

**AUDIT MATERIALITY AND ENVIRONMENTAL MATTERS
IN FINANCIAL REPORTS: SOME INTERVIEW EVIDENCE**

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ABSTRACT

This paper reports interview evidence on audit materiality and environmental matters in financial reports. The findings were based on interviews with twenty-seven senior financial audit practitioners in New Zealand. Significant findings from the research interviews are (1) the auditors' interpretation and perception of the materiality assessment would fundamentally preclude them from even considering environmental matters in their audits, (2) a legislative mandate may be needed to bring about the same awareness in and focus on environmental matters in financial auditors, as is presently evident in public sector auditors; (3) there is evidence of an 'expectations gap II' – i.e. a gap between the expectations of standards setters and practicing auditors (Specht & Waldon, 1992). However further research is required to investigate the cause(s) for the 'expectations gap II' and what might be done to bridge this gap.

Key words: Financial audits, audit materiality, environmental matters, auditing profession

1. INTRODUCTION TO THE STUDY

A study by Ball, Owen and Gray (2000) found that corporate environmental reports are usually verified by non-auditors and are not independent audits in the same way that financial audits are. Thus, they provide little assurance to stakeholders. Ball et al. (2000) also expressed 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 the audit methodology for verifying the representation on environmental matters, since this is the only independent assurance that stakeholders may rely on. This interest motivated the study reported in this paper.

The primary aim of this paper is to report interview evidence from doctoral work-in-progress on audit materiality and environmental matters in financial reports. Hence, this research study is of particular interest to the accounting profession 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. Indeed, this is the first study of its kind in New Zealand. In particular, how New Zealand financial auditors (from now on referred to as ‘auditors’) deal with ‘environmental matters’ in the light of AGS-1010: *The Consideration of Environmental Matters in the Audit of a Financial Report* is not known. This study has the potential, therefore, to enhance our understanding of an under-researched audit phenomenon and to add to extant academic literature in this field. The research findings also promise to be of particular 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 covers the background to the current study. Section three discusses the literature on auditors’ professional judgements on ‘materiality’. Section four covers the theoretical framework for this research study, and section five outlines the research method. The interview findings are reported in section six and the paper ends with a discussion on the implications of the interview findings and some 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). Internationally, 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). The accountancy profession 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).

Academic commentators have for some time now recognised 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, et al., 1998; Gray & Bebbington, 2000; 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 & Driehhuizen, 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, 2000; 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 academic and professional literature revealed only two articles in 2001 and none further to date (see Chiang, 2005). New Zealand auditors are apparently silent on their responsibility for considering environmental matters in financial audits. It is the silence of the auditing profession on an emerging topic which has motivated this doctoral research study on “the audit consideration of environmental matters in financial reports”. This paper focuses on a specific aspect of this doctoral research, which is: audit materiality and environmental matters in financial reports. The next section discusses the literature on ‘professional judgement on materiality’.

3. PROFESSIONAL JUDGEMENT ON MATERIALITY

According to Bell et al. (1997) and Hatherly (1999), the cornerstone of auditing lies in ‘auditors’ professional judgement’ (Bell et al., 1997; Hatherly, 1999). Gray, Owen and Maunders (1991) add further that professional judgement is made throughout the audit:

It begins when the [audit] firm decides to accept an appointment as auditors; and continues through the analytical review, the assessment of audit risk, the determination of levels of materiality, the areas of the company’s activities on which to concentrate, the size of samples, the form of evidence to be sought, the decision to accept or not the directors’ choice of accounting treatment and disclosure and culminates in the conclusions of whether or not the financial statements do show a true and fair view and whether or not to sign off a clean audit report (p. 139).

Iskandar (1996) states that while many professional judgements are made during the audit, the decision on ‘audit materiality’ is the most fundamental. The concept of ‘materiality’ for the purposes of an audit is explained as follows:

Materiality is concerned with assessing whether omission, misstatement or non-disclosure of an item of relevant and reliable information could affect the perceptions of financial report users. Materiality applies to non-financial and narrative information as well as to the financial contents of general purpose financial reports. The materiality judgement is primarily a quantitative one, however, the nature of the item or transaction [qualitative factors] also must be considered” (ICANZ, 1998b, AS-304: Audit materiality, paragraph 8)

