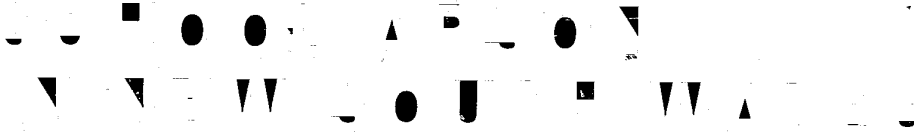


.....



1-20-92  
MF

132232

# SCHOOL ARSON

## IN

# NEW SOUTH WALES

Lucy Burns

133232

U.S. Department of Justice  
National Institute of Justice

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the National Institute of Justice.

Permission to reproduce this copyrighted material has been

granted by

N.S.W. Bureau of Crime  
Statistics and Research

to the National Criminal Justice Reference Service (NCJRS).

Further reproduction outside of the NCJRS system requires permission of the copyright owner.

1991

Published by the NSW Bureau of Crime Statistics and Research  
Attorney General's Department

Level 5  
20 Bridge Street  
Sydney

ISBN 0 7305 8680 4

## PREFACE

School arson is a matter of perennial concern in New South Wales. Although arson attacks on educational institutions constitute less than 12% of suspected arsons each year, the human and financial cost to the community is often disproportionately high. Since 1983/84 the annual cost of school arson in this State has never fallen below \$2 million and, in 1987/88 with the destruction of Narooma High School, rose as high as \$10.1 million. To these financial losses must be added the costs incurred when schools lose donated and irreplaceable equipment and when valuable student and teacher time is spent in cleaning up and salvage.

Despite the high cost of school arson and arson generally, very little useful research has been conducted into ways of reducing the incidence of arson. There is a large theoretical literature on the psychology of arsonists but it generally affords little in the way of practical guidance as to how arson might be prevented. The present study, funded by the NSW Department of School Education, is an attempt to remedy this state of affairs. Instead of concentrating on the 'mind of the arsonist', the research strategy has been to see what factors differentiate schools which have been burnt from those which have not in order to see whether these factors provide clues as to how the risk of school arson might be reduced.

The results are both interesting and somewhat surprising. The pattern of school arson is certainly not random. Certain kinds of school are more at risk than others. Certain seemingly mundane features of the school and/or the school environment place some schools at significantly higher risk of arson than others. Some of these results indicate ways in which the arson risk of existing schools may be reduced. Others carry design and location implications for future schools.

Dr Don Weatherburn  
Director

March 1991

# CONTENTS

<b>PREFACE</b>	iii
<b>ACKNOWLEDGEMENTS</b>	vi
<b>SUMMARY OF RESULTS</b>	1
PHYSICAL CHARACTERISTICS OF THE SCHOOLS	1
ACCESS FACTORS	1
<b>1. INTRODUCTION</b>	2
1.1 BACKGROUND	2
1.2 INCIDENCE OF ARSON AND SCHOOL ARSON	2
Regional differences in school arson	3
The cost of school arson	3
1.3 RESEARCH STRATEGY	4
<b>2. POLICE REPORTS OF SCHOOL ARSON</b>	6
2.1 INTRODUCTION	6
2.2 THE SAMPLE	6
2.3 DISTINCT INCIDENT CHARACTERISTICS	6
Day and time of the fire	6
Value of property damage	8
Type of school	8
Access to the school	9
Location in school targeted	11
Incendiary method	12
Who reported the fire?	13
Presence of others	14
Number of suspects	14
2.4 CONCLUSION	15
<b>3. THE SCHOOL SURVEY</b>	16
3.1 PREVIOUS STUDIES OF SCHOOL ARSON	16
3.2 THE SURVEY QUESTIONNAIRE	17
Physical factors	17
Access factors	18
Disciplinary factors	19

**CONTENTS cont.**

3.3 THE SAMPLE . . . . .	20
3.4 RESPONSE RATES . . . . .	21
3.5 METHOD OF ANALYSIS . . . . .	21
3.6 RESULTS . . . . .	22
Physical factors . . . . .	22
Access factors . . . . .	24
Disciplinary factors . . . . .	28
Differences in school arson by Department of School Education region . . . . .	30
3.7 CONCLUSION . . . . .	31
<b>4. POLICY IMPLICATIONS . . . . .</b>	<b>32</b>
<b>NOTES . . . . .</b>	<b>34</b>
<b>APPENDICES . . . . .</b>	<b>37</b>

## **ACKNOWLEDGEMENTS**

A number of people contributed to this report. Research into the background material and some of the preliminary analysis was undertaken by Michael Cain. Questionnaire design was undertaken by Michael Cain and Jonathan Nichol with assistance from Roseanne Bonney. Survey design was undertaken by Lucy Burns, Jeanette Packer and Bronwyn Lind. The computing and data analysis were undertaken by Lucy Burns, with assistance from Les Kery. The report was written by Lucy Burns but constructive feedback from Jeanette Packer, Bronwyn Lind and other Bureau members contributed substantially to an improved final version. Jonathan Nichol was responsible for desktop publishing.

The Bureau gained valuable assistance from the NSW Police Department and, in particular, members of the Tactical Intelligence Unit. The NSW Fire Brigade and, more specifically, members of the Fire Investigation Unit also made significant contributions. The NSW Department of School Education provided valuable input at all stages of the project. Finally, the Bureau would like to thank all the school principals who gave their time to complete the school survey.

## SUMMARY OF RESULTS

This report presents the results of a project conducted by the NSW Bureau of Crime Statistics and Research at the request of the NSW Department of School Education. The objective was to identify factors associated with the risk of arson in schools. The project involved the analysis of 214 incidents of school arson via police incident reports and a school survey of 363 NSW Government schools. The results were categorized as to whether they related to physical, access or disciplinary characteristics of the schools. No significant associations were found between the disciplinary factors and the risk of school arson. The main results concerning the physical and access factors were as follows:

### PHYSICAL CHARACTERISTICS OF THE SCHOOLS

- (1) The majority of school arsons occurred between Friday and Sunday (55%) and they occurred most frequently between the hours of 4 p.m. and 8 p.m. (33%). Government schools were targeted more frequently than non-Government schools and secondary schools relatively more frequently than other types of schools.
- (2) Results from the school survey indicated that, in respect of schools which enrol pupils from Kindergarten to Year 6, there is a significant association between school size and the risk of arson. Schools which had been subject to arson more often had large enrolments (more than 300 pupils) in Kindergarten to Year 6.
- (3) Arsonists most frequently gained entry to the schools via windows (23%) and/or on the ground floor (17%). Force was used in 38% of cases. Fires were most often started in classrooms (30%) or outside school buildings (22%). The incendiary method most frequently employed was the ignition of school materials (56%).
- (4) Schools which had been subject to arson were less likely to be covered by Neighbourhood Watch.
- (5) Schools which had been subject to arson were more likely to have a major problem with vandalism outside school buildings.

### ACCESS FACTORS

- (1) Schools which had been subject to arson were more likely to have grounds used as thoroughfares by members of the public during and/or outside normal school hours.
- (2) Schools which had been subject to arson were more likely to be close to major shopping centres and to Housing Commission estates.
- (3) Schools which had been subject to arson were more likely to be used by young people outside normal school hours.



# 1. INTRODUCTION

## 1.1 BACKGROUND

The number and diversity of disciplines involved in the investigation of arson is evidence of the social, legal and personal impact this crime has both in Australia and worldwide. Arson is of interest to researchers and theorists in the areas of psychology, psychopathology, medicine and law to name but a few. The enormous involvement in the area reflects the magnitude of the problem. Firstly, there is the tremendous cost in terms of the damage and destruction of property and the loss of life and injury. Secondly, there is the multitude of serious consequences for individuals, families and communities. These are the hidden costs, many of which cannot be quantified. Nowhere are these costs more obvious than in the case of school arson where the psychological damage to students and staff following a major school fire can be devastating.

Whilst the problem remains widespread, knowledge about the factors associated with school arson is not becoming any clearer. This lack of understanding limits the ability of those in authority to plan preventative strategies. With this in mind, at the request of the NSW Department of School Education, the NSW Bureau of Crime Statistics and Research conducted a study to identify some of the factors which may predispose NSW Government schools to arson. The first stage of the project involved the identification of factors associated with the problem of school arson. This was undertaken both through an examination of the nature of school arson incidents from police records and through a review of the literature in the area. The second stage of the project involved a survey of schools to examine the exact relationship between the factors identified and the likelihood that schools in NSW will be subject to arson.

## 1.2 INCIDENCE OF ARSON AND SCHOOL ARSON

According to statistics gathered by the NSW Police Department, arson incidents overall and, more specifically, incidents of school arson have been on the decline in recent years (see Table 1.1).<sup>1</sup> In 1983/84 there were 1,515 arson offences recorded by the Police Department, representing a rate of 28.2 offences per 100,000 persons in NSW. By 1985/86 there were 3,087 recorded arson offences (56.2 per 100,000). Over the subsequent few years the incidence and rate of recorded arsons declined to 2,196 offences in 1987/88 (38.8 per 100,000), 1,879 in 1988/89 (32.7 per 100,000) and 1,691 (29.2 per 100,000) in 1989/90. Nonetheless, the 1989/90 figure represents an overall increase in recorded arson offences on the 1983/84 rate.

As recorded by the Department of School Education, the picture is similar for school arson (virtually all school fires are arsons). As indicated in Table 1.1, the number of school fires increased from 103 incidents in 1983/84 to a high of 158 incidents in 1985/86 before dropping to 88 incidents in 1987/88, 75 in 1988/89 and 66 in 1989/90.

**Table 1.1: Recorded arson offences and school fires, 1983/84 to 1989/90**

<i>Year</i>	<i>Number of arsons<sup>a</sup></i>	<i>Number of school fires<sup>b</sup></i>
1983/84	1,515	103
1984/85	2,499	123
1985/86	3,087	158
1986/87	2,631	111
1987/88	2,196	88
1988/89	1,879	75
1989/90	1,691	66

<sup>a</sup> NSW Bureau of Crime Statistics and Research, 1990, *New South Wales Recorded Crime Statistics 1989/90*, NSW Bureau of Crime Statistics and Research, Sydney.

<sup>b</sup> NSW Department of School Education, Schools Security, Blacktown.

