

**COMMUNICATING
ENVIRONMENTAL, SAFETY AND HEALTH LAW
TO
SMALL BUSINESSES IN NEW ZEALAND:
THE FUNDAMENTAL MISSING LINK**

By

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ABSTRACT

The majority of small New Zealand businesses do not understand their environmental, safety and health protection responsibilities. This is the finding of recent research, including that of the New Zealand Occupational Safety and Health Service (Bateman, 1999:19). The same problem was identified some 30 years ago by Lord Robens in the United Kingdom (Robens, 1972). Without a sound understanding, businesses can not properly meet their obligations to comply with environmental, safety and health statutes, such as the Dangerous Goods Regulations 1958, Resource Management Act 1991, Building Act 1991 and the Health and Safety in Employment Act 1992. There are 63 environmental and safety statutes, which have a total of 3,993 pages. It is estimated that this total is growing at about 300 pages per year.

The same level of understanding is required irrespective of organisation size. Larger companies are normally able to establish policies, sections, committees, club memberships, training programmes and effective systems to meet their needs. Somehow small businesses must understand the same law, but without the majority of the tools and resources available to larger companies. Small businesses therefore need a particularly effective communications process, which appears to be beyond their scope to develop; and therefore provides a worthy research topic.

The research identifies the fundamental missing link in the compliance chain, as hypothesised by Mayhew (Mayhew, 1997:44), to be communication of law, and develops a customised compliance handbook to ease understanding of the law.

The handbook concept was tested with seven small businesses involving land survey, hardware retail, car repair, petrol dispensing, electroplating, fast food supply and shipping. These case studies show the handbook is an effective way to inform small New Zealand businesses of their responsibilities under environmental and safety law. The research also identifies the need for industry based 'champions' to coach small businesses to achieve the required standard.

Key words: small business; environmental; safety and health law; occupational, safety and health; compliance; statute; law; regulation; industry associations

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Enclosure 2. Customised compliance handbook for a Car Repair Workshop

CHAPTER ONE:

INTRODUCTION

1.1 In Australia research has found that 97.5% of small businesses believe they have only 'some specific knowledge', or less, of their Government's health and safety law (Mayhew, 1997:98). This level of understanding would fail to meet the 'all practicable steps' standard set by the New Zealand Health and Safety in Employment Act 1992 (HSE Act).

1.2 In the United Kingdom research involving 4000 small businesses undertaken by the Health and Safety Commission identified communication problems, and concluded that:

The key to success in developing a system which works for small firms is improved communication. To this end the [United Kingdom] Health and Safety Executive is improving information to make it easier for small firms to get the correct advice and find the information they need (Health and Safety Commission, 1997 cited in Eng, Kahl and Baxter, 1997:35).

1.3 In New Zealand research has identified that small businesses have a similar lack of understanding of environmental and safety¹ statute². Jarvis and Wilkinson conclude that:

[M]any [New Zealand] farmers do not understand the requirements of the legislation and may not have a clear understanding of the purpose of it. Some did not grasp the reasons for the consent process, some did not understand Occupational Safety and Health... (Jarvis and Wilkinson, 1998:31).

¹ **Safety:** This term is used throughout the thesis to represent **health and safety in the workplace**. The term includes protection from physical accidents in the workplace, as well as from health hazards in the workplace such as inhalation of toxic dusts.

² **Statute:** This term is used in the thesis to represent the written body of enacted or customary rules recognised by the New Zealand community as binding, including Acts, Regulations, Codes and Maritime Protection Rules.

1.4 Eng, Kahl and Baxter conclude that a significant issue for compliance with the New Zealand safety law is that:

Small business employers have difficulty in understanding what their obligations and responsibilities under the HSE Act are (Eng, Kahl and Baxter, 1997:46).

These quotations indicate that, like Australia and the United Kingdom, a significant proportion of New Zealand small businesses have difficulty gaining a sound understanding of safety law.

1.5 The New Zealand Occupational Safety and Health Service (OSH) acknowledge the difficulties experienced by small businesses. OSH research has concluded that safety knowledge and protective systems are lacking, and that small businesses are the worst affected. This is detailed during an interview with the General Manager of OSH who states:

Worst of all are the small workplaces with fewer than 10 staff. The presence and sophistication of occupational safety and health systems in this sector is low, notes the [OSH Draft Strategic Development] report. Awareness of the HSE Act and the practical implications of its requirements is deficient in a large proportion of [these] workplaces (Bateman, 1999:19).

1.6 The purpose of the law is to protect the environment and the people who live and work in it. Not understanding it must surely increase the prospect of causing harm to New Zealand's environment and our people. This probable increased risk seems to be quietly accepted by society; whereas harm caused by a specific event, such as a chemical spill, would generally be unacceptable. It is not clear why the risk associated with a poor understanding of law should be so readily accepted.

1.7 Lacklustre understanding of safety law was identified in the United Kingdom by Lord Robens about 30 years ago (Robens, 1972). The problem has probably existed long before the Robens Report, possibly since the introduction of the Inspection of Machinery Act 1874, Regulation of Mines Act 1874 and the Factories Act 1891. The ongoing acceptance of risk

due to less than ideal understanding begs the question of '*what can be done to improve this situation, and therefore better protect New Zealanders and their environment?*'

Compliance

1.8 Small businesses need to follow government direction for the good of the community, as well as for their own protection. Government direction is well researched and provides 'best-practice', so it should represent the best way of achieving the subject task. An environmental and safety management system is needed to reliably achieve best practice. The compliance process could be viewed as a chain of events with four critical links. The first link in the chain is *communication* of the government requirements. The second link in the chain of events is *understanding* the government requirements. The third link in the chain is *implementation* of these requirements. Once implemented these requirements need regular *improvement* or maintenance. This is the fourth and final link in the chain of events to achieve the standards set by government. If any one of these links is missing or ineffective then the chain of events will be interrupted and the standard will not be achieved.

1.9 Figure 1 below adapts the domino sequence developed by H.W. Heinrich, as an accident causation model. Heinrich used dominos, to show that it takes a sequence of events for an accident to occur. The same model can also be used to explain the dependence of each of the four stages in the compliance process. Heinrich argued that the sequence of falling dominos could be broken if one of the preceding factors was removed. This is also the case with the compliance sequence. In Figure 1 (b), removal of the communications process will prevent understanding, implementation and improvement, and therefore prevent compliance (adapted from Massey, 1999:80).

Figure 1.

The links necessary to comply with the law

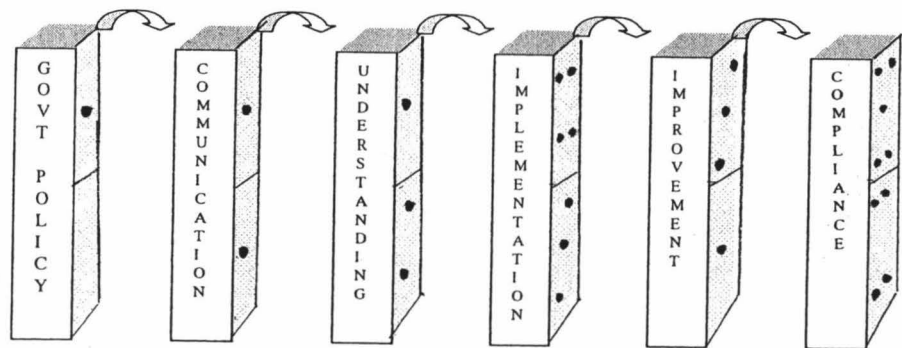


Fig 1(a). All Links in the chain are present – sequence of events completed
compliance achieved

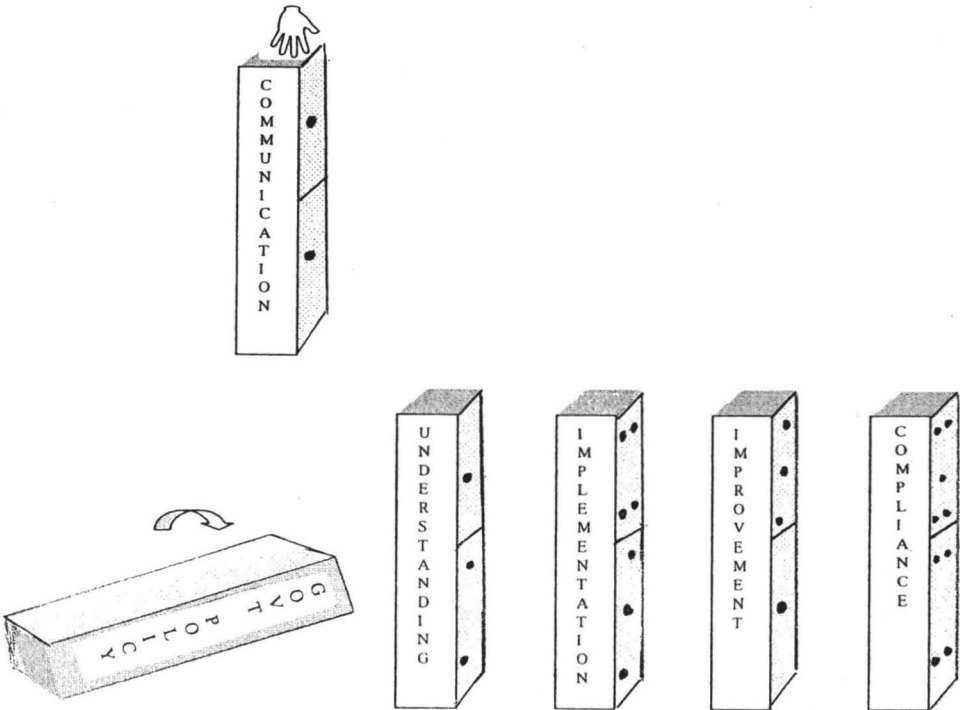


Fig 1 (b). One link in the chain is missing – sequence of events broken
compliance not achieved

1.10 Effective communication of environmental and safety law was chosen as the topic for this research because of its importance to compliance, and the apparent difficulty small businesses have understanding the law.

Research Aim

1.11 The aim of this research is to:

- a. Clarify the degree of difficulty and the support available to small businesses when assessing their environmental and safety statutory responsibilities; and
- b. By using the findings of a. above, design a system to improve the effectiveness of the statutory communications process, and then test this by case study.

Why this Research is Important

1.12 The research focuses on helping small businesses to improve people's safety, and to protect New Zealand's natural environment. The areas addressed have been problematic for at least the past thirty years and are subject to many reports and articles. Examples are '*New Zealand companies lag in environmental study*' (Morrison, 2000), or the formation of a government panel to investigate troublesome occupational health and resource management requirements (Howie, 2001). This research develops a new technique of communicating statutory requirements to small businesses, or in fact to any organisation. The summary developed is simple to use and comprehensive. It is concluded that this process will allow small businesses to improve self-regulation. Improved self-regulation offers many follow-on benefits such as reduction, or redirection, of the annual multimillion-dollar communications programme involving inspection, education and assistance services. Effective management by small businesses would also have immediate paybacks, by reducing industrial spills, work injuries, damage to plant, wasted materials, lost production time and contamination of industrial sites. Reduced wastage and damage to facilities will increase profits, and reduce clean up and dumping costs which could amount to hundreds of millions of dollars annually among the 190,000 small New Zealand businesses. The concept could also be extended to assist small businesses to understand any statute: such as employment, accident compensation or taxation laws. The concept could provide for a more informed debate by a wider audience of any public issue by accurately, and simply, listing relevant legal requirements. If the

maxim that '*Knowledge is power*' is accepted, then this research has the potential to empower small businesses to carry out their tasks more effectively.

Research Lay Out

1.13 This Chapter introduces the topic, states the aim and then sets the limits on the research boundaries to communication of law to small New Zealand businesses. Chapter 2, the literature review, collects the views from published literature to clarify the difficulties small businesses have understanding their responsibilities, what support they receive, and then identifies successful methods of communication from the literature. The literature review compares recent observations to those of 30 years ago to show that little has changed with time. The final section of the literature review collects proven techniques and builds them into a model designed to minimise the communication problems. Chapter 3 sets out the methods used during this research and Chapter 4 outlines and discusses the findings of the research, including the response of seven small businesses to the communications model. Chapter 5, the last chapter, draws conclusions and recommends actions to overcome the problems noted during the research. The customised compliance handbook developed for a car repair workshop is at Enclosure 2.

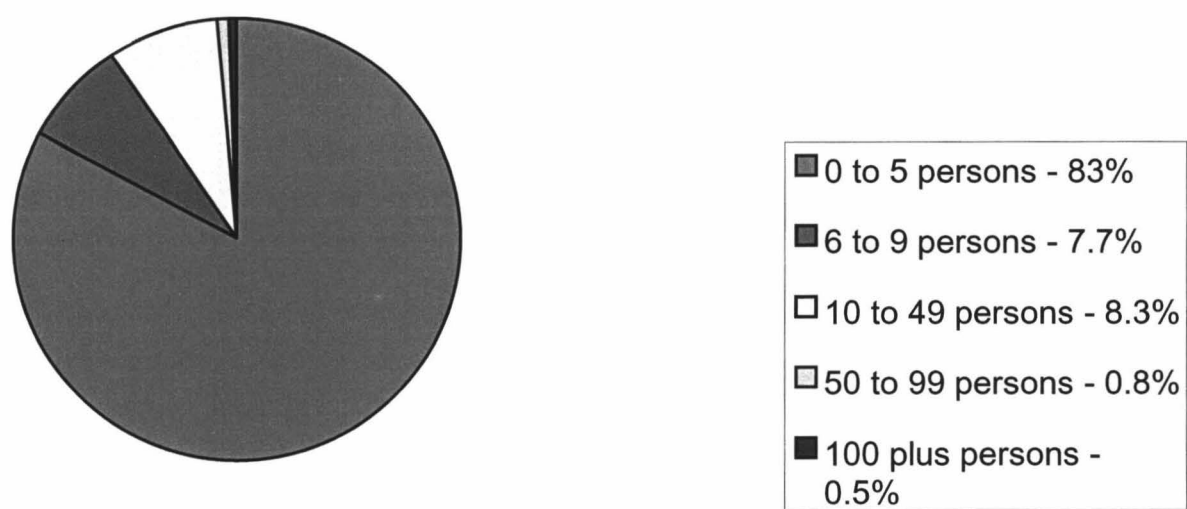
Definition of a Small New Zealand Business

1.14 There isn't a national definition, so enterprises with five or less full time workers were chosen to be a 'small business' for the purpose of this research. Awareness of legislative requirements tends to reduce with business size (National Research Bureau, 1997 cited in Eng, Kahl and Baxter, 1997:28). Businesses with five or less full time workers represent the majority of New Zealand businesses. Therefore, the criterion of five or less workers covers the majority of businesses and focuses on a group with a significantly lower safety performance than larger enterprises.

Small Businesses are Important

1.15 Small businesses represent the majority of businesses in New Zealand and employ a significant proportion of the workforce. There are about 190,000 businesses with five or fewer full time equivalent workers, which represent 83% of the businesses in New Zealand. Small businesses employ 23% of the workforce. These figures exclude most agricultural businesses and some other industry sectors such as community, recreational and personal services (Mears and Sundakov, 1997:9,10). Small businesses therefore represent a significant part of New Zealand industry.

