate made by Mr. McCracken from the Acton site to the other side of the lake. Mr. McCracken could see as much in his record of interview when he was asked: -

A. "How far from you seeing it would you estimate that that distance would be?

A. To across the lake?

A. Yes.

A. I think it was written down here it's between 500 – 700 metres".

There is no evidence that Mr. McCracken ever told anyone that the exclusion zone was 500 – 700 metres. Why did he not tell someone on the project. The answer seems to be there was no need for an exclusion zone at this stage. The suggestion of "the other side of the lake" was really because it was a safe and convenient vantage point. It was not an indication that the exclusion zone should extend to the other side of the lake.

72. There was an additional obligation to properly communicate the exclusion zone to persons involved in the project. If Mr. McCracken is now asserting that he had in mind an exclusion zone of 500 - 700 metres it was not a proper means of communication by a mere footnote to the "CBS Administration Checklist". If he was proposing an exclusion zone of 500 - 700 metres there was an onerous burden upon him to properly communicate that advice to those involved in the project so that appropriate steps could be taken to clear the lake and ensure that persons were not within the zone. If an exclusion zone of 500 - 700 metres was what he really had in mind then there has been a serious dereliction of duty on his part in failing to communicate that exclusion zone in proper and clear terms to those involved on the project.

73. It is my view on the evidence that he did not consider an exclusion zone of that distance to be necessary. It was the settled view of Mr. McCracken that an exclusion zone of 200 metres would apply so with boats being on the lake they would be beyond that distance. No alarm or protest was made by Mr. McCracken about boats being on the lake on 13th July 1997. This was because the presence of the boats on the lake was consistent with his advice concerning an exclusion zone of only 200 metres. The boats were beyond the 200 metre exclusion zone.

74. Counsel Assisting the Inquest makes the submission that the figure should not be treated as having been carefully determined and any suggestion that it was a recommended exclusion zone should be rejected. Counsel continues in his submission to state "first it would be incongruous to suggest that an exclusion zone could be constituted by what is in reality a range of distances; and secondly if these figures were seriously meant to reflect Mr. McCracken's considered minimum exclusion zone then every spectator boat on the lake on

Sunday 13th July 1997 was within this zone and permitted by Mr. McCracken to remain there".

75. In a later record of interview with the police on 2nd September 1997 there is a critical answer as it would seem that Mr. McCracken had no safety concerns about the project when he said: -

"I have said all along if I didn't know what happened in hindsight, I'd press that button again tomorrow. I was quite confident – and the thing with this building here, everyone seemed to think that somewhere along the line, we either cheated on safety aspects, that we didn't consider the planning, that it was rushed. I mean, we've had all this on media, we've heard lots of stuff come out, but with \$400,000.00 or so of the work pending straight after this job, the people who are giving us that work were coming to the meeting, our families were sitting on the other side of the lake, the whole thing on this job was put into place the best that we could put it into place.

A. Would you agree that the planning wasn't all that great in the preparation for the implosion?

A. No I wouldn't".

72. The only time Mr. McCracken indicated a safe viewing distance was on the very confined issue of the VIP viewing platform proposed for the North West side of the site. It was a location well away and almost behind the way the blast was ultimately directed. The figure mentioned at that time was 150 metres which was later extended to 200 metres by the Australian Federal Police.

77. No further consideration was given to these estimates by Mr. McCracken after: -

- a. Abandoning the use of cutting charges,
- b. Reconfiguring the blast towards the lake,
- c. Using large amounts of cartridge explosives in combination with the untried backing plates, and
- d. Employing a minimal amount of protective measures.

78. The role of MIX106.3 in the discussions on the exclusion zone was purely in the area of publicity and advertising of the demolition rather than any formal decision making. The real decision rested with those in control of the site.

79. The role of the Australian Federal Police in fixing the exclusion zone concerned public access, crowd control and site security. Sergeant Kirby of the AFP said the 200 metre exclusion zone was settled after a consultative meeting attended by him in early July. Mr. Lavers and Mr. Hotham of TCL Mr.

Dwyer of PCAPL, Mr. Chabaud of MIX106.3, Mr. Hopkins of the Chief Ministers Department and Sergeant Kirby were in attendance. Sergeant Kirby described how a bigger safety zone than the one originally spoken about was set. His view was that taking the exclusion zone much further afield than that satisfied me that we were in a

safe zone. Sergeant Kirby said the exclusion zone of 200 metres from the base of the building was extended to 200 metres from the foreshore. Sergeant Brown was the AFP operational commander on 13th July 1997. Both AFP officers decided to extend the exclusion zone to 200 metres from the Acton Peninsula foreshore. No one can seriously contend that MIX106.3 had any role in setting the exclusion zone. The primary concerns of the Australian Federal Police related to crowd control, parking, congestion, public access and dealing with possible demonstrators.

80. No criticism can be directed at or made of the Australian Federal Police in relation to their handling of the event. The following points should be made:-

- a. The police had no control over the methodology or protective measures employed on the site,
- b. The police were only included in the co – ordination meetings at a later stage primarily from 12th June 1997,
- c. The police interest in the public event was restricted to crowd control, traffic direction and the preservation of peace in the terms of demonstrators, and
- d. The police involved had no ostensible expertise in demolition whilst their only active role in relation to the final exclusion

zone was to offer the services of the Water Police to secure the exclusion zone restricting access to the site by possible protestors.

At the meetings attended by the AFP no report relating to safety zone was provided whilst the only advice came from PCAPL. TCL and the police were not informed of the source of that advice.

79. The safe viewing distance set by Mr. McCracken was notified only to Mr. Dwyer following his request. Mr. Dwyer passed on that information in the form of a 200 metre exclusion zone from the buildings to Mr. Hopkins and Mr. Lavers and to WorkCover at the meeting on 2nd July 1997. WorkCover had no role to play in any decision setting the exclusion zone. Mr. Dwyer made a file note which related to a conversation he had with Mr. Hend of the ACT Water Police where Mr. Hend advised that boats will be kept to a minimum distance of 200 metres off the Peninsula.