### **Regional differences in school arson**

Although school arson appears to be on the decline, it remains consistently more prevalent in some Department of School Education regions than others. The majority of school arson incidents in the three year period ending 30 June 1990 occurred in the Sydney metropolitan region as opposed to the country areas. More specifically, the highest percentage of all school arson incidents<sup>2</sup> occurred in the Metropolitan West region (30%), followed by the Metropolitan South West region (22%) and the Metropolitan East region (21%). The lowest percentage of school arson incidents occurred in the Metropolitan North region (9%). The six Department of School Education country regions had a lower incidence of arson than the five metropolitan regions over the same time span. The South Coast region had the highest incidence of all country areas over the three year period to 30 June 1990 (7% of all school arsons) followed by the Hunter region (5% of all school arsons).

### **The cost of school arson**

Although reported school arsons have been on the decline in recent years the cost to the public has remained very high. As indicated in Table 1.2, between 1983/84 and 1989/90 over \$33 million of public money was lost through school fires and, as Geason and Wilson indicate, the true cost is often even higher.<sup>3</sup> These authors cite the example of an arson at Pittwater High School where, 'the estimated \$600,000 cost of restoring burnt buildings . . . does not take into account the cost of donated equipment, student and teacher time spent in cleaning up and salvage, the cost of demountables for temporary accommodation or the disruption to students' (p. 46).

Table 1.2: Cost of school arson

<i>Year</i>	<i>Number of reported fires</i>	<i>Estimated cost (buildings only) \$ millions<sup>a</sup></i>
1983/84	103	4.2
1984/85	123	3.1
1985/86	158	4.1
1986/87	111	5.0
1987/88	88	10.1
1988/89	75	4.6
1989/90	66	2.0
Total	724	33.1

<sup>a</sup> Figures were provided by the Department of School Education. Six million dollars of the \$10 million lost in 1987/88 was due to one fire at Narooma High School in which the school was completely destroyed.

### 1.3 RESEARCH STRATEGY

When a series of school fires occurred in 1987, public concern was heightened. One of these schools (Narooma High School) was burnt to the ground and this incident alone had the effect of doubling the recorded annual cost of school arson (from \$5 million to approximately \$10 million).<sup>4</sup> As a result of the substantial loss incurred by these fires the NSW Government introduced several measures. One of these was to allocate \$40 million to the improvement of school security. These funds were used, in the main, to hasten the introduction of electronic surveillance to all high risk metropolitan schools.<sup>5</sup> A second initiative involved the commissioning of the Bureau of Crime Statistics and Research to investigate and report on factors which may predispose some NSW Government schools to arson.

In order to establish the factors that may increase the likelihood that some NSW schools are subject to arson it was decided to compare a group of 'burnt' schools (that is, schools that had been subject to arson) with a group which had not been burnt. The identification of these groups, however, proved difficult. This difficulty arose from two main causes: one associated with the nature of the crime and the other associated with the manner in which it is both reported and recorded.

The very nature of arson means that information on details of the crime are often missing. Arson involves the malicious destruction of property by fire. The use of fire in itself means that vital evidence establishing the occurrence of an arson and the *modus operandi* of the arson offender is often destroyed. The result of this is that the scientific evidence required to classify a fire as an arson is often destroyed and, as a result, a proportion of probable arsons are only categorized as suspicious fires. This made it difficult to identify accurately a complete group of schools subjected to arson.

The manner in which arson is recorded further aggravated the problem. There is no central database that provides information on fires identified as being due to arson. Often, several authorities are involved. For example, in the case of school arson a single incident may involve the Police Department, the Fire Brigade, the Government Insurance Office, the Department of Family and Community Services and the Department of School Education. Each of these bodies uses a somewhat different definition for arson<sup>6</sup> and emphasizes different aspects of the crime. For example, the Government Insurance Office provides a more detailed assessment of damage than does the Police Department or the Fire Brigade, although both these latter authorities collect some information on this issue. Information on offenders, on the other hand, is contained in the records of the Police Department and the Department of Family and Community Services while details of the method of ignition are held in records maintained by the Fire Brigade. The Department of School Education collects its own information on school arson concentrating on whether the school was connected to electronic surveillance and how quickly security guards attended the call of a reported arson.

The involvement of a number of authorities who emphasize different aspects of the fire and use different methods of classification means, inevitably, that some discrepancies will surface. As with other crimes, not all arsons get reported to all authorities. A fire which is started in a rubbish bin at a school and then extinguished, may or may not be reported further by the person who puts it out. If the fire is reported to Sydney Control (000), this call is then transmitted to the Station Office of the Fire Brigade responsible for that region. Officers will then attend the fire and if it is structural, extensive, or suspicious, the police are usually informed. If it is suspicious, the Fire Investigation Unit of the Fire Brigade and the Physical Evidence Section of the Police Department may also be contacted.<sup>7</sup> None of these contacts, however, is certain and the manner of reporting is, to a degree, discretionary.

There are also important variations in the record-keeping practices of different agencies. Lists of school fires kept by the Department of School Education are based on information from the Fire Brigade and are therefore not consistent with statistics kept by the Police Department. For example, the number of reported school fires for 1986/87 is 121 according to Police Department records and 111 according to Department of School Education records. The lower figure from the Department of School Education reflects, in the main, the exclusion of both non-structural school fires and fires in non-Government schools.

The outcome of these problems is that no one agency is capable of providing all the information required about arson incidents. Police reports generally contain more detail than other records and for this reason police reports of arson incidents were examined in order to establish any common factors of these incidents. In addition, other factors likely to be associated with school arson were identified from previous studies in the area. Records from the Department of School Education were used as the basis for categorization of the sampled schools as either burnt or unburnt.

## **2. POLICE REPORTS OF SCHOOL ARSON**

### **2.1 INTRODUCTION**

In this section, the nature of school arson incidents is examined from information provided on police incident reports in order to identify risk factors for schools. More specifically, details of school arsons recorded by the police over a two year (1987/88-1988/89) time span are presented. There are a number of different report forms which may be used by the police to record incidents of arson: the Fire Report (P60), the Fire Information Report (P43), the Police Incident Report (P40), the Police Incident and Arrest Report (P42), the Juvenile Report (P83) and the Person of Interest Report (P41). There is no systematic use of these different forms. For example, although a P60 was completed on most occasions a P40 may also have been completed for the same incident. To avoid duplication of records, hard copies of all forms relating to school arson between 1987/88 and 1988/89 were obtained and coded so that each incident and each suspect was coded only once.

When coding, several discrepancies were noted. One accidental fire had been coded as an arson and one Fire Report contained information on two distinct incidents. Also, as the different forms used by police do not contain exactly the same details, some information is missing for some of the factors discussed below.

### **2.2 THE SAMPLE**

Reports on 214 distinct incidents were obtained from NSW Police Department records of school arson incidents for 1987/88 and 1988/89. They were coded on 37 different variables (the coding form used is shown in Appendix 1). The records were then aggregated for the two years (115 for 1987/88 and 99 for 1988/89). Frequency tables for the majority of these variables were then produced yielding relative frequencies and percentages on a wide range of incident characteristics. These are presented below in relation to the characteristics of each distinct incident.

### **2.3 DISTINCT INCIDENT CHARACTERISTICS**

#### **Day and time of the fire**

As can be seen from Table 2.1, the majority of incidents (55%) occurred between Friday and Sunday. The exact day (and time) of the incident was not, however, specified on all police reports. A common problem with this type of information is that some offences occur overnight, over a weekend, or over a school holiday period when the school is unattended and so it is not possible to ascertain the actual time when the incident took place. In order to overcome this problem and record a day for fires which took place at some time during an extended time period, the first day of the time period was taken. For example, if the fire occurred between Friday and Monday, it was recorded as occurring on the Friday.

**Table 2.1: Day of fire**

<i>Day</i>	<i>Frequency</i>	<i>Per cent</i>
Monday	22	10.3
Tuesday	21	9.8
Wednesday	29	13.6
Thursday	21	9.8
Friday	48	22.4
Saturday	36	16.8
Sunday	34	15.9
Unknown	3	1.4
Total	214	100

It is clear from Table 2.2 that the times when an arsonist is more likely to attack a school are outside school hours with the most frequently cited times being between 4 p.m. and 8 p.m. (33%). However, a surprising number of school arson incidents appear to occur during school hours. In particular, 43 incidents (20%) were reported between the hours of 8 a.m. and 4 p.m. It is important to note that most of these incidents would have occurred on weekends and in school vacation periods when the schools are unattended (note that Table 2.13 on p.14 shows that, apart from the suspect, there were seldom other people present at the time of the fire).

**Table 2.2: Time of fire**

<i>Time</i>	<i>Frequency</i>	<i>Per cent</i>
Midnight to 4 a.m.	42	19.6
4 a.m. to 8 a.m.	14	6.5
8 a.m. to noon	13	6.1
Noon to 4 p.m.	30	14.0
4 p.m. to 8 p.m.	70	32.7
8 p.m. to midnight	33	15.4
Unknown	12	5.6
Total	214	100

### Value of property damage

Table 2.3 shows that most frequently fires (48%) caused damage estimated to cost less than \$1,000. In 25 cases the cost of the damage was not estimated. The minimum cost was \$0 (where the fire did not cause any damage) and the maximum was \$6,000,000 (Narooma High School).

**Table 2.3: Value of property damage**

<i>Value (\$)</i>	<i>Frequency</i>	<i>Per cent</i>
\$0	18	8.4
Less than \$1,000	84	39.3
From \$1,000 to \$10,000	44	20.6
From \$10,000 to \$50,000	19	8.9
From \$50,000 to \$1,000,000	22	10.3
More than \$1,000,000	2	0.9
Unknown	25	11.7
Total	214	100

### Type of school

Government schools were targeted more frequently (87%) than non-Government schools (12%, see Table 2.4). However, consideration of the disproportionate numbers of Government and non-Government schools in NSW is necessary. There were 2,231 Government schools and 848 non-Government schools in NSW in 1988.<sup>8</sup> This means that there were 8 fires per 100 Government schools but only 3 fires per 100 non-Government schools. Thus, Government schools experienced more than twice the rate of school fires experienced by non-Government schools.