Figure 2.
New Zealand enterprises and persons engaged
percent of total, economically significant enterprises



CHAPTER TWO:

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 New Zealand safety law is founded on the principles of self-regulation proposed by the 1972 Robens report prepared for the United Kingdom Parliament. To understand the current situation in New Zealand, it is helpful to review the basis from which it has developed.

The Robens Report

2.2 Lord Robens' report contained management principles for United Kingdom safety management, that would spread throughout the world and remain predominant for the next thirty or more years. The report made many recommendations that would make dramatic and widespread changes to safety management in the United Kingdom. The Robens report was well received and influenced significant changes to the safety systems of Australia, United Kingdom and New Zealand. New Zealand, who has traditionally followed the United Kingdom in law, also adopted Robens' principles. The findings of the Robens report are therefore relevant to New Zealand safety law. The report provides an important reference to the problems existing 30 years ago.

2.3 Robens identified the difficulties of complying with safety law, and proposed management solutions that were widely adopted. Thirty years later the same problems are once again the subject of debate. A United Kingdom explosives expert with extensive experience of drafting and modifying safety legislation for the past 11 years states:

There is much that is excellent in the Robens report, and there can be no doubt that it changed for great good the structure of Safety and Health legislation, and the structure of the enforcing authorities. However, 25 years on, many of the criticisms Robens made of the law at that time appear to be valid once again ... although the precise problems are now different (Smith, 1998).

Smith's view prompted this research to use the problems reported by Robens as a basis to clarify the difficulties faced by small New Zealand businesses.

Too Much Law

[P]erhaps [the most] fundamental defect of the statutory system is simply that there is too much law ... The existence of such a mass of law has an unfortunate and all-pervading psychological effect... Moreover, neither Parliament nor civil service administrators can cope with the task of keeping this huge and detailed body of law up to date (Robens, 1972:6,7).

2.4 The average reader of the daily news, or of an environmental or safety magazine, would probably think that small New Zealand businesses has to comply with only one safety statute and one, or possibly two, environmental statutes. There are 42 statutes that include requirements for safe practice in the workplace and also 42 statutes that include requirements for environmental protection. Twenty-two of these statutes overlap by containing both environmental and safety requirements, giving a total of 63 environmental and safety statutes. The statutes and their basic parameters are listed in Appendix 2. These statutes have a total of 3,993 pages, and it is estimated that this total is growing at about 300 pages per year.

2.5 A view that supports the Robens observation on the excessive volume of law was put forward by Dr Glen Plant, a Professor of Safety and Environmental Protection at the World Maritime University in Sweden:

There is always the temptation for decision-makers to 'notch another law up' because this is far easier and more high profile than the difficult and unspectacular task of making sure standards are adhered to and that there is a level playing field for all (Plant, 1997).

2.6 Robens' view that there is too much law, is supported by recent research such as:

a. **For Australasian Workplaces.** *'Too much law'* was one theme from Felicity Lamm's research:

Interviewees [Australian and New Zealand OSH inspectors, and Queensland small business owners] frequently criticised the quantity and the complexity of the regulations with which they must contend. ... This is supported in the literature where research indicates that small business owners believe that

regulations, including those concerning [safety] matters, are too numerous and complex (Lamm, 1995 cited in Eng, Kahl and Baxter, 1997:29).

b. **Safety in Australian small businesses.** Based on a review of 248 small Brisbane businesses reviewed, Mayhew concludes:

The plethora of government regulations is too much to cope with (Mayhew, 1997:4).

This quotation suggests that small businesses are overcome by the number of government regulations, and are unable to manage them.

2.7 This research set out to summarise all of the environmental and safety statutes, but the volume was too great and only one-third of the pages was summarised. A further 1000 hours of work will be needed to complete the summary. This volume of law is too much for small New Zealand businesses to manage. Palmer and Palmer comments on the quantity of New Zealand law and indicate the hopelessness of trying to keep abreast of it:

[T]he conscientious citizen wishing to read his or her legal obligations would read for a long time. In 1990, the Law Commission estimated that around 4000 new pages are added to the volumes of legislation each year, subordinate as well as primary (Palmer and Palmer, 1997:149). [Note: this refers to all law, not just environmental and safety law]

2.8 Research in the United Kingdom and Australia concludes that there is too much law for small businesses to manage. No relevant New Zealand research has been found, but it is clear that small businesses can not sensibly be expected to assess and implement 3,993 pages of environmental and safety law. It is concluded that small businesses find it difficult to establish their responsibilities from the large volume of New Zealand law.

The Law Should be Simplified

2.9 The second main defect noted by Lord Robens was that the law is badly structured:

[The law] is written in a language and style that renders it largely unintelligible to those whose actions it is intended to influence. Line managers, supervisors and shop-floor operatives are not legal experts. Even

the personnel of the inspectorates experience difficulty in picking their way through it all (Robens, 1972:7).

2.10 Mears and Yeabsley reviewed literature on small New Zealand business compliance and supported Robens' observations when concluding:

Simplification was the common theme [for the provision of information]... employers wanted 'plain language' notices to put up for employees to read instead of the extracts from the legislation (Mears and Yeabsley, 1994:4).

2.11 Palmer and Palmer refers to a Canadian example to outline the responsibility of the State to provide understandable laws, and then recommends that this should be the standard applied in New Zealand:

Much of this law is incomprehensible to ordinary people. In his book *Access to the Law*, the Canadian minister M.L. Friedland has asserted:

"The state has an obligation to ensure that its laws are available in an understandable fashion to laymen³."

That should be our goal. It is a fundamental premise of the rule of law in a democratic society (Palmer and Palmer, 1997:162).

2.12 New Zealand law does not specify who is responsible to present the information to small businesses in 'an understandable fashion to laymen'. It is normal for the responsible government agency to prepare and distribute supplementary information, sponsor articles in relevant magazines, develop compliance programmes and systems and even advertise these services, but this is a matter between the agency and their Minister. There is no specified responsibility for government agencies to educate small businesses and prepare effective packages to assist compliance. Discussions with one government agency established that they are expected by their Minister to provide the '*most bang per buck*'. The department's policy was to concentrate on the larger firms since this would assist efficiency.⁴ This policy, albeit

³ M.L. Friedland, *Access to the Law*, Methuen, Toronto, 1975. P.1.

⁴ Telephone discussion to an unnamed government department 10 July 2000

unwritten, disadvantages small businesses. While this advice was not an official communication it demonstrates the latitude available to the government agencies that are resourced to sponsor the statutes for the benefit of all users. Small businesses have no guarantee that they will receive any particular level of support from the government agencies.

2.13 Provision of law in '*an understandable fashion to laymen*' is disadvantaged by the legislative development process, which translates all law into legal language. The regulations to the Hazardous Substance and New Organisms (HSNO) Act 1996 are about to be issued. The regulations have taken into account the views expressed by a wide cross section of New Zealand society over the past few years. During the consultation period the draft regulations are written in plain English. Revised drafts were circulated, vetted by industry groups, and finalised, still in plain English format. The Parliamentary Council Office then rewrites the regulations into legal language - a process called legal drafting. While the legal drafting process may be an advantage to the executive branch of government and the judiciary, it can only make the regulations more difficult for small businesses to understand.

2.14 Palmer and Palmer reiterate the need for laws to be understood by the people of a democracy:

[I]n a democracy people ought to be able to understand the laws they are supposed to obey, but this is much easier said than done. ... [B]ut too much law is still unnecessarily wordy and obscure. ... Laws can and should be written in a way that is both intelligible and legally certain (Palmer and Palmer, 1997:165).

2.15 Recent research refers to the difficulty small businesses have with the complexity of law. Extracts from these reports are presented below, to demonstrate the widespread belief in the literature that complexity of law is still a problem, and the problem applies to almost all small businesses:

a. **Queensland Builders.**

Previous research of self-employed and small business Queensland builders indicated that many were unaware of the legislative framework, confused about it or interpreted it incorrectly, did not grasp the two key underlying concepts of self regulation or duty of care, and that at best half comprehended the basic principles (Mayhew, 1997:30).

b. **Australian Small Businesses.** Australian research aimed at reducing the burden of compliance by 50% by revenue neutral measures found, amongst other things,

[S]mall businesses are concerned that they do not have the expertise to deal with technically complex [safety] regulation. They are not able to translate the regulations into effective workplace management strategies without the additional cost of hiring professional advisors (National Occupational Health and Safety Commission, 1997 cited in Eng, Kahl and Baxter, 1997:13).

c. **Farmers and Law.** A research project, conducted on behalf of the New Zealand Ministry of Agriculture and Fisheries, surveyed 976 farmers and horticulturists and found a lack of understanding of safety law and environmental law. The paper found that:

Most [farmers] knew something about the HSE Act, [but] not enough to be able to explain it to a friend, and ... Farmers' fears and uncertainties [of the requirements of the law] will be best reduced by provision of understandable, factual information (Jarvis and Wilkinson, 1998: 18, 5).

d. **Australian Chamber of Commerce** - for firm size less than 20 employees.

The impact of legislative [safety] requirements is of concern to small business. Respondents indicated that [safety] law and legal documents were too complex and detailed. Respondents indicated that they are not fully aware of their current legal [safety] responsibilities (Australian Chamber of Commerce and Industry (ACCI), 1995 cited in Eng, Kahl and Baxter,

1997:31).

- e. **Safety in Queensland and New Zealand Small Businesses.** Felicity Lamm studied Queensland and Auckland small businesses and reported:

The legal complexity of employment legislation such as the Employment Contracts Act 1991 and the HSE Act hinders their progress and ultimately their survival. The overall sentiments are that the regulations must be straight forward and be able to be easily applied to the workplace (Lamm, 1995 cited in Eng, Kahl and Baxter, 1997:30).

2.16 The Australian National Occupational Health and Safety Commission sponsored a 'Bizlink' safety module, which is a computer-based guide for small businesses. Even though a National body sponsored the programme, the Bizlink programme advises that: *'It is always advisable to seek legal advice when considering how the law applies to your business operations.'* The warning from the sponsoring government agency demonstrates the difficulties inherent in understanding the law, as well as the extent of the precautions small businesses need to take to be confident of meeting legal requirements.

2.17 Small businesses find environmental and safety law complex and difficult to understand, and hence they find it difficult to establish their responsibilities. There is no known official programme that is effectively rectifying this common difficulty for small businesses. Government and other communication programmes should provide information in the form that is in 'an understandable fashion to laymen', and include only directly relevant information.

It is Unfortunate that One Business is Subject to a Number of Statutes

2.18 Robens observed that a single business was subject to a number of acts and sets of safety regulations, which were controlled by many authorities. Robens considered these controls were overly complex.

At the level of the individual workplace, one establishment may be subject to a multiplicity of safety and health provisions under a number of acts and sets of regulations... It is true that a wide variety of safety and health

problems can arise at certain kinds of workplace, but it is difficult to accept that the pattern of administrative controls needs to be as complex as this (Robens, 1972:9,10).

Robens recommended just one authority for safety.

2.19 Robens recommendation for simplification of safety controls was adopted when New Zealand introduced a single act, the HSE Act, which repealed or amended some 100 acts and revoked 52 regulations. Because the approach of the act was very different from previous acts there were a string of flow on effects, which resulted in small businesses remaining to be subject to a number of acts and regulations for safety. The performance-based approach of the new act requires small businesses to go further than the prescriptive requirements of the earlier law. This is outlined by Christchurch District Court Judge Everitt:

... [The HSE Act] requires all employers to be proactive; in other words to seek out all hazards and take steps to prevent injury to workers. Employers are now required to be analytical and critical in providing and maintaining a safe working environment. It is not just a matter of meeting minimum standards and codes laid down by statute. It requires employers to go further and to set down their own standards commensurate with the principal object of the Act after due analysis and criticism. This is a new duty cast upon employers⁵ (Campbell, 1998:62).

2.20 The need to 'go further' includes an unwritten requirement to review law applicable to all activities undertaken by small businesses. The standard of performance required by the HSE Act can be summarised by the term, 'all practicable steps'. Achieving this standard requires all steps to be taken that are reasonably practicable in the circumstances, when considering the severity and likelihood of harm occurring, and the availability and cost of information and protection measures. 'All practicable steps' for the occasional handling of a flammable liquid in the workshop of a small business would include complying with the Dangerous Goods (Class 3 - Flammable Liquids) Regulations 1985, the Dangerous Goods

⁵ Department of Labour v Regina Ltd, Unreported, CRN 3045004405, Dunedin District Court, 22 February 1994.

(Labelling) Regulations 1978 and the Building Act 1991 in addition to the HSE Act and Regulations. The 'all practicable steps' requirement of the new law is open-ended and places a great deal of pressure on small businesses to cover every conceivable method of ensuring safety which includes checking relevant law, codes of practice and guidance information. This procedure was not necessary to the same degree under the pre-Robens laws and therefore represents an increased duty for small businesses that has been created by the introduction of a single act.

2.21 Under the new HSE Act every statute now must be considered under the 'all practicable steps' regime, which requires small businesses to manage all safety law. Forty-two of the statutes listed at Appendix 2 include some reference to the safety of workers or the public. Small businesses should check whether these statutes are applicable. Yet analysing such a large number of statutes is beyond the ability of the majority of small businesses – even government agencies do not undertake such a review. It is considered that it is not practicable for small businesses to analyse the current safety statutes. Perhaps 'all practicable steps' should involve only the key statutes. Only a Court can settle the extent to which small businesses should review safety laws. What is clear is that small businesses are still subject to a number of statutes, and that understanding these is beyond their resources.

2.22 The new HSE Act raised the performance standard required of small businesses, and made management more difficult than before. Small businesses still struggle to manage numerous statutes. The law remained complex and overlapping, but introduced wider responsibilities and also s 5 of the Act imposed a standard of 'excellence'. In addition, because the new acts were non-prescriptive, small businesses found it more difficult to interpret the requirements. The introduction of the HSE Act is considered to be the point in time where safety laws became even more complicated for small businesses. Small businesses now definitely needed outside assistance.

2.23 Robens' recommendation of just one authority for safety was not implemented. In New Zealand 7 government departments manage the 42 statutes affecting safety in small businesses (Appendix 2), but there is no coordinating body to address the overlaps and interactions.

Nor is there any publication to explain how small businesses should manage this difficult and complex mix of law. The minimum needs of small business are a concise statement of their compliance objectives, and some guidance towards how they can be achieved. Caple identifies the need for a single source of guidance for Australian small businesses:

The various Codes of Practice, Guidance Notes and Australian Standards appear to be confusing to industry. A request for a "one stop shop" of guidance or bench marking [safety] standards was commonly reported from industry (Caple, 1996:40).

New Zealand small businesses would also benefit from a one-stop-shop for guidance.

2.24 Today small New Zealand businesses have to comply with an excessive number of environmental and safety acts, regulations and rules which vary between pure environmental provisions to pure safety provisions and those with various mixes of the two. These statutes are managed by 11 different government agencies. Small businesses are expected to interpret these scattered requirements and then apply them to their activities. This is the same problem identified by Robens 30 years ago, to which he proposed that there should be just one national authority for safety at work (Robens 1972:36).

Information Communication Methods and their Individual Strengths

2.25 Clearly the current form and quantity of law is difficult for small businesses to manage. These difficulties might be avoided by an effective method of communication. The strengths and weaknesses of the existing communication systems need to be identified before any improvements can be made, and this is the purpose of the following section.