80. It seems to me that all parties were entitled to rely upon the exclusion zone fixed by the specialist implosion subcontractor who had knowledge of all relevant facts. An additional 200 metres had been extended as an abundant precaution. Nothing was communicated by TCL or PCAPL which suggested

the exclusion zone was not an appropriate one. An exclusion zone of 200 metres from the buildings was extended by the Australian Federal Police to 200 metres from the Acton Peninsula Foreshores and this additional extension came about in the following manner as described by Sergeant Brown "it was agreed that we'd set a greater distance of 200 metres around it in case there was room for error there somewhere because on the water its hard to tell distances across the water".

81. This distance of 200 metres relied upon by the AFP was communicated to them by the Project Director (TCL) and the Project Manager (PCAPL). The AFP were relying, as was the Territory, upon the advice being provided by the Project Director and the Project Manager responsible for technical information. The AFP then for more abundant caution extended the zone to apply to 200 metres from the foreshore. The evidence does not suggest that WorkCover was involved in setting the exclusion zone but rather the evidence suggests that the inspectors were informed about the exclusion zone that had been set and relied upon those indications being given from people involved in the technical side of the project particularly Mr. McCracken the explosive demolition expert.

EXCLUSION ZONE – MR. W. LAVERS AND TCL

82. It is unfortunate that Mr. Lavers has been assigned during the Inquest and in the submissions with the status of the technical adviser for the project. It seems to me that Mr. Lavers unfairly acquired that status the moment he had any dealings with Mr. Dawson and others in the CMD. Mr. Lavers is an architect with two degrees with a personal liking for the role of a media liaison person. Any suggestion that Mr. Lavers was an expert in explosives or the demolition process in my assessment is a total fallacy. Mr. Lavers presented during the Inquest, as I have frequently mentioned, as being a conscientious and meticulous officer who made copious notes in his diary of various commitments that he was required to discharge on a daily basis in his public life. The difficulty confronted by both Mr. Lavers and Mr. Dwyer of PCAPL is simply that they were acting as conduits in respect of information being provided to them or requested of or by them from the contractor and/or the subcontractor, Mr. McCracken, or others especially Mr. Dawson or the CMD. The evidence establishes that the information provided over the months of the project was either factually inaccurate or totally unreliable causing both men a great deal of difficulty as a consequence of the tragedy. Mr. Lavers was simply an employee of TCL acting as the agent for the principal. Mr. Lavers was a man possessed of considerable management skills and was left with the burden of answering all enquiries in relation to the project whether technical or otherwise. Invariably it necessitated Mr. Lavers seeking information from Mr. Dwyer of PCAPL whose company had the contract with the Territory. I am quite confident that Mr. Lavers would not have accepted this function of having to liaise with Mr. Gary Dawson, the media adviser to the Chief Minister, if he was to later know that by virtue of those actions he was accredited with a role inconsistent with his qualifications, expertise, knowledge and skills.
83. The project team statement issued by TCL, PCAPL, CCD and CBS on the evening of the tragedy the 13th July 1997 made the following statement:-

"In formulating plans for the demolition, an extensive and rigorous process of risk assessment was implemented. This risk assessment was commenced 18 months ago as part of the feasibility study into the clearing of Acton Peninsula. A component of the risk assessment process including extending the acceptable implosion safety margin of 50 metres to 200 metres as an added precaution for onlookers".

The initial advice provided to those co-ordinating the public event came from Mr. Lavers who advised of an exclusion zone in the vicinity of 50 metres. No doubt this advice was founded upon the reference in the February 1996 report of Richard Glenn and Associates which at page 4 makes the following statement: -

"On each implosion day an exclusion zone, expect to be in the order of 50 metres, will be established around the building to be demolished". This report by Richard Glenn and Associates was entitled "Possible Impact on Hospice Activities".

84. It will be appreciated that at that stage there was no detail as to the actual methodology proposed, the type of explosives or protective measures nor was implosion a settled form of demolition. No advertising had been made nor were the contracts let or the contractor or subcontractor appointed so that when Mr. Lavers provided this information in January 1997 it was at a very early stage and could only be regarded as preliminary information. I do not believe that Mr. Lavers should be criticised for providing this detail. It seems to me that all Mr. Lavers was seeking to achieve was to point out to Mr. Hopkins when he provided that information what the RGA Report actually had said on this issue. Again what Mr. Lavers provided Mr. Hopkins for the purpose of drafting a response by the Chief Minister to Mr. Tolley of the Hospital Services Union of Australia was simply the advice provided by RGA.
85. What is critical, however, is that Mr. Lavers was present at the meeting on 2nd July 1997 and later on the site explaining the methodology in some detail to the media on 10th July 1997. It was this knowledge of the changes in the methodology and the reconfiguration of the blast away from the hospital that should have warranted some attention being given to reassessing the exclusion zone. It was clearly a lack of attention to detail. I reiterate that I do not consider Mr. Lavers to be the absolute technical adviser for the organised public event. Mr. Lavers was also somewhat removed from any supervisory role. His conduct and actions can be regarded as careless. I agree with Mr. Purnell's submission where he quotes Lieutenant Woodcock who came to the view that Mr. Lavers "didn't know very much about the whole explosion process at all". It is for that reason that I do not view Mr. Lavers as giving technical expert advice but rather providing information contained in a briefing report to him prior to the enlivenment or shortly after the reactivation of the project and later when he passed advice to Mr. Hopkins to facilitate the Tolley reply.
86. Mr. Lavers did become aware of the exclusion zone of 200 metres but it is not sufficiently clear in my view when Mr. Lavers became apprised of that detail. It possibly occurred on 2nd July 1997 but it was more likely to have been made known to him as late as 10th July 1997 by which time it was probably too late

for him to take any action about the matter or realise its significance. It should also be remembered that the Inquest did not have the benefit of Mr. Lavers giving evidence on this issue in any detail so that the only material available comes in his record of interview and what others may have said about the role of Mr. Lavers. In any event I do not propose to continue labouring this issue of Mr. Lavers state of knowledge or involvement in the exclusion zone issue as the sole responsibility for setting and reassessing exclusion zones lay primarily with Mr. Rod McCracken as the explosives expert and subcontractor and then with Mr. Fenwick as the supervising contractor.