**Table 2.4: Government or non-Government school**

<i>Government</i>	<i>Frequency</i>	<i>Per cent</i>
Yes	186	86.9
No	25	11.7
Unknown	3	1.4
Total	214	100

As can be seen from Table 2.5, the majority of school fires occurred in public schools (48%) and secondary schools (40%). Once again, however, consideration of the disproportionate numbers of these types of schools is necessary. There were 1,659 public schools and 381 secondary schools in NSW in 1988.<sup>9</sup> This breakdown is for Government schools; the breakdown for non-Government schools is not known. However, as 87% of the fires were in Government schools, it is clear that fires were relatively more frequent in secondary schools than in public schools.

**Table 2.5: Type of school**

<i>Type of school</i>	<i>Frequency</i>	<i>Per cent</i>
Preschool	3	1.4
Public (Years K to 6)	102	47.7
Central	1	0.5
Secondary	85	39.7
Other <sup>a</sup>	10	4.7
Unknown	13	6.1
<b>Total</b>	<b>214</b>	<b>100</b>

<sup>a</sup> The category 'Other' includes non-Government schools which enrol students from Kindergarten to Year 12.

### **Access to the school**

Tables 2.6-2.9 show the physical details of the crime such as the method of access to buildings. It is important to note that a good deal of data on these factors are missing. As outlined at the beginning of this section, the main reason for these missing data is that the information is not common to all of the types of reports used by the police to record fires. For example, 28% of cases lacked data on the use of force to gain entry. Of those cases where information was recorded, force was used in 52% of cases and no force was used in 48% of cases (see Table 2.6).



**Table 2.6: Forced entry to the school**

<i>Was force used?</i>	<i>Frequency</i>	<i>Per cent</i>
Yes	81	37.9
No	74	34.6
Unknown	59	27.6
Total	214	100

Point of entry was noted in only 36% of cases, and of these cases the majority of fires (57% of this 36%) were lit outside school buildings (see Table 2.7).

**Table 2.7: Point of entry to the school**

<i>Point of entry</i>	<i>Frequency</i>	<i>Per cent</i>
Rear of buildings	11	5.1
Side of buildings	12	5.6
Front of buildings	10	4.7
No entry/fire lit outside	43	20.1
Unknown	138	64.5
Total	214	100

In 60% of cases information about the level of the building entered was missing. Where information was obtained entry was gained via the ground floor in 42% of cases (see Table 2.8).

**Table 2.8: Level of the building through which entry was gained**

<i>Level</i>	<i>Frequency</i>	<i>Per cent</i>
Balcony	3	1.4
Ground floor	36	16.8
First floor	3	1.4
No entry/fire lit outside	43	20.1
Unknown	129	60.3
Total	214	100

In 43% of cases information about how entry was gained to the school was missing. Where information was obtained, entry was gained through a window in 41% of cases (see Table 2.9).

**Table 2.9: How entry was gained**

<i>How entry was gained</i>	<i>Frequency</i>	<i>Per cent</i>
Gate	24	11.2
Window	50	23.4
Ceiling/roof	3	1.4
Wall	2	0.9
No entry/fire lit outside	43	20.1
Unknown	92	43.0
Total	214	100

### **Location in school targeted**

Although a large proportion of the information about the physical factors associated with the fire was missing (such as information on how the offender gained entry) there was rather more information available on the most commonly targeted area of the school and how the fire was started. The most commonly targeted internal area was the classroom (targeted in 30% of cases, see Table 2.10). Fires started externally (22%) were non-structural, and typically involved the lighting of rubbish in bins, the burning of uncollected debris and refuse, or the lighting of playground equipment and facilities (for example, seats and benches, gymnastic mats and door mats). Fires lit in areas of the school which

may have been entered by persons intending theft (for example, canteen, gymnasium or store-room) represented 10% of all fires.

**Table 2.10: Location in the school targeted**

<i>Location</i>	<i>Frequency</i>	<i>Per cent</i>
Classroom	65	30.4
Principal's office	3	1.4
Administration block	8	3.7
Store-room	14	6.5
Staff room	16	7.5
Canteen	7	3.3
Library	3	1.4
Science room	4	1.9
Home science	1	0.5
Manual arts	2	0.9
Hall	3	1.4
Gymnasium	1	0.5
Externally	47	22.0
Other	29	13.6
Unknown	11	5.1
<b>Total</b>	<b>214</b>	<b>100</b>

### **Incendiary method**

Fifty-six per cent of incidents involved the ignition of school materials (for example, papers, books and posters, see Table 2.11). Fourteen per cent of arson incidents involved accelerants such as petrol and kerosene, while 15% of incidents involved the arsonist using rubbish, found to be available on site.

**Table 2.11: Incendiary method**

<i>Method</i>	<i>Frequency</i>	<i>Per cent</i>
Debris found at site	32	15.0
School materials	120	56.1
Flammables/brought to site	9	4.2
Flammables/found at site	4	1.9
Flammables/source unknown	16	7.5
Other	9	4.2
Unknown	24	11.2
Total	214	100

**Who reported the fire?**

Most frequently incidents (28%) were reported to police by a witness to the event, other than a school member (see Table 2.12). School members (teachers, principals, ancillary staff or students) reported 23% of fires.

**Table 2.12: Who reported the fire?**

<i>Reported by</i>	<i>Frequency</i>	<i>Per cent</i>
Security	23	10.7
Police	16	7.5
Fire Brigade	19	8.9
School member	49	22.9
Owner of premise	2	0.9
Witness (not school member)	60	28.0
Other	29	13.6
Unknown	16	7.5
Total	214	100

### Presence of others

In only 5% of cases was it known that there were others present in the school (apart from the suspects) when the arson occurred (see Table 2.13). In the other incidents either the premises were unoccupied or there was no information recorded on this variable.

**Table 2.13: Other persons present**

<i>Others present</i>	<i>Frequency</i>	<i>Per cent</i>
Yes	11	5.1
No	168	78.5
Unknown	35	16.4
Total	214	100

### Number of suspects

In only 21% of incidents (n=45) was there a known suspect, and, in total, there were only 89 suspects identified (see Table 2.14). Of the 45 incidents involving a suspect, 40% implicated one person (possibly) acting alone; 33% implicated a pair; and 27% implicated group activity (three or more persons). The small number of alleged offenders indicates the difficulty in identifying aspects of the offence such as motive. Generalizing from such a small proportion is highly unreliable. Those apprehended for an offence may differ markedly from those not caught or identified, so conclusions about offenders who are caught may not apply to those not caught. For example, offenders who are apprehended may be younger, on the whole, than those who are not apprehended. Those who are older may have put more planning into the crime and hence be less likely to be caught. For this reason characteristics of those alleged offenders identified above are not presented in this report.

**Table 2.14: Number of suspects per school arson incident**

<i>Number of suspects</i>	<i>Frequency</i>	<i>Per cent</i>
0	169	79.0
1	18	8.4
2	15	7.0
3	10	4.7
5	1	0.5
6	1	0.5
Total	214	100

## 2.4 CONCLUSION

This section has yielded information concerning school arson incidents such as time of day and day of the week when the fire occurred, type of schools targeted and details of the fire such as where and how the fire was started. More specifically, the majority of arsons occurred over the weekend (from Friday to Sunday) and at those times when schools are most likely to be unoccupied. Details about the type of school indicate that Government schools were targeted more often than non-Government schools and that, proportionally, secondary schools were burnt more often than public schools. In relation to cost, it appears that of the reported arsons for which damage estimates were recorded, about half of the estimates were for \$1000 or less.

With regard to the fire itself, many of the incidents lacked information on at least some of the factors. The information which was recorded indicates that a large proportion of fires were lit outside the school buildings. Where entry had been gained, in most cases it was through a window and/or on the ground floor. Once inside, the fires were mostly started in classrooms using school materials or debris found on the site. In the main, fires were reported to police by witnesses or school members (such as teachers and cleaners). Seldom were others present (apart from the suspect) when the fire broke out. There were 89 alleged offenders for the 45 incidents in which alleged offenders were located.

### 3. THE SCHOOL SURVEY

#### 3.1 PREVIOUS STUDIES OF SCHOOL ARSON

In general, previous studies have considered malicious damage, arson and theft as different facets of a single security problem.<sup>10</sup> Two main studies have pin-pointed some common factors which determine the likelihood of all of these breaches of security. Together with information from the police reports, the factors identified in these studies provide the basis for the questions included in the school survey reported here. For this reason the studies will be described briefly. The first study, *Crime Prevention in Schools: Practical Guidance* was undertaken by the UK Department of Education and Science<sup>11</sup> (from now on referred to as the DES study) and the second, *A Study of School Vandalism*, was undertaken by the USA Center for Juvenile Delinquency Prevention<sup>12</sup> (from now on referred to as the CFJDP study). A summary of the main findings of these two studies follows.

##### (a) *Crime Prevention in Schools: Practical Guidance (DES Study)*

The aim of this study was to conduct a cost benefit analysis of various initiatives undertaken by local education authorities to combat theft, arson and vandalism. The research team stressed the need to identify the level of risk of any particular school.<sup>13</sup> More specifically, they argued that the following factors were central to the determination of the level of risk:

- the type of school (e.g. public or secondary);
- the design and construction of the school;
- the location of the school and the nature of the site;
- the day-to-day management of the school buildings;
- the history of damage incidents such as arson and vandalism.

In particular they found that schools were more likely to be the subject of arson if they were secondary schools, built in the 1960s or early 1970s, constructed mainly of combustible materials, were close to certain areas (e.g. areas of high social stress and deprivation), were used as public thoroughfares, had poor or non-existent working relationships within the school and with the community and had a history of frequent vandalism.

##### (b) *A Study of School Vandalism (CFJDP Study)*

This second study also looked at the features of schools which made them vulnerable to attack by vandals and arsonists. Physical indicators of increased risk of arson outlined by this study included:

- the size of the school and the pupil to teacher ratio;
- the degree of access to and proximity to various places such as residential areas;
- the presence or absence of various security measures such as electronic surveillance and Neighbourhood Watch schemes.

Schools were more likely to be subject to arson attack if they were large, had a high pupil to teacher ratio, were close to residential areas and had no security measures.

In addition, the CFJDP study looked at both the school ethos and the nature of the student-school relationship. More specifically they examined:

- factors which might alienate the students such as inconsistently enforced rules and the degree of emphasis on grades;
- the relevance and value of the education provided by the school;
- the level of involvement in school activities by school members, parents and the community.

Schools were more likely to be subject to arson attack if they over-emphasized grades, inconsistently enforced rules, had rigid curricula, the value of the education was perceived as being poor and the level of active involvement in school activities by school members, parents and the community was low.

