

**THE CONSIDERATION OF ENVIRONMENTAL MATTERS
IN FINANCIAL REPORTS: SOME PRELIMINARY
EVIDENCE ON CURRENT AUDIT PRACTICES**

A paper written for the 5th Asia Pacific Interdisciplinary Research
in Accounting Conference (APIRA) 2007
Auckland, New Zealand
8-12 July

This paper reports PhD work in progress.
Please do not quote without the author's permission.

Christina Chiang
Faculty of Business
Department of Law, Economics, Accounting and Finance
AUT University
Auckland, New Zealand

Private Bag 92006, Auckland 1020, New Zealand
christina.chiang@aut.ac.nz
Ph +64 9 921 9999; Fax +64 9 921 9990

**THE CONSIDERATION OF ENVIRONMENTAL MATTERS
IN FINANCIAL REPORTS: SOME PRELIMINARY
EVIDENCE ON CURRENT AUDIT PRACTICES**

ABSTRACT

This paper reports preliminary findings on what are current practices in the audit consideration of environmental matters in financial reports. It also reports on auditors' perceptions of their responsibility for verifying environmental matters and whether AGS 1010 has impacted on current audit practice.

The preliminary findings indicate that auditors do not consider environmental matters as a key audit risk area despite their implications for the community and public interest. Environmental matters (provided they have a financial impact on the company's financial report) are considered mainly for those companies operating in a sector or industry that is exposed to significant environmental risk. Auditors depend on management in the client company to disclose information of any audit significance. They do not pro-actively search out environmental risk exposures for all their audit clients. The promulgation of AGS-1010 in 2001 apparently has little impact on how auditors take environmental matters into consideration when auditing financial reports.

Key words: Financial audits, environmental matters, auditing profession

1. INTRODUCTION TO THE STUDY

The primary aim of this paper is to report preliminary findings from a doctoral work-in-progress. In particular, this paper reports preliminary findings on what are current practices in the audit consideration of environmental matters in financial reports. It also reports on auditors' perceptions of their responsibility for verifying environmental matters and whether Audit Guidance Statement (AGS) 1010: The consideration of environmental matters in the audit of a financial report has impacted on current audit practice. AGS-1010 is "consistent in all material respects" with the International Auditing Practice (IAPS) Statement 1010: The consideration of environmental matters in the audit of a financial report (1998) (ICANZ, 2001, Appendix 1). Hence, this research study is of particular interest to the accounting profession (local and overseas) and its members because international theory development on the audit of environmental matters (and the role of the accounting profession within this exercise) is limited and empirical studies are few, with none to date in New Zealand. In particular, how New Zealand financial auditors (from now on they will be known as 'auditors') deal with environmental matters in the light of AGS- 1010 is not known.

A study by Ball, Owen and Gray (2000) found that corporate environmental reports are usually verified by non-auditors and they are not independent audits in the same way that financial audits are. Thus they provide little assurance to stakeholders. Ball et al. (2000) also commented on their concern about "the extent to which verification statements promote organizational transparency and the empowerment of external parties" (p. 4). Their study suggests that verification statements that appear alongside environmental reports are virtually worthless. It is therefore of interest to determine what financial auditors do when verifying the financial representation of environmental matters, since this is the only independent assurance that stakeholders may rely on. This interest provides a further motivation for the current study.

This doctoral study has the potential, therefore, to enhance our understanding of an audit phenomenon that is not widely known and to add to extant academic literature in this field. The research findings also promise to be of interest to the New Zealand Institute of Chartered Accountants (NZICA) and its members in their deliberations on domestic and international practice standards in relation to the audit of environmental matters.

The next section provides the background to the current study. Section three discusses the business risk approach to auditing; section four informs on the theoretical framework and discusses its appropriateness for the current study; and section five outlines the research methodology. The preliminary research findings are reported in section six and the paper ends with a discussion and concluding comments.

2. BACKGROUND TO THE STUDY

Within the last decade, greater publicity and coverage by the news media on the impact of business activities on the environment has made the general public more aware of environmental issues and their consequential economic externalities (Holmes, 1999). Greater public awareness of environmental issues has in turn led to increasing public environmental concerns and less tolerance for environmentally destructive business

practices (Bewley, 1993). In this study, environmental issues are taken to mean the impact some business activities have on the environment. Examples of environmental issues are:

The contamination of soil and groundwater, the contamination of surface water or air pollution; the use of hazardous substances; the generating or processing of hazardous waste; or business activities that may have an adverse impact on customers, employees, or people that live in the neighbourhood of the entity's sites (ICANZ, 2001, AGS-1010, paragraph 21).

For the purposes of AGS-1010, environmental matters are:

Initiatives to avoid, remedy or mitigate any adverse effects of activities on the environment, or to deal with conservation of renewable and non-renewable resources (such initiatives may be required by environmental laws and regulations or by contract or they may be undertaken voluntarily); consequences of violating environmental laws and regulations; consequences of environmental damage done to others or to natural resources; and consequences of vicarious liability imposed by law (for example, liability for damages caused by previous owners) (ICANZ, 2001, AGS-1010, paragraph 10b).

Environmental matters are a relatively new challenge for the accounting profession (Dixon, Mousa, & Woodhead, 2004). Overseas accounting professional bodies acknowledge that general environmental concerns have resulted in specific changes to business practices, and "it can be expected that these changes will affect the accounting profession" (Gray, 1990, p.65). Professional bodies respond to the rapidly rising importance of environmental matters by addressing environmental questions and by bringing the issues on to the centre-stage of the accounting agenda (Bebbington & Gray, 1990; Collison & Slomp, 2000). The Institute of Chartered Accountants in England and Wales (ICAEW) states that:

...the importance of environmental [matters] is increasingly recognised. They often have implications for business and cannot be ignored by auditors [and accountants] (ICAEW, 2000, p.1) and

...where environmental factors will impact on a company's policy and activities, and will impose costs on the company, or affect its asset values or liabilities, actual or contingent, the financial consequences need to be accounted for or reported in accordance with existing accounting requirements (ICAEW, 1992, p.3).

Authors recognise that environmental matters are important in the economic functioning of entities whose activities affect the environment (Collison, 1996; Collison & Gray,

1997; Collison, Gray, & Innes, 1996; Medley, 1997). Environmental matters also impact different aspects of accounting (Collison & Gray, 1997; Collison et al., 1996; Gray & Bebbington, 2000; Gray, Bebbington et al., 1998; Todd & Stafford-Bush, 1995) and may manifest themselves in contingent liabilities, provisions, reserves, valuation of fixed assets and depreciation policy (Collison et al., 1996).

Environmental matters can also very quickly lead to serious ‘going-concern’ issues. It is usually assumed that a company is a going-concern and is going to survive beyond the short term. However if a company whose business activities significantly affect the environment is sanctioned by law, the company may face closure. “Environmental matters are [therefore] important accountability issues” (Fiedler & Lehman, 1995, p.196) with significant implications for financial reporting (Blokdiik & Driehuisen, 1992; Browning, 1994; Cornell & Apostolou, 1991).

For some entities environmental matters are significant and auditors should be aware of their impact on financial statements (Billing, Buisman, Willis, & Wilson, 1994; ICAEW, 2000). A company whose business impacts negatively on the environment (for example by violating pollution laws) may be liable for fines as well as costs of cleaning up and abating future pollution (Simunic, 1994). The financial statements for this company must present fairly the environmental costs, liabilities and contingencies of the company’s activities (Teasley, 1995). If the financial statements are then subject to an audit, the auditor has a responsibility to ensure that environmental matters are properly accounted for and reported in the financial report (Chadick, Rouse, & Surma, 1993; Gray, 2000a; Gray & Bebbington, 2000; Gray, Collison, & Bebbington, 1998; Huizing & Dekker, 1992). This requirement is also stated in New Zealand’s AGS-1010:

When environmental matters are significant to an entity, there may be a risk of material misstatement (including inadequate disclosure) in the financial report arising from such matters. In these circumstances, the auditor needs to give consideration to environmental matters in the audit of the financial report [and] when forming an opinion on the financial report, the auditor should consider whether the effects of such environmental matters are adequately treated or disclosed (ICANZ, 2001, AGS-1010, paragraphs 2 and 55).