87. Two answers given by Mr. Lavers in his record of interview are of considerable importance: -

A. "Was a second opinion sought in regard to safety exclusion zones based on the Glenn report?

A. At the time of the report I don't believe so, however, during the course of the project, ultimately it was the – Rod McCracken was the person who advised PCAPL.

A. And what did he exactly did he advise?

A. From my discussions with Cameron Dwyer he originally talked of 50 metres as being normal, 100 metres as being convenient and lets make it 200 metres to be on the safe side, which virtually meant that the Peninsula was – they didn't want anyone standing on the Peninsula. We went into greater detail just before the implosion about the safety of the Hospice and whether it should be occupied because the Hospice is only 78 metres from Sylvia Curley House".

This is the understanding of Mr. Lavers and what he was telling Mr. Hopkins and Mr. Dawson. This was reasonable conduct on Mr. Lavers' part. Again the lack of precision in the terms of the safe distance is apparent.

EXCLUSION ZONE - MR. M. SULLIVAN AND MR. R. WADE

79. This segment was an unsatisfactory area of the Inquest where a substantial amount of time was lost on an issue which depended upon the credibility of Messrs. Wade and Sullivan as to who was to be believed. I do not propose to make any finding about this issue. The evidence on this topic ranged well outside the scope of the Inquest and touched upon matters in the nature of a professional dispute between the two men which at its very highest the topic was peripheral or collateral to the Inquest and upon reflection largely irrelevant when one considers that a decision on an exclusion zone rested with the shotfirer. The professional issue went back to a point in time prior to Katie Bender's death.

80. Mr. Purnell SC for TCL made some lengthy submissions concerning what he describes as the Wade allegations. I shall endeavour to deal with them as succinctly as possible.
81. The suggestion is that on 5th June 1997 Mr. Russell Wade a former senior Military Officer spoke to Mr. Sullivan at a social function and told him in essence that because of the steel I beams in the columns, the use of steel cutting charges would be involved and the stand off distance when such charges were used in military demolitions was 1000 metres. Mr. Wade further stated that an independent safety officer should be appointed by the government and that the Chief Inspector of Dangerous Goods should be involved. Mr. Wade volunteered his advice should it be required. If this was the advice offered then it was of some significance and worth consideration, if not adoption.
82. Mr. Sullivan denied the conversation.
83. Counsel Assisting the Inquest argues that Mr. Wade's version of the conversation should be accepted for the following reasons: -
- a. It was well known as at 5th June 1997 that steel was in the building columns (I agree. This fact was known as far back as 1991 when an earlier feasibility study had been prepared by the ACT Board of Health with Richard Glenn and Associates),
 - b. Mr. Sullivan agreed that he did have a conversation with Mr. Wade that evening with only himself and Mr. Wade present which lasted about 1 minute or slightly longer in duration,
 - c. There were concessions made as to the length of their conversation sufficient for Mr. Wade to have passed on to Mr. Sullivan the information that he claims to have provided,
 - d. Mr. Sullivan would not attribute Mr. Wade's involvement in the writing of the letter by Mr. O'Donnell of APESMA to the

then Minister Mr. David Lamont as a motive for Mr. Wade to fabricate the conversation, and
 - e. Mr. Wade remained unshaken and credible despite lengthy and trivial attempts to attack his credit.
79. The counter argument advanced by Mr. Purnell of Counsel is to this effect, viz; why would one in a position of Mr. Wade responsibly wait for a social occasion to raise such a serious issue as public safety, and secondly, why would one in a position of Mr. Wade take only 1 – 1^{1/2} minutes only in duration to convey an issue of public safety to Mr. Sullivan and then not discuss or raise it with him again. If Mr. Sullivan allegedly made no reply to the comment then why did not Mr. Wade at least repeat his comments to ensure that Mr. Sullivan heard or understood the import of those allegations or seek some response or assurance that he Mr. Sullivan would do something about these grave matters. Why, if Mr. Wade was so serious about safety, did he not

follow up the alleged conversation with at least a written memorandum to Mr. Sullivan to ensure Mr. Sullivan remembered, heard or was at least considering and conscious of this important matter.

80. There certainly was a conversation between the two men and as to the exact content there is total conjecture. I am not prepared to make any definitive finding primarily because I do not accept that it directly or even indirectly contributed to the death of Katie Bender. There is no doubt that Mr. Sullivan, if this conversation had occurred, could have alerted Mr. Lavers to the issues. TCL were relying on persons more closely involved in the project as the experts and who were exercising a supervisory role. Then again for Mr. Sullivan to become involved would be just another unnecessary intrusion on the responsibilities of Mr. Lavers which by this time in late June/early July in my assessment of the evidence had become somewhat onerous. The Inquest heard a great deal of interesting evidence about this conversation but which in reflection was only remotely connected with the fact-finding function of the Coroner.

97. Finally the evidence on such issues as the brochures for the engineering conference in Queensland, the lack of confidence in senior management, the union issues, the references to Mr. Whitecross MLA and Mr. Kaine MLA make for interesting anecdotal information but in essence are not helpful issues in determining the more substantive matters in this Inquest. Accordingly I do not propose to make any findings about this conversation or the two men, Mr. Sullivan or Mr. Wade. It may become relevant to other litigation at a future time in another place.