### **3.2 THE SURVEY QUESTIONNAIRE**

Factors associated with school arson were identified from the study of police reports and the DES and CFJDP studies described above. These factors were finalized through consultation between staff at the Bureau and the Department of School Education and included as measures in the school survey.<sup>14</sup> The factors were categorized into three main areas: physical characteristics of the school, access to the school and disciplinary issues within the school. The specific variables addressed within each of these areas are outlined below. The full questionnaire used in the survey is presented in Appendix 2.

#### **Physical factors**

##### *(a) Type and size of school*

Information gathered from police reports and the DES and CFJDP studies indicated that both the type and the size of a school is important in determining its risk status for arson. Police data and the CFJDP study indicated that, proportionally, secondary schools were burnt more often than other types of schools. The CFJDP study demonstrated that schools with large student enrolments and high pupil to teacher ratios were more vulnerable to arson attack.

Type of school was used as a means of categorizing the sample in this survey and so was not used to discriminate between schools which had or had not been burnt. In respect of size, however, the present survey measured the number of students enrolled within the schools. Schools were then categorized as having either small (less than 300 pupils) or large (more than 300 pupils) student enrolments.

The number of full-time equivalent staff employed was also measured and categorized according to whether the school employed a very small number (less than 10.0 full-time equivalent staff), a small number (from 10.0 to 20.0), a large number (from 20.0 to 50.0) or a very large number (more than 50.0) of full-time equivalent staff.



### *(b) Construction factors*

The DES and CFJDP studies also cited construction variables as important arson risk factors. In particular, the studies indicated that older schools, schools built mainly of combustible materials and those with large numbers of demountable classrooms were particularly at risk of arson. For this reason measures of these three variables were included. In relation to the age of the school, the survey measured whether the construction of the majority of the buildings of a school occurred before 1950, between 1950 and 1960, between 1960 and 1970, between 1970 and 1980 or between 1980 and 1990. In relation to construction materials, the survey asked whether the majority of school buildings were constructed of timber, brick or of other materials which the principals were asked to specify. The principals were also asked to indicate the number of demountable classrooms at their school.

### *(c) Condition of the school*

Within the literature a relationship was also found between the condition of the school and risk of arson. The authors of the DES study argued that schools which were run down were more likely to be subject to damage. This point was further highlighted by the police reports which showed that many arsonists used debris or rubbish found on site as ignition material. For this reason the present survey looked at the general condition of the school buildings and grounds asking the principal to rate these as very poor, poor, average, good or excellent. Measures of the time taken to repair damage to school property were also included, whether repair work took less than one month, between one and six months, between six and twelve months or more than twelve months. In addition the survey asked whether the school had beautification programs involving staff, students, parents and the community.

## **Access factors**

### *(a) Time of access*

The use of schools as thoroughfares by members of the public was also felt to be important to their risk status for vandalism and arson. As both the DES and the CFJDP studies argued, schools which were used as unauthorized access routes were at a high risk for both arson and vandalism. This finding was highlighted by information from the police reports which demonstrated that a large proportion of fires were lit outside normal school hours. For these reasons the present study looked at whether the schools were used regularly as access routes during or outside normal school hours.

### *(b) School use as access route to high risk areas*

The DES and CFJDP studies emphasized that the risk of arson and vandalism was heightened when schools provided access routes to certain high risk areas. For this reason the present survey measured whether the schools provided access routes to these areas. More specifically, the survey asked whether the schools provided access to transport, hotels or clubs, shopping centres, residential areas, parkland or sportsfields or other areas not specified by the survey.

*(c) Proximity to high risk areas*

Proximity to the closest licensed hotel or club, major shopping centre and Housing Commission area were also measured. The survey asked whether the distance from the school to each of these types of areas was less than 0.5 kms, between 0.5 and 1.0 km, between 1.0 and 2.0 kms, between 2.0 and 3.0 kms or more than 3.0 kms.

*(d) Community use of school buildings*

The DES and CFJDP studies argued that community use of school buildings was important. In Australia this is also felt to be so. It has become an Department of School Education strategy to encourage the use of school buildings for community activities outside school hours.<sup>15</sup> This has a twofold effect. Firstly, community participation in the school is fostered. Secondly, crimes such as vandalism and arson are said to be deterred. For this reason the study also looked at whether the school buildings were used by the community outside normal school hours.

*(e) Use of schoolgrounds (including sportsfields) by young people outside normal school hours*

As indicated by the CFJDP study and the Report of the Community Welfare Advisory Committee on Vandalism<sup>16</sup> many acts of vandalism (including arson) are perpetrated by youths in their teens. For this reason the present survey asked if young people used the schoolgrounds (including sportsfields) outside normal school hours.

**Disciplinary factors***(a) Disciplinary problems*

The CFJDP study argued that school ethos is important in determining a school's predisposition to vandalism and arson. Schools which had a high percentage of students who did not demonstrate respect for school property or had problems with discipline were at a higher risk for both vandalism and arson. For this reason the present survey included measures of the percentage of students who did not demonstrate respect for school property. In particular, principals were asked for information on the number of breaches of security, the number of major acts of vandalism both inside and outside school buildings and the number of arsons or attempted arsons in the prior twelve months. In addition, the average number of parent-initiated contacts (in person or by phone) per month that were related to disciplinary matters were sought.

The levels of various types of problems were also measured. Principals were asked to indicate whether the school had no problems, only minor, moderate, significant or major problems with lack of discipline, truancy, vandalism inside and outside buildings, arson, staff absenteeism and staff turnover.

*(b) Student alienation factors*

The CFJDP study pointed out that although the causes of vandalism and arson remained somewhat unclear, practices which alienated students were often cited as causative. For this reason the present survey included measures of some of these practices. In particular, the survey looked at whether or not the schools used streaming<sup>17</sup> to organize classes, the inclusion of corporal punishment in the school's Fair Discipline Code, the number of students suspended in the past twelve months and whether or not students participated in courses or classes that enhanced social awareness.

*(c) Alienation factors as perceived by the school principals*

A further set of measures related to the alienation issue asked the principals for their perception of some of the practices at their schools. These questions measured the involvement in all types of school activities by the staff, students, parents and the community (the levels were scored as poor, low, average, high or very high). The relevance of the school curriculum (whether the principal viewed the school curriculum as meeting the needs of the students in the area and whether the students viewed the present curriculum as meeting their needs) was also measured. Finally, the value of the education provided by the school to the community was assessed. More specifically, principals were asked to indicate whether the staff, students, parents and the community perceived the value of the education provided by the school to the community to be very poor, poor, average, good or excellent.

*(d) Presence of security measures and date of installation*

Finally, the DES and CFJDP studies indicated that the presence of security measures was an effective deterrent to school arson. The present survey, therefore, asked whether schools had various security measures and for the date of their installation.

### **3.3 THE SAMPLE**

In all, the school survey was sent to the principals of 363 Government schools in NSW. The schools comprised two subgroups. The first subgroup consisted of all of the 121<sup>18</sup> schools which had been subject to arson in either 1987/88 or 1988/89 as indicated in the Department of School Education records of school fires. Burnt schools were categorized according to their type (public or secondary) and their location (in terms of Department of School Education region) from information provided in the Department of School Education's 1989 Directory of Government Schools in New South Wales.<sup>19</sup> The frequency of school fires for each type of school in each region is shown in Table 3.1.

**Table 3.1: Schools which were subject to arson at least once in 1987/88 or 1988/89 and were sent the school survey, by departmental region and type of school**

<i>Region</i>	<i>Type of school</i>		<i>Total</i>
	<i>Public</i>	<i>Secondary</i>	
Metropolitan East	17	12	29
Metropolitan North	6	4	10
Metropolitan West	23	10	33
Metropolitan South West	13	13	26
Country	11	12	23
<b>Total</b>	<b>70</b>	<b>51</b>	<b>121</b>

The second subgroup in the sample consisted of schools which had not been the subject of arson in either 1987/88 or 1988/89 according to Department of School Education records. Within each region by type grouping, two unburnt schools were selected at random for each burnt school in that group. The matching of schools on the basis of type and region was done from information provided by the Department of School Education's 1989 Directory of Government Schools in New South Wales. The principals of all schools selected were sent a copy of the questionnaire with enclosed Freepost envelopes and two explanatory letters, one from the Department of School Education and one from the Bureau of Crime Statistics and Research (these are shown in Appendices 3 and 4 respectively). Principals were requested to respond within three weeks.

### **3.4 RESPONSE RATES**

A total of 121 questionnaires were distributed to the burnt schools and 242 to the unburnt schools. Overall there was an 86% (n=312) response rate. In respect of type of school, the higher response rate came from public schools (88%) and the lower from the secondary school group (83%). In regard to region, the highest number of surveys came back from country schools (92%) and the lowest from the Metropolitan East (83%). Finally, more schools in the unburnt group (89%) returned the survey in comparison with the burnt group (where there was a 79% response rate). However, none of these differences was great and the overall response on the part of the schools was extremely good for a voluntary survey.

### **3.5 METHOD OF ANALYSIS**

The aim of the survey was to investigate factors that may predispose schools to arson. In order to establish this, the burnt and unburnt schools were compared on each of the factors measured by the survey. As most of the factors in the survey were categorical in nature the approach taken was to examine each of the variables in turn using the chi-square statistic to test for an association between the factor and arson.

### 3.6 RESULTS

The results are presented in four parts. The first part presents the association between the physical factors measured in the survey and whether a school had or had not been the subject of arson. The second part outlines the association between access variables and the likelihood of arson while the third part looks at disciplinary factors. The fourth part discusses all of these factors across individual departmental regions.

#### Physical factors

##### (a) Size of the school

Within the survey, principals were asked to specify the number of students enrolled in Kindergarten to Year 6, Years 7 to 10 and Years 11 and 12. Schools were categorized according to whether they had enrolments of less than or more than 300 pupils<sup>20</sup> in each of these groups of years.

The results showed no significant relationship between school arson and the number of students enrolled in Years 7 to 10 or Years 11 and 12. However, as predicted by the CFJDP study, a significant relationship was found between school arson and the number of students enrolled in Kindergarten to Year 6 ( $X^2 = 13.99$ ,  $df = 1$ ,  $p < 0.001$ ). From Table 3.2 it can be seen that 78% of schools in the burnt group had student enrolments of more than 300 pupils in these years. In the unburnt group only 50% of schools had more than 300 pupils enrolled in these years.