Hence the responsibility for environmental matters has led some authors to perceive a widening in the scope of financial auditing and the auditor’s duty of care to explicitly incorporate environmental matters (Bewley, 1993; Dixon et al., 2004). When the NZICA Professional Practice Board promulgated AGS-1010 in 2001, it states that:

Its [AGS-1010] purpose is to assist auditors, and the development of good practice, by providing guidance on the application of the Auditing Standards in cases when environmental matters are significant to the financial report of the entity. The extent to which any of the audit procedures described in this Statement may be appropriate in a particular case requires the exercise of the auditor’s judgement in the light of the requirements of the Auditing Standards and the circumstances of the entity (ICANZ, 2001, AGS-1010, paragraph 10b).

The implication of AGS-1010 is that New Zealand auditors need to factor environmental considerations into their audit planning and procedures when verifying the truth and fairness of a company's financial report (ICANZ, 2001, AGS-1010, paragraph 10b).

The need to consider environmental matters in financial audits is made explicit in AGS-1010. It also indicates that: "environmental matters can be complex and may therefore require additional consideration by auditors" (AGS-1010, paragraph 3). One might therefore expect 'the consideration of environmental matters in financial audits to be a widely discussed contemporary topic, with relevant information disseminated in technical journals and professional seminars. However, a search of New Zealand literature revealed only two articles in 2001 and no other to date (see Chiang, 2005). New Zealand auditors are apparently silent on their responsibility for considering environmental matters in financial audits. Their silence raises some questions. What are auditors' perceptions of their responsibility for environmental matters? What is current audit practice in relation to AGS-1010? Is AGS-1010 impacting current audit practice? These questions, which have not yet been examined, form the focus of this study. However, before considering the empirical findings regarding current practice in the consideration of environmental matters in financial audits, the next section discusses the business risk approach to auditing, an approach currently practised by many audit firms (Lemon, Tatum, & Turley, 2002).

3. THE BUSINESS RISK APPROACH TO AUDITING

According to the New Zealand accounting profession, the purpose of auditing is to determine:

If the financial report complies with generally accepted accounting practice and if it does not, the respects in which it fails to comply; if it gives a true and fair view of the matters to which relates; and in addition whether proper accounting records have been kept as far as it appears from the auditor's examination of those records (ICANZ, 1998b, AS 702: The audit report on an attest audit, paragraph 37(a)).

Traditionally, financial auditing is conceptualised in terms of audit risk reduction (Gray & Manson, 2005). Audit risk is the risk that the auditor fails to reach proper conclusions about the company and the accounting information on which the auditor is reporting (ICANZ, 1998a, AS-402: Audit risk and internal controls). The components of audit risk are inherent risk, control risk and detection risk. Inherent risk is the risk that a material misstatement could occur in the absence of internal controls. Control risk is the risk that a material misstatement could not be prevented or detected on a timely basis by a company's internal control structure. Detection risk is the risk that the auditor's substantive procedures failed to detect a material misstatement. The auditor's objective is to achieve as low a level of audit risk as is practicable because he or she may be implicated for negligence in court should the audit opinion be inappropriate. Given the cost of both performing audit procedures and being exposed to audit risk, the auditor assesses the company's exposure to inherent and control risks to determine the level of

detection risk that the auditor is willing to accept while still achieving as low a level of audit risk as is practicable (ICANZ, 1998a, AS 402: Risk assessments and internal controls). The level of testing to be conducted is determined by the level of detection risk the auditor aims to achieve.

The audit risk model is used in audit planning to focus audit effort on those classes of transactions or balances that are most likely to contain material misstatements (Gay, 2002). It enables auditors to make rational decisions concerning the type and amount of audit evidence to be gathered in each area of the audit (Gay, 2002). However, when applying the audit risk model, the auditor considers the risk of misstatement inherent in the company's activities only (Lemon et al., 2002). Although the auditor does require a good understanding of the business subject to audit, he does not refer to the wider business objectives of the company. This approach is considered somewhat narrow, so in the 1990s, several of the big audit firms developed audit methodologies based on the business risk assessment approach (BRA) (Lemon et al., 2002). Business risk is defined as: "the risk that the audited entity will fail to achieve its objectives" because of external or internal pressure and forces (Lemon et al., 2002, p.1). It is said that business risk is the risk associated with the company's profitability and survival (Gay, 2002). Audit firms using this approach consider issues wider than just the truth and fairness of the financial statements.

Business risk is broader than audit risk because audit risk focuses on financial statement misstatements whilst business risk focuses more widely on company objectives which may have no implications for financial reporting. It is designed to give a top-down, business-risk orientation to audit work (Bell, Marrs, Solomon, & Thomas, 1997). However, BRA is not an entirely new or different approach to auditing. It is essentially: "an extension on the traditional audit risk model, placing even greater emphasis on understanding of the client's business and the risks it faces" (Gay, 2002, p.68).

The BRA requires auditors to spend more time in obtaining a broader knowledge of the company's business in order to determine whether financial report assertions are valid. The auditor starts by discussing with management their company's exposure to those risks factors that prevents it from achieving its business objectives. The auditor then assesses the specific business risks that the company faces to determine if they might result in errors, fraud or other irregularities, and ultimately in a materially misstated financial report (Gay, 2002). It is said that: "an analysis of business risk informs the assessment of audit risk" (Gray & Manson, 2005, p.175) because business risk affects audit risk (Gay, 2002) and so affects the nature, timing and extent of the auditor's work through the required level of detection risk. However, the final audit objective of giving an opinion on the annual financial report is not changed despite the initial focus being wider than a traditional audit (Lemon et al., 2002).

Authors have identified concerns arising from the use of business risk approaches. Partners and managers are more involved in the planning process than previously, since: "business risk approaches emphasise judgement and broad skills [needed] to assess the position of a business in its environment, matters of strategy, operation and finance", (Lemon et al., 2002, p.22). This has: "consequent effects on the costs of audit [particularly at the planning stage] or the content of other procedures" (Lemon et al.,

2002, p.21). Some authors reasoned that in order to counterbalance the increased cost of partner and manager time at the planning stage of the audit, detailed testing of account balances are reduced (Gray & Manson, 2005; Power, 2000). The BRA relies more on qualitative evidence such as the effectiveness of internal controls and on analytical evidence such as financial ratios. Hence a bigger part of the audit is spent on the 'process' of obtaining knowledge of the business. In fact, the assessment of business risk means that the auditor tends to see the business through the same eyes as management (Hatherly, 1998). There is also a greater tendency to rely on company management as far as possible. Dependence on management for information may bring the auditor close to management, aligning the auditor with management so that independence may be, or may appear to be, threatened (Lemon et al., 2002). It may also allow management to influence specific audit objectives (Gay, 2002). Therefore it has been suggested that BRA may lead to under-auditing, which is problematic because it may consequentially increase both detection risk and audit risk (Gray & Manson, 2005). Hence, Gay (2002) cautions that: "care needs to be taken that it does not exacerbate expectation gap issues" (p. 68). Humphrey (1991) defined "the expectation gap" generally as:

...a representation of the feeling that auditors are performing in a manner at variance with the beliefs and desires of those for whose benefit the audit is carried out (p.7).