How the concept on ‘materiality’ is applied in an audit is now being explained. The auditor’s greatest concern for each audit is the possibility that a material misstatement, omission or non-disclosure is not detected by the audit procedures carried out (detection

risk) which may directly expose the auditor to audit risk. In particular, for a company whose activities impact the environment, the auditor's concern is the existence of material environmental matters that impact financial reporting not being detected by audit procedures. This may consequently lead to audit risk, which is the risk that the auditor expresses an inappropriate audit opinion. Hence, to reduce the exposure to audit risk to an acceptably low level, when planning the audit the auditor considers what could cause the financial report to be materially misstated. In developing the audit plan, the auditor establishes an acceptable materiality level to enable the auditor to detect material misstatements that may occur in the financial report (ICANZ, 1998c, AS-402: Risk assessments and internal control)). This in turn enables the auditor to decide which items to examine and what appropriate procedures to perform. However, McKee and Elifsen (2000, p. 54) caution that choosing the wrong materiality level affects decisions about the nature, extent and timing of the fieldwork and "these decisions, in turn, affect the effectiveness or efficiency of the audit".

At the completion of an audit, the amount of detected misstatements is compared with the assessed 'tolerable misstatement' amount (defined as the amount by which the account or class of transactions can be misstated and not be considered material) (Messier Jr., Martinov-Bennie, & Eilifsen, 2005, p. 205). If the level of detected misstatements is lower than the maximum tolerable level ('materiality' level), auditors do not have to make any audit adjustments, since it is deemed that the detected but unadjusted misstatements would not distort the decision making of financial statement users. This process enables the auditor to determine if the misstatements are material enough to require adjustments to client's books (Messier Jr. et al., 2005). However McKee and Elifsen (2000) raise a concern that the audit standard on 'materiality' does not give guidance on *how* to implement materiality concepts when applying the appropriate audit judgement to evaluating the significance of detected misstatement, although Fogarty, Graham, & Schubert (2006) suggest that the common benchmarks of quantitative measures are net income, revenues and net assets.

Carmichael (2006) states that qualitative considerations *do* influence the evaluation of audit findings, however according to McKee and Elifsen (2000), auditors *prefer* to quantify their materiality judgements. Rogers (2004) observes that financial executives, accountants and auditors routinely apply the 5% and 10 % 'rule of thumb' (that is any value under 5% is considered immaterial, and any value over 10% is considered material). There are authors (Weinstein, 2007; Zuber, Elliot, Kinney Jr, & Leisenring, 1983) who believe that materiality is *essentially* a quantitative consideration of what is important to the presentation of a company's financial statements, principally net income or earnings per share. They consider any matter with no quantifiable effect on current or future financial statements, including the notes and statement of accounting policies, to be outside the scope of the auditor's responsibilities.

There are a number of criticisms against auditors' preference for a quantitative 'materiality level'. The US Securities Exchange Commission (SEC) (1999, p. 1) warns that blindly following a numerical 'rule of thumb' in materiality decisions is clearly not acceptable because "misstatements are not immaterial simply because they fall beneath a numerical threshold". The SEC asserts that company management and auditors need to

also understand client situation and the risks faced by the company which are represented by qualitative considerations in reporting and disclosure decisions (Chewning & Higgs, 2002). Additionally, Burrowes (2006) reports that the US Public Company Accounting Oversight Board (PCAOB) criticises the auditing profession for being too quantitative especially in the judgement field. The PCAOB asserts that evaluating materiality requires an exercise of judgement based on an assessment of what constitutes reasonable assurance under the circumstances, which is not the mechanical application of a predetermined formula. Kranacher (2007), the editor-in-chief of the CPA Journal warns that:

Quantitative measures provide a deceptive sense of comfort, especially for those accustomed to dealing with numbers....the qualitative aspects of a misstatement cannot be disregarded or excused for merely quantitative reasons. The issues behind the numbers often tell us more than the numbers alone. If CPAs ignore these clues, if they set aside their professional judgement, they do so at their own peril (p. 80).