EXCLUSION ZONE – MR. DWYER (PCAPL)

98. Mr. Dwyer of PCAPL is frequently described by his Counsel as the conduit of information between the contractor and subcontractor, the Project Director and the principal. Mr. Dwyer was an administrator lacking any technical expertise in the demolition of buildings using the implosion method and explosives. Yet there is no escape from the simple fact that PCAPL and Mr. Dwyer had been appointed the Project Manager and Superintendent by virtue of their experience in management. I do not accept that role solely involves the exercise of passing on information in a routine manner without any form of examination or scrutiny. Nor do I accept the proposition that it would have been irregular or inappropriate for Mr. Dwyer to intrude on the issue of whether an exclusion zone had been properly established. The evidence is such that it required the Project Manager and Superintendent to be taking an active controlling and supervising role in relation to what the contractor and subcontractor were actually undertaking on the site.

99. Mr. Dwyer was asked about the setting of the exclusion zone in his record of interview which was adopted by him on oath: -

A. "Did he Mr. McCracken say that there was a possibility that there would be some fly rock at any stage to you?"

A. He advised that there could be and the exclusion zones were set up to eliminate any safety issues associated with

that. I think his original advice was the 50 metre zone and then it was increased according to his advice.

A. So you said 50 metres for – to have people therefore – within the 50 metres is that what he initially said?

A. No. What happened – he advised the exclusion zone in a meeting of 200 metres.

Q. Right.

A. And that was also the position where the perimeter fence was set on the site.

A. That's 50 metres we're talking about here?

A. No.

A. The perimeter site – the perimeter fence, how far was that from the – was that 200 metres was it?

A. No it would be – what happened was, we asked Rod to advise a safe distance on the Peninsula and he advised a position 20 metres I think it's the western road which is up near the Hospice end.

A. Right.

A. And the fence was put in position. Then the distance of 150 metres was set from the shoreline which put the overall exclusion zone well over 200 metres which was his advice to us.

A. Ok, and did you accept that exclusion zone?

A. On his advice, yes.

A. On his advice?

A. A contractor sets those limits".

100. Mr. Dwyer confirmed in evidence that in his discussions with Mr. McCracken an exclusion zone was set at 200 metres from the building and that a distance of 150 metres from the shore was set which put the effective zone at more than 200 metres.
101. Not one single document was provided to Mr. Dwyer by Mr. McCracken or Mr. Fenwick formally advising him of the appropriate exclusion zone either in answer to Mr. Dwyer's directive of 27th June 1997 or otherwise. It was meritorious and entirely proper for Mr. Dwyer to issue the directive but he omitted to follow up the failure of Mr. Fenwick or Mr. McCracken to respond to this crucial request. The only record relating to this issue is a hand written note by Mr. Dwyer written two days after the implosion outlining oral advice that he had received. He agreed in evidence that the advice only related to the safe distance for a VIP viewing platform, which I have previously mentioned. Indeed he agreed with the proposition put by Mr. McCracken's Counsel that he did not "specifically seek Mr. McCracken's advice as to the precise distance from which it would be safe for members of the public to view this implosion".
102. Mr. Chabaud stated that information concerning the exclusion zone was provided at the co – ordination meetings by Mr. Dwyer and Mr. Gaskin. Mr. Hopkins agreed with a proposition put by Mr. Ibbotson of Counsel for PCAPL that it was Mr. Dwyer's role to obtain information about the exclusion zone from the contractor and provide it to these meetings. This was the concept of being a conduit. The fact that neither of the demolition contractors were even invited to a single one of these meetings nor did they apparently seek to attend effectively meant that whatever advice Mr. Dwyer gave would probably be accepted and therefore become the exclusion zone.
103. At the meeting of 2nd July 1997 at which Mr. Dwyer was present Mr. McCracken indicated he might reconfigure the blast. People were on notice at that meeting of the risk of flying debris and the fact that cutting charges were not being used. Mr. Dwyer should have ensured in my assessment after the meeting of the 2nd July 1997, given that he was the conduit for information to Mr. Lavers and to the officers of the Chief Ministers Department, that Mr. Fenwick and Mr. McCracken had given him sound advice on the safe viewing area in the interests of general public safety. This was a clear failure on the part of Mr. Dwyer and was a factor in the death of Katie Bender.

EXCLUSION ZONE – MR. TONY FENWICK (CCD)

104. There is no evidence that Mr. Fenwick took any steps to ensure that Mr. McCracken gave considered and calculated advice as to the appropriate exclusion zone. On 2nd June 1997 when Mr. Dwyer directed him to provide such information in writing, Mr. Fenwick never bothered to respond in writing and his oral advice given some time later related only to dust. There was a duty on Mr. Fenwick as the contractor to supervise his explosives subcontractor. The importance of this issue in my assessment is a relevant factor contributing to the death of Katie Bender.

105. In conclusion the failures of Mr. McCracken in this regard constituted gross negligence. Those failures contributed to the death of

Katie Bender, simply because it was Mr. McCracken's responsibility as the explosives demolition expert to set the safety standards. It was a further failure in the terms of providing an adequate exclusion zone having full knowledge that the public were invited to attend as spectators. The fact that Mr. McCracken never set a specific exclusion zone for the spectators demonstrates a failure on his part to exercise proper responsibility for the blast.

LACK OF PROTECTIVE MEASURES

106. There was no protection at all between the webbing of C30 and C74 and where Katie Bender was standing. The complete lack of any protective measure, other than the inadequate bund walls and the incomplete sandbagging, should have been apparent to all who spent any time on the site either on 13th July 1997 or in the days leading up to the blast. When taken in conjunction with the reconfiguration of the blast towards the crowd and the indications that flying debris was a real possibility, the lack of protective measures ought to have been obvious even without expert knowledge. They were factors relevant to the death of Katie Bender.