Codes of practice, guidelines and information leaflets

2.26 Codes of practice, guidelines and information leaflets are a common form of transferring information to small businesses. The documents are normally small, colourful, carefully laid out and specialise in one particular subject, e.g. using isocyanate paints, or one

aspect of one subject such as how to avoid occupational overuse syndrome by correctly using a computer. In New Zealand this information is normally produced by government agencies, but is also occasionally produced by industry organisations. Some of the documents produced by government agencies are designated as 'approved codes of practice'. Complying with an approved code of practice is a defence against prosecution, however only about 21 of these have been produced, mainly because of the time and difficulty involved. Following ordinary codes of practice and guidelines can provide significant protection from prosecution for situations where there is no approved code. Codes and guidelines are often generic in nature; providing an overview of how to manage some aspects of the process, but often do not provide full and specific information as is required by a small business. This would be difficult to achieve given the many different situations that the code or guide will be applied to. One of the most impressive documents noted is titled *Guidelines for the Provision of Facilities and General Safety and Health in Commercial and Industrial Premises* produced by the New Zealand Occupational Safety and Health Service. The book is simply laid out explains the requirements for certain activities or situations, for example safety in refrigerated compartments, and lifting heavy loads. Helpfully, this publication contains appropriate transcripts from the HSE Act and Regulations, to give the reader an in-depth understanding of the law applying to that specific situation. This format is an excellent tool that gives employers the option of selecting the simplified explanation or the legal statement; whichever best suits their needs at the time. The publication is 70 pages long and covers most of the provisions of the HSE Act and some of the requirements of the Regulations. The guideline does not meet the one-stop-shop requirement since it covers only 39 of the 542 environmental and safety requirements identified at Appendix 2.

2.27 The codes and guidelines produced by the government authorities do not always meet the needs of small businesses. Caple indicated that the Australian Government creates about 80% of their national safety information, but that the information has minimal penetration into small businesses. This observation indicates that the money used to produce the information could be better used on other communication methods. Caple concludes:

... that the role of government in production large quantities of information, often duplicating contents from multiple agencies, is not a cost effective strategy (Caple, 1996:70).

A report by New Focus Pty Ltd. that assesses safety aspects of small Australian businesses recommends that communications designed to reach employers should:

Move away from the traditional OSH communication that is hard to read and understand, too theoretical, too voluminous and has an academic style (New Focus Pty Ltd, 1996 cited in Eng, Kahl and Baxter, 1997:37).

Research by Rush observed:

[Although] Workcover printed materials were found to be well written, laid out and informative they were judged not 'user friendly' enough because they contained too much information (Rush, 1993:26 cited in Mayhew, 1997:43).

This view is also supported by David Caple's research in the State of Victoria that concludes:

Small businesses [feel] they are deluged with health and safety related information, much of which is scanned and filed. They found much of the information to be of little specific relevance to their businesses (Caple, 1996:66).

2.28 The Caple, Rush and New Focus Pty Ltd findings are supported by an assessment of the guidelines and pamphlets produced to explain the Resource Management Act 1991, one of the key New Zealand environmental acts. Only 10 of the 433 sections and none of the nine schedules in the Act are considered by this research to directly assist small businesses protect the environment. These 10 relevant sections are: ss 9 and 10 (land use), s12 (coastal marine area), s13 (river and lake beds), s14 (water restrictions), ss 15 and 70 (discharge of contaminants), ss 16 and 326 (noise) and s17 (adverse effects). The remaining 423 Sections and nine Schedules are of course needed to understand the basis, aims and administration of the Act, but this information is more than is normally needed by small businesses to meet their everyday obligations. National Guidelines are produced by the relevant government agency for subdivision, contaminated sites, water quality, odour management and cleaner production, but do not include any of the 10 sections of the Act directly relevant to small businesses. The sponsor Agency also produces pamphlets and guidelines on subjects such as

the Resource Management Act 1991 to help understand the regime, but none of these publications identify any of the 10 areas of risk to small businesses. Non-specific information is often not well accepted by small businesses, which is one of the main conclusions of the OSH review which states:

General occupational health and safety information and assistance is not useful to small businesses which need information which is directly relevant to individual workplaces (Eng, Kahl and Baxter, 1997:48).

2.29 There are many shortfalls reported on government produced guidelines. Analysis of Appendix 2 indicates that there are about 1,000 basic requirements that could apply to small businesses. Codes and guidelines in their totality do not cover every provision, so it is not possible to use them to cover all relevant aspects of the law. A code or guide could not be found to cover the earlier example of the occasional use of flammable liquids in a workshop. Even if the codes and guidelines covered all subjects, small businesses would have difficulty establishing the relationship between the assortment of codes and information leaflets written in different levels of complexity and styles. In summary there are insufficient guidelines, and those that have been produced are not effectively bridging the gap between the law and the small Australian businesses. There is no evidence that the New Zealand codes and guidelines are any more successful. It was noted that some guidelines inserted the full-text of the applicable law alongside an explanation of the requirement. This concept showed the potential to be an effective communications tool and would be adopted by the communications method recommended by this research.

Off-the-shelf management programmes

2.30 There are many management programmes designed to assist small businesses manage their safety obligations, but none have been found for environmental obligations. The safety management programmes include the *Accident Compensation Commission (ACC)* *Workplace Safety Management Practices Programme* and the *Occupational Safety And Health Service Basic Steps Programme*. Management programmes are normally sponsored by a government authority with the aim of supporting small businesses to achieve the prescribed level of safety performance. Often the sponsor will develop a system that will, if effectively adopted, ensure compliance by the small business. The Victorian Government

developed a system called *Safety Map* that is described by Caple as:

For those organisations without a formalised program, Safety Map can be used as a model on which to base a [safety] management program. The elements of Safety Map have a quality approach (in line with ISO 9001 quality standard) to defining, documenting, measuring and auditing relevant [safety] processes. Access to relevant [safety] information is a critical element of this system (Caple, 1996:36).

The *Workplace Safety Management Practices Programme*, like the *Safety Map* programme, does not provide information on statutory requirements, so therefore does not provide small businesses with an understanding of relevant law. Some management programmes do contain some statutory responsibilities. The *Basic Steps* programme above provides limited guidance on 27 requirements of the HSE Act and Regulations. One commercial system, which will not be named, was examined because it provided the most complete set of legal requirements. The system only covered the HSE Act, leaving out the Regulations, dangerous goods, and other statutes containing safety requirements, and of course environmental statutes. The commercial system provided information on each section of the Act through a series of menu selections, which made an overview of the requirement difficult. Overall the programme fell short of providing the information required. It is concluded that 'off-the-shelf' management programmes do not provide sufficient specific information on environmental and safety responsibilities for small businesses.

Safety solutions databases

2.31 Employer associations or large organisations develop safety solutions databases, for example the Australian meat processing industry that circulated 100 proven safety initiatives. These initiatives were further enhanced within individual companies. The Victorian Hospital Association has a database of over 400 safety solutions that they share among all public hospitals and with 60% of health centres (Caple, 1996:31). Databases rely on an active industry association, computer facilities, and available management time. Small businesses often do not have access to all of these facilities or resources, so [safety] solutions databases do not seem to be a ready solution. Furthermore databases tend to be used for general information and do not provide a summary of the overall responsibilities, therefore do not represent a one-stop-shop. The literature

reviewed contained no reference to the existence of any significant safety solutions databases in New Zealand.

Direct contact with government agencies

2.32 Direct contact with government agencies would normally involve telephone discussions and an occasional worksite inspection by a suitably qualified and experienced inspector. A survey on chemical questions by the Australian Council Of Trade Unions in 1995 established that direct contact with government agencies was not providing the sort of advice they were looking for:

In general the employers view the services provided by the government agencies as being too general, too technical and more appropriate for larger employers who have access to OSH trained staff (Caple, 1996:67).

The dual advisory and prosecution role of government agencies is also a concern to small businesses.

Some employers felt the open expression of problems ... may increase the probability of subsequent inspection and possible prosecution of their businesses (Caple, 1996:67).

2.33 No single government agency has expertise in all of the statutes, so small businesses would have to liaise with the 11 government sponsor agencies and integrate the information provided. This is not a one-stop-shop approach so it wouldn't be favoured by small businesses. Government agencies have many disadvantages in applying the advisory role of their duties, and are not considered by this research to provide an effective solution to providing small businesses with an overall understanding of their legal obligations.

Employer associations

2.34 Employer associations and trade unions can contribute valuable information and safe work procedures to their members, but this will only be effective where a high proportion of small businesses belong. Only 30 to 40% of small Australian employers belonged to employer

associations (Caple, 1996:27). Because the employer association represents only the minority of small businesses the associations do not have the level of contact necessary to communicate compliance requirements. Mayhew supports Caple's conclusion and states:

[T]otal reliance on ... employer associations for [safety] information promulgation may be misguided because many small [Brisbane] business owner/managers will have no contact at all with employer associations (Mayhew, 1997:40).

Industry associations

2.35 Industry based management systems may be operated by an employer association, an industry council, a private company, in fact any organisation. In New Zealand there are two predominant environmental and safety systems offered by industry associations, and another system in development. The existing systems are distinctive by their thorough, integrated and accurate approach to compliance with the law. Both are international solutions that are customised to meet New Zealand requirements. The system under development is also likely to achieve this standard once implemented.

2.36 **Project INTEGRATE.** Project INTEGRATE is being funded by the Institute of Research and Science and Technology, and is producing a management package for environmental, quality and health and safety management for small and medium businesses. The pilot study is complete. All the businesses involved found benefit in reviewing their processes from an integrated perspective. Most businesses made changes ranging from minor changes, through to significant changes to working practices. It was noted that those businesses that had experience with management systems, including those heavily regulated, required less change. Project INTEGRATE is about to publish a handbook containing information on developing an integrated management system. The handbook is designed to allow the business to either work through the handbook on their own, or work with the provider to get training and implementation assistance. Longer-term plans include providing a handbook via the Internet, and to develop complimentary integrated management training. The website for this project is www.integrate.co.nz (Levy, 2001).

2.37 **International Safety Rating System®.** The International Safety Rating System is a profit based system marketed by Det Nors Veritas of Norway, and is based on detailed multi-tier performance check lists, with each check-off point allocated its own score. There are checklists for many areas of management, including safety and environmental protection. The score achieved indicates the performance of the small business, and the marking sheet easily identifies areas for improvement. The International Safety Rating System is based on quality management principles and international best practice, which makes it a very demanding total management system requiring a 100% commitment of the small business. The New Zealand Government introduced this system in 1979, in support of the then newly introduced ACC legislation. Regrettably ACC policy changes resulted in this initiative being abandoned some 10 years later.

2.38 **Responsible Care™.** The International Responsible Care programme is another example of an industry association initiative to assist member companies meet their environmental and safety responsibilities. The New Zealand version of the programme is similar to programmes established in 45 countries, but customised to reflect New Zealand law. The programme is tailored to enable small to medium enterprises demonstrate compliance. Responsible Care is based on the principles of a club, where all members participate to achieve safe workplaces, safe products and protection of the natural environment. Responsible Care produces a six volume Manager's Handbook to support these aims. The Manager's Handbook guides members on law, international best practice, codes of practice, guidelines, and examples of policies and procedures implemented by members in New Zealand and overseas. The Responsible Care programme keeps members fully informed with legislative changes and their likely effects, provides training, carries out compliance audits and represents industry views to the relevant authorities. The cost of membership for businesses of 20 employees or less is \$600 per year. The programme is run by the New Zealand Chemical Industry Council who, as an industry association, have members engaged in many types of consumer and service industries, and of course the chemical industry. Small businesses belong to Responsible Care, but at present only a very small proportion of New Zealand businesses with less than five workers are Responsible Care members (NZCIC, 1999).

2.39 Small businesses could achieve excellent environmental and safety standards by using either the International Safety Rating System or Responsible Care packages; but there is a management overhead. The packages are technically very thorough and require a sound level of knowledge to apply. The packages are mainly used by medium to large firms with dedicated staff, able to monitor progress and implement changes to meet the constant improvement cycles incorporated within the systems. The dilemma is that while both systems are excellent, they do not yet have many small businesses as members. Caple believes that the role of government will inevitably change from trying to develop and disseminate safety information for industry, to assisting and supporting safety networks (Caple, 1996: 69). Changes in government agency policy to provide financial and political assistance to industry organisations would allow the industry association programmes to be more available to small businesses. Using industry associations to communicate environmental and safety responsibilities would avoid many of the problems small businesses have dealing with government departments, as outlined earlier in this Section. Such problems include the lack of a one-shop-stop approach, duplication of information, non user-friendly material, and a lack of direct relevance of the information. Initiatives such as Responsible Care, the International Safety Rating System and hopefully soon Project INTEGRATE, are commendable but there needs to be a greater involvement by the 190,000 small New Zealand businesses. Caple suggests the government should provide encouragement by way of financial and political support (Caple, 1996:69).

Brooker's online libraries

2.40 Brooker's provides comprehensive information for specialist and legal applications. The computer-based information system provides full transcripts of all statutes, a comprehensive law digest, comprehensive employment law services and accurate and expert legal information. Brooker's also publish a Workplace Safety and Accidents Handbook that is a guide for the HSE Act and the Accident Rehabilitation Compensation Insurance Act 1992. A sound understanding of the New Zealand legal system is desirable to effectively use the comprehensive information provided. The user needs to know what to look for, where it is located, and then interrelate the provisions of overlapping statutes, case law and any other relevant information such as definitions and commonly accepted interpretations. It is considered that the comprehensive and legal nature of the information provided would be too

complex for the preference of small businesses. This is based on general observations of the literature which identify time and skill resource limitations for issues not directly concerned with primary production activities, as summarised by the OSH Literature Review:

The lack of time is a fundamental constraint for small business employers.
... Small business employers do not have the expertise to deal with technically complex occupational health and safety legislation. The amount and complexity of the documentation required could be overwhelming and small business employers do not know when they have reached compliance (Eng, Kahl and Baxter, 1997:46).

It is also relevant that computer based systems are not the preferred communications-medium for small businesses, as noted by Mayhew:

[C]omputer programs are unlikely to be appropriate for the majority of very small business at present because many do not even own a computer (Mayhew, 1997:46).

It is concluded that legal information systems such as Brooker's can provide excellent and valuable information, but this information is not in the ideal form to assist the average small business to understand their environmental and safety legal obligations.

Standards

2.41 ISO 9000 quality standards and ISO 14000 environmental standards do not provide information relating to statutory requirements, but advise how to manage quality and environmental systems. New Zealand Standard 4801 (interim) *Occupational Health and Safety Management Systems - Specification with guidance for use* is useful as a self-guidance and self-audit tool. The Australian/New Zealand Standard 4804: *Occupational Health and Safety Management Systems - General guidelines on principles, systems and supporting techniques*, is designed to assist with implementation or improvement of safety management systems. The standards propose general procedures for management, but do not detail the actual requirements of the statute. The user is required to have knowledge and an

understanding of safety practice to carry out the procedures recommended by the standard. In general the standards assist with the communications process, but do not by themselves provide the information to be communicated. Small businesses can not undertake their responsibilities without the relevant statutory information.

Seminars and conferences

2.42 Seminars and conferences are not well suited to provide a comprehensive solution for small businesses. Mayhew concluded from a review of 248 Brisbane small businesses:

[O]verall, however, working through seminars and courses cannot be relied upon to produce effective [safety] communication to the majority of small business employers as so many are unable to attend, and may have no wish to (Mayhew, 1997:42).