**Table 3.2: Number of students in Kindergarten to Year 6**

<i>Student enrolment in Kindergarten to Year 6</i>	<i>Burnt</i>		<i>Unburnt</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Under 300 pupils	13	21.7	66	50.4
Over 300 pupils	47	78.3	65	49.6
Total	60	100	131	100

Note: 121 schools in the sample did not enrol students in these years and were therefore excluded from the analysis.

Principals were also asked to specify the exact number of full-time equivalent teaching and ancillary staff employed at their schools. Schools were categorized according to whether they employed less than 10.0, between 10.0 and 20.0, between 20.0 and 50.0 or more than 50.0 full-time equivalent staff.<sup>21</sup> As predicted by the CFJDP study, a significant association was found between the number of full-time equivalent teaching staff and school arson ( $X^2 = 13.7$ ,  $df = 3$ ,  $p < 0.003$ ). As indicated by Table 3.3, 19% of schools in the unburnt group had very few (0-10.0) full-time equivalent teaching staff. Within the burnt group only 4% of schools had this low staffing level.

The number of full-time equivalent ancillary staff employed was not significantly associated with whether or not a school had been burnt.

**Table 3.3: Number of full-time equivalent teaching staff**

<i>Number of full-time equivalent teaching staff</i>	<i>Burnt</i>		<i>Unburnt</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Less than 10.0	4	4.3	39	18.7
From 10.0 to 20.0	26	27.7	47	22.5
From 20.0 to 50.0	39	41.5	60	28.7
More than 50.0	25	26.6	63	30.1
Total	94	100	209	100

Note: Nine of the schools had missing values on this factor and were therefore excluded from the analysis.

### *(b) Construction of school*

Principals were also asked to indicate the date of construction of the majority of the school buildings, the main construction materials and the number of demountable classrooms at the school.

Date of construction varied, with schools mainly being built either before 1950 (23%) or in the 1960s (24%). The main construction material used for this sample of schools was brick (used in 73% of schools). In addition, 53% of schools had at least one demountable classroom. When these factors were compared across the burnt and unburnt groups<sup>22</sup>, however, no significant associations were found.

### *(c) Condition of school*

The survey looked at the general condition of the school grounds and buildings, the average time taken to effect repairs and whether the schools had any ongoing beautification programs which involved staff, students, parents or the community.

Only 8% of school principals rated the condition of their school grounds and school buildings as either poor or very poor. Therefore, in order to permit statistical analysis the categories were collapsed into poor, average and good.<sup>23</sup> Using this rating scale no significant relationship was found between these variables and school arson.

Very few schools took longer than one month to effect repairs to school buildings. The majority of principals (91%) indicated that repair time was less than one month for minor damage affecting health or safety. Forty-two per cent of school principals stated that repairs to other minor damage took less than one month. The most frequently cited time for repairs to major damage to furniture and materials and/or non-structural damage to buildings was longer than for minor damage with 41% of schools taking between one and

six months to effect this type of repair. Finally, the time taken to effect repairs to major damage to buildings was more variable than the other repair times with the most frequent time (23%) being between one and six months but with 30% of the data missing. From unsolicited comments included on the returned surveys it appears that the majority of these missing data represent schools which had never experienced this type of damage. None of these variables was significantly related to school arson.

School beautification programs most commonly involved students (84%) or staff (82%). Only 61% of schools had beautification programs involving parents and 32% involved the community. Again, none of these factors was significantly related to whether a school had or had not been the subject of arson.

### Access factors

#### (a) Time of access

As predicted by the police reports and the DES and CFJDP studies, a significant relationship was found between use of schools as thoroughfares and whether the schools had or had not been the subject of arson ( $X^2 = 15.4$ ,  $df = 1$ ,  $p < 0.001$ ). More specifically, Table 3.4 shows that there was a significant association between regular use of schools as thoroughfares during normal school hours and being the subject of arson. Forty-eight per cent of schools in the burnt group had grounds that were regularly used as access routes during normal school hours whereas only 25% of schools in the unburnt group had grounds which were regularly used for this purpose.

**Table 3.4: School use as a thoroughfare during normal school hours**

<i>Use as a thoroughfare during normal school hours</i>	<i>Burnt</i>		<i>Unburnt</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Yes	45	47.9	53	25.1
No	49	52.1	158	74.9
Total	94	100	211	100

Note: Seven of the schools had missing values on this factor and were therefore excluded from the analysis.

Similarly, as indicated by Table 3.5, there was a significant association between regular use of schools as thoroughfares outside normal school hours and the likelihood of being burnt ( $X^2 = 13.7$ ,  $df = 1$ ,  $p < 0.001$ ). Seventy per cent of schools in the burnt group were regularly used as thoroughfares outside normal school hours whereas, in the unburnt group, only 47% of schools were used in this way.

**Table 3.5: School use as a thoroughfare outside normal school hours**

<i>Use as a thoroughfare outside normal school hours</i>	<i>Burnt</i>		<i>Unburnt</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Yes	66	69.5	99	46.7
No	29	30.5	113	53.3
Total	95	100	212	100

Note: Five of the schools had missing values on this factor and were therefore excluded from the analysis.

***(b) School use as access route to high risk areas***

This section of the survey dealt with the areas to which the schools provided access. When schools were used as access routes, they were mostly used as thoroughfares to residential areas (45%), followed by shops (27%), transport (21%), hotels or clubs (13%), and finally parkland (21%). Only 8% were used as access routes to areas not specified by the survey. However, in many cases the schools provided access to several of these amenities or facilities. It was impossible, therefore, to assess separately the association between the risk of school arson and the facility or amenity to which the school provided access.

***(c) Proximity to high risk areas***

Proximity to the nearest shops was found to be significantly related to whether a school had been subjected to arson ( $X^2 = 13.7$ ,  $df = 4$ ,  $p < 0.008$ ). As indicated in Table 3.6, 37% of schools in the burnt group were close to shops (less than 0.5 kms away) whereas this was the case for only 21% of the unburnt group. Conversely, there were proportionally fewer schools in the burnt group at the extreme distance (9% were more than 3.0 kms away) than in the unburnt group (20% were more than 3.0 kms away).



**Table 3.6: Proximity to closest major shopping centre**

<i>Proximity to shops</i>	<i>Burnt</i>		<i>Unburnt</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
0 - 0.5 kms	35	36.5	44	20.8
0.5 - 1.0 km	20	20.8	54	25.5
1.0 - 2.0 kms	23	24.0	40	18.9
2.0 - 3.0 kms	9	9.4	32	15.1
3.0 kms or more	9	9.4	42	19.8
Total	96	100	212	100

Note: Four of the schools had missing values on this factor and were therefore excluded from the analysis.

Table 3.7 demonstrates that, as predicted by the DES study, there was also a significant relationship between school arson and proximity to the nearest Housing Commission area ( $X^2 = 10.7$ ,  $df = 4$ ,  $p < 0.030$ ). More schools in the burnt group were close to the nearest Housing Commission area (38% were less than 0.5 kms away) than in the unburnt group (27% were less than 0.5 kms away). Conversely, fewer schools in the burnt group (19% were more than 3.0 kms away) than in the unburnt group were a long way from the nearest Housing Commission area (36% were more than 3.0 kms away).

However, the risk of school arson was not related to whether a school adjoined a park, bushland, or area of undeveloped land or to a school's proximity to the nearest licensed hotel or club.

***(d) Community use of school buildings outside school hours***

In contrast to the prediction of the DES and CFJDP studies, community use of school buildings outside normal school hours on either weekdays or weekends was not significantly associated with school arson.

**Table 3.7: Proximity to closest Housing Commission area**

<i>Proximity to closest Housing Commission area</i>	<i>Burnt</i>		<i>Unburnt</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
0 - 0.5 kms	34	37.8	54	27.0
0.5 - 1.0 km	11	12.2	29	14.5
1.0 - 2.0 kms	16	17.8	31	15.5
2.0 - 3.0 kms	12	13.3	15	7.5
3.0 kms or more	17	18.9	71	35.5
Total	90	100	200	100

Note: Twenty-two of the schools had missing values on this factor and were therefore excluded from the analysis.

*(e) Use of school grounds (including sportsfields) by young people outside normal school hours*

As was predicted from the CFJDP study, a significant relationship was found between use of the schoolgrounds by young people outside school hours and whether a school had or had not been the subject of arson ( $X^2 = 6.16$ ,  $df = 1$ ,  $p < 0.013$ ). As can be seen from Table 3.8, there were more schools in the burnt group (92%) than in the unburnt group (80%) whose grounds were used by young people outside normal school hours.

**Table 3.8: Use of schoolgrounds (including sportsfields) by young people outside normal school hours**

<i>Use of schoolgrounds by young people outside normal school hours</i>	<i>Burnt</i>		<i>Unburnt</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Yes	86	91.5	169	80.1
No	8	8.5	42	19.9
Total	94	100	211	100

Note: Seven of the schools had missing values on this factor and were therefore excluded from the analysis.

## Disciplinary factors

### (a) Number and level of disciplinary problems

This set of factors measured the number and level of several disciplinary problems at the schools. Ninety-one per cent of principals reported that only a small proportion of students (less than 10%) demonstrated disrespect for school property. When asked about the twelve months prior to the survey the majority of schools reported having none or only between one and ten major acts of external vandalism (98%), no arsons or attempted arsons (85%), none or between one and ten breaches of security (93%) and no major acts of internal vandalism (78%). The low number of schools with security breaches precluded statistical analysis of the differences. The majority of schools (72%) had more than one disciplinary contact by parents per month but in 45% of cases the number of such contacts only ranged between one and ten. The number of disciplinary contacts was not significantly associated with whether a school had or had not been burnt.<sup>24</sup>

In relation to the level of the disciplinary problems at their schools, the majority of principals rated their schools as having no problem or only minor problems with arson (92%), vandalism inside buildings (87%), lack of discipline (87%), truancy (82%), staff turnover (72%) or absenteeism (69%).

Reported problems with vandalism outside buildings were more evenly spread, with 67% of schools reporting no problem or only minor problems with vandalism outside buildings. This enabled a cross-tabulation<sup>25</sup> to be undertaken. The relationship was found to be significant ( $X^2 = 10.0$ ,  $df = 2$ ,  $p < 0.007$ ). As demonstrated in Table 3.9, more principals of burnt schools rated their schools as having major vandalism problems (17%) than principals of unburnt schools (8%).