Failure to Test the Method Used

107. The final configuration of the explosives used on 13th July 1997 consisted in essence of the following: -

- a. Use of Riogel cartridge explosives only in large quantities,
- b. Placed against steel backing plates,
- c. Which in turn were placed directly against the steel webs of the columns,
- d. With the columns having being cut in the "half moon" method, and
- e. With no protective measures in the direction of the blast.

108. Mr. McCracken himself acknowledged that: -

- a. He had never used Riogel before,
- b. He had never used backing plates in this manner before and it was his idea to do so,
- c. He had never imploded a steel framed building of the kind in question before, and
- d. Consequently he had never previously experienced the use of explosives to kick out steel columns that had been cut in this fashion.

109. It was imperative that before conducting the implosion Mr. McCracken surely would have tested the method or at least would have had an independent assessment made of the method by someone with expertise. This was because he had no prior experience on which to base a forecast of what might happen particularly in the light of his knowledge that a crowd was

expected to be present in the direction of the blast. It was critical that an independent check of the capacity of the explosives be made. There was no suggestion that he did either. Mr. McCracken agreed with the police that at the time of the detonation he did know what the result would be yet when specifically asked by the police whether he should have sought a second opinion he dismissed this as unnecessary saying "I honestly don't think we would have had a different scenario at all". This certainly was a curious response possibly indicating Mr. McCracken's own inability to assess his own methodology.

110. This very same methodology was put to Mr. Loizeaux for his expert comment. Mr. Loizeaux said, "there would have been no spectators. I wouldn't have permitted it...because the likelihood/probability, not possibility – the probability of fly of very large elements was so high, I would not have done it at all...I wouldn't have detonated it".

111. Mr. McCracken did claim that he had sought other opinions although the only person he had nominated was Mr. Appel. The highest that Mr. McCracken put any consultation with him was that he might have mentioned that the webs were thin and that he proposed to insert backing plates. Mr. McCracken further stated that Mr. Appel never made any "decision" about the use of the plates as he was overseas at the relevant time. Mr. Appel never saw the size of the plates proposed to be inserted by Mr. McCracken. Nobody "physically did the calculations" before the plates were inserted. At the time of Mr. Appel's visit on 6th and 7th June 1997 Mr. McCracken was still searching for cutting charges and even involved Mr. Appel in the search. Mr. Appel could not be regarded as providing a second expert explosives demolition opinion. Mr. McCracken has to be regarded as being reckless intending to proceed with the demolition in the light of those particular circumstances.

112. The fact that Mr. Ashley believed the cutting method he approved was for an induced collapse rather than implosion demonstrates the inadequacy of any consultation Mr. McCracken may have had with Mr. Ashley.

113. The test blasts conducted by Mr. McCracken did not involve any testing of the steel backing plates. Those tests were effectively worthless as prognostic tools as Mr. McCracken himself conceded. Only one of these

tests was of Riogel against steel. This test involved a smaller column that did not have the weight of the structure upon it and consequently had more freedom to move. This test resulted in some fly being produced. A portion of the web was found near the bund wall about 6 metres away. Mr. McCracken only used 1kg of Riogel to facilitate this test.

114. Mr. Loizeaux was of the firm view that it was imperative to test the method that was actually to be used on the day of the implosion. Whilst acknowledging there are some types of construction (e.g. post tensioned or pre - cast and pre – stressed reinforced concrete) on which it would be inadvisable to conduct a test blast he indicated that such test blasts could have been conducted in this case on concrete encased steel. The testing of the method ultimately used would have in his opinion shown that the method

was an inappropriate one to kick columns out. In the Appendix K response at K5c it is stated that it was not possible to conduct a full test blast perhaps based on the advice of Mr. Ashley and that to do so would have affected the structural integrity of the building. This proposition was never put to Mr. Loizeaux. The weight of evidence suggests that Mr. Loizeaux's point of view should be accepted.

115. It is no excuse for Mr. McCracken to rely on an alleged inability to conduct a full test blast as the reasons for not conducting any tests at all involving

backing plates. Mr. McCracken was aware from the test blast he did perform that portions of the web may be projected. It was as a consequence of this that he conceived the idea of using a backing plate to strengthen the web. He did not know that the plates would deform and push against the web at the time of detonation yet he did not even test his theory on a small non-structural column. It would seem that he was content to use this method, not knowing what the final result would be, just hoping that it would work out.

116. The best evidence is that the backing plates, rather than strengthening the webs, instead pushed through, fractured them and they then became projectiles. This is illustrated by the sheer amount of web and backing plates including the fatal fragment that were thrown such large distances from the site. This result could have been predicted even without testing had Mr. McCracken bothered to consult an expert prior to employing this method for the first time on 13th July 1997. It must again be said that those responsible for the conduct of Mr. McCracken should also have been alert to obtain specialist expert demolition advice in relation to the use of such explosives.

117. Mr. Loizeaux described the method as ill-conceived. The backing plates were steel just as dense as the web itself. Accordingly rather than strengthening the web as hoped by Mr. McCracken these unsecured plates transmitted almost the full force of the explosive energy straight into the web making projectiles of both the webbing and the plate itself.

118. Mr. Loizeaux explained the method by which the plates transferred this energy through his croquet analogy.

"So that the explosives were not pushed through the web?---Mm.

Take that as the assumption in general terms?---I think that is ill conceived because the backing plate as you are referring to this---

Yes?---is made of material just as dense as the web itself and this steel is a perfect medium for the transmission of energy through the backing plate into the web regardless so not only are you still going to put virtually the same amount of energy into the web of the column which they are intending to remove and that web probably would become a projectile and this would be come a very effective projectile as well because it has been flame cut on all four sides. The analogy – do you play croquet?

Well personally I don't but it is neither---?---I do not mean personally, but you use the same description?

Yes?---The small ball, the wickets, you smash the ball around.