Conferences generally assist understanding of the law but, like codes of practice and guidelines, normally focus on only a few aspects of the subject, and are unlikely to cover the full spectrum of subject areas required by small businesses. Conferences also are not regularly attended by small businesses, so would have difficulty in communicating with this special sector of industry.

Telephone advice line

2.43 The main providers of safety information such as employer associations, unions, and government, offer a dedicated telephone advice service. Caple's research involving 248 small/medium businesses in Victoria found that telephone line advice was not an effective solution:

[G]eneral [safety] Help Lines are poorly utilised as the caller is not sure [that] information provided would be unbiased or practical... A critical criteria [is] that the service provider must be trusted by the caller to provide accurate and practical advice ... (Caple, 1996:45).

Internet

2.44 Caple advises of an Australian safety Internet network set up in 1994 by various groups of practitioners. New organisations keep joining the network, which continues to grow quickly. The network suits practitioners, but isn't ideal for communicating requirements to small businesses:

Those who are subscribers comment on the wealth of information available, much of which however, is not particularly relevant or is very general and repetitious. Hence, this medium seems more suited to the [safety] practitioner or researcher than the small/medium employer requiring more specific information. The lack of hardware and trained users in business in general inhibits the growth of this information medium (Caple, 1996:38).

Universities

2.45 Caple's research found that the impact of universities on small and medium sized industries is minimal:

Industry generally felt the [universities'] research would be too academic and not directly relevant to their business (Caple, 1996:40).

This research is an example. The document would not be at all helpful to small businesses, only the outcomes could be of use. Caple's research would suggest that in general universities are not seen by small businesses as an ideal authority to communicate environmental and safety responsibilities.

Consultants

The direct impact of [safety] consultants with individual small/medium sized industries is minimal. This is partially due to the financial costs of engaging private consultants and also because their existence is relatively unknown by the small/medium employers (Caple, 1996:41).

2.46 Consultants do not normally advise large homogeneous networks, as do industry associations, thus have varying approaches and standards. Caple identified that consultants

were not an ideal means to routinely communicate environmental and safety law to small businesses.

Audio tapes

2.47 Free tapes are sent to large and selected industries in an attempt to convey safety information in Victoria, Australia. Debates on safety issues are recorded on the tapes, which provide a medium acceptable to many management levels. The initiative resulted in a high level of listening during "discretionary time", such as driving in a car. The willingness to listen to the tapes compared favourably with other methods of communicating safety information (Caple, 1996:39). Caple didn't comment further on the advantages of using tapes, however many tapes would be needed to cover the full range of activities of a small business, and there would need to be a selection process to only provide relevant tapes. It is therefore considered that tapes are useful, but are not a complete solution for communicating law to small businesses.

Networking within industry

2.48 Caple found that Australian small businesses networked very effectively when problems arose. Networks considered by Caple included Internet, industry associations - that have been outlined above, as well as less obvious avenues such as regional safety groups, other small businesses, accountants, solicitors and medical practitioners. Small businesses sought answers to specific safety questions and preferred to use a simple means such as telephone or fax communication. Caple found that the networks were serving the needs of small businesses most satisfactorily. Employer associations or unions provide the main network systems within Australia, but only about 35% of the 248 small businesses surveyed were members (Caple, 1996:43,70). Wyatt concludes that:

Personal contact via either telephone or face-to-face communications is of vital importance with small business because: they don't read. They hate reading. They hate paperwork. That's why they are in a trade. Someone has to come to them (Wyatt, 1993:46 cited in Mayhew, 1997:45).

2.49 It is concluded that none of the communication methods reviewed above effectively meets the needs of small businesses. Some of these methods do have characteristics that have

been identified as particularly effective, such as inclusion of a transcript of relevant law, provision of references to relevant standards, use of voice tapes, and the value of networking. The design of the communications system for small businesses should, where possible, include these effective characteristics.

How to Improve Small Business Compliance

2.50 Caple has identified that there will always be two groups: those businesses who wish to become fully skilled safety specialists and those, the majority, who do not (Caple, 1996:69). Caple's dichotomy is clearly identifiable in the results of Mayhew, 1996 where 97.5 % of businesses surveyed did not consider they had the necessary high level of understanding of safety laws. It is this group that needs encouragement to understand the law. Removal of proven difficulties must result in an increased level of understanding and therefore improve the ability of small businesses to meet their obligations.

2.51 The proposed system should be specifically designed to suit the needs of the 95% that will not meet the required standards without encouragement and assistance. The 5% of small businesses remaining, the proactive group, would also gain some benefit from an effective method of communication. Techniques for successful communication identified in the literature are summarised below to form the 'user requirement' for the most effective theoretical method to communicate statutory requirements to small businesses.

A one-stop-statute-shop

2.52 A 407-page document, Enclosure 1, has been compiled as part of this research to demonstrate that all of the environmental and safety legal requirements relevant to small business can be contained in one book. Enclosure 1 contains only the most relevant statutes, representing about one-third of the total volume of law, but an assessed two-thirds of the relevant requirements. From this exercise it is assessed that a summary of all of the relevant statutes would be about 700 pages long. Therefore it is practicable to have a single publication listing all of the relevant environmental and safety law for small businesses. This publication would effectively be a one-stop-statute-shop or a Master Summary Book for small businesses environmental and safety law.

Free or inexpensive

2.53 Cost appears to be a very important factor in the operation of small businesses, as indicated by Australian statistics which showed that some 15,000 companies subscribed to free safety information, whereas less than 2,000 companies paid for subscription based safety information (Caple, 1996:68).

Portable

2.54 Small businesses are often subcontracted to different work sites. The information needs to be readily portable and usable at almost any site.

Comprehensive but simple

2.55 Information provided for small businesses must be easily understood but accurate. Very simple language and careful explanation of definitions is essential. The information should be simple enough to be understood by every employee, yet complete enough to provide sufficient information for the manager to check that all requirements have been met. The method selected to achieve these standards was developed during this research. The method is based on a three-layer information system. Each statutory provision is covered in each layer.

- a. **The first layer.** The first layer contains a simple one-line-statement for each relevant requirement. These statements can be arranged under work activity headings e.g. earth moving, chainsawing, contractors etc. The one-line-statement also references the source of that requirement, for example '*Containers of Class 3a or 3b* [e.g. petrol or turpentine] *must remain closed when in storage (Dangerous Goods Class 3 Reg 31(g))*'. The first layer is intended to convey the information quickly and easily to employees and employers: it is almost a 'shopping list' of things to do, or not to do.
- b. **The second layer.** The second layer is a précis of each requirement in a matrix format. This method of summarising law was developed during my ENVI 512 practicum paper, that summarised environmental and safety law relevant to the Royal New Zealand Navy into a matrix or table form. The summary matrix was very well received and is now an annex to the Navy environmental and safety orders, helping to explain the relevant requirements of the statutes to all rank levels. The summary matrix contains all of the important details of the statute, but in plain English. One table is used to précis each

statute, and the statutes are arranged in alphabetical order throughout the layer. The intended use of the second layer is to allow more detail to be obtained on a one-line-statement if so desired. The matrix entry of Reg 31(g) of the Dangerous Goods Class 3 (Flammable Liquids) matrix is copied below:

Dangerous Goods (Class 3 - Flammable Liquids) Regulations 1985

31	Storage of Class 3 (a), and Class 3 (b) not in bulk	Containers are only to be opened in open air and outside of the immediate vicinity of any store. Containers are not to be opened in the store unless to affix a liquid and vapour tight pipeline connection.
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- c. **The third layer.** The third layer is a word-for-word quote of the relevant sections of the actual statute. The communications method of publishing relevant parts of the statute to assist understanding was first noted in the review of government codes and guidelines earlier in this chapter. Inclusion of the full text of the subject provision allows the small business to examine the requirements where necessary to see exactly how they should be applied to the workplace. The third layer for Regulation 31(g) of the Dangerous Goods (Class 3 - Flammable Liquids) Regulations 1985 is copied below:

31. Rules as to storage of dangerous goods of Class 3(a) and Class 3(b) otherwise than in bulk — *Except as may be otherwise provided under these regulations, every occupier of premises where dangerous goods of Class 3(a) or Class 3(b) are stored otherwise than in bulk, and every person in or about those premises, shall comply with the following general rules (and every such occupier shall, if so required by an Inspector, keep a copy of the rules posted in a conspicuous place on the premises), namely:*

(a) ...

(b) ...

.

(g) *A container holding dangerous goods shall not, except as permitted by these regulations or as approved by an Inspector, be opened on the premises otherwise than in the open air and then not in the immediate vicinity of any depot. Such a container shall be opened only for the minimum time necessary for drawing off the dangerous goods, and, during the drawing off, every reasonable precaution shall be taken to prevent the escape of the dangerous goods or any vapour therefrom:*

Provided that this paragraph shall not prohibit the opening of a drum or other container for the purpose of affixing a liquid-tight and vapour-tight connection through which the dangerous goods may be pumped to a position outside the depot:

2.56 The three-layer information system allows the small business to select the layer of

information best suited to the particular situation. It is expected that the busy small business will mostly use the one-line-statements because they are quick to read and very simply written, but on occasions where the one-line-statement is not fully understood, the reader would refer to the matrix. If the query was still unanswered then the transcript of the statute, layer 3, can be studied.

2.57 By combining relevant provisions of the relevant statutes in the Master Summary Book it was noted that overlaps and interactions between acts became more apparent and more easily understood. The most apparent benefit is having like-requirements of different statutes listed under the same heading. For example in the first-layer under a section for *Pollutants* there are four pages of one-line-statements on pollutant management from resource management, maritime transport, building and ozone protection acts, regulations and rules - a total of 5 statutes and 6 marine protection rules. Having the information condensed in such a few pages makes it easier to gain an overview of how the different statutes interrelate. There are also a few instances where an activity is subject to multiple statutes which can be included in a common one-line-statement to provide a very clear understanding of what controls there are over the particular activity, for example:

Discharges of oil are permitted from machinery spaces by all vessels, except in Special Areas, provided that the oil content does not exceed 15 ppm and contains no other chemicals or other substances which are hazardous to the marine environment: (Resource Management Act Section 15B, Resource Management (Marine Protection) Regulation 9, Maritime Protection Rule 120).

This single statement gives a working knowledge of the requirements from three statutes, and also makes the small business aware of the overlap of provisions.

Relevant information

2.58 Many researchers urge that information produced for small businesses be tailored.

Mayhew advises that:

[T]he economic and time constraint means that all [safety] communications must be brief, direct and immediately applicable to the specific small business tasks carried out (Mayhew, 1997:4).

Eng, Kahl and Baxter, identified the:

... need for concrete industry sub-sector specific practically applied information and specific solutions rather than generic theoretical guides (Eng, Kahl and Baxter, 1997:53).

Applying information down to specific tasks such as 'disposing of waste materials' or 'pumping fuel' or 'working at heights' would allow the worker to focus on the requirements of the task performed. It is practicable to provide a collection of requirements tailored to the tasks of an individual small business. This would result in a customised compliance tool for that particular business.

Accurate and current

2.59 The information supplied must be very accurate and reflect the latest amendment, and where possible include further references and important common law cases. Care must be taken to avoid bias, ambiguity and misinterpretation of the information summarised. Accuracy is underwritten by the full transcript of relevant statutory requirements contained in layer three of the information.

Protection from prosecution

2.60 Protection from prosecution was not mentioned in the literature reviewed, but it is probably the most readily apparent advantage to the small business. The small business must address each of the one-line-statements (the individual entries in the first layer) to provide a solid protection from prosecution. Following the requirements of each of the one-line-statements, no more and no less, would offer a high degree of protection from prosecution. Presently there is no other readily identifiable way that small businesses can protect themselves from prosecution with any degree of certainty.

Trustworthy, and person-to-person communications

2.61 Research has concluded that face-to-face communication is the most effective method of communicating with small businesses (Wyatt, 1993:46). A visit to the small business is necessary to gather the information to customise the information to be supplied. The visit provides personal contact via face-to-face communication, and could lead to telephone

assistance providing it was acceptable to both parties. The customised information provided to the small business would often remove need for future face-to-face communication, but where there was a need, the information would assist with the discussions.

The final product

2.62 A handbook was the only format that met all of the identified design requirements. Computers, voice tapes, consultants and the 10 other techniques assessed in the literature review did not meet all of the communication ideals for small businesses. The handbook is small, light, and can be tucked into a work vehicle or kept on a shelf in the work area. A handbook is inexpensive, independent of power supplies, computers and computer training. A handbook can be referred to at any time without the need for consultants, and outside authorities. It is feasible to produce a one-stop-shop within a handbook. The three layered information system developed is compatible with a handbook. A handbook is an ideal format to support face-to-face communication and networking within industry. The handbook shows that the business has made an effort to identify their legal requirements, which would provide some protection against prosecution, or at least would act as mitigation. The suitability and advantages of the customised compliance handbook will be tested by the case studies.

Section 7

Conclusion of the Literature Review

The problems with law

2.63 The Robens observations that, there was too much law - which was too complex - and that there were a number of statutes that applied to the same work place, are still relevant to small New Zealand businesses. Law is difficult to change, so it is not surprising that these problems still exist after some 30 years. Compliance with unmanageable law is just one more challenge that has to be factored into business operations.

Tools to help small businesses

2.64 There is already a huge pool of publications, computer systems, telephone help lines, member clubs, consultants, and other tools to help small businesses understand the law. The review of these resources was unable to establish any one tool, or a combination of these tools, that can communicate relevant statutory information to small businesses in an effective and efficient way. There are good sources of information, such as the industry association initiatives and the OHS guideline publications, but none of these provides a customised, specific one-stop-shop solution for small businesses. A customised one-stop-shop has never been achieved but was identified by the literature as an ideal. The information must be inexpensive, trustworthy, accurate, comprehensive but simple. The information needs to be portable, easy to use, and easily discussed with associates and professional advisers. Safety and environmental protection practice should be a simple process, and it should be approached from a simple perspective. The simpler the communications process, the more people it will be able to communicate with. Protection from prosecution was not discussed particularly in the literature, but it is considered a key driver for compliance, and should be a factor of the information design.

2.65 Incorporation of all of these attributes into a single tool resulted in the creation of a customised compliance handbook that is simple, accurate, small and customised to the individual small business. The design of the customised compliance handbook includes all of the ideal communication characteristics identified from the literature reviewed, and is assessed at Chapter 4: Findings and Analysis.

CHAPTER THREE: METHODOLOGY

3.1 The research consisted of two separate activities. The first activity was completion of an in-depth literature review to clarify the degree of difficulty and the support available to small businesses endeavouring to understand their statutory responsibilities. This clarification process provided the foundation for the second stage of research, which was the design and test of the communications method to meet the needs of small businesses.

3.2 The discovery of a private health and safety data collection, after three months of research, allowed a fundamental change in methodology. The data contained significant research based on 500 small businesses, and therefore removed the need to gather data from the 50 small businesses as originally intended. The time saved enabled the research findings to be developed into a proposed communications method. The basis of the original approach that was followed for the first three months is included at the end of this section for completeness.

Research Activity 1: The Literature Review

3.3 The literature available had been gathered from research of more than 2000 small businesses. Only data on communication was selected from the wide range of issues covered in the literature. In this way the communication issues were isolated for analysis, free from other processes in the compliance chain of events.

