

# AUDIT MATERIALITY AND ENVIRONMENTAL MATTERS

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### ABSTRACT

**Purpose** – This paper examines the issue of audit materiality in regard to the disclosure of environmental matters in financial reports. Its purpose is to reveal auditors’ views and practices when judging the materiality of environmental matters. It also highlights implications for how environmental matters are audited and for the reliability of financial reporting by firms whose activities may generate adverse environmental effects.

**Design/methodology/approach** – In-depth, semi-structured interviews were conducted with twenty-seven senior public and private sector financial auditors in New Zealand.

**Findings** – The findings reveal that auditors’ interpretations of materiality criteria tend to preclude them from considering environmental matters in their audits. This contributes to a ‘type II audit expectation gap’ – i.e. a gap between the expectations of standards setters and the practices of auditors (Specht and Waldron, 1992) – which impedes the achievement of appropriate, independent assurance on environmental matters in financial reports.

**Originality/value** – This paper is the first to draw on interview evidence from auditors to examine how they deal with the issue of materiality in regard to this important, emerging aspect of audit practice.

**Research limitations/implications** – This study was conducted in a New Zealand context only. However, since auditors’ duties are similar the world over, the findings point to general avenues for promoting improved practice in regard to the audit of environmental matters.

**Paper type** - Research paper

**Key words** - audit materiality, environmental matters, financial audits, audit expectation gap, auditing profession

## INTRODUCTION

Professional judgement around the assessment of materiality lies at the core of audit practice (Iskandar, 1996). Determining materiality presents a challenge for auditors, however, particularly where a firm's business activities produce effects that are difficult to quantify in financial terms (De Martinis and Burrowes, 1996; Holder, Schermann, Whittington and Blossom, 2003; Stout, 2001). In this paper, we examine how auditors are exercising their professional judgement in regard to materiality in the context of an emerging aspect of their role – the audit of environmental matters in financial reports.

There is increasing recognition that the environmental impacts of a firm's business activities are of interest to its stakeholders (de Villiers and van Staden, 2007; Deegan and Rankin, 1997; Gibson and O'Donovan, 2007; Marshall, Brown and Plumlee, 2007). It has also been noted that, since corporate environmental reports are not independently audited in the same way that financial reports are, they provide limited organizational transparency, assurance and empowerment to stakeholders (Ball, Owen and Gray, 2000). The audit of representations on environmental matters in financial reports is the only independent assurance that stakeholders can rely on, therefore.

Yet, there has been little examination of this aspect of audit practice. Although guidance statements such as the International Auditing Practice Statement (IAPS) 1010: *The Consideration of Environmental Matters in the Audit of Financial Statements* exist to direct the practising auditor, little is known of how financial auditors think and act when applying their professional judgement to auditing firms whose activities may give rise to environmental matters. A key aspect of this professional judgement is the need to assess materiality. An auditor's greatest concern is to ensure that no material misstatement, omission or non-disclosure remains undetected by audit procedures, since this could result in an inappropriate audit opinion. Discerning a suitable audit materiality level is crucial to the efficacy of the audit, therefore. But, it presents a challenge in regard to environmental matters whose effects are often difficult to quantify.

The dual aims of this paper are (i) to examine auditors' perspectives and practices around adjudging materiality in the audit consideration of environmental matters, and (ii) to reflect on the implications for how audits of environmental matters are carried out, and what this means for the reliability of financial reports from firms whose activities may generate adverse environmental effects. The significance of these issues for audit practice is outlined next.

## ENVIRONMENTAL MATTERS: THEIR SIGNIFICANCE IN AUDIT PRACTICE

Greater publicity and heightened awareness have made the public less tolerant of environmentally destructive business practices. Such practices - contaminating soil or water, polluting the air, using hazardous substances, generating or processing hazardous waste, or engaging in any other activities that may adversely impact customers, employees or neighbouring communities (ICANZ, 2001, paragraph 21<sup>1</sup>) - are adverse business outcomes that many stakeholders want to see disclosed (Bewley, 1993; de Villiers and van Staden, 2007; Deegan and Rankin, 1997; Gibson and O'Donovan, 2007; Marshall *et al.*, 2007).

This concern for environmental issues presents an emerging challenge for the accounting profession (Dixon, Mousa and Woodhead, 2004; Herath, 2005). Internationally, accounting professional bodies acknowledge that environmental concerns have resulted in changes to business practices which in turn impact the accounting profession (Gray, 1990; Bebbington and Gray, 1990; Collison and Slomp, 2000). The Institute of Chartered Accountants in England and Wales (ICAEW), for example, has noted that environmental issues may impose costs on a company or affect its asset values or liabilities (actual or

contingent), so their financial consequences “need to be accounted for or reported” and “cannot be ignored by auditors” (ICAEW, 1992, p.3; ICAEW, 2000, p.1).