Yes?---When you sting you opponent what you do is you place your ball against their ball. The balls are quite similar in material, quite dense, hard not like steel but hard – put your foot on your ball, take your mallet, strike your ball and their ball, energy passes through your ball into their ball and their ball goes as far as possible in the wrong direction. What would happen if you put energy behind this dense plate the energy would pass right through it much the same as the energy would pass through a croquet ball and would still go into the web and fly. Likewise the energy into the backing plate would make it fly, evidenced by the concave shape and the cupping. Its not only cupped one direction, its cupped the other direction and I would say it was done by explosives because if you turn the plate over you can see that the striations in the back of the plate showing energy that was pumped into it and energy from explosives will actually modify, to some extent, the structure of the steel. Impact explosives were used in mating different types of metals together explosively and again a metallurgist would be more qualified to describe that but I would think that this would be ill advised and not serve a purpose. Rather than strengthen the plate it would have been a better process – something that we do – is

cushion the plate and we will take a piece of rubber conveyor belting, which we already have on the job, as mentioned previously, a piece of plywood, something soft and the intent of that is to remove the brisance which is a term that reflects shattering power of an energetic explosive and by removing the brisance out of the impact of the detonation and then transmission of energy into the web you're likely to minimise or mitigate the shear tearing along the flanges where the web attaches to the flanges which are much thicker. You're going to get shear lines which was very evidence in the columns that I saw yesterday and also as seen in the photographs this morning. That would have mitigated that tearing, possibly had a mitigating effect on the amount of fly by reducing the energy imparted to the web in the backing plate".

119. Mr. McCracken knew that the first time his final method would be tried would be on the day of the implosion itself. He also knew that integral to this system was the placement of large amounts of explosives directly against steel. There was no effective protection in the direction of the blast. Mr. McCracken should therefore as a matter of reasonable precaution for public safety have adopted and insisted upon at least the standard accepted military exclusion zone of 1000 metres being adopted when using explosives in such circumstances. The evidence in support of this conclusion comes from Dr. Krstic on 24th March 1998, Mr. Russell Wade on 31st July 1998.

120. Mr. Fenwick as the head contractor had the duty to properly supervise Mr. McCracken's activities on the site on the site. He conceded that he knew that one test blast conducted by Mr. McCracken resulted in explosive charge blowing a small hole in the beam. He further believed that Mr. Dwyer had attended that test blast. Mr. Fenwick was aware of the need to strengthen the centre of the column and infact it was his workers who cut 200 odd backing plates that were used by Mr. McCracken for this purpose.

121. Mr. Fenwick knew the importance of conducting test blasts. Mr. Fenwick had assisted Mr. McCracken in conducting one blast in relation to shock waves. He also knew the purpose of the backing plates was to stop the web blowing out. Therefore he must have been aware that if this proposal failed to work on a test it was likely again that holes would be blown through the column webs. Yet he did not bother to ensure that Mr. McCracken's proposed solution for strengthening the webs was tested at all or otherwise assessed as safe and effective before being used for the first time on the 13th July 1997.
122. Mr. Dwyer was also in my view aware of Mr. McCracken's purpose of using steel backing plates. Mr. Dwyer told the police that he had been advised by Mr. McCracken that the backing plates were to be used to "strengthen up the centre of the column so the effect would be that the explosive didn't blow a hole in the column" and thus to help push the columns out of position. He, like Mr. Fenwick, failed to take any steps to ensure that this proposal was tested or otherwise assessed safe before being used for the first time.
123. There are a combination of failures evident here by both Mr. Fenwick and Mr. Dwyer which combined with their other failures amount to negligence. Mr. Fenwick was in a greater position than Mr. Dwyer to prevent these circumstances occurring. If I was required to attribute any degree to these failures it must primarily fall upon Mr. Fenwick. Mr. Dwyer bears a lesser level of responsibility but he at least had constructive knowledge of Mr. McCracken's methodology and importantly the late changes. It should be said in relation to Mr. Dwyer that he, as the Project Manager and Superintendent on the site for a considerable number of months, was in a position and should have ensured that the *ACT Demolition Code of Practice* was rigidly complied with including the *Australian Code of Practice* in relation to the use of explosives. The evidence satisfies me that Mr. Dwyer was totally unsuited for appointment to the role of a Project

Manager on a site the size of the Acton project involving a demolition using explosives. The evidence also demonstrates a lack of capacity in Mr. Dwyer to manage and supervise the work practices of Mr. McCracken and Mr. Fenwick.

Visit to the site by military personnel

124. In the days shortly before the implosion occurred there were a large number of persons who attended the site and observed the work being undertaken by Mr. McCracken.

125. On 1st July 1997 there was a courtesy briefing provided to the Australian Federal Police Bomb Squad including the officer in charge Sergeant Gary Brodie. Mr. McCracken discussed details of his methodology with these persons including the difficulty in obtaining the cutting charges he wanted to use, his consequent decision to use cartridge explosives with pre cut columns and his intention to kick out the columns. The visitors also inspected the half moon cuts to the columns, the application of the explosives to the steel backing plates and the effect of the gap between the web and those backing plates to

lessen the possibility of fragmentation of the web in accordance with "accepted principals".