3.4 The literature research was conducted from the perspective of small businesses to make sure that their limitations would be taken into account. The lack of resources held by small businesses is commonly accepted, and is stated in the OSH literature review:

Unlike large businesses, small business employers are less able to employ their own personnel to provide their organisations with the necessary occupational safety and health information and education (Eng, Kahl and Baxter, 1997:47).

Reviewing the situation from the position of the government agency could easily have resulted in a different conclusion, with more onus being placed on small businesses to provide

the missing link.

3.5 Small businesses do not normally have the resources to operate independent management systems for environmental protection and safety protection. These requirements are normally managed under a common management system. This was recognised by the inclusion of both topics in the research aim. It is important to consider the two topics together for the sake of small businesses. Combining statutory requirements under the same management system also recognises the strong interrelationships between the two types of law. Appendix 2 clearly shows the interlacing of statutes. One-third of the provisions contain only safety provisions, one-third contain only environmental provisions and one-third of the statutes have both environmental and safety provisions. It is not practicable for small businesses to separate these provisions, which demonstrates the importance of considering environmental and safety compliance within the one research topic.

3.6 Constant reference to 'compliance with the law' can give the impression that the law is the factor needing our protection. Nothing could be further from the intention of this research. Needless damage to the environment and injury to fellow workers is a tragedy to all those involved. Protection of the environment, and those in the workforce is the primary concern of all aspects of this research. It is therefore requested that 'compliance with the law' be read to have the same intent as 'protection of the environment and workers from accident'. The only reason compliance with the law is researched is that it acts as a mechanism to improve environmental and safety protection.

3.7 I chose small businesses with five or less employees for this research. The main reason for selecting this group was that the smaller businesses have more difficulty meeting the requirements (National Research Bureau, 1997 cited in Eng, Kahl and Baxter, 1997:28). Five is the smallest identified classification of a small businesses used by the literature. The difficulties tend to be most acute in this group, and therefore any improvements would be most pronounced. Another reason for selecting small businesses is my observation that a large organisation consists of many smaller work areas, which often share many of the problems of small businesses. If the problem can be resolved for small businesses, then the solution may be partly applicable for larger businesses.

3.8 The main resources used for this research were the acts, regulations and rules produced by the New Zealand Government, and sourced from the New Zealand Defence Force Library in Wellington. These publications are updated regularly. Other sources of these statutes would include the VUW Law Library, or purchase from a Government Bookshop. The Small Business Environmental and Safety Master Summary Book was compiled from 1,241 pages of law. No suitable electronic files of the complete acts and regulations could be found, so about 100 hours of work was needed to collect the information from the Internet, check it against the hard copies of the law, and reinstate the correct format. The lack of availability of New Zealand law on word-processor compatible files was a notable hindrance to this research.

3.9 Summarising the environmental and safety law relevant to small businesses was critical to this research. This process must be accurate to maintain the meaning of the law. Relevant government authorities, which are sponsors for the particular statute, were asked to review the summaries used in the communications model. For example, the second layer summary of the dangerous goods statutes was checked by Department of Labour officials, who proposed some improvements, but in general found it to be a fair representation. The checks by the sponsors were important to validate that the summary was a fair representation of the law.

Research Activity 2: Design and Test of the Ideal Communications Method

3.10 The literature review identified the features that small businesses would like to see in a communications solution, such as simplicity and a one-stop-shop. These features were incorporated into a system that was designed to meet the needs of small businesses, as identified from the literature. This model was tested with seven small businesses. The model was improved by feedback from the case studies and then retested. The final proposal is the result of three improvement and test cycles.

Selection of case studies

3.11 A wide cross section of small businesses was selected to test the ability of the proposed handbook to meet the needs of all small businesses. These businesses involved retail, fast food, petrol dispensing, car repair, shipping, land-surveying and electroplating. It was decided to limit the number of businesses chosen to less than ten to allow an in-depth

evaluation of the system effectiveness within the available research resources. The businesses chosen were located in Wellington to allow better communication and to minimise costs.

Review and improvement process

3.12 The customised compliance handbook was discussed with the small business several times during the case study. Suggested improvements were made and a new handbook issued. This iterative-review method, or *usability testing* research methodology - as it is termed by web-page market researchers, resulted in three important changes to the theoretical model. These were grouping one-line-statements under hazard headings such as 'chainsawing' or 'contractors', inclusion of relevant forms and references to assist implementation of the requirements, and the incorporation of the latest ACC workplace audit requirements within the handbook.

Resources

3.13 No research assistance was used, and there was no expenditure for the research. Increased resources would have allowed a full summary of all of the statutes, instead of the 15 summarised. Increased resources would also have allowed full development and testing of an automated collation process, to simplify production of the customised compliance handbooks. The limited resources available are not considered to have affected the conclusions of the research.

Communications system design

3.14 More complex systems could have been developed, and these could have been computer-based, but this technology would not have suited the simplicity and portability of product needed by small businesses. Simplicity of product was accepted to be a fundamental design requirement.

The Original Research Plan

3.15 In the first three months no relevant research was able to be located. Library and Internet searches were fruitless. Two statutory compliance projects were identified but no information was available on these. The imminent introduction by the Wellington City Council of a 'fully-fledged electronic compliance system' to provide relevant plain English

summaries of the legislation to managers was reported in the local newspaper (Smith, 1997). Thorough checks on the progress of this \$310,000 project, including a visit to the Council, showed that no knowledge, evidence or recollection of the project remained. In another endeavour Prism, a department of the ACC, commenced work on a package to help self-employed businesses help themselves, but this project was discontinued after a change in ACC's focus (Hoskins, 1999:24).

Proposed interviews

3.16 From the outset of this research it was planned to interview 50 small businesses. A questionnaire was developed as part of a structured one-hour interview. The 42-page questionnaire was found to be very effective when pre-tested on a small land surveying company. The Resource Management Act and Building Act sections of the questionnaire are at Appendix 1, because the first two boxes of each question are considered to provide the basis for a more proactive audit tool than has been used in the past. The second box of each question uses the same plain English précis that was developed for the second layer of the communications tool, thus demonstrating another use of the statute-summary process.

3.17 The findings were that the company met 90% of their legal requirements, which is a very good standard of compliance when compared to national and international performance levels. Most of the interview time was spent discussing the meaning of the law, and the interview soon became an information exchange exercise for both the interviewer and interviewee. While waiting for approval to proceed with the questionnaire, a rich vein of information was discovered in a chance meeting. The new information superseded a large part of the original research intention. This saved considerable time and allowed the research to be extended to investigate the ideal communications method. The chance meeting and the resultant change in direction is fortunate since the Human Ethics Committee withheld approval to use the questionnaire.

3.18 The questionnaire asked questions on compliance with environmental and safety law, similar to those asked in many other audits. The Committee considered it unacceptable for an academic institution to ask whether or not a business complied with the law, even though every precaution would be taken to ensure anonymity of results. The Committee's primary

concern was that a disclosure of wrong-doing could lead to prosecution, if the data were ever attributed to a participant. If this decision were taken as a precedent, then university research would never ask whether participants complied with the law in an interview situation. The question could only be asked in an anonymous postal situation where there was no possibility of ever identifying the company participating. The complexity of the questions of the environmental, safety and health questionnaire required explanation and interpretation, and would not suit the anonymous postal questionnaire method.

CHAPTER FOUR:

FINDINGS AND ANALYSIS

Small Business Difficulty Understanding the Laws

4.1 The statistics relating to environmental and safety protection in New Zealand are mostly extremely high, or extremely low, but rarely average. As for any management system, extreme figures indicate that things are not what they should be. Sometimes extreme performance levels can be good, such as profit margins, but often extreme figures are a symptom of a problem. An extremely high proportion of small New Zealand businesses appear to be below the required performance standard, probably at least 75% based on indications of the literature. Communications has been a problem to small businesses for an extremely long period, at least 30 years. It is most unusual that there is no public outcry at the increased risk due to low understanding levels. The quantity of the law is so extreme that a small business would have to read, understand and implement more than 10 pages per day, every day, for a year to properly manage it. There is an extremely high number of statutes that need to be managed, and an unusually high number of separate authorities (11) managing these statutes. A large number of statutes (22) are neither purely environmental nor purely safety, but a mixture of the two disciplines. The law is very complex. All of the statistics above indicate the extreme difficulty faced by small businesses when complying with the environmental and safety statutes. The law is too difficult for small businesses to understand, without assistance.

Support Provided to Small Businesses

4.2 The only realistic improvement option available is to provide effective support to small businesses. Existing communication support methods were assessed, and some good traits were identified, but no overall effective communications system could be found. Many solutions, such as conferences, attract only a small percentage of small businesses because they are expensive and time consuming. Other solutions, such as codes of practice and standards are too generic, do not cover all activities, and are hard to keep current. Industry association initiatives such as the International Safety Rating System and Responsible Care have the capability and techniques to adequately meet the needs of small businesses. Associations such as the Motor Trade Association or the Master Builders Association could also fill this need, as could project INTEGRATE. Even though the industry associations are

ready, willing and able to provide the assistance required, only a very small proportion of the 190,000 small businesses use these services. The reasons for this are partly that small business membership of industry associations is low, partly the lack of interest shown by the majority of small businesses (Caple, 1996:27, 69) and also partly the lack of administrative resources to meet the standards supported by the industry association (Mayhew, 1997:4). Caple identifies a dichotomy, where the majority of small businesses do not wish to become fully skilled safety practitioners (Caple, 1996:69), who will therefore not voluntarily seek support, or even have an awareness of available support. The communications support system needs to be changed so that the non-proactive majority is prompted into action. Mayhew identified that a fundamental link had been missed in the research and information implementation cycle (Mayhew, 1997:44). For small businesses the missing link is an effective communications system.

4.3 The only comprehensive government sponsored initiative for small businesses, the International Safety Rating System, has been discontinued. No government programmes have been identified by this research that meet the ideal communication characteristics identified by the literature. No government support has been identified for the industry associations, who hold the key to communicating with small businesses. Changes to law and increasing enforcement would appear to be the only control methods being used by government to try to increase compliance. For example, the proposed changes to the HSE Act will, if approved, increase penalties, introduce instant fines, and increase exposure to prosecution. None of these measures was recommended by the literature to assist small businesses understand their responsibilities. This seems to be the temptation to 'notch up another law' rather than provide a level playing field (Plant, 1997). The literature cited no praise for government initiatives, quite the reverse. Small businesses tend to have a deep suspicion of government intervention (Eng, Kahl and Baxter, 1997:53), and therefore avoid direct contact with government agencies. Government codes and guidelines do not meet the needs of small businesses, and the law is too complex and too voluminous. The other difficulty government represents to small business is the lack of coordination for the 11 separate departments managing the environmental and safety statutes. Only the industry associations have the organisation, knowledge and expertise to overcome these difficulties. Before there will be any real improvement it must be recognised that the enforcement agency will never be in a good

position to also be educator and coach. Government must pass the responsibility for educating and coaching to those with a direct interest in the outcome. In the current organisational framework this should fall to the industry associations. Only the industry associations can effectively integrate and coordinate the laws set and enforced under the multitude of government departments. This view is also supported by Mayhew:

...government sponsorship presents an immediate barrier to the acceptance of any [safety] message. However, when [safety] preventive activities are sponsored through organisations which are seen to have the interests of small business owner/managers at heart, the barriers are diminished. Industry associations, particularly those that are specific to occupational groups, are a natural medium for enhanced communication of [safety] measures (Mayhew, 1997:4).

The previous Minister for the Environment has expressed confidence in the capability of industry organisations to assist businesses to manage their obligations:

I commend the **Responsible Care™** programme to all businesses and organisations seeking a means to meet their safety, health and environmental objectives (Upton, 1998).

Communications System Design, Build and Test

4.4 A customised compliance handbook was created for each of the seven case studies. The 'user requirement' for the customised compliance handbook was established by the literature review to include the following features: a one-stop-shop approach, low cost, portability, comprehensiveness, simplicity, custom made, accuracy, statutory protection, and incorporation of face-to-face communications. The handbook uses a three layered system to provide simplicity, comprehensiveness, and accuracy. The **first layer** simplifies each requirement as much as possible to make it readily understandable to everyone, including the most junior and inexperienced employee. The **second layer** is a plain-English interpretation that retains all of the important detail, but is still easily understood by small businesses. The **third layer** is a transcript of the particular provision to provide detail and accuracy. Each

layer covers every section, regulation or rule that could place an environmental or safety obligation on the small business. The three-layer method is a direct result of this research project.

Solving the problem of 'too much' and 'too complex' law

4.5 It is not practicable to reduce or simplify environmental and safety law to a level manageable by small businesses, but it is possible to minimise the apparent number and complexity of requirements from their viewpoint. This effectively achieves the same result. A fully completed Master Summary Book would reduce the number of provisions small businesses had to review to about 20% of the original number. The reduction was achieved by omission of provisions that are not directly applicable. For example the Ozone protection requirements reduced from 80 in the statute to 12 in the Master Summary Book. Generally it was found that the majority of the statutory provisions were not relevant to small business processes. For example, the Section 30 functions of regional councils under the Resource Management Act 1991 were omitted, since they were not an obligation of small businesses. Provisions that small businesses will use from time to time, but do not directly threaten the environment or safety, were also omitted. Examples include the procedure to obtain resource consent, or to appeal council decisions. Non-inclusion of the administrative functions is in-keeping with Mayhew's recommendation to be specific and non-generic (Mayhew, 1997:137).

4.6 Mayhew concluded that:

...personalised [safety] information and advice is apparently well accepted in small business. Generic information is not (Mayhew, 1997:137).

Mayhew is advising that not only do the legal requirements have to be reduced for small businesses in general, but that the advice is better accepted if it is personalised. Therefore, a further customisation process was introduced by selecting only those provisions that are relevant to the activities of the small business interviewed. This process reduces the Master Summary Book, containing all the provisions, to a customised compliance handbook that relates just to the subject business. A typical reduction for this stage is from 400 pages to 150

pages. The surveyor customised-handbook was the shortest at 69 pages. Reductions were made by total omission of requirements of the Dangerous Goods Class 2 (Gases) Regulations 1980, and the Ozone Protection Regulations 1996. This was possible because the company's activities did not involve gases of any sort, or ozone depleting substances. Only 6 of the 15 statutes and 55 of the 542 sections and regulations needed to be included in the surveyor's handbook. A volume reduction of 94%, or about one twentieth of the original statute volume, was achieved. The effectiveness of the handbook in reducing the volume of statute was very pleasing.

Solving the problem of too many statutes

4.7 Robens noted that a number of statutes apply to an individual workplace, and that it was difficult to accept that the controls need to be so complex (Robens, 1972:9,10). The observation is still valid some 30 years later, with many acts and regulations directly and indirectly controlling safety in the work place. It is very unlikely that existing statutes will be consolidated to any degree, but summarising all of the statutes into one document would allow a small business to work from a single publication. A single publication effectively avoids the difficulty noted by Robens. A single publication also enhances integration and leads to a simplification of overlapping provisions. For example, the car repair workshop uses small quantities of petrol in the workshop and must therefore comply with clauses from the Building Regulations, Dangerous Goods Act, Dangerous Goods (Labelling) Regulations, and the Dangerous Goods Class 3 Regulations. All of these provisions are listed consecutively on the one page of the customised compliance handbook, saving reference to the four parent statutes.