When establishing an acceptable 'materiality level', ICANZ (1998b, AS-304: Audit materiality, paragraph 14 and 15) states that auditors should take into account *qualitative* considerations such as "any legislation or regulation or specific provisions contained in the audit mandate, compliance with authorities, legislative concern and issues of public interest" when establishing an acceptable material level. Also, when assessing a company's exposure to environmental risk, ICANZ (2001, AGS 1010: The consideration of environmental matters in the audit of a financial report, paragraph 4) states that auditors should refer to ICANZ (1998a, AS 208: Considerations of laws and regulations in an audit) which indicates the need for considering environmental laws and regulation pertaining to a company:

[Even though] certain non-compliance with laws and regulations may not have a direct financial effect on the financial report, they may still influence the decisions or assessments of users and therefore be material. The particular characteristics of non-compliance with laws and regulations mean the auditor should, more so than for other "errors", consider the effect of non-compliance on the decisions or assessments of users in terms of both its nature and amount" (ICANZ, 1998a, AS 208: Considerations of laws and regulations in an audit, paragraph 17).

Considering together the requirements in AS-304, AGS-1010 and AS-208, it can be said that when an auditor assesses a company's exposure to environmental risk (which means the risk of material misstatement of the financial report due to environmental matters), the auditor needs to determine the financial statements users' perception of significant environmental laws and regulations affecting the company which may influence their decision making even though they may not have a direct financial effect on the financial report. Fogarty, Graham, and Schubert (2006) further clarify that auditors *should* consider the needs of users as a *group*, not just those of specific individuals. Hence, Chewning and Higgs (2002) suggest that financial statements should disclose information that affect

stakeholder decisions, based on their perceived needs (Gist & Shastri, 2003). The implication is that “if investors believe that more environmental disclosure is necessary to make informed investment decisions, then such information is by definition material” (Rogers, 2004, p. 55). Although AGS-1010 and AS-208 are not explicit on the separate disclosure of environmental matters in the financial report, Gray, Collison and Bebbington (1998) recommend their separate disclosure because they think environmental issues are qualitatively and potentially quantitatively different from all other issues with financial impacts. This is also the recommendation of CICA (1993). In particular Gray et al. (1998) would like to see separate disclosures for (1) fines and penalties for non-compliance with environmental regulations and (2) abandonment/decommissioning costs.

In addition to the observations and comments made by various authors, there is also evidence supporting the materiality of environmental information to users of annual reports. Deegan and Gordon (1996) observe increasing community appeal for environmental information; Tilt (1994) found that environmental groups rely on annual reports to assess the environmental performance of reporting entities; Deegan and Rankin (1997) reason that managers of reporting entities must consider environmental information material to report users because a number of them provide voluntary environmental disclosures. Their survey study also provides evidence that “some groups within society do perceive environmental issues as material to their decision-making processes, and they seek information on environmental matters in the annual report” (Deegan & Rankin, 1997, p. 567). Ingram (1978) and Anderson and Frankie (1980) found that the market reacts to social disclosure.

Thus, the literature indicates that information on environmental matters is material to financial report users in their decision making and as such, AS-208 and AGS-1010 deem environmental matters to be an audit issue of public interest and a material matter of corporate accountability. Nevertheless, little is known about auditors’ perception of environmental matters that exist for some companies and whether they impact significantly on the audit even though they may not have a direct financial effect on financial reporting. What factors are being considered by auditors when assessing the materiality of a company’s exposure to environmental risk is also little known. These issues are being examined in the current research. The next section discusses the theoretical framework and explains its appropriateness for the research study.

4. THEORETICAL FRAMEWORK

It is said that every research effort 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).

The concept of an ‘expectation gap [type] II’ (Specht and Waldon, 1992) appears to provide the appropriate lens for the observed phenomenon for this research study. The following sections start with a general discussion of ‘the audit expectation gap’ and then focus particularly on ‘the expectation gap II’.

The audit expectation gap

‘Audit expectation gap’ is used to describe the difference between public’s expectation of auditors and the auditors’ actual performance (Gray & Manson, 2005). However, its definition somewhat varies according to authors. Humphrey (1991, p. 7) defines ‘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”. On the other hand, he indicates that ‘the expectation gap’ can also be more narrowly defined as ‘a role-perception’ gap, that is a comparison of what users expect auditors to be capable of compared with a predetermined notion of what is reasonable to expect auditors to provide. This may be caused by ‘an ignorance gap’ which can at least be narrowed by educating users. The debate on ‘the expectation gap’ has been around for more than one hundred years (Humphrey, Moizer, & Turley, 1992), and most of the studies focussed on the expectations of financial statement users and auditors’ actual performance. Monroe and Woodliff (1994) define ‘the expectation gap’ more narrowly as the difference in beliefs between auditors and the public about the duties and responsibilities assumed by auditors and the message conveyed by audit reports. Jennings, Kneer and Reckers (1993) however, define ‘the expectation gap’ as the difference between what the public expects from the auditing profession and what the profession actually provides whilst Porter (1993) defines ‘the expectation gap’ as the gap between society’s expectations of auditors and auditors’ performance as perceived by society. It is important to note that for all these studies, the two parties involved are the auditors and the stakeholders or the general public.