126. There was a visit by defence experts on 10th July 1997 at about 2.00pm. It was a technical tour. It comprised officers from the Australian Army and the Royal Australian Navy. These persons were accompanied by Mr. Mike Sullivan and Mr. Warwick Lavers of TCL with some media personnel including the Australian Broadcasting Corporation. About 14 – 18 persons were involved in the tour.
127. There were frequent exhortations made by Counsel for TCL and PCAPL for these two Military Officers to be called as witnesses in the Inquest on the issue of methodology. Counsel for TCL has made a competent and exhaustive analysis of the Records of Interview provided by the two officers. I have adopted the majority of those submissions with some additional excerpts included. Counsel for TCL made particular prominence of the Record of Interview provided to the police by Major K. J. Cuthbertson who is a Project Officer with the Directorate of Trials Department of the Defence (Army).
128. Lieutenant R. J. Woodcock has been a member of the Royal Australian Navy for 21 years and holds a Masters in Explosive Ordnance Engineering from Cambridge University. His responsibility is to look at magazines on board Royal Australian Navy vessels. Lieutenant Woodcock explained that he overheard a conversation and indicated to his colleagues that he would like to join a visit for his own knowledge. Lieutenant Woodcock made it perfectly clear in his Record of Interview that the demolition work at Acton Peninsula did not relate to his own military work. The officer said it was like "on the job training, sort of backing up what I had learnt". The officer continued that it was "an information excursion" and did not consider it a technical thing. Lieutenant Woodcock was not sure whether the person that conducted the tour was actually Mr. Rod McCracken but did say that "he then took us through a tour of the site showing us various test cuts that he had done, where he had put the explosives, he explained the process, he explained the problems that he had with the entire job and going into detail how he couldn't get explosives and how well he didn't have the plans and how he – the building was a lot stronger than he first thought and how he got around the problems with those things".
129. It seemed that Mr. McCracken handed around the linear cutting charges for the visitors to inspect. Lieutenant Woodcock saw the sandbagging strapped around particular columns. Lieutenant Woodcock saw the work being done at the Hospice, the various test blasts on the RSJ's and the cutting to various columns. Lieutenant Woodcock made it perfectly clear in his record of interview that what is done in a military demolition is totally different in a civil atmosphere.
130. When asked by the police "did you discuss any safety distance that he was going to include on the day" Lieutenant Woodcock replied "he did and

I cant remember the exact distances but he – the limit they had established with the police boats were going to be out of bounds was well and truly far beyond where anything would fall far beyond".
Lieutenant Woodcock was asked: -

A. "Did you pass any approvals or advice?"

A. "Oh no basically no".

131. Lieutenant Woodcock attended the demolition on Sunday 13th July 1997 with his wife in an area west of the Yacht Club. Lieutenant Woodcock said in his evidence that he sensed something was wrong. He made this judgment by virtue of the amount of splashes and the distance the debris was falling in the water beyond the police boats. Lieutenant Woodcock explained that the army are more familiar with demolition work. He did not see any person conducting any inspection or ticking off figures whereas in the military (sphere) the people are very rigorous with that sort of thing in the terms of taking notes. The officer said "I go off regularly and do inspections of ships and we have check lists and we have all sorts of things to talk about and I saw no evidence of that sort of thing at all".

132. Lieutenant Woodcock further said, "we were there on what I would call an excursion. Not any fact finding, just general interest sake. I found it intensely interesting. I dragged my wife by push – bike there and I would have got a lot closer but I was only stopped by (the) crowds. This was my very first experience with contracting type work that was interesting. It wasn't done how Navy people would probably do it but I went away with overwhelming feeling that this guy has done this many many times and knows what he's about, so I would have gone to where Katie or where I would have got as close as I could which would have been around by the site except I found out earlier that part was roped off and I couldn't get there so I would have gone to where Katie Bender was but I couldn't get through the crowds".

133. Two engineers accompanied Major Cuthbertson to the demolition site on 10th July 1997. They were Messrs. David Kemp and Lindsay Vickers. Mr. Kemp had experience not only as an engineer in the construction of buildings but also demolition work. Mr. Vickers is a person who assisted Major Cuthbertson on another project involving the use of explosives. The arrangements for the visit had been initially made by Captain Leo Monkovich an ammunition technical officer based in Sydney.

134. Major Cuthbertson's function with defence "is testing the safety and useability of explosives stores where we clarify and amend current safety procedures and safety distances". Major Cuthbertson explained that an "implosion is the use of explosives in very, very small quantities on a building prepared for demolition. An implosion is the resultant collapse of a building using the smallest amount of explosive and most of the fragment that normally results from an explosion, an explosion is massive quantities of explosive that you expect massive debris and fragments to be thrown clear of the building. The implosion minimises fragmentation and debris and virtually uses the weight of the building to collapse itself". The reason for the site visit was on a "professional basis, were interested to see how the construction industry complied with an implosion activity. We were interested in the placement of

charges, the preparation of the building, the safety procedures, how they anticipated the building would collapse and most of our demolitions are huge".

135. Major Cuthbertson provides a very significant answer in relation to the difference between a civil demolition and a defence type demolition. Major Cuthbertson says: -

"The difference between a defence demolition, the simplest example I can give you, I conduct trials to test the fragment throw, that is the velocity which a fragment travels through the air, the exact point on the ground where it lands and the collection of that data, in some instance we will construct a purpose built magazine, place a set quantity of explosives inside it knowing that it will totally demolish or destroy the building and then proceed to collect the data. The data is what the blast pressure builds up and occurs when the explosive is initiated, the velocity the fragment travels after the blast commences to tear the building apart, the distance that the fragments travel before they strike the ground and the condition of the fragment after it hits the ground".

"This is filmed and instrumented down to the nth degree to get the maximum benefit so that we can understand what happens during a demolition. That information is then used on the various formulas to calculate safety distances. That's our role. The charges, the size charges, anything that we use can vary. My last trials were from 10kg, I fired up to 75 tonne in a single blast, total demolition and destruction of the building. The difference between that and a civil demolition such as the implosion, what my belief was, small quantities of explosive are used to shift, not to cut the steel girders that were to hold the building. I believe that it is the same as a stack of cards, if you cut out a layer of the lower cards then the weight and the volume of whatever mass rests above that point will collapse and if you continue to knock out those lower cards then obviously the weight at the top will crumble and push the building down. Minimum – the blast does the work, you are not cutting steel, that was my understanding of this civil demolition.

136. Major Cuthbertson said that Mr. McCracken explained to them the surprise that he experienced when they started to clear away the reinforced concrete from the brickwork and found that additional steel had been added to the outer edges of each of the flanges. He showed a little bit of dismay at that because he apparently was not expecting it.