The recent prevalence of the business risk approach has significant potential implications for the audit of environmental matters. When an auditor considers environmental matters to be significant for a particular company, the auditor has to assess the environmental risk of material misstatement, non-disclosure or distortion of the environmental matter reported in the financial report. How or whether auditors do apply the BRA when considering environmental matters in financial audits is unclear, having received little attention in the audit literature. Thus, this issue underpins the objectives of this study. The next section discusses the theoretical framework and explains its appropriateness for the research study.

4. THEORETICAL FRAMEWORK

It is said that every research should be framed by a theoretical perspective because:

Theory provides a footing for considering the world, separate from, yet about, that world. In this way, theory provides both a framework for critically understanding phenomena and a basis for considering how what is unknown might be organised. [For generalisability,] theories are self-confirming in the sense that they instruct us to look at phenomena in particular ways (Silverman, 2005, p.99).

Organisational legitimacy appears to provide the appropriate lens for the observed phenomenon for this research study. The following sections start with a discussion on organisation legitimacy, followed by why it has been chosen for this study.

Organisational Legitimacy theory

The audit profession, as an organisation, relies for its status and position on the perception that its members perform an important task, and that they execute this task with proficiency and with the backing of a legitimate professional body. The maintenance of organisational legitimacy is, therefore, critical to upholding the audit profession:

Organisational legitimacy is based on the notion that there is a social contract between [organisations] and society. The social contract requires [organisations] to act responsibly... and perform socially desired actions in return for approval by society. In doing so, the society 'confers' upon the organisation the "state" of legitimacy (Deegan, 2002, p.292).

However, when: "an actual or potential disparity exists between two value systems, there will exist a threat to organisational legitimacy" (Dowling & Pfeffer, 1975, p.122). This may lead to a 'legitimacy gap', defined as:

... the difference between the 'relevant public' expectations relating to how an organisation should act, and the perceptions of how they do act (Deegan, 2002, p.304).

For an organisation to be adjudged legitimate (Lindblom, 1994), it has to take steps to ensure its legitimacy (Dowling & Pfeffer, 1975), and the process is called legitimation:

Legitimation is the process whereby an organisation justifies to a peer or subordinate system its right to exist...(Maurer, 1971, p.361, cited in Dowling and Pfeffer, 1975).

Thus, to maintain organisational legitimacy:

The organisation can adapt its output, goals and methods of operation to conform to prevailing definitions of legitimacy; the organisation can attempt, through communication to alter the definition of social legitimacy so that it conforms to the organisation's present practices, output and values; or the organisation can attempt through communication to become identified with symbols, values or institutions that have a strong base of legitimacy(Dowling & Pfeffer, 1975, p.127).

There are many practical approaches to organisational legitimation. However, from preliminary interview data obtained, it appears that for the doctoral study, the approach to ensure/maintain organisational legitimacy by the audit profession, as outlined by Dowling and Pfeffer (1975) is "to become identified with symbols, values or institutions that have a strong base of legitimacy" (p. 127). Ashforth and Gibbs (1990) clarifies this approach further with their explanation on "ceremonial conformity" as a legitimation approach in which an organisation might adopt practices that are seemingly: "consistent

with social expectations while leaving the essential machinery of the organisation intact” (Ashforth & Gibbs, 1990, p.181). This enactment is strictly:

for its symbolic quality... to provide the appearance of action without the substance... [with the intention of fostering] the belief among constituents that the organization’s activities and ends are congruent with the expectations, values, and norms of constituents (Ashforth & Gibbs, 1990, p.182).

The following section provides some explanation why organisational legitimacy is deemed the appropriate theory for the current research. Baker (1977) indicates that the auditing profession is essentially concerned with legal liability exposure and client demands related to the rising costs of audits. Clients require delivery of a tangible product in the form of marginal cost savings or marginal revenue increases in exchange for the fees they pay. This social contract specifies that the auditing profession will provide social value in the form of audited financial statements in exchange for a virtual monopoly of audit practice and self-regulation (Baker, 1977). This relationship supports the legitimacy of the auditing profession. However,

[The auditing profession as] a professional body could lose its legitimacy if the public expected a change in performance that was not forthcoming. In the present dynamic social environment, continuance of previous practices may not be sufficient to maintain legitimacy, even if the performance related to that practice is maintained or even improved. Legitimacy is a moving target. If society recognises a need for either different or additional information, than accountants [and auditors] are expected to provide the needed information (Reynolds & Mathews, 1999, p.89).

Recently, however, due to mounting criticism of the auditing profession, there appears to be a legitimacy gap. Commentators (Gilkison & KPMG, 1999; Gray & Bebbington, 2000; Rubenstein, 1992) observe that highly publicised environmental disasters such as Exxon Valdez, Chernobyl, Love Canal, and Union Carbide at Bhopal have changed public and political general awareness, attitudes and concerns for environmental issues (Watson & Mackay, 2003). Studies also showed that environmental information is material to various stakeholders and that they seek the disclosure of this information in corporate annual reports (Cornell & Apostolou, 1991; Deegan & Rankin, 1997). Although environmental reporting is not mandatory, it is presumed to fall within the auditor’s ambit when it is presented in this manner (Gray, 2000b). In even more recent times, media and public scrutiny of a number of high profile corporate failures such as Enron, Parmalat, Health International Holdings (HIH) Insurance (Mak, Deo, & Cooper, 2005) have resulted in mounting criticism of the audit profession (Chandler, 1999). Thus, the auditing profession is facing a crisis of investor confidence in financial reporting and auditing (Weirich & Rouse, 2003). There is turbulence in the environment in which the auditing profession operates (Baker, 1977). Hence, it needs to maintain its legitimacy in order to attract continued society support.

It is in the midst of high profile corporate failures and criticism of the auditing profession in 1998, that International Auditing Practice Statement (IAPS) 1010: The consideration of environmental matters in the audit of financial statements (1998) was issued. In 2001, New Zealand's AGS 1010, "consistent in all material respects" with IAPS 1010 (ICANZ, 2001, Appendix 1), was promulgated. In this context, it appears that the consideration of environmental matters and the promulgating of AGS 1010 are socially desired for the accounting profession to maintain their state of legitimacy.

This paper reports preliminary findings based on four in-depth data analysis. However, the researcher has completed all the interviews and based on them has noted a number of common themes and concepts: (1) AGS 1010 is only a guidance statement, and it being such a long document, a number of auditors have not read it until it was pointed out to them in the introductory letter/email sent to those willing to participate in the research interview. (2) although participants have all indicated that environmental risk exposure for their audit clients is considered as part of their business risk assessment approach in the early stages of audit planning, yet when probed further, (3) most audit firms do not train staff in identifying environmental risk exposure factors, and their audit programmes do not contain any sections that specifically deal with environmental matters; (4) most environmental matters are reported in the annual report, outside the financial report, thus auditors are not responsible for them, (5) besides anything that cannot be quantified is immaterial.

A review of the literature indicates that the accounting professional bodies, overseas and in New Zealand, have not highlighted the importance of IAPS 1010 and AGS 1010. Besides, an in-depth study of AGS 1010 points to several instances of "double think" (the ability of holding two contradictory opinions believing in both of them); and the overall message in AGS 1010 is "it is business as usual".

A potential interpretation is that, in order to maintain their legitimacy, the auditing profession promulgated IAPS 1010 (and AGS 1010) which gives the appearance to stakeholders via the social contract that the profession's activities and ends are congruent with the expectations, values, and norms of constituents. However, comments from interviews with New Zealand auditors indicate an "appearance of action without the substance" (Ashforth & Gibbs, 1990, p. 182). Thus, 'organisational legitimacy' does offer an appropriate theoretical perspective for examining the observed phenomenon. It is, therefore, the chosen theoretical framework for the doctoral research, given its fit to some of the issues raised in the literature relevant to the research topic and the empirical data derived from recent interviews of New Zealand auditors.