Specht and Waldon (1992) examine auditors’ perceptions of the effectiveness of the ‘expectation gap standards’ with respect to their stated and overall objectives in reducing the gap between public expectations and the perceptions of auditors with respect to auditors’ roles and responsibilities in conducting financial statements audits in regards to: (1) addressing public concerns regarding detection of errors, irregularities and illegal acts, (2) assisting auditors in planning more effective audits, (3) improving external auditor communications and (4) improving internal communications. The study was based on the perception that “those [auditors] who must implement the standards will almost always influence the outcome” (Specht & Waldon, 1992, p. 88). Specht and Waldon (1992, p. 88) further explain that “individuals often behave in ways that insure that their expectations will be fulfilled”. The study found “a significant gap in existence between what the ‘expectation gap standards’ were intended to accomplish and auditors’ perceptions of what the standards will accomplish” (Specht & Waldon, 1992, p. 90). Hence, Specht and Waldon (1992, p. 90) suggest the presence of a previously unrecognised “audit expectation gap” which is “one between those responsible for formulating auditing directives [such as the ‘expectation gap standards’] and those responsible for implementing such directives, the auditing community”. They call this phenomenon an ‘expectation gap II’ and the gap between the expectations of financial

statements users and auditors an 'expectation gap I'. The distinguishing difference is that the 'expectation gap I' focuses on comparing the expectations of *financial statement users* and the auditors whilst 'expectation gap II' focuses on comparing the expectations of *standard setters* and the auditors.

Over the last two decades, various empirical and experimental studies have confirmed the existence of an 'expectation gap' between the auditing profession and financial statement users (Best, Buckby, & Tan, 2001; Dixon & Woodhead, 2006; Fadzly & Ahmed, 2004; Humphrey, Moizer, & Turley, 1993; Monroe & Woodliff, 1994; Porter, 1993) and also the public sector and audit report users (Chowdhury & Innes, 1998). Some of the major issues associated with the audit expectation gap include: auditor independence; the definition and role of an audit; auditor responsibility and accountability; skill and competency of auditors; and scope and quality of audit work (Humphrey, 1991). These studies suggest that audit performance is not in accordance with the wishes of those on whose behalf the audit is performed (Humphrey et al., 1992; Humphrey et al., 1993).

Simunic (1994) suggests that the profession's issue of guidance on the consideration of environmental matters in the audit of a financial report is in response to the expectation gap between auditors and financial statement users (i.e. the 'type I' gap). Other commentators have identified technical competencies, precise responsibilities of auditors; the limits of audit function, the adequacy of audit standards and the quality of audit delivery as issues central to the debate on the expectation gap (i.e. the 'type I' gap) (Humphrey et al., 1992; Swift & Humphrey, 2000). These issues are further complicated by Hines' (1989) argument that audit work is based not only a body of auditing knowledge, but also on claims or at least the appearance of auditing knowledge embodied in audit standards and guidance statements.

Eleven years after Specht and Waldon (1992) identified the so-called 'expectation gap II', Specht and Sandlin (2003) confirm its continuing existence between standard setters and practicing auditors. Specht & Waldon (1992) and Specht and Sandlin (2003) 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 audit standard or guidance may be successfully implemented. Likewise, auditor perception of a low probability of success may result in decreased motivation and effort toward implementation of the audit standard or guidance (Specht & Waldron, 1992). The current study aims to determine if there is an 'expectation gap II' between standard setters and auditors regarding the implementation of AGS-1010 and the audit of environmental matters in New Zealand financial reports. The next section discusses the research method.

5. THE RESEARCH METHOD

This research 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 auditors 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 proved to be a time consuming activity. Often auditors could not be reached because they were at the client's office, or at some meeting and could not be disturbed. Instead the researcher was often referred to the auditor's 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. 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 assurances 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 were 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 then transcribed for data analysis.