137. Major Cuthbertson said that Mr. McCracken made a claim that the methodology was on "United States" advice. "He said that the plans were late or unavailable at the time but they proceeded in the manner that the US had advised. He said his proposed demolition of the set up, the testing that was used to cut and remove excess steel from these girders had been sent to the States and verified by some company over there". It should be noted that during the course of the interview Major Cuthbertson was shown a number of photographs by the interviewing police officer and asked to make comments. It should also be stressed that he didn't pass any comments at the time about the amount of explosives. It was the officers understanding that at the time that he left the demolition site that Mr. McCracken was using Riogel as a kick charge and a shaped cutting charge. The officer continued "the Riogel is used where all the steel had been cut through using the gas axe. The shape charge

was used on a couple of the major beams that were well underneath the building.

138. Major Cuthbertson was asked "did yourself or any person in the group give an opinion on what he had set up at the time to Mr. McCracken?"

A. "No not myself no. Kemp and Vickers who were with me, no some of the others were discussing other points but I was more interested in the exposed charge. I wanted to see the positioning and the placement, hence, this photograph".

A. "Do you know if Mr. McCracken asked for any approval of what he was doing?"

A. "No I wouldn't".

A. "Do you know if any person in the group was there to give approval to Mr. McCracken of what he was doing?"

A. "Not from us, we were there purely as a professional group we were interested to see what his procedures were, how he was placing the charges and how he anticipated the building to fall".

139. Major Cuthbertson was unaware of the strength of Riogel. It was a new explosive in his field and he used a different high explosive. Major Cuthbertson was professionally interested to find out how the Riogel worked and in particular whether Riogel was designed to cut the steel which would result in fragmentation or whether it would simply act as a pushing type. When asked about whether Mr. McCracken informed the group of any safety distances Major Cuthbertson said "not as such. We asked what the anticipated throw was and in a general conversation, "what's your safety distance?" He said that "they did not expect any fragment or debris to go outside the earthen mark which was probably 10 foot – 10, 12 foot outside the wall".

140. Major Cuthbertson was asked at question 57: -

Q. "Have you got any comment in relation to – concerns or that opinions expressed that both Army and Police that experts had attended the site and given approval for it?"

A. "It was wrong. Our group was there simply to get an understanding of how he had planned it, what had been done. Media being media, if there's not a story there, there've invented, it sounds good. Obviously they were attracted because

there were two media representatives there in that group who reported as being there. None of us were there to give any form of approval one way or the other. I think that if – if more of the charges had have been positioned, the possibility may have been but it wasn't and no comment was made in that field. We were there as interested onlookers if you like, experienced in the field of explosive but not there to check on his work.

141. Counsel for PCAPL endeavours, in making the following submission, to place another interpretation on the purpose of the visit and the possible outcome. Their attendance on the site and the absence of any comment by the visitors, favourable or otherwise, does in no manner enable a conclusion or inference to be drawn that whatever was occurring on the site had some form of approval on their part. It is misleading for Counsel to suggest otherwise.

"The submission by Counsel Assisting that these visitors "had no duty or place to comment on the methodology they observed" surely misses the very important point that none of them raised any concern about that methodology. Had any of these experts had the slightest quarm that the methodology they observed might cause pieces of metal to be projected onto, let alone over the lake, they would and should have said so (indeed, it is arguable that they did have a duty to do so). Moreover there is no doubt given the presence of the media during some of these visits that had any such doubts or concerns being expressed they would have become public".

142. Clearly the answers given earlier by Major Cuthbertson lays to rest any suggestion that the military personnel were there to provide advice let alone any type of approval to the methodology. It is consistent with their position that they were there on an information-gathering basis. The military personnel were simply curious onlookers with a common interest in demolition and explosives.

143. The military personnel who visited the site were not called as witnesses to the Inquest as they had no role to play in relation to the cause and effect of the tragedy. Counsel for PCAPL wants to attribute duties, responsibilities and obligations to anybody that had any connection with the demolition except for his own client Mr. Dwyer. Counsel for PCAPL in my view is simply clutching at straws. It is an attempt to minimise the omissions of Mr. Dwyer and to deflect harm away from his client.

144. Major Cuthbertson further said: -

"Military wise as soon as we do one of those, place any explosive be of high or low velocity then we set an automatic 1000 metre exclusion zone. I was quite surprised how close people came in". He continues "probably that goes against the grain but we use bigger charges. We use higher velocity charges and it's professionally something we wouldn't do but in this case we believe that the precautions had been taken. McCracken had explained his procedures. The charge breaks that he said, 803kg were the two charge weights that stick in my mind and with the amount of preparation, that is the cutting of the girder, all these were designed to do was push, not shatter and it could have worked".

145. Major Cuthbertson felt that the use of Riogel by Mr. McCracken was correct. It appears from other answers given in the record of interview that Major Cuthbertson had thought that the methodology employed by Mr. McCracken with the protective measures that he had taken with the exclusion zone were reasonable in the circumstances of a civilian demolition.

146. Major Cuthbertson continued: -

"The moment a military target is established from an individual metal target, it is 1000 metres. That would be calculated – the outside girders of that building – all around that building would be a minimum of 1000 metres. That's an unwritten law that we utilise because we know that the stuff will fly that far".

147. Counsel for PCAPL attempts to ascribe a role to the military personnel that was wholly inconsistent with the purpose of their going to the site. The military personnel were not there to check on the methodology or to

detect issues as to safety. The military personnel were dealing with demolitions using explosive devices in a military context. The military visitors were there simply to gain some understanding of the procedure and protocol that was undertaken in a civil demolition. It simply is not open to make any suggestion that the attendance by the military personnel on the site and their lack of adverse comment on the methodology amounted to some sort of tacit approval to what was actually occurring on the site. It needs to be made perfectly clear that the military personnel were not on the site to examine Mr. McCracken's method of demolition or assist in the loading of explosives and therefore they were not there to consider the possibilities that something might go wrong.