Suggestions by small businesses

4.8 As part of the continuous improvement cycle incorporated in to the research the handbooks were discussed to assess their suitability, and where improvements could be made. The small businesses were able to suggest concepts not obvious from the literature. The surveyor explained that it is normal for small businesses to focus on the job to be done, rather than the generic *safety* or *environmental* headings originally used within the first layer. It was requested that the one-line-statements be grouped under activities such as 'earth work', 'agricultural work', 'employing contractors' and 'hiring generator'. This is an excellent

suggestion, and supports the concept proposed by Mayhew and Eng, Kahl and Baxter of using personalised rather than generic advice (Mayhew, 1997:137, Eng, Kahl and Baxter, 1997:53). This concept was incorporated into the design of the handbooks. In general the small businesses expected more than the aim of this research. They expected their handbooks to not only outline their obligations but also to tell them how to meet them. These suggestions were incorporated by the inclusion of OSH Form 4039 - *Hazard Identification and Controls*, OSH Form 3206 - Notice of Accident and the Victorian Workcover Authority (1995) guide to *Recognise the Hazards in Your Workplace*. References to publicly available codes, guidelines and other best practice will be included into the final publications, but were too difficult to collect, rationalise and list within this boundaries of this research. The fast food outlet suggested that the scope of the handbook should be extended to cover the requirements of the *ACC Workplace Safety Management Practices Programme*. Small businesses can save up to 20% of their accident compensation payments by complying with this programme. Strictly this was outside of the immediate aim of this research, but because of the interest shown by the small business, the ACC requirements were assessed. The ACC requirements could be met by inclusion of 33 additional requirements, an additional six pages, to the first layer of the handbook. Inclusion of these provisions will be a valuable addition, as they will make it considerably easier for small businesses to comply with the safety statutes. The three suggestions received from the case studies have significantly improved the suitability of the handbook.

Customised compliance handbook design

4.9 The literature review identified the most effective communication methods to convey safety obligations to small businesses. The selection of a hard copy format for the handbook allowed incorporation of all of the features recommended by the literature reviewed. The handbook is portable and independent of electronic equipment that is often not readily available to small, often mobile, businesses. The handbook can be referenced at any location, at any time, without the need for power supplies, computers or computer operating skills. The hard copy format was considered to be ideal for small businesses. The handbook could always be supplied in electronic format if this was of particular advantage. The document is comprehensive, yet simple and inexpensive. The average time taken to produce the handbook, including interview time, was about 2½ hours. Printing costs were between \$5 and \$10. The

document provides a focus and a reference to help small businesses to network, which Caple found Australian small businesses did very effectively when problems arose (Caple 1996:70). The document also requires face-to-face communications in its creation, which is an ideal method of communication, and assists in building trust (Wyatt, 1993:46 cited in Mayhew, 1997:45). The concept of grouping statutory requirements under activities such as 'garbage disposal' is supported by the literature (Eng, Kahl and Baxter, 1997:53). The publication also avoids contact with government authorities and therefore removes the fear of small businesses exposing themselves unnecessarily to prosecution.

4.10 It was decided to include the full index of each relevant statute into the handbook. This decision was justified by the general interest in the statutes shown by small businesses while discussing their responsibilities. The index gives the small business a simple overview of the statute that will be very useful on occasions. The index is generic, and therefore not recommended by the literature, so it was inserted in the third layer - which is only for reference. This allowed the small business to view the index, but without interference with the main communication process.

Customised compliance handbook effectiveness

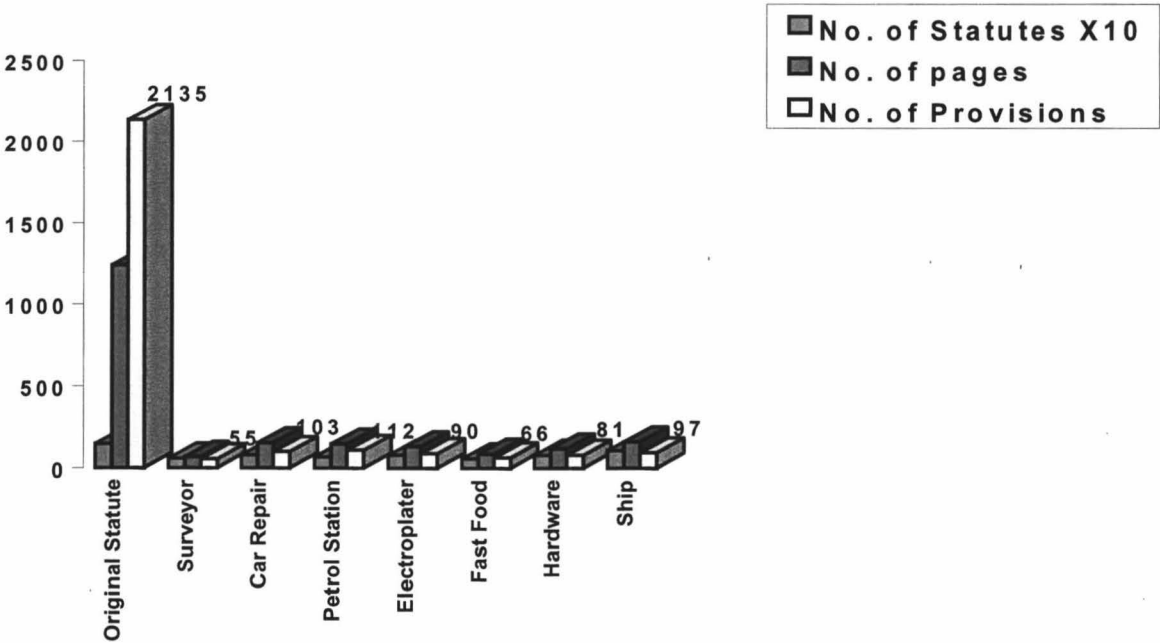
4.11 **Size reduction.** The car repair garage was one of the most complex work sites. Waste oil, handling petrol, oil storage tanks, oxy-acetylene welding, a kerosene wash tank, car hoists and an oil fired boiler all added to the basic workplace obligations. In this example the handbook reduced 15 statutes to 8 - 53% of the original, 1,241 pages to 157 - 13% of the original, and 2135 sections, regulations, clauses and rules to 105 one-line-statements - 5% of the original. The reductions achieved for the case studies are summarised at Table 1, and Figure 3 below.

Table 1.
Statute reductions achieved by the customised compliance handbook

	Original Statute	Customised compliance handbooks prepared for:						
		Surveyor	Car Repair	Petrol Station	Electrop -later	Fast Food Outlet	Hardware Shop	Coastal Ship
No. of Statutes	15 (100%)	6 (40%)	8 (53%)	7 (47%)	8 (53%)	6 (40%)	8 (53%)	11 (73%)
No. of Pages	1241 (100%)	69 (6%)	157 (13%)	151 (12%)	136 (11%)	88 (7%)	121 (10%)	165 (13%)
No. of Provisions	2135 (100%)	55 (3%)	103 (5%)	112 (5%)	90 (4%)	66 (3%)	81 (4%)	97 (5%)
Percentage Reduction. The % age reduction shown above refers to the final size when compared against the original size. Percentage of original size = $\frac{\text{final size}}{\text{Original size}} \times 100\%$								

Figure 3.

Reductions achieved by the customised compliance handbook



Case study response to the customised compliance handbook

4.12 Each of the seven businesses responded positively to the handbook. Two have asked for the ACC requirements to be incorporated into their version so they can achieve a high safety performance standard. Despite their best intentions each of the seven case studies only reviewed the book during the research visits; they were too busy during normal work hours. Discussion on the document showed that all were very aware of the difficulties in identifying applicable law and then understanding it, but accepted that the handbook overcame these difficulties. The next link in the management process is understanding the responsibilities summarised by the handbook. It became apparent during the case study interviews that the businesses needed to be helped with this process. They knew some of the requirements but were unable to grasp how to manage the complete set of requirements. It is assessed that without further assistance to understand the handbooks no progress at all will be made by any of the case studies. The handbook simplifies each requirement, but the complete set of requirements is too complex for small businesses to understand and manage without professional support.

Handbook production process

4.13 The first stage of handbook production was a short interview with the small business. The purpose of the interview was to identify what activities the small business undertook and to mark the applicable one-line-statements. The interview took between 30 and 45 minutes. The next process was to remove non relevant requirements from the master summary word-processor file. This took another 45 minutes. Then the one-line-statements were arranged into activity based groups such as 'oxy acetylene welding'. The handbook was then printed on to the white, yellow and green paper corresponding to the 'one-line-statement', 'plain English' and 'transcript' layers. The book was then bound and presented to the small business. The production process was simple, quick and used only normal office equipment. The resulting product was a custom-made, comprehensive and easily understood statutory reference that could be immediately used by the small business.

New processes

4.14 This research has developed a series of new processes. These processes include the three-layered-summary as a means of communicating statute in a simple, accurate and comprehensive form. A method to quantitatively compare statutes, as demonstrated in Table

2, was developed and found to be an effective and simple method of describing documents. The technique was found to be very versatile and was used in a number of ways, for example to indicate the simplification achieved by the handbooks, indicate quantitatively the amount of law small businesses had to manage, and also to assess the comprehensiveness of advisory documents. If the document does not cover the specific requirements of the statute then, no matter how well it is written, it is of little use. This method was used to evaluate a guide to the Resource Management Act 1991, and can be used in the future to assess the comprehensiveness of government or industry produced summary documents. A table identifying whether statutes have environmental provisions, safety provisions, or a mixture of both, was also developed by this research to explain the complexity and interrelation between the statutes. For instance it can be seen that 22 statutes have both environmental and safety provisions, which then can be used to explain the benefits of considering management under a single system, rather than under separate environmental and safety systems. The complexity of integrating statutes can also be simply explained by demonstrating the widely varying mixture of environmental and safety provisions occurring within the statutes. The one-stop-shop concept is a widely discussed concept, but a working example has not been referred to by the literature studied. The one-stop-shop concept has been developed by this research, and implemented into the workplace by the customised compliance handbook. This handbook is believed to be a new concept, in that it provides the workplace with a customised list of their responsibilities in easily understood terms. The concept of the Master Book is also believed to be new. Such a publication would be ideal for environmental and safety professionals in the fields of consulting, inspecting, teaching, or research.

Difficulties and Limitations

Difficulties obtaining electronic transcripts

4.15 Electronic transcripts of the statutes could not be found in a usable form from any source. Full electronic copies of the law were not available from the Blue Star Group, who now has the supply contract after the Government Printing Office was privatised in 1990. Two problems were found with the statutes available on the Internet. The first problem was the cost of \$17.30 to download each act and \$12.50 to download each regulation. **The total cost to download all of the statutes would be about \$900.** This cost of accessing statute over the

Internet is considered to be a disincentive for small businesses wishing to meet their obligations. The other problem that was found with the electronic statutes was that the format was lost when electronically copied. The electronic copy process involved copying sections of the statute into a word-processor document. The copied passage then needed to be formatted to remove additional line feeds and to insert spaces between numbers and text. The formatting had to be done by hand and took about 100 hours of extra work to format the statutes summarised. Extensive inquiries made to government agencies, law libraries and computer experts were unable to solve the formatting problem. One commercial provider forwarded an extract from one set of regulations that was supposed to be compatible with word-processor software, but the extract required formatting, just as the information from the Internet required formatting. A hard copy of the statute was necessary to assist with the summary process. Fortunately hard-copies were available from the New Zealand Defence Force library at no cost to visitors. They are expensive documents to maintain and would not normally be available to small businesses. The expense of obtaining updated statutes in electronic or hard copy form is another difficulty in the communication process. This difficulty was not represented in the literature reviewed. The control of this information is the responsibility of the relevant government authority and it should be one of their key aims to make the information freely available to every person and business needing access to it. This is achievable by government agencies, as has been shown by the lead of the Maritime Safety Authority who make their Maritime Safety Rules available free of charge on their Internet site. Unfortunately these rules also need formatting on being copied into a word-processor document.

Difficulties interpreting statutes

4.16 Assessing and simplifying the intent of each requirement of the 15 environmental and safety statutes summarised was an arduous and time-consuming process. The process was subjective, and needed an understanding of the laws and the types of situations they were likely to apply. Overlaps and interactions of the law were assessed, and similar requirements from different statutes were grouped in the one-line-statement layer. The summary process of the statutes into the one publication was technically demanding and took about 1000 hours. To summarise all 66 statutes would take a total of about 2000 hours. The most important finding from the summary exercise is that, given the shortage of available time and the limited

statutory expertise, it is not practicable for small businesses to produce their own statutory summaries.

4.17 It was found that a sound understanding of the law is necessary to discuss environmental and safety obligations with small businesses. It was noticeable that the dangerous goods classification codes and other definitions used extensively by the statutes were not well understood. Examples are 'Class 3 (c) Dangerous Goods' which was translated to the surveyor as meaning 'the drum of diesel', and the need to explain the exact meaning is of 'serious harm'. Interpretation was necessary to define what 'self propelled plant' was and to explain that the tractor use referred to in the health and safety regulations does not apply to agricultural use of tractors. Small businesses showed particular interest in what laws were applicable, and how these laws could adversely affect their business. The uncertainties expressed by small businesses on the meaning and applicability of legal requirements support Robens' views that the law is too complex and too voluminous. One particular question was 'does my 20 litre drum of diesel stored in the shed require approval by the inspector?' **The answer could not be found within the 204 regulations for flammable liquids, but progress has still been made as the question had been identified** and can now be asked of a dangerous goods inspector, or other trusted information source. It was found that the more the small businesses used their handbook the better they understood the complexities of the statutes that affected their businesses, and that there was generally a continuous improvement of understanding with time.

Limitations of information

4.18 **Scarcity of environmental research.** The research available was very limited on the environmental aspects, but was plentiful for safety, especially for Australian businesses. Environmental aspects were provided mainly by Jarvis and Wilkinson who concluded, from a sample of 976 New Zealand farmers and growers, that many farmers do not understand the law, particularly the land consent and safety obligations (Jarvis and Wilkinson, 1998:31). Library searches, Internet searches, and direct approaches to government agency policy-analyst staff did not provide any significant information on small business compliance with environmental law. The overlap between environmental and safety law is shown at Appendix 2, where 22 statutes have a mixture of both requirements. Such a high degree of overlap and collocation is an indicator of the similarity between the format and style of these two types of

statute. Therefore the lack of pure environmental research is not expected to have changed the outcome of this research, even though it would have been very much valued.

4.19 Extensive use of Australian findings. The research on Australian small businesses was necessary to support the findings of this research. The majority of New Zealand research reviewed also used Australian findings to support conclusions. It is considered impracticable to avoid using Australian research. The Robens Report is the only significant research outside of the Australasian workplace. The report has been very influential on the present New Zealand safety law, and is therefore considered relevant to the New Zealand situation. The research used is believed to be the best available, and was basically the same as that used by OSH for *The Small Business Strategy - A Review of the Literature* by Eng, Kahl and Baxter, 1997.

4.20 Limited range of statutes used. Only one-third of the statutes could be summarised within the time allocated for the research. The statutes were summarised in priority of their apparent importance to small businesses. The key statutes that have not yet been inserted into the Master Summary Book are those relating to toxic substances, food hygiene, health, biosecurity, fire safety and transport. The only real effect of limiting the number of statutes used is to reduce the completeness of the handbooks. The surveyor noted that the handbook provided didn't cover requirements for working on the road. Road control regulations are one of the statutes that have not yet been summarised. A summary of all statutes would have included these requirements. The customised compliance handbooks should be reissued once all of the relevant statutes have been summarised. It is not considered that the limited range of statutes summarised has affected the conclusions of this research.