5. RESEARCH METHOD

This research is an on-going doctoral study and to date, not all the transcripts have been analysed. However, this study is qualitative and adopts a naturalistic inquiry approach (Lincoln & Guba, 1985). It took some effort to obtain participants for the interviews. The researcher made a list from the Yellow Pages and Google searches of auditing firms and their phone numbers. The researcher then rang the individual firms for the names and email addresses of their audit partners and managers, after which email letters outlining the aim of the doctoral study and a request for an interview were sent to them. In total

fifty five emails were sent out, of which six replied saying that they did not have clients with environmental problems and therefore were not able to assist. One auditor replied saying: "I had not read AGS-1010 and I do not know its content. Thus, I do not know how much I can be of help to you". A number of auditors had misunderstood the research topic. Three thought that the research study was on 'environmental auditing' and two thought that the research was on 'the audit of independent environmental reporting'. When the researcher rang to clarify the research topic, they said that they were too busy and the emphasis for them was their compliance with international financial reporting standards, thus they did not have time for me. This indicates that for a number of auditors, they are not entirely sure or clear about their position with the audit of environmental matters in the financial reports. This study is therefore timely in bringing to the open an audit phenomenon which is unclear.

The researcher followed up each non-replied email with a telephone call. Contacting the auditors was an enduring activity. Often the auditor could not be reached because the auditor was at the client's office or at some meeting and could not be disturbed. Instead the researcher was referred to the personal assistant (PA). After being asked several questions about the research study, the PA gave assurance to ring back when the person had spoken with the auditor. It usually took a day or two before the PA rang back. If the auditor had consented to an interview, the PA made an appointment with the researcher. Auditors are very busy people and a number of them had indicated that they were only willing to allocate one hour for the interviews. Hence the researcher prepared a list of semi-structured questions to ensure that important issues for the research were asked during the one-hour interviews. An outline of the questions is listed in the appendix section of this paper. The auditors who were interviewed were very open and helpful. As a preamble to the actual interview, the researcher always communicated her appreciation to the auditor for the time given to her for the interview. She also reassured the auditor that she was not intending to be judgemental on current practice. The assurance given often put the auditors at ease. They appeared to have an open attitude and made very helpful comments, using examples they had come across to illustrate their comments. However, they were very careful not to mention the names of the companies which have environmental problems and which they had audited. All the auditors interviewed were genuinely interested in participating in the research even though some of them had indicated they did not have any clients with environmental matters in their financial reports. In their situation, they spoke of what could be done if they had detected any environmental concerns for their clients.

Once the interviews started, other participants were contacted by snowball sampling. Altogether, twenty-seven senior financial audit practitioners in New Zealand agreed to participate. Of the participants, ten auditors were from the Big Four firms, eight auditors were from medium sized firms, seven were public sector auditors and two were government auditors. They are all chartered accountants and members of NZICA with access to AGS-1010. Audit partners and managers were selected for interview because they are usually the ones who plan and manage audit clients. The interviews were conducted over a period of six months (June to December 2005); they were taped and are currently being transcribed to typed-format for data analysis.

The preliminary findings reported in this paper were based on the analysis of four substantial interviews transcripts. Data analysis for this study was informed by a number of literature (Appleton, 1995; Burnard, 1991) but focussed specifically on the work of Miles and Huberman (1994). Data analysis for this study was directed by semi-structured interview questions and the research topic. The process of analysing data began when the researcher read and re-read the text of the interview transcriptions; during which time data that did not add meaning or value to the analysis were removed. Since semi-structured interview questions were used for data collection, all the data from each question were gathered together and then coded with some preset categories first and then with emergent categories as they became apparent. Preset categories are preconceived themes and concepts from the research topic that the researcher really wanted to know about. They provided direction for what to look for in the data. Preset categories were identified before the data were coded and the coding was by searching the data for text that matched the preset categories. Emergent categories on the other hand were categories that emerged from the data and were defined after the researcher had worked with the data. They are themes or issues that recur in the data which the researcher had not previously thought about, and they became new categories which were added to the preset categories. The researcher read and re-read the text to ensure that the data were correctly coded. The task of data analysis is reflective, subjective and also iterative. After the first coding of the data had been done, the researcher came back after a time to re-code the same data a second time to ensure consistency in the coding. As the data were organised into categories, the researcher began to see patterns, themes and connections both within and across categories. These themes and connections were then interpreted and the interpretations were used to explain and communicate the research findings. Reflecting on the research findings also enabled the researcher to connect with the extant academic literature, and different possible theories which assisted in pointing the researcher to an appropriate theoretical perspective for framing and interpreting this doctoral research.

NVivo 7, a computerised qualitative data analysis software programme was used to manage the data analysis process. Steps taken in managing the data analysis were as follows. Firstly, all the transcription documents (saved as MSWord documents) were imported into the NVivo7 project platform ready for coding. Secondly, the researcher created nodes (or 'empty containers) for the preset categories and emergent categories. Each node was labelled and given a description to ensure consistent coding. Nodes for pre-set categories were created before the data text were coded. However; nodes for emergent categories were created as they emerged from the data and were defined. The third step is the actual coding of the transcription documents previously imported into NVivo 7. As the researcher read through each transcription, words or phrases or paragraphs that seemed significant were noticed and coded to the appropriate nodes straight away. Once coding of the transcription documents was completed, coding reports were made for finding texts from all the transcription documents that were coded at the selected nodes. These coding reports were then examined for patterns, themes and connections both within and across categories. Subsequently, the patterns, themes and connections were analysed and interpretations of the analysis formed the basis for the research findings and theorising.

The next section reports the preliminary findings on the research topic based on the analysis of four substantial interviews transcripts. The confidentiality of the auditors was assured. Hence to preserve their anonymity, in the next section when quoting the auditors, they are being referred to by a numbering system, for example an audit partner is 'AP' and an audit manager is 'AM' and 1, 2 etc are code numbers for each of the individual interviewees.

6. RESEARCH FINDINGS

This section reports preliminary findings on (a) the auditors' perceptions of their responsibility for auditing environmental matters, (b) their current audit practice in the consideration of environmental matters in financial reports, and (c) whether AGS-1010 has impacted on their current practice. Issues and implication of the issues that emerged from the interviews are analysed, discussed and interpreted in section seven of this paper.

Perceptions of audit responsibility for considering environmental matters

The responsibility placed on auditors for considering environmental matters when auditing financial statements was made explicit only in 2001, when AGS-1010 was first promulgated even though, as one respondent noted:

...it's something that has been around, that people have been aware of since I qualified at least, and actually even before I qualified as a member of NZICA in 1998 (AP 1).

However each of the respondents saw his or her responsibility differently. One respondent was reluctant to expand his current responsibilities to incorporate the consideration of environmental matters:

I'm not sure whether in my view it's an area that we really want to be getting into as chartered accountants. I don't really want to be increasing the scope of my responsibility as an auditor any further than what it already is and, certainly don't want to go any further than I have to (AP 2).

Another respondent did not think that the consideration of environmental matters is central to the audit; that it is just something to consider:

[Environmental matter] is something to consider, but I don't think it necessarily forms a central part of the audit (AP 1).

And the third respondent treated the consideration of environmental matters no differently from other audit issues:

...from my point of view, the environmental provision is no different to any other form of provision and the way that you'd account for it is very similar (AM 3).