**Table 3.9: Extent of problem with vandalism outside buildings**

<i>Extent of problem with vandalism outside buildings</i>	<i>Burnt</i>		<i>Unburnt</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Minor	52	58.4	158	76.3
Moderate	22	24.7	32	15.5
Major	15	16.9	17	8.2
Total	89	100	207	100

Note: Sixteen of the schools had missing values on this factor and were therefore excluded from the analysis.

### (b) Student alienation factors

The second group of questions on disciplinary factors measured student alienation. The survey asked whether the schools used streaming to organize classes and if so whether this streaming was based on academic achievement, whether the schools used corporal

punishment and the number of students suspended in the last twelve months. Questions on whether the students participated in courses related to either social and/or community issues, or career-oriented and work-related topics or issues of crime prevention, law and the protecting of public property were also included.

About half the schools (48%) used streaming to organize classes. Of those which did use streaming, 96% based it on academic achievement or some combination of academic merit and other factors. There was, however, no significant relationship between the use of streaming to organize classes and whether or not a school had been the subject of arson.

Only 12% of schools (n=39) reported having corporal punishment as an option in their Fair Discipline Code and only 3 schools reported using the cane weekly. This factor did not differentiate burnt from unburnt schools.

Fifty-five per cent of schools had suspended at least one student in the previous twelve months and almost half of these schools had, at the time of the survey, readmitted all of these students to school. As with the other factors, however, this variable did not differentiate between the burnt and unburnt schools.

Within the sample the majority of schools had student participation in courses or classes that addressed social/community issues (89%), issues of crime prevention, law or protection of public property (72%) or career-oriented and work-related topics (54%). However, none of these factors was found to be significantly related to whether a school had or had not been the subject of arson.

### *(c) Alienation factors as perceived by the school principal*

The third set of disciplinary measures related to the principals' perceptions of their schools. Firstly, principals were asked about the level of active involvement in all types of school activities by staff, students, parents and the community. Secondly, they were asked to indicate the relevance of the school curriculum, whether they felt it met the needs of the students in the area and whether they perceived the students as feeling it met their needs. Finally they were asked about their perceptions of the value of the education provided by their schools to the community.

No principals rated their schools as having poor or low active involvement by staff and only 7 (2%) principals rated their students as having low active involvement. Involvement by parents was most often cited as being high (26%) or low (25%). Rated involvement by the community was lower (in 33% of cases the cited rating was average). None of these measures was significantly related to school arson.

The majority of the principals (91%) felt the curriculum met the needs of the students in the area and 89% responded that the students also regarded the curriculum as meeting their needs. Ninety-five per cent of principals rated staff as having perceived the value of the education provided by the school to the community as being good to excellent. This meant that further statistical analysis could not be undertaken on this variable. It was possible to perform cross-tabulations<sup>26</sup> on perceptions by students, parents and the community but no significant findings emerged.

*(d) Presence of various security measures and the date of installation*

The final set of questions was related to the presence or absence of security measures within the school and the date they were installed. The majority of schools had security lighting (85%) and installed and functioning electronic surveillance (79%). Fewer schools had Neighbourhood Watch schemes (32%), regular guard patrols (16%), security grills on all accessible windows (7%), perimeter fencing (5%) or installed and functioning audio alarms (4%). Of those measures which it was possible to analyze (electronic surveillance, security lighting, regular guard patrols, security grills on windows and Neighbourhood Watch schemes) only participation in a Neighbourhood Watch scheme had a significant association with whether a school had or had not been burnt ( $X^2 = 5.3$ ,  $df = 1$ ,  $p < 0.021$ ). Table 3.10 indicates that burnt schools were less likely to be involved in Neighbourhood Watch coverage (23% were covered) than unburnt schools (where 37% had coverage). None of the other security measures were significantly associated with whether a school had or had not been the subject of school arson.

**Table 3.10: Presence of Neighbourhood Watch**

<i>Presence of Neighbourhood Watch</i>	<i>Burnt</i>		<i>Unburnt</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Yes	22	23.2	77	36.5
No	73	76.8	134	63.5
Total	95	100	211	100

Note: Six of the schools had missing values on this factor and were therefore excluded from the analysis.

**Differences in school arson by Department of School Education region**

It may be the case that the significant associations found in this study are regional rather than general. For example, rather than being significant in all areas it may be the case that the relationship between use of schools as thoroughfares and arson is significant in the metropolitan regions only. If this were the case it might be attributable to the high population density of those areas (in contrast to the less populated country areas). The implication of this is that, rather than being due to school design, for example, the relationship between use of schools as thoroughfares and arson may be an artifact of the population density of a particular region.

Theoretically it is possible to test for regional differences by cross-tabulating the two school groups (burnt and unburnt) by the significant variables within each of the ten Department of School Education regions. Such an analysis is, however, precluded by the small number of school arsons in each particular region. A more fruitful method of categorizing the regions was obtained by collapsing the schools into two broader classes:

'metropolitan' and 'country'. This increased the numbers sufficiently within the metropolitan area for them to be interpretable. Cell sizes for some of the variables within the country, however, remained too small to analyze. Overall, however, where the cell sizes were large enough to be meaningful, results held for both the country and metropolitan regions, indicating that the effect of these factors is not just an artifact of a specific region. In order to undertake a more detailed analysis of this aspect of school arson it would be necessary to increase the size of the sample.

### **3.7 CONCLUSION**

Some of the factors measured by this survey were significantly related to school arson. The significant physical characteristics were the number of students enrolled in Kindergarten to Year 6 and the number of full-time equivalent teaching staff. There were relatively more school fires where the student enrolment in Kindergarten to Year 6 was more than 300 or where the number of full-time equivalent teaching staff was over 20.

Public access was significantly related to the risk of school arson on a number of measures. Schools which had been subject to arson were used more often as thoroughfares during or outside school hours and were used more frequently by young people outside school hours. However, whether the school buildings were used by the community either on weekdays or weekends was not related to the risk level of a school for arson.

The facilities or amenities to which the school provided a thoroughfare were variables whose effect was difficult to assess since access to the areas mentioned in the survey was not mutually exclusive (for example, access to shops and access to transport were commonly found together). Proximity to shops or Housing Commission areas was, however, found to be a significant factor. In general, schools subjected to arson were closer to both of these types of areas than schools which had not been burnt. On the other hand, proximity to the nearest licensed hotel or club and whether or not the school adjoined a park, bushland or area of undeveloped land made no significant difference to the risk of a school becoming the target of arson.

The extent of the problem with vandalism outside school buildings was the only disciplinary variable found to be significantly related to school arson. Schools which had been subject to arson reported a major problem with this type of vandalism more frequently than other schools.

Of the security measures which could be analyzed, only involvement in Neighbourhood Watch was a significant predictor of school arson. Schools in the burnt group had significantly less involvement in Neighbourhood Watch schemes.

It would have been interesting to assess whether there was a decrease in arson after the introduction of the various security measures. Theoretically, this could have been done by comparing schools which had been burnt in 1987/88 and had not been burnt in 1988/89 on the basis of whether a security measure had been implemented in the intervening period. However, this analysis was inappropriate for two reasons. Firstly, the measures which were cross-tabulated with whether a school had or had not been burnt did not discriminate between these two groups. Secondly, information about the date of introduction of all these security measures could not be reliably obtained.

## 4. POLICY IMPLICATIONS

Information relevant to school arson has been identified from two main sources, namely data obtained from the police reports and data from the school survey. Both these data sets have produced results that are of potential use in limiting school arson. It must be stressed, however, that although in the survey statistically significant associations were found between some of these factors and school arson, this does not necessarily imply a causal link. It may be the case that these associations can be attributed to other variables which were not measured by this survey. To the extent that causal relationships do underly the observed statistical associations, however, the results suggest a number of ways in which the risk of school arson may be reduced.

Firstly, there are a number of seemingly mundane but nevertheless important factors related to the physical characteristics of the schools which put them at risk of arson. A large proportion of school arsons occurred on the weekends and between 4 p.m. and 8 p.m. Schools with Neighbourhood Watch coverage were less likely to be burnt than schools without this security measure. It would be a useful strategy, therefore, to extend and emphasize the need for Neighbourhood Watch coverage of schools. If the extension of Neighbourhood Watch to all areas is limited by resource considerations, priority in extension should be given to areas containing schools with either large enrolments of pupils in Kindergarten to Year 6 or secondary schools, these being the categories of schools which are most particularly at risk.

Information from the police reports also shows that a large number of fires are started externally, and that debris (probably lying in the school grounds) is often used to start the arson. This is despite the fact that the overwhelming majority of school principals surveyed considered their school grounds to be well maintained. There would, accordingly, appear to be a need to heighten the awareness among school principals of the need to maintain a debris-free environment within the school perimeter. It might also be worth considering the use of fixed and lockable rubbish bins, so that debris cannot be removed from these bins and used as fuel. In the main, where fires were started internally, classrooms were most often the target and school materials were most often the ignition material used. Access to school rooms, moreover, often appeared to be via windows. It is obviously important, therefore, to ensure that classrooms are securely locked at night and that all combustible school materials are stored away securely after normal school hours.

These are, perhaps, relatively straightforward and commonsense precautions indicated by the survey and police incident report results. The most surprising findings, however, concern the effects of those variables associated with public access to and use of school grounds. The use of schools as thoroughfares by members of the public, for example was very strongly associated with the risk of school arson. Schools from the burnt group were nearly two times more likely to be used as thoroughfares than schools from the unburnt group. A similar finding emerged in relation to the use by young people of school grounds after school hours. Again, schools which are close to shops and Housing Commission estates, and which therefore are likely to be frequently used as access to those shops and estates, were also more at risk of arson.

It is obvious that strategies which have the overall effect of reducing uncontrolled public access to school grounds are likely to exert an important effect in reducing the risk of school arson. There are a variety of ways in which this may be achieved. Decisions on the positioning of future schools need to take into consideration the importance of limiting the use of schools as access routes in order to reduce the risk of arson. The location of gates and perimeter fences and walls is important for the same reason. If there are overriding social reasons in favour of continued public access to school grounds for recreational purposes, such access ought ideally to be supervised or at least monitored (once again, monitoring could perhaps be undertaken by Neighbourhood Watch).