Likewise, academic commentators have for some time recognised that environmental matters are critical to the economic functioning of entities whose activities impact the environment. Their potential effects span various aspects of accounting, including: contingent liabilities, provisions, reserves, valuation of fixed assets and depreciation policy (Collison and Gray, 1997; Collison *et al.*, 1996; Gray *et al.*, 1998; Gray and Bebbington, 2000). They can also quickly lead to serious going concern issues. While it is usually assumed that an entity will survive beyond the short term, those whose activities significantly affect the environment may encounter serious, adverse consumer or investor reaction (Miller and Quinn, 1998) or, if sanctioned by law, may face closure. “Environmental matters are important accountability issues” (Fiedler and Lehman, 1995, p. 196) therefore, with significant implications for financial reporting (Blodjijk and Driehuisen, 1992; Browning, 1994; Cornell and Apostolou, 1991).

This emerging responsibility for recognising and reporting environmental matters considerably broadens the scope of the financial auditor’s duty of care (Bewley, 1993; Dixon *et al.*, 2004). Where environmental matters are significant for a reporting entity, auditors should be aware of their impact on financial statements (Billing *et al.*, 1994; ICAEW, 2000). A company whose business impacts negatively on the environment may be liable for fines and the 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 (Chadick *et al.*, 1993; Gray, 2000; Gray and Bebbington, 2000; Gray *et al.*, 1998; Huizing and Dekker, 1992).

The special challenges of auditing environmental matters were seen to warrant specific guidance on auditors’ professional duties and how to apply relevant accounting standards for this purpose. At the international level, this direction was provided by International Auditing Practice Statement (IAPS)-1010: *The Consideration of Environmental Matters in the Audit of Financial Statements*. In New Zealand, the context for this study, an adapted version of IAPS-1010 was released to guide the nation’s auditors, as outlined next.

### **The Consideration of Environmental Matters: Guidance for New Zealand Auditors**

New Zealand’s AGS-1010 *The Consideration of Environmental Matters in the Audit of Financial Statements* is, apart from some minor changes to wording, identical to IAPS-1010. When the New Zealand Institute of Chartered Accountants (then ICANZ) Professional Practice Board promulgated this Audit Guidance Statement in 2001, it stated:

[AGS-1010’s] 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, paragraph 10b)

The AGS-1010 definition of “environmental matters”, employed for the remainder of this paper, includes:

- Initiatives to “avoid, remedy or mitigate any adverse effects of activities on the environment” or to conserve 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
- Consequences of vicarious liability imposed by law (for example, liability for damages caused by previous owners).

(ICANZ, 2001, paragraph 10b)

AGS-1010 requires New Zealand auditors to factor environmental considerations into their audit planning and procedures when verifying the truth and fairness of a company’s financial report (ICANZ, 2001, paragraph 10b). It warns that significant environmental matters may give rise to a risk of material misstatement (including inadequate disclosure) in the financial report, and notes the duty of the auditor to consider whether the effects of environmental matters are adequately treated or disclosed (ICANZ, 2001, paragraphs 2 and 55).

AGS-1010 also observes that environmental matters are a challenging aspect of audit practice, since they “can be complex and may therefore require additional consideration by auditors” (ICANZ, 2001, paragraph 3). In light of this acknowledged complexity, we might expect the audit consideration of environmental matters to be a widely discussed contemporary topic. However, the New Zealand academic and professional literature contains only two articles in 2001 and none in the years that followed AGS-1010’s promulgation (Author 1, 2005). New Zealand auditors are apparently silent on their responsibility for considering environmental matters in financial audits.

This paper focuses on the issue of audit materiality as it relates to environmental matters in financial reports, since discerning an appropriate materiality level is crucial to the efficacy of the audit but can necessitate difficult professional judgements. Next we turn to the literature on key issues around assessing audit materiality as context for examining how this concept is applied to environmental matters.

## **PROFESSIONAL JUDGEMENT ON MATERIALITY**

The cornerstone of auditing is auditors’ professional judgements (Gray *et al.*, 1991; Bell *et al.*, 1997; Hatherly, 1999), with decisions on ‘audit materiality’ perhaps the most fundamental of these (Iskandar, 1996). The auditor’s greatest concern is the possibility that audit procedures may fail to detect a material misstatement, omission or non-disclosure (‘detection risk’), thus exposing the auditor to the risk of expressing an inappropriate audit opinion (‘audit risk’). The New Zealand Auditing Standard ISA (NZ) - 320 *Materiality in Planning and Performing an Audit* notes that materiality concerns the assessment of whether omission, misstatement or non-disclosure of relevant information could affect the perceptions of financial report users (NZICA, 2009d, paragraph 10).