Data analysis for this study was informed by a range 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. First, all the transcription documents (saved as MSWord documents) were imported into the NVivo7 project platform ready for coding. Second, 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 interview findings on the research topic. The confidentiality of the auditors was assured. Hence to preserve their anonymity, in the next section when quoting the auditors, they are 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. THE INTERVIEW FINDINGS

The literature reviewed (Deegan & Gordon, 1996; Deegan & Rankin, 1997; Tilt, 1994) indicate that environmental matters are material to financial statement users; deemed to be an audit issue of public interest and a material matter of accountability. However, little is known about the factors auditors take into consideration when assessing the materiality of a company's exposure to environmental risk. The findings from the interviews on this little known research issue are being reported in the following paragraphs.

A majority of the interviewees predominantly assessed the 'materiality' of an issue in relation to the financial impact on financial statements, for example:

'Materiality' is in respect of the financial impact on the financial statements. I don't think an auditor can give an opinion on anything but the financial statements [AP 2].

An interviewee explained the assessment of materiality further:

I think if there is a direct major pollution issue, you don't need to be a rocket scientist to figure out that there's an oil spill on land and that it is leaching through. You pretty much have to insist that the client makes the effort to quantify it and then the auditor would check to see what the quantification was. For example, I've audited a dairy company which had issues with discharge of milk into a river. They had holding pens up against a river bank. Effluents leaked into a river and the company had issues with the local environmental council, which exposed them to fines. That was approximately 8 years ago and the fines were not that significant as far as the audit was concerned. If that company was to pollute the river again, and if I was to be auditing the company now, I'd probably look more closely at it because the scope of the fines has increased quite dramatically, and therefore the risk to the client is greater [AM 1].

Many of the interviewees also felt very strongly that environmental matters *must* be quantifiable before an opinion is given on them:

Environmental matters must always be quantified if an audit opinion is to be given on them, because in a narrow sense the auditors specify only the pages in the financial report. Hence, if I couldn't quantify it, some expert out there would need to quantify it [AP 2].

In fact, a number of the interviewees tended to agree with management's practice that unless environmental matter is quantifiable, it would not be considered for audit reporting purposes:

Company directors are quite correct in saying, "well, if you can't quantify, what the heck are you fiddling around with it for audit reporting?" [AM 10].

A number of the interviewees indicated that they felt no urgency to verify environmental matters and risk unless they have a 'material' financial impact on financial reporting:

Well unless there's a financial impact for such matters, as things stand now there's little to push auditors to look at those things explicitly [AM 20].

AFFCO [a meat processing company which polluted a river in South Auckland by discharging the off-cuts from the processed meat into the nearby river instead of building a waste treatment plant] was fined five million dollars, yet in terms of their balance sheet and profit and loss account, if the fine means absolutely nothing in terms of materiality we would not bother with it [AM 11].

All of the interviewees (who are also financial auditors) also indicated that they would delve into any non-compliance with environmental legislation only if the non-compliance has a material financial impact on the financial report:

If there's no legislative requirement it's going to be hard to quantify it and it would be hard to convince the client that it should be disclosed [AM 20].

If we think an entity is not complying with a piece of legislation we'd let the company know through the management report. However, generally non-compliance with environmental laws wouldn't have a material impact on the accounts unless it had a significant financial obligation [AM 20].

However, the interviewees felt that quantifying environmental matters is challenging, as it depends on co-operation by the client and whether the benefit in doing so outweighs its cost:

There are problems you know. How do you quantify it [environmental matters]? Is the client willing to quantify it? Do you go to the trouble of quantifying it? [AM 1].

If the company land is poisoned, it is very difficult to determine the impact; to assess and measure the materiality of its impact and how it can be measured in financial terms or even provide for it [AM 14].

Nevertheless, a considerable number of the interviewees seemed comfortable working with *quantifiable* information; hence their concern is whether they are able to turn *qualitative* environmental information into *quantifiable* information:

The challenge is definitely in being able to measure these things [environmental matters] and actually turn qualitative information into quantitative dollars and cents [AP 2].

An interviewee who is also a retired audit partner and an audit practice reviewer reflected on the position succinctly. In the interviewee's view, in the earlier days of their professional life, most young auditors would only consider materiality as a '*quantitative*' assessment but as they mature with age and experience, they begin to realise the importance of '*qualitative*' factors in the assessment of materiality:

After many years of managing and also reviewing junior auditors' work, I find that to get them out of the notion that materiality is a '*quantitative* measure' is quite hard work. They grow up eventually, but it takes a little while. I also have to put my hand up. While I was a trainee accountant many years ago, I also assessed materiality '*quantitatively*'. Assessing materiality '*qualitatively*' comes with experience and understanding the nature of information. It's hard though as a partner because I've had to argue with clients about disclosures and they'll say "*well it's not material*" [APR 18] [emphasis added].