There are, finally, two important general points to be made. Despite the cost of school arson to the community, the unconditional risk of a school becoming the subject of an arson attack is very low. Because of this, both principals and teachers alike, are unlikely to be alert to the factors that place a school at risk. As the distribution of these factors (for example, school size, access etc.) will tend to change over time, effective risk management requires continuous monitoring of the changes in the risk profile of different schools. Consideration should therefore be given to the establishment of a general school arson database containing regularly updated information on the arson relevant characteristics of each school.

The analysis of police incident data on school arson also reveals a number of inadequacies. Police records on school arson incidents often fail to record data important to the analysis of arson risk. In some circumstances the relevant data may be difficult or impossible to obtain. In other circumstances there would seem to be scope for more diligent recording practices by the police. No doubt the recording of data on arson incidents is hampered to some degree by the wide range of agencies involved. Better information on incidents of school arson, however, is vitally important to future arson risk management.



## NOTES

<sup>1</sup> NSW Bureau of Crime Statistics and Research, 1990, *New South Wales Recorded Crime Statistics 1989/90*, NSW Bureau of Crime Statistics and Research, Sydney.

<sup>2</sup> Arson incidents were defined as all fire incidents excluding accidental and electrical fires. Mean values are for the 3 year period ending 30 June 1990.

<sup>3</sup> Geason, S. & Wilson, P.R., 1990, *Preventing Graffiti & Vandalism*, Australian Institute of Criminology, Canberra.

<sup>4</sup> NSW Department of Education, 1989, *Schools Security Presentation to Regional Properties Officers/Senior Technical Officers Course*, Sydney.

<sup>5</sup> NSW Department of Education, op. cit.

<sup>6</sup> The NSW Police Department uses 4 categories. Definitions of these categories were provided by the Tactical Intelligence Unit of the Police Department:

1. Deliberately lit: evidence at the fire site indicates it was deliberately lit
2. Suspicious: unable to prove the fire was deliberately lit at that stage
3. Non-suspicious: the fire did not occur by human intervention
4. Cause unknown

The NSW Fire Brigade uses 10 categories. Definitions of these categories were supplied by the NSW Fire Brigade:

1. Undetermined
2. Incendiary: legal decision or physical evidence indicates that the fire was deliberately lit
3. Suspicious: circumstances indicate the possibility that the fire was deliberately set, multiple ignitions were found, or there were suspicious circumstances and no accidental or natural ignition factor could be found
4. Misuse of ignition
5. Misuse of material ignited
6. Mechanical failure, malfunction
7. Design, construction, installation inefficiency
8. Operational deficiency
9. Natural condition
10. Other ignition factor

<sup>7</sup> Information supplied by the Fire Investigation Unit.

<sup>8</sup> Figures supplied by the Department of Education, Employment and Training.

<sup>9</sup> NSW Department of Education, 1989, *Directory of Government Schools in New South Wales 1989*, Sydney.

<sup>10</sup> UK Department of Education and Science, 1987, *Crime Prevention in Schools: Practical Guidance*, Building Bulletin 67, HMSO, London.

<sup>11</sup> UK Department of Education and Science, op. cit.

<sup>12</sup> Center for Juvenile Delinquency Prevention, 1979, *A Study of School Vandalism*, South-West Texas State University.

<sup>13</sup> The term risk is defined here as a predisposition to damage.

<sup>14</sup> The following selection of factors were incorporated into a structured survey which was piloted on ten school principals. Following the pilot study minor changes to the survey were made.

<sup>15</sup> NSW Department of Education, 1987, *School Community Educational Awareness Security Program*, Press Release.

<sup>16</sup> Report of the Community Welfare Advisory Committee on Vandalism, 1978, South Australia.

<sup>17</sup> Streaming refers to the placing of students in classes according to their academic ability.

<sup>18</sup> In all there were 124 burnt schools on the Department of School Education list of school fires for 1987/88 and 1988/89. Two of these schools were used in the pilot phase and one school was burnt to the ground and not replaced. This left 121 schools which were sent the school survey.

<sup>19</sup> For administrative purposes the Department of School Education divides the State into regions. Due to the small number of fires in country schools, for the purposes of this report schools from the five country regions have been combined into a single group. The metropolitan regions were Metropolitan East, Metropolitan North, Metropolitan West and Metropolitan South-West. Head office was included in the Metropolitan East region.

<sup>20</sup> No such criteria are defined by the Department of School Education. Cutoff points were selected by the Bureau on the basis of the spread of the data.

<sup>21</sup> No such criteria are defined by the Department of School Education. Cutoff points were selected by the Bureau on the basis of the spread of the data.

<sup>22</sup> Number of demountables was categorized into none or some.

<sup>23</sup> The categories were collapsed:

Poor = very poor + poor;  
Average = average; and  
Good = good + excellent.

<sup>24</sup> Disciplinary contacts by parents were categorized as no calls versus one or more.

<sup>25</sup> The categories were collapsed:

Minor = minor + non-existent;  
Moderate = moderate; and  
Major = Significant + major.

<sup>26</sup> The categories were collapsed:

Poor = very poor + poor + average; and  
Good = good + excellent.

## **APPENDICES**

**APPENDIX 1 Arson Study Coding Form**

**APPENDIX 2 Arson Project School Survey Form**

**APPENDIX 3 Department of School Education Memorandum to Principals**

**APPENDIX 4 Bureau of Crime Statistics and Research Letter of Request to Principals**

I.D. \_\_\_\_\_

**ARSON STUDY CODING FORM**

1. Number of suspects

--	--

2. Suspect number for this form

--	--

3. Distinct suspect number (consult suspect register)

--	--	--

4. Distinct incident flag

--

Code 1 once for each separate incident;  
0 for all other sheets referring to the same incident

5. Microfilm reference number

--	--	--	--	--	--	--	--

6. Year when incident became known to police

--	--

7. Time of incident  
(Use 24 hour clock)

--	--	--	--

8. Day of incident

- 1 = Monday
- 2 = Tuesday
- 3 = Wednesday etc.
- 9 = Don't know

9. Date of incident

--	--	--	--	--	--

10. Incident location

--	--	--	--	--

(Record full name and address, code only postcode)

11. Incident reported by:

--	--

- 1 = Security patrol
- 2 = Police
- 3 = Firebrigade
- 4 = Principal/teacher
- 5 = 'School watch' member
- 6 = Victim/owner of premises, vehicle etc.
- 7 = Suspect /owner of premises, vehicle etc.
- 8 = Suspect (not owner of premises, vehicle etc.)
- 9 = Witness
- 10 = Other (specify) \_\_\_\_\_
- 99 = Not known

12. Location of incident (M.O.)

- 1 = School
- 2 = Other 'public owned' building
- 3 = Commercial property
- 4 = Residential property
- 5 = Vehicle
- 6 = Boat
- 7 = Grass, park, bushland etc.
- 8 = Other (specify) \_\_\_\_\_
- 9 = Don't know

13. If fire is at a school, specify type of school

- 1 = Pre-school/kindergarten
- 2 = Infants school
- 3 = Primary school
- 4 = Central school
- 5 = High school
- 6 = Other (specify) \_\_\_\_\_
- 8 = Not applicable
- 9 = Don't know

14. If the fire was at a school, was it the property of the NSW Department of Education?

- 1 = Yes
- 2 = No
- 8 = Not applicable
- 9 = Don't know

15. If the fire was at a school, state location where fire apparently began

- |                             |                            |
|-----------------------------|----------------------------|
| 1 = Classroom               | 10 = Manual arts room      |
| 2 = Principal's office      | 11 = Hall                  |
| 3 = Administration block    | 12 = Gymnasium             |
| 4 = Storeroom               | 13 = Outside building      |
| 5 = Staffroom               | 14 = Underneath building   |
| 6 = Canteen                 | 15 = In roof/ceiling       |
| 7 = Library                 | 16 = Other (specify) _____ |
| 8 = Scienceroom             | 88 = Not applicable        |
| 9 = Homescience/sewing room | 99 = Don't know            |

--	--

16. Method apparently used

- 1 = Ignition of debris
- 2 = Ignition of school materials
- 3 = Ignition of other materials at site
- 4 = Petrol, kerosene, other flammable substances brought to location
- 5 = Petrol, kerosene, other flammable substances found at location
- 6 = Petrol, kerosene, other flammable substances, source unknown
- 7 = Chemicals brought to location
- 8 = Chemicals found at location
- 9 = Chemicals, source unknown
- 10 = Other (specify) \_\_\_\_\_  
[Record combinations, and postcode]
- 99 = Not known

17. Was the suspect on the premises, or in the vehicle legitimately?

- 1 = Yes
- 2 = No
- 8 = Not applicable
- 9 = Don't know

18. Was there evidence of a forced entry?

- 1 = Yes
- 2 = No
- 8 = Not applicable
- 9 = Don't know

19. Point of entry (1)

- 1 = Rear
- 2 = Side
- 3 = Front
- 4 = No entry, fire lit outside
- 8 = Not applicable
- 9 = Don't know

20. Point of entry (2)

- 1 = Gate/door
- 2 = Window
- 3 = Ceiling/roof
- 4 = Floor

- 5 = Wall
- 6 = No entry, fire lit outside
- 8 = Not applicable
- 9 = Don't know

21. Point of entry (3)

- 1 = Balcony
- 2 = Ground floor
- 3 = First floor
- 4 = Above

- 5 = No entry, fire lit outside
- 8 = Not applicable
- 9 = Don't know

22. Were any persons (other than the suspect/s) present within building, vehicle at time of offence?

- 1 = Yes
- 2 = No
- 8 = Not applicable
- 9 = Don't know

23. Number of persons other than suspect/s

- 001 = One person present
- 002 = Two persons present etc.
- 888 = Not applicable
- 999 = Don't know

24. Number of persons injured

- 001 = One person
- 002 = Two persons
- 888 = Not applicable
- 999 = Don't know



25. Specify person/s injured, eg. suspect, student, fire brigade member etc. (postcode)

--	--

---

---

26. Suspect's relationship to the property burnt

--	--

- 1 = Owner
- 2 = Friend/family member of owner
- 3 = Tenant/resident
- 4 = Acquaintance/neighbour
- 5 = Employee of owner (in legitimate business)
- 6 = Apparently engaged by owner to commit arson
- 7 = Customer of the target business
- 8 = Student of the target school
- 9 = Peer, family member of student at the target school
- 10 = Local resident
- 11 = No apparent relationship
- 12 = Other (specify) \_\_\_\_\_
- 88 = No suspect
- 99 = Don't know