Current audit practice in the consideration of environmental matters in financial reports

In the literature, authors (Gay, 2002, Gray and Manson, 2005; and Lemon et al., 2002) recognise BRA as an approach auditors commonly use when planning audits. It appears that BRA is also the approach applied to the audit consideration of environmental matters as indicated by one respondent:

All the planning is client specific in so far as the risk profiling. When you're assessing the business risk and the accounting processes within the business risk model, you have to assess all impacts that would go into the risk profile and the environment was one of them that would be part of the planning process (AP 1).

Planning an audit is done firstly by determining a company's exposure to the different business risks and recognising whether they give rise to any audit issue which requires further consideration. One respondent said that environmental risk is one of the business risks considered in BRA:

The BRA model that we use in our planning for audits forces us to consider environmental issues and what the impact is on the client (AM 3).

It is said that discussions with management and asking questions about the company's exposure to environmental risks often enables an auditor to recognise the existence of environmental issues:

It depends on the client but procedures range from a minimum of asking management and to having discussions with management around any potential issues (AP 4).

Basically from discussions with the owners and/or directors of an entity, you'd be asking "What is impacting upon the operation of the business?" (AP 1).

And once the existence is recognised, the auditor determines its significance:

So we are forced to in the planning stage either dismiss it, saying it's not an issue or to say there are potential issues (AM 3).

However, there are reasons why auditors are not always able to detect and to deal with environmental issues. Firstly, auditors rely on management to tell them if they have any environmental issues. If management is not aware of them or do not intend to disclose its existence, then the auditors would not become aware of it:

Finding it [environmental issues] for the first time is the hard part and you are reliant on the organisation having processes for those issues to get flushed up to the top level...You are in some way reliant on the client to tell you in your relationship with the client if they have got any

environmental issues. Everything is dependent on what the client tells you (AM 3).

If they're not aware of anything either, then it makes it kind of difficult (AP 1).

The respondents illustrate this difficulty with the following examples:

[First example] My personal experience is with contaminated land and there was some leaching of some kind of chemicals – the issues were tied up about 4-5 years ago with one of our managers who was on a site tour, She asked, “What’s in that shed?” They knew she was pregnant at the time, and said “we can’t go anywhere near there because it’s all contaminated and it’s not good for you as you are pregnant”. And she asked, “What do you mean it’s contaminated?” They’re just been accumulating waste into a big shed. So then, as far as I understand it, the company management realised that there were some issues but it is not huge dollars. However management started investigating the extent of potential problems; was being careful and went through environmental audits. That was how we then started investigating what we needed to do (AM 3).

[Second example] If they [the auditors] would go out to a company which might be freight forwarders say, all they see are trucks and storage facilities. They may not be taking into consideration that there’s a hazardous material storage facility there. What would happen if the hazardous materials leaked? (AP 1).

Secondly, audit checklists are too general. Unless specific questions are being asked in the checklist, it would be difficult to detect environmental matters:

As with a lot of audit functions the review of contingent liability which environmental matter often is, consists of interviewing one director and ticking a few boxes as to what are the contingent liabilities. No, you’re not going to pick up any potential [environmental] liabilities this way because it [the checklist] doesn’t ask specific questions on environmental matters (AP 1).

Thirdly, if environmental matters are not specifically referred to when planning an audit, it is unlikely that they would be considered in the audit programmes (which consist of detailed audit steps that are planned to be performed):

Our audit programmes are set for each individual client. Each client has its own audit programme, but it’s all done electronically. We pick what we call steps from a data base of steps, so if we had environmental issues you could go to that data base and drag in tailored procedures of what to do for environmental provisions (AM 3).

Our audit programme is pretty similar to the Big Four in respect that it's a generic audit programme but the questions that pop out are dependent upon the information that's put in at the beginning (AP 2).

Matters regarding (a) professional judgement on materiality and (b) environmental risks assessment on current practice surfaced during the interviews. They are reported on below.

Professional judgement on materiality

Once an auditor recognises an environmental issue for a company, the auditor has to assess its materiality and determine its relationship with audit risk (ICANZ, 1998c, AS-304: Audit Materiality). Only significant environmental matters warrant further consideration, as indicated by one respondent:

I don't doubt that there are probably some minor environmental issues going on in lots of companies. Minor breaches here and there aren't reported because they're not significant so they do not concern us ... [However], the first thing to do is to find out how significant it is, and then, if we decided it was material, to follow it up with the management of the organisation to find out what they're doing about it... You are only obliged to check if you think there will be a material misstatement (AM 3).

However, what is less clear is how auditors assess materiality. One respondent indicated that the assessment of materiality depends on a number of factors:

The assessment of materiality depends on the individual circumstances; it depends on the organisation. It depends on what's happening (AP 2).

Another respondent implied that the consideration of materiality is dependent on whether it can be quantified:

It depends if you can quantify it. I think if there is a direct pollution issue, and it's a major one, you don't need to be a rocket scientist to figure out that there's an oil spill on barren land and that it is leaching through. You pretty much have to insist that the client make efforts to quantify it and then the auditor would check to see what the quantification was and see what the qualifications of the person who did quantify them for the cost was going to be (AP 1).

The following examples were given by a respondent to illustrate the point:

[First example] I've audited a dairy company which had issues with discharge of milk products into a river. They have had a situation where they had holding pens up against a stop bank river. Effluents leaked into a river and they had issues with the local environmental council, which exposed them to fines. That was approximately 8 years ago and the fines weren't that significant. Then it was an immaterial issue so far as the audit was concerned. If that company was to do it again, and if I was to be auditing them now, I'd probably look more closely at it because the scope of the fines have increased quite dramatically, and therefore the risk to the client is greater (AM 1).

[Second example] Currently, although the maximum charge [for environmental liabilities and prosecutions] is \$200,000 fine and a maximum prison sentence of 2 years, I've never heard of anybody in New Zealand, and never be it a director or manager or whoever is responsible for the leakage actually being sent to prison. I've never heard of any firm being fully fined up to the \$200,000 maximum. I mean it's normally \$25,000 or 50,000. To be honest, it is often the operations of big corporations that are exposed to significant environmental risks. If you are looking at a corporation with a turnover of \$400 million then a profit bottom line of say between \$20 million and \$50 million depending of what the nature of the company is, a \$50,000 fine is a small charge, so it slipped under the higher materiality. So auditors as part of the enforcers don't seem too serious about it (AP 1).

The above comments imply that environmental accountability is dependent on the materiality of the environmental issue, and it appears that the assessment of materiality is based on whether it can be quantified. The implications of these emerging issues are discussed in section six of this paper.

Environmental risks assessment

If an environmental issue is considered material, the auditor determines the environmental risk that misstatements, distortions and omissions may occur in financial reporting. There are different ways of obtaining information on environmental risks assessment, as indicated by a respondent:

When considering the audit risks and areas to focus on, environmental risks is one of the factors considered. There are many ways you get your information in terms of identifying those risks: management discussion, responses to legal matters when you do your search at the end of the year and write to the lawyers that backed it for the company (AP 4).

Often there is no difficulty in determining a company's exposure to environmental risk if it is operating in a specific industry or sector that is exposed to significant environmental risks. However, for a company not operating in an obviously environmentally risky industry, environmental issues appear to be ignored or not given any importance, as pointed out by the following respondents:

It depends on the issue and on the client. Say if it's a Freezing Works [which is a meat processing company] you pay more attention to it. If it's a manufacturer with limited exposure per our risk assessment to environmental issues we just ignore it, sorry not ignore it but take less importance (AM 3).

If it was the Freezing Works or a chemical storage facility or mining company that is part of the audit planning process when you're assessing the risks (AP 1).

If you have a client working in an area that is sensitive to the environment, for example, the Freezing Works, then I think it does constitute an area of risk that the auditor should be aware of because potentially it could be exposing contingent liability for the company and the auditor should make efforts to inquire as to what has been done to mitigate that risk (AP 1).