4.21 Omission of territorial authority rules. Because of time limitations this research does not consider the additional rules set by the 84 territorial authorities, which are particular to their regions or districts. These rules are made under regional plans, district plans and regional coastal plans. Ideally a handbook for a particular small business would include the relevant territorial authority rules. This is still a possibility for the future. The effect of this limitation is a small reduction of the coverage offered by the handbooks produced to date.

4.22 **Number and location of case studies.** The findings of this research are based on only seven case studies out of a possible 190,000 small New Zealand businesses. All of the case studies were in Wellington. While the results of the case studies do support the conclusions of the literature reviewed, a much greater sample monitored over a greater period of time would be required to accurately assess the value of the handbook. Conclusive evidence evaluating the advantages of the customised compliance handbook approach in communicating law would be valuable, and is an area recommended for further research.

Future Research

4.23 Further research is recommended to be carried out on:

- a. A definitive assessment of the advantages of the customised compliance handbook for communicating environmental and safety law to small businesses;
- b. The ideal role for industry associations in communicating health, safety and environmental information to small businesses;
- c. The advantages and costs of providing New Zealand statutes on word-processor compatible files, at no cost to users;
- d. The production of a New Zealand health, safety and environmental database which would allow small businesses to generate their own compliance handbooks, at no cost to users;
- e. Whether the standard of 'all practicable steps' requires small businesses to assess the 42 safety statutes for provisions relevant to their operations.

CHAPTER 5:

CONCLUSIONS AND RECOMMENDATIONS

[I]t was found that [safety] information and advice has not penetrated very small business to any real extent. The current 'top down' ... regulatory package, preventative information/advice supply processes, and structures for recording work-related injury and illness are predicated on management systems which do not exist in very small business. The vast majority did not know an act existed - let alone detailed Codes of Practice/Advisory Standards - and were unaware of reliable [information] sources. Most did not belong to any industry associations, and were primarily focused on economic survival. ...

The literature review has indicated that well-designed Australian research into assessment of appropriate ways to communicate [safety] issues, ... is urgently needed (Mayhew, 1997:149, 47).

5.1 Mayhew's conclusion above is based on 248 Brisbane small businesses, and echoes the findings of this research. These shortcomings will adversely affect small businesses meeting their environmental and safety requirements. It is important for the environment and its people to recognise the problems and proceed with effective solutions.

Difficulties Faced by Small Businesses

5.2 The sheer volume, complexity, overlaps, and distributed responsibility of environmental and safety law was found to be overwhelming for those running small businesses. Only a third of the statutes could be summarised during this research, and so it is argued that it is beyond the capability of small businesses to assess what law is applicable to their operations. The literature reviewed has not identified any existing or proposed programme to allow small businesses to accurately identify their environmental and safety responsibilities. In fact quite the reverse is true where, for example, Mayhew refers to the plethora of government regulations being too much for small businesses to cope with (Mayhew, 1997:4). It is disconcerting to note that the many of the statistics noted by this research were extreme. Examples are high levels of statutory unawareness, continued

existence of similar problems to those identified 30 years ago, continued exposure of the public to risk, extreme quantities of law and the widespread acknowledgement of the problem without a concrete solution. It is therefore not surprising to note the comment by the Minister of Labour that:

There is disturbing evidence that New Zealand's [safety] record is worse than that of comparable countries (Office of the Minister of Labour, 1999:3).

The extremes exist despite the abundance of positive energy, initiatives, and the collective skills of all affected parties. This indicates the difficulty of achieving the standard of set by the 'all practicable steps' regime. The difficulty of the task must be acknowledged and supported at the highest level of government, and then be determinedly pursued using the best techniques and resources that are available. Identifying and understanding the requirements of relevant law is a widespread and difficult problem, which is considered to be beyond the capability of small businesses to manage. The authorities must address the communication problem before small businesses can effectively address their responsibilities under the law.

Support to Small Businesses

5.3 Provision of legal responsibilities in a form that is understood is the fundamental missing link in the small business compliance process. This link must be provided before progress can be made. The literature review did not identify any effective system, government or commercial, that presently provides small businesses with an accurate account of their statutory responsibilities, in a usable form. A number of industry associations already provide this service to their members, who are mainly medium and large sized businesses. Small businesses generally do not belong to industry associations (Caple, 1996:27), nor do they have the resources to customise a general programme prepared by an industry association. Two things have to happen before progress can be made. The first is that small businesses must be attracted to join the industry associations and then the industry associations must provide and support a customised programme for each small business. The handbook process developed by this research is recommended for this communication and support programme. This process will not be successful unless full support is given by the

government agencies. The resources of government agencies might be able to provide sufficient assistance to industry associations so they can attract the majority of the 190,000 New Zealand small businesses as members. Government agencies could fund the industry associations by reallocating the resources currently used to produce guidelines and codes. This concept is based on the literature which advises that government provision of large quantities of compliance information often isn't cost effective (Caple, 1996:70).

5.4 Mayhew also concludes that the needs of smaller businesses are not well served by government guidelines, codes and standards (Mayhew, 1997:47). Nor are small businesses provided with effective programmes to identify and understand applicable environmental and safety law. This essential link in the overall compliance process is missing.

A Clearly Defined System is Needed

5.5 The support plan for small businesses must recognise the need for a combined approach by government agencies, industry associations and the small business concerned. The literature concludes that it is inevitable that industry associations become the intermediaries between the government agencies and small businesses (Caple, 1996:69). Industry associations are well suited, and are in a good position to achieve this role, but they need the government's support to encourage an increase in small businesses membership levels. The shortcomings of small businesses can not be solved by simple tools or by making new laws. New tools and laws may be necessary, but the first requirement is to establish clear roles for the stakeholders, who are the government, industry associations and the small business – each has an essential role. The system recommended by this research is that the government makes the law; the industry associations communicate the law to small businesses and assist with its implementation; the small businesses manage their responsibilities with industry association assistance; and then government enforce the law as necessary. This arrangement would provide clear demarcation of responsibilities and eliminate inefficiencies arising from duplication and mixing of roles that can occur without clear guidelines. Inefficiencies can only detract from the performance of small businesses.

The Customised Compliance Handbook

5.6 At times during this research it was thought that the customised compliance handbook

was all that was missing, but the handbook needs to be provided and supported by an agency external to the small business. Nevertheless the handbook is an essential tool in this process. The handbook was designed to include all of the communication techniques recommended by the literature. Seven small businesses were selected and used as a test-bed for the model. Suggestions for improvement were incorporated and then the model retested by the small businesses. The improvement cycle was continuous and the final product was a mixture of theory from the literature and the experience of the small businesses. The constant improvement cycle introduced major improvements that, in hindsight, simply followed the recommendations of the literature. The first was providing specific information, not generic information (Mayhew, 1997:137). This was partly achieved by, where ever it was possible, groupng one-line-statements under specific work activities such as 'earthworks', not generic terms such as 'safety' or 'environmental'. Another suggestion was to include all of the information needed by the small business in the handbook. A further proposal to include the requirements of the new *ACC Workplace Safety Management Practices Programme* into the handbook has the potential to provide significant assistance to small business compliance. This follows the one-stop-shop recommendation of the literature (Caple, 1996:40). The final format of the handbook supports networking, face-to-face communication, avoids contact with government departments, minimises problems of the length, complexity and overlap of the statutes. Interview and production time for the handbook averaged about 2½ hours per business and material costs were less than \$10. The handbook met every ideal identified in the literature. The success of audio tapes in some situations was noted and could be used to explain the concept of the handbook to users. The most measurable success of the handbook concept was the reduction of the number of requirements to between 3% and 5% of the original number. The creation of the handbook is significant because it provides a new solution for small businesses to the long-standing difficulties first identified by Robens in 1972.

The Implications of this Research

A new and readily obtainable tool

5.7 Case studies were selected to demonstrate the handbook performance in a variety of applications, including land surveying, fast food, car repair, petrol retail, electroplating,

hardware retail and shipping. The handbook concept was found to be equally effective in all applications. The final test of the handbook would be accreditation of one of these businesses under the ACC Workplace Safety Management Practices programme. Use of the handbook in a confident and effective manner should achieve the top level of accreditation. The practical outcome of the research is a procedure that creates a customised compliance handbook, within two hours of arrival at a small business, containing all of the relevant statutory requirements needed to manage their environmental and safety obligations. This is potentially applicable to every small business and small workplace in New Zealand. Another product of this research, the Master Summary Book, has the potential to communicate relevant law, simply and accurately, to any group or organisation with interests in this area. Application of the customised compliance handbook concept could have a major effect on environmental and safety management in New Zealand.

Improved theory and practice

5.8 A number of tools and techniques were developed to support this research. These tools were developed to explain the difficulties associated with managing thousands of pages of statute. Numerically assessing the content of codes, guidelines and other summaries provided a useful comparison tool. Categorising statutes into three groups: environmental, safety, and environmental and safety also helped to explain the nature of statute in simple and non-technical terms.

Lessons Learned

5.9 The researcher was very fortunate to receive safety reports from Australia and New Zealand agencies from a chance meeting. Normally these documents are written for, and used by, the government agencies. None were identifiable through the Internet, library searches, or direct application to the government agencies. These documents made up a significant part of the literature reviewed and the research would not have been complete without them. There must also be similar unpublished reports from environmental agencies, but these have not been able to be located. The lesson learned is that conventional literature search techniques can not always be relied on to provide sufficient information to support research.

Conclusion

5.10 This research has found similar problems to those found 30 years ago. Environmental and safety law continues to increase in quantity while at the same time its performance standards become more and more demanding. The 63 environmental and safety statutes overlap, interact and several can apply simultaneously. Managing the law is beyond the means of most small businesses and will continue to remain so unless a determined effort is made by each government agency, with the support of successive governments, to acknowledge and act upon these well documented problems. Communication of the meaning of relevant legal responsibilities is a fundamental link that is missing which prevents small businesses from meeting their obligations. One solution has been suggested by this research in the form of a customised compliance handbook to convey law to small businesses in a form that is accurate yet easily understood. This model was tested, improved and found to achieve the aim. Tools such as the handbook will only be effective if supported and nurtured by an organisation that is fully committed to helping small businesses. The research indicates that industry associations are the most practicable option. The extra work and support provided by the industry associations will need to be recognised and strongly supported by the 12 government agencies that sponsor New Zealand's environmental and safety law. This will save small businesses trying to cope with the plethora of government regulations for another 30 years.

Recommendations

5.11 It is recommended that:

- a. The government agencies recognise the critical importance of communicating environmental and safety law to small businesses;
- b. The government formally delegates to proven industry associations the full responsibility for communicating environmental and safety statutory responsibilities to small businesses, and provides the necessary political and financial support;
- c. That the customised compliance handbook concept, developed by this research, be used as part of the industry association programme to communicate responsibilities to small businesses;
- d. The government removes the difficulty and cost factors associated with obtaining full statutes and other information necessary to manage environmental and safety compliance;
- e. That government agencies publish full lists of the research that they sponsor.

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Resource Management Act 1991

Purpose. To promote the sustainable management of natural and physical resources.

Supplementary Legislation: Resource Management (Marine Pollution) Regulations 1998⁶

Question 1: Do you Use ⁷ Land ⁸ , remove trees, or disturb habitats? Yes <input type="checkbox"/> No <input type="checkbox"/>	Sections 9, 10
Requirement: Land can be used for any legal activity provided that rules of the regional and district plan are complied with. Other restrictions can include heritage orders and designations, which may be waived if Resource Consent is obtained from the requiring Authority. Existing lawful uses, or use established by designation prior to the introduction of the relevant regional or district plan remain legitimate in certain situations.	
<input type="checkbox"/> not aware of requirement <input type="checkbox"/> too costly or too busy <input type="checkbox"/> within resources but not complete	<div style="text-align: center;">problems experienced and possible solutions:</div> <div style="display: flex; justify-content: space-between;"> met at minor or no cost <input type="checkbox"/> </div> <div style="display: flex; justify-content: space-between;"> met at significant cost <input type="checkbox"/> </div>

Question 2: Do you disturb the Coastal Marine Area ⁹ (CMA) in any way? Yes <input type="checkbox"/> No <input type="checkbox"/>	Section 12
Requirement: Within the CMA no person may reclaim, drain, erect or alter structures, damage or disturb any part of the CMA nor deposit any substance, or introduce plants unless allowed by rules or resource consent.	
<input type="checkbox"/> not aware of requirement <input type="checkbox"/> too costly or too busy <input type="checkbox"/> within resources but not complete	<div style="text-align: center;">problems experienced and possible solutions:</div> <div style="display: flex; justify-content: space-between;"> met at minor or no cost <input type="checkbox"/> </div> <div style="display: flex; justify-content: space-between;"> met at significant cost <input type="checkbox"/> </div>

Question 3: Do you conduct any activities on or near river or lake beds Yes <input type="checkbox"/> No <input type="checkbox"/>	Section 13
Requirement: Broad Summary of Requirements: No person may erect or alter a structure, disturb the bed, introduce any plant, deposit any substance, reclaim or drain river and lakebeds unless permitted by the regional plan or resource consent. No person may enter or pass across or disturb plants or habitats of river and lake beds if this contravenes a rule in the regional plan.	

⁶ The Resource Management (Marine Pollution) Regulations are included in the RMA summary

⁷ **Use:** in relation to any land means change to any structure, disturbance of the land, damage to habitats, depositing any substance, or any other use (s 2)

⁸ **Land:** includes land covered by water, the air space above the land, and the surface of water in any lake or river. but not the coastal marine area (s 2)

⁹ **Coastal Marine Area:** means the foreshore, seabed, coastal water and the air space above the water between the mean high water springs and the 12 nautical mile seaward boundary.

Question 4: Do you dam or divert fresh or coastal water? Yes <input type="checkbox"/> No <input type="checkbox"/>		Section 14
Requirement: No person may take, use, dam or divert fresh or coastal water unless required for fire fighting or permitted by the regional plan or resource consent.		
<input type="checkbox"/> not aware of requirement <input type="checkbox"/> too costly or too busy <input type="checkbox"/> within resources but not complete	problems experienced and possible solutions:	met at minor or no cost <input type="checkbox"/> met at significant cost <input type="checkbox"/>

Question 5: Do you discharge any contaminant onto land or into water or air? Yes <input type="checkbox"/> No <input type="checkbox"/>		Section 15
Requirement: No person may discharge any contaminant ¹⁰ into water or onto land or into air unless allowed by a regional plan, resource consent or regulations.		
<input type="checkbox"/> not aware of requirement <input type="checkbox"/> too costly or too busy <input type="checkbox"/> within resources but not complete	problems experienced and possible solutions:	met at minor or no cost <input type="checkbox"/> met at significant cost <input type="checkbox"/>

Question 6: Do you dump or incinerate anything in the CMA? Yes <input type="checkbox"/> No <input type="checkbox"/>		Section 15A
Requirement Prohibits Dumping ¹¹ , or incinerating any matter within the CMA unless resource consents is held.		
<input type="checkbox"/> not aware of requirement <input type="checkbox"/> too costly or too busy <input type="checkbox"/> within resources but not complete	problems experienced and possible solutions:	met at minor or no cost <input type="checkbox"/> met at significant cost <input type="checkbox"/>

Question 7: Do you create significant noise? Yes <input type="checkbox"/> No <input type="checkbox"/>		Section: 16
Requirement: Occupiers shall adopt the best practicable ¹² option to ensure noise emitted from land or water does not exceed a reasonable level. Noise levels may be prescribed by local district plans.		