The audit practice reviewer further explains that although the assessment of materiality can probably be based on quantitative factors, the explanations for the assessment varies from none to something quite elaborate. None the less, the audit practice reviewer indicated that a significant qualitative factor that impacts the assessment of materiality is actually an understanding of *who* the readers are and *what* matters to them:

As I review other auditors' files, I would say that at least a third don't have anything written down at all and the others range from writing down a number with no explanation to sometimes quite elegant assessments of how materiality should be assessed. So there's a very wide range there. Nevertheless, the more experienced auditors do have an unwritten sense of what is material. For some of them it's still very much based on '*quantitative* factors', for others though, materiality is based on both '*qualitative* and *quantitative* factors' which is simply a case of understanding who the readers are and what matters to them [APR 18] [emphasis added].

On the other hand, interviewees who are public sector auditors have a very different perspective to their materiality assessment of an entity's exposure to environmental risk, which is not only based on quantifiable information. It is based more on what is significant to the *users* of financial statement; what is *their* perception of materiality:

No, if you can't quantify the environmental risk, that wouldn't make it immaterial. Materiality is linked to the impact, which is linked to the users of the financial statement. So if we thought that non-disclosure of an environmental matter would impact a user's decision making, then we might consider that it should be disclosed. Certainly when it comes to rate payers [for example], they should have certain points of view about the environment and we would consider their perception of materiality [AM 20].

The public sector auditors explained that they consider environmental matters as essentially non-financial information, thus their assessment of environmental risks is not wholly concentrated on the financial aspect. In fact, the assessment is extended to include public risk, health risk and safety risk factors:

I see information on environmental matters as non-financial reporting, and we use a different kind of materiality assessment for non-financial information. Our materiality assessment takes into consideration public risk and safety risk; these are not financial risk. For example, if anything leaked into the water system, it's unsafe to drink the water. Council needs to meet the requirements of the health standards by ensuring that the water is safe for drinking and we should be able to assess the cost to meet health standards in order to safeguard the interest and wellbeing of the consumers. So when you assess the risks exposure, it's no longer materiality; it's high public risk exposure that is the consideration. That means you have to concentrate on the exposure to high public risk. That is a major risk from the [public sector] auditor's perspective and so we need to make sure that the client report properly. Even if the figures are out by 0.1 %, it is still a big deal because the public is at risk, because the water is polluted. Hence we don't concentrate just on the financial aspects, but also the high public risk, health risk and safety risk factor [AM 22].

Regardless of whether the materiality assessment is based on qualitative or quantitative factors, the interviewees stressed that practical auditing is very much based on professional judgement, imagination and common sense; and there are many possible solutions to consider:

The audit approach just gives you guidelines to audit but practical auditing is based on professional judgement, imagination and common sense [AM 22].

You make a judgement call based on knowledge and audit experience, but how far can you make that call and hope that you got it right? [AP 2].

The following paragraphs summarise and analyse the main interview findings from the preceding paragraphs. They also discuss their implications for audit practice.

7. DISCUSSIONS AND CONCLUDING REMARKS

The interview findings indicate that most auditors determine acceptable levels of 'materiality' by evaluating financial considerations. The findings also indicate that auditors are more comfortable working with *quantifiable* information. Hence they have a preference for quantifiable information on environmental matters and thus are concerned whether they are able to turn *qualitative* environmental information into *quantifiable* information. Thus the general perception among auditors is that if environmental matters cannot be quantified then it is considered immaterial, does not warrant separate disclosure and does not need to be verified. Similarly, the interview findings also indicate that auditors would investigate non-compliance with environmental legislation *only if* the non-compliance has a material financial impact on the financial report. Hence most of the interviewed financial auditors reasoned that oftentimes they do not investigate the fines and penalties imposed on New Zealand companies for breaching environmental laws (which are typically less than NZ \$100,000) because they are considered immaterial when the quantitative 'rule of thumb' is applied. The implication is that auditors are generally not complying with AS-304: *Audit Materiality* which requires auditors to consider the *nature* of the item or transaction when judging materiality; and with AS-208: *Considerations of Laws and Regulations in an Audit*, which states that in addition to the amount, the *nature* of non-compliance with laws and regulations should be considered. Even if they do not have a direct financial effect on the financial report by its nature, the non-compliance may still influence the decisions of users and therefore is material.