The implication of the above comments is that while it is not difficult to recognise environmental risks for companies in obviously environmentally risky industries, an auditor may have some difficulty in recognising environmental risk for a company not operating in one of those environmentally risky industries or sections. This issue is further discussed in section six of this paper.

The impact of AGS-1010 on current audit practice

The impetus for the doctoral study is AGS-1010, but how or whether it impacts current practice is not known. Comments made by respondents regarding this research issue are reported below.

Some of the respondents have not referred to the promulgation, even for the interviews. One respondent admitted that referring to AGS-1010 becomes necessary only if the respondent has to deal with environmental matters and compulsory if the status of AGS-1010 is raised to an audit standard. Another respondent relied only on international standards which are said to be more stringent. It appears that AGS-1010 has not changed current audit practices. Respondents who did peruse through at the contents of AGS-1010 felt that although the document is very lengthy, it does not contain sufficient guidance. The above observations are encapsulated in the following comments made by the respondents:

I'm not sure because I haven't referred to that this year. No. I don't think it has really changed the way we do our audits (AP 4).

I am not sure that AGS-1010 really go far enough. If you look into AGS-1010, I wonder if it gives sufficient guidance on how auditors should recognise environmental issues in the audit process. I have to pass on the answer to that question because I didn't read it more thoroughly (AP 2).

AGS-1010 sets out the principle on how you generally approach an audit in terms of the knowledge. How much detailed consideration is given to the guidance statement for each audit depends on clients. For a large majority, truthfully not much. There is high risk in environmental work. As the guidance currently sits, it is a very long document. What it doesn't do is that it doesn't give that detail, a bit like the valuation, it doesn't give you the details of doing the steps and ticking them off and you get your conclusions (AP 4).

We refer to international auditing standards and our audits are in line with overseas auditing standards anyway which tend to be more stringent than what we have here in the first place. So I can't think of any thing which really changed. I have not read AGS-1010 thoroughly (AM 3).

It is a guideline as opposed to being a standard - when they standardize it, it supposedly becomes more compulsory then you start paying closer attention (AM 3).

I did flick through AGS-1010. Its a case of you're aware its there, but when you get an industry that's specifically involved in an issue that might be an environmental issue, that's when it comes out, sits in front of the desk, and you go right through the guidance (AP 1).

The implications of the above observations and comments made are discussed in the following section.

7. DISCUSSION AND CONCLUDING REMARKS

In this section, findings from the interviews are summarised, and the implications of the findings are analysed and discussed. This section also outlines research limitations and other issues identified for further consideration and research.

Firstly, the current study examines auditors' perceptions of their responsibility for environmental matters. Audit responsibility for environmental matters is not recent; auditors are aware of their responsibility even before 2001 when AGS-1010 was first promulgated in New Zealand. However, some auditors appear reluctant to increase the scope of their responsibility by bringing it into the central part of the audit. This may be

due to the perception that their role as auditors is sufficiently demanding without worrying about environmental issues (Chiang, 2006).

Additionally the current study reports auditors' perceptions of the current state of environmental accountability. One respondent pointed out that it is often the operations of big corporations that are exposed to significant environmental risks, yet it appears that environmental accountability in New Zealand is somewhat downplayed because the fines and penalties for environmental violations are often considered immaterial to warrant any concern for audit purposes. As a consequence, auditors do not seem too serious about it. However, regardless of auditors' perceptions of their responsibility for environmental matters, AGS-1010 is explicit in the requirement that "the auditor needs to give consideration to environmental matters in the audit of the financial report" (ICANZ, 2001, paragraph 2).

Regarding current practices, the respondents indicate that BRA is the dominant approach to auditing environmental matters. The first step in this approach is discussions with management that (hopefully) enables the auditor to recognise any environmental issue which is significant to the company. It is the first recognition of the existence of environmental issues that is the key to the consideration of environmental matters in financial reports. However, that first recognition is dependent on whether the client management informs the auditor.

Adopting the BRA does not always provide blanket assurance that environmental matters would be considered in the audit of financial reports. Management may not be aware of, or may not have intended to disclose, any information on their company's exposure to environmental risks in their discussions with the auditor. The checklists used when reviewing contingent liabilities (an audit area which covers most environmental matters) often do not specifically ask questions on environmental matters. Audit programmes are generic and whether they consider environmental matters is dependent on the auditor's initial recognition of the existence of environmental issues. Therefore environmental matters could be completely missed out and not given further audit consideration if the auditor had not realised or recognised its existence and significance for the company in the first instance. This could lead to audit failure and great exposure to legal liability. Gay (2002) cautions that audit issues concerning environmental matters may exacerbate the audit expectation gap. Whether the auditor's consideration of environmental matters in financial reports is an issue which exemplifies the audit expectation gap is outside the scope of the doctoral research. It could however be a topic for future research.

If an environmental issue is recognised as significant for a company, the auditor uses his professional judgement to assess its materiality for audit purposes. It seems materiality depends on the auditor's ability to quantify the assessment in financial terms. However, AS 304: Audit materiality, paragraph 8 states that "materiality applies to non-financial and narrative information as well as to the financial contents of general purpose financial reports". The audit standard further asserts that:

In the establishment of the acceptable materiality level both the amount (quantity) and nature (quality) of misstatements need to be considered. In assessing materiality the auditor should take into account any

legislation or regulation or specific provisions contained in the audit mandate, in addition to professional judgement, which may impact on the assessment. ...Consideration of materiality may also cover additional matters such as compliance with authorities, legislative concern and issue of public interest (AS-304: Audit materiality, paragraph 14 and 15).

Referring to comments made in the interviews, it seems that an environmental matter is deemed material only if it has a financial effect which is quantifiable. Hence, the assessment of materiality appears to have been narrowed down to what is quantifiable. The auditors interviewed appear to have disregarded the consideration of the nature (quality) of non-financial and narrative information when establishing acceptable materiality levels. Additionally, AS-304 states that the consideration of materiality covers issues of public interest. The Code of Ethics states that “the accountancy profession [of which the auditing profession is a sub-set] will act to serve the public interest [which is defined as] the collective well-being of the community of people and institution ((ICANZ, 2003, The Code of Ethics, paragraph 14 and 15). By definition, environmental matters are issues of public interest and should therefore be deemed material by their very nature and not by their quantitative financial measurement. Further review of the literature on the concepts of professional judgement of materiality and the public interest will be necessary to provide a clearer understanding of the underlying concepts.

Regarding environmental risk, auditors are apparently able to recognise its existence for companies in industries or sectors which by their nature, tend to be exposed to significant environmental risk. The challenge really is for auditors to recognise environment risk for a company not operating in one of those obvious environmentally risky industries or sectors. To add to this challenge, if management does not mention existing environmental matters for the company to the auditor during their discussions, the auditor could very possibly fail to recognise its existence and therefore would not have considered it in the audit plan and programmes. This may lead to under-auditing and greater exposure to detection risk and audit risk since exposure to environmental risk is a consideration of audit risk (Gray & Manson, 2005). Are there challenges in the actual verification of environmental matters? The doctoral research is also covering this concern but research findings on it are not reported in this paper.

This paper also reported findings on the impact of AGS-1010 on current audit practice. The interviews indicate that most of the auditors have not thoroughly read the contents of AGS-1010. They saw it as a very lengthy document which does not provide sufficient details on the procedures necessary for an auditor to arrive at an audit conclusion about environmental matters. There is a preference for reliance on international auditing standards which are seen as being more stringent. It appears that auditors will pay closer attention to AGS-1010 only if it is made into an audit standard which requires mandatory compliance in terms of Rule 11 (paragraph 97) of the Code of Ethics and also on a need to know basis when the auditor has to obviously deal with environmental matters in their audit.