27. Suspect's address (record full address, code only postcode)

--	--	--	--

---

---

28. Suspect's employment status

--

- |                          |                 |
|--------------------------|-----------------|
| 1 = White collar         | 5 = Domestic    |
| 2 = Blue collar          | 6 = Institution |
| 3 = Unemployed/pensioner | 8 = No suspect  |
| 4 = Child/school student | 9 = Don't know  |

29. Suspect's sex  
1 = male  
2 = female  
8 = no suspect  
9 = don't know

--	--

30. Suspect's age  
88 = no suspect  
99 = don't know

D.O.B.    /    /   

--	--	--	--	--	--

31. Suspect's racial appearance  
01 = White  
02 = Aboriginal  
03 = Arab  
04 = Asian  
05 = Indian  
06 = Maori  
07 = Mediterranean

- 08 = Negro  
09 = Pacific Islander  
10 = Slavic  
11 = Other  
88 = No suspect  
99 = Don't know

--	--

32. Value of property damage

--	--	--	--	--	--	--	--

33. Was the alleged suspect apparently affected by drugs?  
1 = yes  
2 = no  
8 = no suspect  
9 = don't know

--

34. Was the alleged suspect apparently affected by alcohol?  
1 = yes  
2 = no  
8 = no suspect  
9 = don't know

--

35. Manner in which the matter was cleared

0 = Not cleared

1 = By arrest

2 = Juvenile caution

3 = No further action taken

4 = No offence disclosed

5 = By C.A.N. or Summons

6 = Other (specify) \_\_\_\_\_

9 = Don't know

36. Number of persons arrested

--	--

37. Apparent circumstances surrounding the offence

(Record relevant details and postcode)

--	--

---

---

---

# ARSON PROJECT SCHOOL SURVEY FORM

APPENDIX 2

Bureau of Crime Statistics and Research  
Level 5 • 20 Bridge Street  
Sydney 2000  
Phone 02 257 0823

Please print.

Name of school: \_\_\_\_\_

Address: \_\_\_\_\_

Postcode: \_\_\_\_\_

Department of Education region: \_\_\_\_\_

Name of respondent: \_\_\_\_\_

Position held: \_\_\_\_\_

Contact telephone number: \_\_\_\_\_

## OFFICE USE ONLY

1

4

8

10

### 1 Type of school: (please circle number)

High	Primary class 1	Primary class 2	Primary class 3	Primary class 4	Central	S.S.P.
1	2	3	4	5	6	7

11

### 2 Total student enrolment:

Number of students - Years K to 6: \_\_\_\_\_

Number of students - Years 7 to 10: \_\_\_\_\_

Number of students - Years 11 and 12: \_\_\_\_\_

15

19

23

### 3 Total number of:

(a) Full-time equivalent teaching staff \_\_\_\_\_

(b) Ancillary staff \_\_\_\_\_

26

29

### 4 Has your school been the subject of arson?

(a) In 1987/88 If yes, how many times?  
Yes No (please circle) 1 2 3 4+ (please circle)

(b) In 1988/89 If yes, how many times?  
Yes No (please circle) 1 2 3 4+ (please circle)

(c) In 1989/90 If yes, how many times?  
Yes No (please circle) 1 2 3 4+ (please circle)

30  31

32  33

34  35

**5** Date of construction of majority of school buildings: *(please circle number)*

pre-1950s	1950s	1960s	1970s	1980s
1	2	3	4	5

 36

**6** Materials from which buildings are mainly constructed: *(please circle number)*

timber	brick (a)	other (specify)
1	2	3 _____

 37

**7** How many demountables are there? \_\_\_\_\_

  39

**8** What is the general condition of the school buildings? *(please circle number)*

Very Poor	Poor	Average	Good	Excellent
1	2	3	4	5

 40

**9** What is the general condition of the school grounds? *(please circle number)*

Very Poor	Poor	Average	Good	Excellent
1	2	3	4	5

 41

**10** What is the average time taken to effect repairs to:

(a) minor damage affecting health, safety or security (e.g. broken external window or door lock)? *(please circle)*

0-1 month	1-6 months	6-12 months	12 months plus
1	2	3	4

(b) other minor damage (e.g. non-obscene graffiti, hole in internal wall)? *(please circle)*

0-1 month	1-6 months	6-12 months	12 months plus
1	2	3	4

(c) major damage to furniture and materials and/or non-structural damage to buildings? *(please circle)*

0-1 month	1-6 months	6-12 months	12 months plus
1	2	3	4

(d) major structural damage to buildings? *(please circle)*

0-1 month	1-6 months	6-12 months	12 months plus
1	2	3	4

 42

 43

 44

 45





**22** What is the value of the education provided by your school to the community, as perceived by: *(please circle number for each)*

	Very Poor	Poor	Average	Good	Excellent
(a) Staff	1	2	3	4	5
(b) Students	1	2	3	4	5
(c) Parents	1	2	3	4	5
(d) Community	1	2	3	4	5

86

87

88

89

**23** Is 'streaming' used in your school for organising classes?  
*(please circle yes or no)*

yes no

90

**24** If 'streaming' is used, is it based on academic achievement?  
*(please circle yes or no)*

yes no

91

**25** Do students participate in courses or classes that address:  
*(please circle yes or no for each)*

- |  |     |    |
|--|-----|----|
| (a) social/community issues?                                       | yes | no |
| (b) career-oriented and work-related topics?                       | yes | no |
| (c) issues of crime prevention, law or protecting public property? | yes | no |

92

93

94

**26** Do you think the present school curriculum meets the needs of the students of the area? *(please circle yes or no)*

yes no

95

**27** Do the students view the present curriculum as meeting their needs? *(please circle yes or no)*

yes no

96

**28** Is the school, or has the school, been involved in a police-school?  
*(please circle yes or no)*

yes no

97



**29** Is corporal punishment an option in your "Fair Discipline Code"?  
(please circle yes or no)

yes                      no

 98

**30** If yes, how many students would be caned, on average, per week?

\_\_\_\_\_

   101

**31** How many students have been suspended in the last 12 months?

\_\_\_\_\_

   104

**32** Of the students who have been suspended in the last 12 months, how many have returned to the school?

\_\_\_\_\_

   107

**33** Per week, what is the average number of parent-initiated contacts (in person or phone ) that are related to disciplinary measures?

\_\_\_\_\_

   110

**34** Over the last 12 months, at your school, what is the total number of:

(a) breaches of security? \_\_\_\_\_

(b) major acts of internal vandalism? \_\_\_\_\_

(c) major acts of external vandalism? \_\_\_\_\_

(d) arsons or attempted arsons? \_\_\_\_\_

   113   116   119   122

**35** Does the school have: (please circle yes or no for each)

(a) installed and functioning electronic surveillance?                      yes                      no

(b) installed and functioning audio alarms?                                      yes                      no

(c) "person-proof" perimeter fencing?    yes                      no

(d) security lighting?    yes                      no

(e) regular guard patrol?    yes                      no

(f) security grills on all accessible windows?                                      yes                      no

(g) neighbourhood watch coverage?    yes                      no

 123 124 125 126 127 128 129

If yes, date of introduction of each measure:

(a) installed and functioning electronic surveillance?

   /   /

--	--	--	--	--	--	--	--

135

(b) installed and functioning audio alarms?

   /   /

--	--	--	--	--	--	--	--

141

(c) "person-proof" perimeter fencing?

   /   /

--	--	--	--	--	--	--	--

147

(d) security lighting?

   /   /

--	--	--	--	--	--	--	--

153

(e) regular guard patrol?

   /   /

--	--	--	--	--	--	--	--

159

(f) security grills on all accessible windows?

   /   /

--	--	--	--	--	--	--	--

165

(g) neighbourhood watch coverage?

   /   /

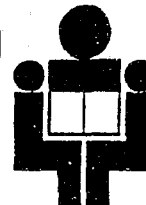
--	--	--	--	--	--	--	--

171

***The Bureau of Crime Statistics and Research would like to thank you for your co-operation in completing this form.***



# Department of Education



13th Floor  
Ferguson Centre  
130 George Street  
Parramatta

Please address all  
communications to:  
N.S.W. Department of Education  
Box 868. P.O., Parramatta 2150

Our reference: 87/94231

Your reference:

Telephone: 689

Facsimile No.: 891 1325

## MEMORANDUM TO PRINCIPALS

The Department has engaged the NSW Bureau of Crime Statistics and Research to conduct a study on school vandalism with special attention to the problem of arson. The study aims at examining trends in the incidence and distribution of school vandalism and will endeavour to isolate social and psychological factors relating to those trends.

An important element of the research is the collection of data to help identify schools which are susceptible to attacks by vandals and arsonists. You will appreciate that the results of the study will supplement our understanding of the influences which motivate such attacks and provide an important resource for the planning of school facilities.

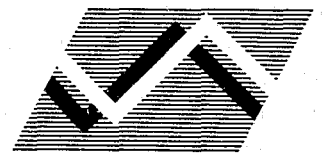
To facilitate collection of the information, I have approved the Bureau of Crime Statistics and Research conducting a survey of schools. The survey form for this exercise is enclosed and I would appreciate your co-operation in ensuring its early completion and return direct to the Bureau.

(Dr). F G Sharpe

Director-General of Education



## N.S.W. Bureau of Crime Statistics and Research



Level 5  
20 Bridge Street  
Address all mail to Director  
Box 6 G.P.O.  
Sydney N.S.W. 2001  
Tel. (02) 257 0888  
Fax. (02) 241 1783

DR. DON WEATHERBURN  
DIRECTOR

In reply please quote:

7.4

16 July 1990

Dear Sir/Madam

**Re: School Survey on Arson in Schools**

At the request of the Department of Education the Bureau of Crime Statistics and Research is conducting a study on school arson. The object of the study is to establish, if possible, the factors which predispose schools to arson.

The present phase of the study involves a survey of school principals in order to benefit from the understanding they may have of the problem. Your participation in the study is, therefore, of the utmost importance.

Enclosed is a copy of the survey form and a Freepost envelope for which no stamp is required. I would be grateful if you would complete the survey and return it to the Bureau in the Freepost envelope by the 10th of August, 1990.

Yours sincerely,

Dr Don Weatherburn  
**Director**