Various authors (Burrowes, 2006; Chewning & Higgs, 2002; Kranacher, 2007) have criticised auditors' dominant focus on financial considerations when determining acceptable levels of 'materiality' and the findings from this study confirm the validity of these criticisms. Since the interviewed financial auditors have a preference for quantifiable environmental matters, they may easily overlook qualitative information on environmental matters which may influence the evaluation of audit findings. Besides, it is not always possible to use a purely quantitative basis to decide whether an item is material, because the emission of a small amount of toxic substance (for example dioxin or mercury) can be material to the receiving environment (Blokdiik & Drienuizen, 1992). Thus, reliance on a numerical threshold when assessing materiality may result in under-auditing or no auditing of environmental matters. In reality, *qualitative* considerations are just as important as quantitative considerations especially for environmental matters and therefore should not be neglected because the issues behind the numbers often reveal more information than just the numbers alone (Kranacher, 2007). Also, relying on quantitative measures indicates that auditors are setting aside their professional judgement and may be missing important clues indicated by qualitative aspects (Kranacher, 2007).

Of greater significance is the requirement in AGS-1010 for auditors to treat environmental matters in terms of 'provisions, contingent liabilities and contingent assets'. According to NZ IAS 37, a contingent liability only has to be a *possible* or *probable* obligation; no *monetary* obligation is required as oftentimes the amount is uncertain. Hence, even if environmental matters are not readily quantifiable, they should still be considered as contingent liabilities and thus be disclosed in the notes to the

accounts. Therefore, the comments made by a number of the auditors (not to bother with 'unquantifiable' environmental matters) indicated that the auditors' interpretation and perception of the materiality assessment would fundamentally preclude them from even considering environmental matters as contingent liabilities, which must be disclosed in the notes to the accounts. This is perhaps the most fundamental factor impairing the consideration of environmental matters in the audit of financial reports.

Being so financially focussed also implies that financial auditors had not considered the public interest, or the influence that environmental matters may actually have on financial report users' decision making (Deegan & Rankin, 1997). On the other hand, the interview findings indicate that public sector auditors tend to determine the acceptable level of 'materiality' in terms of what is considered as *significant to the users* of financial statement; that is *the users'* perception of materiality. Also, their assessment of environmental risks takes into consideration public risk, health risk and safety risk factors, in addition to financial risk factors.

Thus, it appears that public sector auditors are better fulfilling their role and position in society than their financial auditor colleagues. They also seem more diligent in searching out omitted environmental matters and verifying its validity, accuracy and completeness of the information on environmental matters. However, their environmental matters-conscious mentality is being driven by the legislative mandate imposed by the Local Government Act 2002. Hence, to bring about the same awareness in financial auditors may require a legislated mandate; this suggests that AGS-1010 should be changed from a guideline to an audit standard.

Since McKee and Elifsen (2000) have cautioned that the audit standard on 'materiality' does not give guidance on *how* to implement materiality concepts in general audit practice, it is not surprising that the research findings reveal a variety of practices in determining the acceptable level of 'materiality'. These interview findings provide evidence of the existence of an 'expectation gap [type] II' (Specht, 1992; Specht & Sandlin, 2003). However further research is required to investigate the cause(s) for the 'expectation gap II' and what might be done to bridge that gap.

Since 'materiality' considerations are overarching and the fundamental driving force of an audit, a useful way forward would be to develop specific accounting standards that override the traditional 'materiality test', and that require disclosure of particular items regardless of the quantum involved. A similar prescription could be developed for environmental matters.

In sum, this paper has examined audit materiality and environmental matters in financial reports, based on interviews with twenty-seven senior financial audit practitioners in New Zealand. The significant findings from the research interviews are (1) the auditors' interpretation and perception of materiality criteria would fundamentally preclude them from even considering environmental matters as contingent liabilities, (2) a legislative mandate may be required to raise the awareness of, and focus on, environmental matters by financial auditors to the level presently evident amongst public sector auditors; (3) the interview findings provide evidence of the existence of an 'expectations gap II'. However

further research is required to investigate the cause(s) for 'expectation gap II' and what might be done to bridge the gap.

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