Specht and Waldron (1992, p.25) introduce the concept of “Expectation Gap II”: one between the standard setters and practising CPAs” and Specht and Sandlin (2003)

confirm its continued existence between standard setters and practicing auditors. The authors assert that the implementation of audit standards and guidance statements depends on the auditors' perceptions of the efficacy of the promulgations. Achievement and motivation are linked to perceptions. There is a higher probability of implementation if the auditor perceives that the auditor can successfully implement the standard or guidance. Likewise, auditor perception of a low probability of success may result in decreased motivation and effort toward implementation of the standard or guidance (Specht & Waldron, 1992). However, studies by Specht and Sandin (2003) and Specht and Waldron (1992) did not investigate the cause(s) for expectation gap II and what might be done to bridge the expectation gap. The doctoral study is also determining if there is an expectation gap II between standard setters and auditors regarding the implementation of AGS-1010; if it does exist, then what might be the cause and what recommendations are available for bridging the gap. However, findings on this issue are not reported in this paper.

The current research study on the audit consideration of environmental matters in financial reports is ongoing. Preliminary findings based on in-depth data analysis of four interview transcripts are reported in this paper. Also, the critical analysis, interpretation and evaluation of the issues raised in this paper has provided a basis for linking these findings with extant academic literature and to an appropriate theoretical perspective for framing and interpreting this doctoral research.

8. APPENDIX: INTERVIEW GUIDE

- Q1. Do environmental matters pose a unique challenge for auditors? Why?
- Q2. Is environmental awareness changing the work of auditors? Why?
- Q3. What is your perception of the audit responsibility for considering environmental matters?
- Q4. Do current accounting standards sufficiently cover environmental matters (contingent liabilities, provisions; reserves; valuation of fixed assets)?
- Q5. Are companies willing to fully disclose all environmental obligations and liabilities that impact their financial statements?
- Q6. What are your experiences with environmental matters?
- Q7. What is the extent of your responsibility for information in a separate environmental report?
- Q8. What actions would you take if environmental information reported in the annual report or separate environmental report is inconsistent with the information in financial statements?
- Q9. Do you have someone or a department that monitors the broader agenda of environmental issues that may affect your clients and your firm itself?
- Q10. Are environmental issues explicitly referred to in your audit programme and staff training?
- Q11. What practical guidance (if any) is given by your firm, for recognising environmental issues?
- Q15. What are the initial steps you take in deciding whether environmental issues may be significant to an entity's financial statements?
- Q16. If environmental matters are potentially significant to the financial statements, what are the audit steps taken to assess the environmental risk exposure to potential misstatement or non-disclosures in financial statements?
- Q17. What level of understanding of environmental matters should an auditor have?
- Q19. Do you discuss general issues on environmental matters with every client management?
- Q21. Should an auditor expect an entity to operate controls over environmental risks and to what extent should the auditor evaluate such controls?
- Q22. Is it possible to check whether the entity is complying with every environmental law and regulation? Are there any practical difficulties?
- Q24. How do you deal with a company which does not comply with any of the environmental legislation?
- Q25. Do you refer to the ISO standards, eg ISO 14011 "guidelines for environmental auditing"?
- Q26. Are there any difficulties in recognising and measuring the financial impacts of environmental matters?
- Q27. How would you overcome the difficulties?
- Q28. What are the audit steps taken when reviewing the accounting treatment for significant environmental matters, such as the recognition of environmental impairment?
- Q29. Do you have any problems in obtaining evidence on environmental matters? Describe them.
- Q30. Would you obtain any additional representations from management about the effect of environmental matters on the financial statements?

- Q31. Are there any areas in which you consider additional education and training may be required to enable an auditor to cover the issues raised AGS 1010?
- Q32. Are there anything unique about environmental matters that need to be considered for audit reporting?
- Q33. What role should NZICA play, in giving real meaning to environmental disclosures/reporting and thereby strengthening accountability?
- Q34. For those clients whose activities do not obviously impact the environment, are they generally aware or concern for the environment?
- Q35. Other than promulgating AGS 1010, is there anything more you would like NZICA for environmental matters and the statutory audit?
- Q36. To what extent do audit clients expect auditors to understand how environmental issues are affecting company business in general?
- Q37. Are clients generally serious about environmental matters?
- Q38. Do any audit client sought advice on environmental matters from your firm?
- Q39. Do your firm offer advice on environmental matters to any audit client?
- Q40. Do you use non-audit experts for environmental matters?
- Q41. What criteria did you use in selecting the expert?
- Q42. To what extent do you take responsibility for the expert's work?
- Q43. How do you manage your relationship with the expert?
- Q44. Should disagreements/conflicting views arise, how are they managed?
- Q45. What steps would you take when consulting with environmental experts or obtaining expert assistance?
- Q46. What steps would you take if information obtained by an expert engaged by management appears to be unreliable?
- Q47. How might clients use the work of non-audit environmental auditors?
- Q48. What do you think is NZICA's for AGS 1010?
- Q49. Do you think AGS 1010 gives sufficient guidance on the audit consideration of environmental matters?
- Q50. Has AGS 1010 impacted on how you audit? If it does, in what way?
- Q51. In addition to following the guidelines in AGS 1010 and consulting with experts, how can the audit of environmental matters be further improved?
- Q52. How would you assess "audit materiality" of environmental matters?
- Q53. Do you think focus on environmental issues will become more significant in time?

REFERENCE LIST

- Appleton, J. V. (1995). "Analysing qualitative interview data: addressing issues of validity and reliability". *Journal of advanced nursing*, Vol 22, pp. 993-997.
- Ashforth, B. E., & Gibbs, B. W. (1990). "The double-edge of organizational legitimation". *Organizational Science*, Vol 1 No 2, pp. 177-194.
- Baker, C. R. (1977). "The structural response of the Large CPA Firm to Its environment". *International Journal of Accounting*, Vol 12 No 2, pp. 69-80.
- Ball, A., Owen, D. L., & Gray, R. H. (2000). "External transparency or internal capture? The role of third party statements in adding value to corporate environmental reports". *Business Strategy and the Environment*, Vol 9 No 1, pp. 1-23.
- Bebbington, J., & Gray, R. (1990). "The greening of Accountancy - Accounting for a better environment". *Accountants' Journal* September, pp. 17-20.
- Bell, T., Marrs, F., Solomon, I., & Thomas, H. (1997). *Auditing organizations through a strategic systems lens*. KPMG Peat Marwick LLP.
- Bewley, K. (1993). "The green team". *CA Magazine*, pp. 44-46.
- Billing, R., Buisman, J. A., Willis, A. D., & Wilson, R. W. (1994). "Environmental issues pose major challenges to accountancy profession". *International Federation of Accountants Newsletter*, Vol 18 No 1.
- Blokdijs, J. H., & Driehuisen, F. (1992). "The environment and the audit profession: A Dutch research study". *European Accounting Review*, Vol 1, pp. 437-443.
- Browning, J. A. (1994). "Review engagements in review". *CA Magazine*, Vol 127 No 8, pp. 38-39.
- Burnard, P. (1991). "A method of analysing interview transcripts in qualitative research". *Nurse Education Today*, Vol 11, pp. 461-466.
- Chadick, B., Rouse, R. W., & Surma, J. (1993). "Perspectives on environmental accounting". *The CPA Journal*, January.
- Chandler, R. A. (1999). "Critics' use of satire against the auditing profession: A short historical note". *Accounting, Auditing & Accountability*, Vol 12 No 1, pp. 129.
- Chiang, C. (2005). "Auditors' views on the significance of "Environmental Matters" and their impact on the audit profession: Some New Zealand evidence". Paper presented at the Accounting and Finance Association of Australia and New Zealand, Melbourne, Australia, July 6-8, 2005.
- Chiang, C. (2006). "Auditors' perception of environmental matters and its implication for the consideration of environmental matters in financial audits. New Zealand". *Journal of Applied Business Review*, forthcoming (February).
- Collison, D. (1996). "The response of statutory financial auditors in the UK to environmental issues: A descriptive and exploratory case study". *British Accounting Review*, Vol 28, pp. 325-349.
- Collison, D., & Gray, R. (1997). "Auditors' responses to emerging issues: A UK perspective on the statutory financial auditor and the environment". *International Journal of Auditing*, Vol 1 No 2, pp. 135-149.
- Collison, D., Gray, R., & Innes, J. (1996). *The financial auditor and the environment*. London: ICAEW.
- Collison, D., & Slomp, S. (2000). "Environmental accounting, auditing and reporting in Europe: The role of FEE". *The European Accounting Review*, Vol 9 No 1, pp. 111-129.