¹⁰ **Contaminant:** any substance (including gases, liquids, solids and micro-organisms) or energy (excluding noise) or heat, that is likely to change the physical, chemical or biological condition of the land, water or air to which it is discharged.

¹¹ **Dumping:** Deliberate disposal of waste, excepting that derived from the normal operation of the ship.

¹² **Best Practicable Option:** the best method for minimising the adverse effects on the environment. The full definition is at s 2 of the Act. Note this has nothing to do with 'practical' meaning suited to action.

Question 8: Do you minimise any adverse effect you have on the environment? Yes <input type="checkbox"/> No <input type="checkbox"/>		Section: 17
Requirement: Everyone has a duty to avoid, remedy or mitigate any adverse effect on the environment caused by or on behalf of that person.		
<input type="checkbox"/> not aware of requirement <input type="checkbox"/> too costly or too busy <input type="checkbox"/> within resources but not complete	problems experienced and possible solutions:	met at minor or no cost <input type="checkbox"/> met at significant cost <input type="checkbox"/>

Question 9: Do your discharge anything, including sewage, from your ship into the CMA? Yes- No – NA		Section 15B
<p>Discharges from Ships: Discharge of harmful substances¹³ or contaminants from ships are prohibited within the CMA unless:</p> <ul style="list-style-type: none"> • The discharge is allowed by regulations, regional or coastal plan or resource consent or • After reasonable mixing the harmful substance does not produce conspicuous films, change of colour, objectionable odour or have significant adverse effects on aquatic life or the environment in general. • Discharges to air are not likely to be noxious, dangerous, offensive or objectionable to such an extent that it has or is likely to have a significant adverse effect on the environment. <p>Marine Pollution Regulations: The Resource Management (Marine Pollution) Regulations 1998 <u>do not allow</u> within the CMA:</p> <ul style="list-style-type: none"> • Discharge of plastics, dunnage, lining and packing materials <p>The Resource Management (Marine Pollution) Regulations 1998 <u>allow</u> within the CMA:</p> <ul style="list-style-type: none"> • The remedy of adverse effects of an oil spill by discharge of chemicals approved under the Maritime Transport Act Part XXIII - refer to the Maritime Protection Rule Part 132 later in this document • Discharge of bilge water not exceeding 15 ppm of oil while the ship is underway • Treated sewage further than 100 metres from a marine farm • Untreated sewage further than 500 metres from the shore (or a marine farm) <u>and</u> more than 5 metres in depth (from 1 July 2000) • Comminuted waste (not to include plastics or packaging materials) beyond 3 nautical miles from MHWS <p>Clean ballast water¹⁴, and normal ship discharges including by-products of ship propulsion and hotel services, greywater¹⁵, incineration of own ship waste, ship cleaning above the waterline, fire fighting and weapons discharge.</p>		

¹³ **Harmful substance:** as prescribed by Regulations and include petroleum in any form, sewage, and most chemicals as listed in Schedule I to the RMA Marine Pollution Regulations 1998.

¹⁴ **Clean Ballast Water:** Ballast water that has been taken from mid ocean or from NZ coastal waters.

¹⁵ **Greywater:** Derived from showers, hand basins, baths, galleys, dishwashers, and laundries but not sickbays.

Building Act 1991

Purpose. The purpose of this Act is to provide for necessary controls on building construction and use so that they are safe and sanitary, and to coordinate those controls to other requirements of building use and management of natural and physical resources. Principles of the Act include safeguarding people, fire protection, safe stowage of hazardous substances, access for disabled and efficient use of energy.

Supplementary Legislation: Building Regulations 1992 (incorporating the Building Code)
: Approved Documents issued by the Building Industry Authority in support of the Building Code

Enforcement: The territorial authorities enforce the act. Certain technical disputes may be referred to the Building Industry Authority for determination.

Question 10: Do you construct buildings Yes <input type="checkbox"/> No <input type="checkbox"/>		Sections: 7, 8
Requirement: Existing Buildings ¹⁶ that were commenced after the <i>Building Code</i> was issued (1992) must comply with the building code when built, and must be upgraded to the present code if they are: <ul style="list-style-type: none">• Altered (s 38)• Are to undergo a change of use• To be subdivided under the RMA or have a limited life extended (s 46). Are dangerous or insanitary (s 64) Or are earthquake-prone (s 66)		
<input type="checkbox"/> not aware of requirement	problems experienced and possible solutions:	met at minor or no cost <input type="checkbox"/>
<input type="checkbox"/> too costly or too busy		met at significant cost <input type="checkbox"/>
<input type="checkbox"/> within resources but not complete		

Question 11: Do you undertake any new building work including alteration or demolition? Yes <input type="checkbox"/> No <input type="checkbox"/>		Sections: 32, 38
Requirement: Building consent is required prior to almost any building work, including construction, alteration ¹⁷ or demolition any building. Alterations must comply as nearly as is reasonably practicable with the provisions of the Building Code for escape from fire and access and facilities for use by people with disabilities as if it was a new building.		

¹⁶ **Building:** Any temporary or permanent, movable or immovable structure (including any structure intended for occupation by people, animals, machinery or chattels); and includes any mechanical, electrical or other system attached to and forming part of the structure whose proper operation is necessary for compliance with the building code, but does not include cranes, ships, vehicles, munitions magazines or scaffolding.

¹⁷ **Alter:** Rebuild, re-erect, repair, enlarge

Question 12: Do your buildings need a compliance schedule? Yes <input type="checkbox"/> No <input type="checkbox"/>	Section: 44
Compliance Schedule. <ul style="list-style-type: none"> • A compliance Schedule is required for every building (other than a single residential dwelling) that contains any form of automatic fire protection device including doors, warning systems, emergency lighting or general purpose mechanical systems such as ventilation systems, lifts and systems in respect of these systems. • Is issued by the local authority • Specifies maintenance and reporting procedures to be followed by independent qualified persons • Owner is to hold the schedule • Schedule is to be available for inspection <p>A statement is to be displayed publicly in the building for the first 12 months advising the place the schedule is held and the systems and features covered by the schedule.</p>	
<input type="checkbox"/> not aware of requirement <input type="checkbox"/> too costly or too busy <input type="checkbox"/> within resources but not complete	Problems experienced and possible solutions: met at minor or no cost <input type="checkbox"/> met at significant cost <input type="checkbox"/>

Question 13: Do you need to display an annual building warrant of fitness? Yes <input type="checkbox"/> No <input type="checkbox"/>	Section: 45
Building Warrant of Fitness. <ul style="list-style-type: none"> • A building warrant of fitness is to be prepared by the owner and supplied to the local authority on each anniversary of the Compliance Schedule. • It is the owner's statement that the requirements of the compliance schedule have been fully complied with during the previous 12 months. <p>A copy of the Warrant of Fitness shall be displayed publicly in the building.</p>	
<input type="checkbox"/> not aware of requirement <input type="checkbox"/> too costly or too busy <input type="checkbox"/> within resources but not complete	problems experienced and possible solutions: met at minor or no cost <input type="checkbox"/> met at significant cost <input type="checkbox"/>

Question 14: Have you changed the use of a building since 1993? Yes <input type="checkbox"/> No <input type="checkbox"/>	Section: 46
Change of Use of building. <p>The territorial authority must be notified before any change of use, and in the new use the buildings must comply with, as nearly as is reasonably practicable, specified provisions of the Building Code.</p>	

Environmental, Safety and Health Law that May Affect Small Businesses

Name of Statute	Statute Details					Master Summary Book Details		
	Sponsor	Environmental provisions?	Safety provisions?	Total pages	Total sections	Summarised? ✓ or ✗	Summary length in pages	No. of one-line-statements
ANTARCTICA (ENVIRONMENTAL PROTECTION) ACT 1994	MFAT	✓		69	57			
BIOSECURITY ACT 1993	MAF	✓		200	185			
BUILDING ACT 1991	DoIA	✓	✓	115	93	✓	6	0
CONSERVATION ACT 1987	DoC	✓		193	65			
DANGEROUS GOODS ACT 1974	DoL	✓	✓	40	45	✓	14	14
ELECTRICITY ACT 1992	CC		✓	122	182			
ENVIRONMENT ACT 1986	MfE	✓		22	35			
HAZARDOUS SUBSTANCES AND NEW ORGANISMS ACT 1996	MfE	✓	✓	251	259	✓	21	0
HEALTH ACT 1956	MoH		✓	126	140			
HEALTH AND SAFETY IN EMPLOYMENT ACT 1992	DoL		✓	38	62	✓	39	23
MACHINERY ACT 1950	DoL		✓	42	42			
MARINE MAMMALS PROTECTION ACT 1978	MoF	✓		23	30			
MARINE RESERVES ACT 1971	DoC	✓		32	25			
MARITIME TRANSPORT ACT 1994	MoT	✓	✓	334	485			
OZONE LAYER PROTECTION ACT 1996	MfE	✓		30	33	✓	3	5
PESTICIDES ACT 1979	MAF	✓	✓	46	77			
PLUMBERS, GASFITTERS & DRAINLAYERS ACT 1976	MoH		✓	160	68			
RADIATION PROTECTION ACT 1965	MoH	✓	✓	24	33			
RESERVES ACT 1977	LINZ	✓		180	125			
RESOURCE MANAGEMENT ACT 1991	MfE	✓		456	433	✓	21	12
RIVER BOARDS ACT 1908	DoIA	✓		60	128			
SOIL CONSERVATION AND RIVERS CONTROL ACT 1941	DoC	✓		114	170			
TOXIC SUBSTANCES ACT 1979	MoH	✓	✓	56	83			
TRANSPORT ACT 1962	MoT		✓	309	201			

Appendix 2-2

Name of Statute	Statute Details					Master Summary Book Details		
	Sponsor	Environmental provisions?	Safety provisions?	Total pages	Total sections	Summarised? ✓ or ✗	Summary length in pages	No. of one-line-statements
ABRASIVE BLASTING REGULATIONS 1958	DoL		✓	5	12			
BUILDING REGULATIONS 1992	DoIA	✓	✓	12	381	✓	27	30
DANGEROUS GOODS (CLASS 2 — GASES) REGULATIONS 1980	DoL	✓	✓	57	141	✓	58	133
DANGEROUS GOODS (CLASS 3— FLAMMABLE LIQUIDS) REGULATIONS 1985	DoL	✓	✓	94	204	✓	88	180
DANGEROUS GOODS (CLASS 4 AND 5) FLAMMABLE SOLIDS) REGULATIONS 1985	DoL	✓	✓	13	40	✓	18	34
DANGEROUS GOODS (LABELLING) REGULATIONS 1978	DoL	✓	✓	9	10	✓	5	7
DANGEROUS GOODS REGULATIONS 1958	DoL	✓	✓	19	301	✓	11	16
ELECTRICITY REGULATIONS 1997	CC		✓	85	110			
ELECTROPLATING REGULATIONS 1950	MoH	✓	✓	19	24			
EXPLOSIVES REGULATIONS 1959	DoIA	✓	✓	35	80			
FACTORY & COMMERCIAL PREMISES (FIRST AID) REGULATIONS 1985	DoL		✓	7	15			
FIRE SAFETY AND EVACUATION OF BUILDINGS REGULATIONS 1992	DoIA		✓	17	23			
FOOD HYGIENE REGULATIONS 1974	MoH		✓	51	87			
FOOD REGULATIONS 1984	MoH		✓	17	306			
FOREST AND RURAL FIRES REGULATIONS 1979	MAF	✓	✓	40	53			
FOREST DISEASE CONTROL REGULATIONS 1967	MAF	✓		10	24			
GAS REGULATIONS 1993	CC	✓	✓	18	38			
HAZARDOUS SUBSTANCES & NEW ORGANISMS, REGULATIONS (Genetic) 1998	MfE	✓		15	9			
HEALTH (HAIRDRESSERS) REGULATIONS 1980	MoH		✓	8	16			
HEALTH (INFECTIOUS & NOTIFIABLE DISEASES) REGULATIONS 1966	MoH		✓	15	27			
HEALTH AND SAFETY IN EMPLOYMENT (ASBESTOS) REGULATIONS 1998	DoL	✓	✓	16	38			
HEALTH AND SAFETY IN EMPLOYMENT (MINING ADMINISTRATION) REGULATIONS 1996	DoL		✓	17	33			
HEALTH AND SAFETY IN EMPLOYMENT (PRESSURE EQUIPMENT, CRANES, AND PASSENGER ROPEWAYS) REGULATIONS 1999	DoL		✓	27	39			
HEALTH AND SAFETY IN EMPLOYMENT REGULATIONS 1995	DoL		✓	34	70	✓	27	59

Appendix 2-3

Name of Statute	Statute Details					Master Summary Book Details		
	Sponsor	Environmental provisions?	Safety provisions?	Total pages	Total sections	Summarised? ✓ or ✗	Summary length in pages	No. of one-line-statements
LEAD PROCESS REGULATIONS 1950	MoH	✓	✓	8	28			
MARINE MAMMALS PROTECTION REGULATIONS 1992	DoC	✓		12	22			
MARINE RESERVES REGULATIONS 1993	DoC	✓		6	18			
NOXIOUS SUBSTANCES REGULATIONS 1954 (REPRINT)	MoH	✓	✓	7	23			
OZONE LAYER PROTECTION REGULATIONS 1996	MfE	✓		45	47	✓	16	19
PESTICIDES (ORGANOTIN ANTIFOULING PAINTS) REGULATIONS 1993	MoF	✓		2	6			
PESTICIDES REGULATIONS 1983	MoF	✓		7	17			
PESTICIDES (VERTEBRATE PEST CONTROL) REGULATIONS 1983	MAF	✓		14	29			
PLASTIC WRAPPING REGULATIONS 1979	MoH		✓	2	6			
PRODUCT SAFETY STANDARDS (CHILDREN'S NIGHTWEAR AND LIMITED DAYWEAR HAVING REDUCED FIRE HAZARD) REGULATIONS 1999	CC		✓	8	4			
RADIATION PROTECTION REGULATIONS 1982	MoH	✓	✓	24	28			
RESOURCE MANAGEMENT (MARINE POLLUTION) REGULATIONS 1998	MfE	✓		28	16	✓	4	10
TOXIC SUBSTANCES REGULATIONS 1983	MoH	✓	✓	52	54			
LAND TRANSPORT RULE: DANGEROUS GOODS 1999 [45001]	MoT		✓	96	47			
Statutes: TOTAL Number: 63		42 enviro nm- ental	42 Safety	3,993 Pages	5,481 Sectio ns	1,241 Pages 2,135 Sectio ns	358	542

Note: There are other statutes that could be included in the above list such as the Sugar Loaf Islands Marine Protected Area Act 1991, or Animal Remedies Act 1967, but such acts were not considered to be generally applicable to Small Business and therefore omitted in the above analysis.

CC: Commerce Commission
 DoC: Department of Conservation
 DoIA: Department of Internal Affairs
 DoL: Department of Labour
 LINZ: Land Information NZ
 MAF: Ministry of Agriculture and Forestry

MFAT: Ministry of Foreign Affairs and Trade
 MfE: Ministry for the Environment
 MoF: Ministry of Fisheries
 MoH: Ministry of Health
 MoT: Ministry of Transport