- Cornell, D. W., & Apostolou, B. (1991). "Auditing for violations of environmental laws". *The National Public Accountant*, Vol 36 No 7, pp. 16.
- Deegan, C. (2002). "The legitimising effect of social and environmental disclosures - A theoretical foundation". *Accounting, Auditing & Accountability Journal*, Vol 15 No 3, pp. 282-311.
- Deegan, C., & Rankin, M. (1997). "The materiality of environmental information to users of annual reports". *Accounting, Auditing & Accountability Journal*, Vol 10 No 4, pp. 562-583.
- Dixon, R., Mousa, G. A., & Woodhead, A. D. (2004). "The necessary characteristics of environmental auditors: A review of the contribution of the financial auditing profession". *Accounting Forum*, Vol 28 No 2, pp. 119-138.
- Dowling, J., & Pfeffer, J. (1975). "Organizational legitimacy: societal values and organisational behaviour". *Pacific Sociological Review*, Vol 18 No 1, pp. 122-136.
- Fiedler, B., & Lehman, G. (1995). "Accounting, accountability and the environmental factor". *Accounting Forum*, Vol 19 No 2/3, pp. 195-204.
- Gay, G. (2002). "Bridging the business dynamic into the audit". *Australian CPA*, Vol 72 No 1, pp. 66.
- Gilkison, B., & KPMG. (1999). *Accounting for a clean green environment*. Anchor Press Ltd, Nelson.
- Gray. (2000a). "Current developments and trends in social and environmental auditing, reporting and attestation: A review and comment". *International Journal of Auditing*, Vol 4, pp. 247-268.
- Gray, I., & Manson, S. (2005). *The audit process. Principles, practice and cases (3rd ed.)*: Thomson Learning.
- Gray, R. (1990). "The accountant's task as a friend to the earth". *Accountancy*, June, pp. 65-68.
- Gray, R. (2000b). "Current developments and trends in social and environmental auditing, reporting and attestation: A personal perspective". Unpublished working paper, University of Glasgow, Scotland, pp. 1-21.
- Gray, R., & Bebbington, J. (2000). "Environmental accounting, managerialism and sustainability: Is the planet safe in the hands of business and accounting?" *Advances in Environmental Accounting & Management*, Vol 1, pp. 1-44.
- Gray, R., Bebbington, J., Collison, D., Kouhy, R., Lyon, B., Reid, C., Russell, A. & Stevenson, C. (1998). "The valuation of assets and liabilities: Environmental law and the impact of the environmental agenda for business".
- Gray, R., Collison, D., & Bebbington, J. (1998). "Environmental and social accounting & reporting" in *Financial reporting today: Current trends and emerging issues 1998*: Accountancy Books.
- Hatherly, D. (1998). "Is the risk-driven audit too risky?" *Accountancy*, August, pp. 86.
- Holmes, D. (1999). "Sustainable development reporting". *Australian CPA*, Vol 69 No 2, pp. 22-23.
- Huizing, A., & Dekker, H. C. (1992). "The environmental issue on the Dutch political market". *Accounting, Organizations and Society*, Vol 17 No 5, pp. 427-448.
- Humphrey, C. (1991). "Audit expectations" in M. Sherer & S. Turley (Eds.), *Current issues in auditing* (pp. 3-21). London: Paul Chapman Publishing.
- ICAEW. (1992). "Business accountancy and the environment: A policy and research agenda". London: ICAEW.

- ICAEW. (2000). "Environmental issues in the audit of financial statements". London: ICAEW.
- ICANZ. (1998a). "AS 402: Risk assessments and internal control" in New Zealand Codified Auditing Standards and Audit Guidance Standards. Wellington: ICANZ.
- ICANZ. (1998b). "AS 702: The audit report on an attest audit" in New Zealand Codified Auditing Standards and Audit Guidance Statements. Wellington: ICANZ.
- ICANZ. (2001). "AGS 1010: The consideration of environmental matters in the audit of a financial report" in New Zealand Codified Auditing Standards and Audit Guidance Statements. Wellington: ICANZ.
- ICANZ. (2003). "Code of Ethics. In New Zealand Codified Auditing Standards and Audit Guidance Statements". Wellington: ICANZ.
- Lemon, W. M., Tatum, K. W., & Turley, W. S. (2002). Developments in the audit methodologies of large accounting firms. London: Auditing Practices Board, ICAEW.
- Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Beverley Hills, CA: Sage.
- Lindblom, C. K. (1994). "The implications of organisational legitimacy for corporate social performance and disclosure". Paper presented at the Critical Perspectives on Accounting Conference, New York.
- Mak, T., Deo, H., & Cooper, K. (2005). "Australia's major corporate collapse: Health International Holdings (HIH) Insurance "May the force be with you"". Journal of American Academy of Business, Vol 6 No 2, pp. 104-112.
- Maurer, J. G. (1971). Readings in organization theory: Open-system approaches. New York: Random House.
- Medley, P. (1997). "Environmental accounting - What does it mean to professional accountants?" Accounting, Auditing & Accountability Journal, Vol 10 No 4, pp. 594-600.
- Miles, M., & Huberman, A. (1994). Qualitative data analysis: An expanded sourcebook. London: Sage.
- Power, M. (2000). The audit implosion: Regulating risk from the inside. London: ICAEW.
- Reynolds, M. A., & Mathews, M. R. (1999). "The environment and the accountant as ethical actor". Advances in environmental accounting and management, Vol 1, pp. 83-100.
- Rubenstein, D. B. (1992). "Bridging the gap between green accounting and black ink". Accounting, Organizations & Society, Vol 17 No 5, pp. 501-508.
- Silverman, D. (2005). Doing qualitative research. In London: Sage Publications.
- Simunic, D. A. (1994). "New auditing standards - Mostly smoke and mirrors?" CGA Magazine, September, Vol 23, pp. 79.
- Specht, L. B., & Sandlin, P. (2003). "Auditor perceptions of SAS 99: Do two expectation gaps still exist?" Journal of Applied Business Research, Vol 20 No 4, pp. 25-32.
- Specht, L. B., & Waldron, D. G. (1992). "Auditor perceptions of statements on Auditing Standards 53 and 54: A study of demographics and perceptions of efficacy". Journal of Applied Business Research, Vol 8 No 2, pp. 87-95.
- Teasley, H. (1995). "Green auditing". CGA Magazine, Vol 21, pp. 67.
- Todd, C., & Stafford-Bush, S. (1995). "Environmental issues and financial statements". Chartered Accountants Journal, pp. 63-65.
- Watson, M., & Mackay, J. (2003). "Auditing for the environment". Managerial Auditing Journal, Vol 18 No 8, pp. 625-630.

Weirich, T. R., & Rouse, R. W. (2003). "Auditing struggles with crisis of confidence".
The Journal of Corporate Accounting & Finance, May/June, pp. 19-25.