In developing the audit plan, an auditor must establish an acceptable materiality level to enable the detection of material misstatements in the financial report (NZICA, 2009e). This in turn enables the auditor to decide which items to examine and what appropriate procedures to perform. 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 *et al.*, 2005, p. 156). If the level of detected misstatements is lower than this materiality level, auditors do not have to make any audit adjustments to the client's books, since it is deemed that the detected but unadjusted misstatements would not distort the decision making of financial statement users (Roberts and Dwyer, 1998).

McKee and Elifsen (2000) note that auditors generally prefer to quantify their materiality judgements, a view supported by Rogers' (2004) observation that auditors routinely apply a 5% and 10 % 'rule of thumb' - that is, any value under 5% is considered immaterial, and any value over 10% is considered material (see also: Zuber *et al.*, 1983; Carpenter and Dirsmith, 1992; Libby and Kinney Jr, 2000; Braun and Dutta 2001; Nelson *et al.*, 2002; Fogarty *et al.*, 2006; Weinstein, 2007). However, McKee and Elifsen (2000) raise a concern that audit standards on materiality provide no guidance on *how* to operationalize materiality concepts. Certainly, quantitative benchmarks offer little assistance to audit judgements concerning less easily quantified business outcomes (such as environmental matters), so qualitative considerations should still influence the evaluation of audit findings (Carmichael, 2006).

Indeed, criticisms have been levelled at auditors' preference for a quantitative materiality level. The US Securities Exchange Commission (SEC) 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" (Illiano, 1999, p. 64). The SEC asserts that company management and auditors need to also understand the client's situation and the risks faced by the company, which are represented by qualitative considerations in reporting and disclosure decisions (Chewning and 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 regard to audit judgements. 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, p. 80), the editor-in-chief of the CPA Journal, warns:

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.

Consistent with International Auditing Standard *IAS-320 Audit Materiality*, the New Zealand standard *ISA (NZ) - 320 Materiality in Planning and Performing an Audit* states that auditors should not just apply metrics, but should also 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 materiality level (NZICA, 2009d, paragraphs 6,2 and 2009e, paragraph 6). Also, when assessing a company's exposure to environmental risk, *AGS-1010 The Consideration of Environmental Matters in the Audit of a Financial Report* (ICANZ, 2001, paragraph 4) directs auditors to *ISA (NZ)-250: Consideration of Laws and Regulations in an Audit of Financial Statements* (NZICA, 2009b). This audit standard notes that non-compliance with laws and regulations may influence the decisions of report users, even though it may not have a direct effect on the financial report. The standard then instructs auditors to "consider the effect of non-compliance on the decisions or assessments of users in terms of both its nature and amount" (NZICA, 2009b, paragraph 6). This means that, where a firm's activities impact the environment, the auditor should be concerned about detecting material environmental matters, even where they are not easily quantified.

The combined requirements of ISA (NZ) - 320, AGS-1010 and ISA (NZ) -250 mean that a New Zealand auditor needs to consider financial statements users' perceptions of environmental matters and regulations that may influence their decision-making. Further, the international audit literature is clear that financial statements should disclose any information that stakeholders perceive as relevant to their decision making (Chewning and Higgs, 2002; Gist and Shastri, 2003; Fogarty *et al.*, 2006) and 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). Certainly, there is evidence that such environmental information *is* perceived as material by report users (de Villiers and van Staden, 2007; Deegan and Rankin, 1997; Gibson and O'Donovan, 2007; Marshall *et al.*, 2007; Tilt, 1994).

In summary, New Zealand auditors have a clear duty to consider the disclosure of relevant environmental matters in financial reports. Since environmental matters may be material to stakeholders, ISA (NZ)-250 and AGS-1010 direct that they be considered as an issue of public interest and a material matter of corporate accountability. Further, the fact that environmental matters are difficult to quantify should not exclude them from consideration. Little is known about auditors' perceptions and practices around environmental matters, however. Do environmental matters impact the audit? What factors are considered by auditors when assessing the materiality of a company's exposure to environmental risk? The theoretical framework used to inform our examination of these issues is outlined next.

## **THEORETICAL FRAMEWORK: THE AUDIT EXPECTATION GAP**

The term 'audit expectation gap' (AEG) is used to describe the difference between the public's expectation of auditors and auditors' performance (Gray and Manson, 2005). Several studies have confirmed the existence of such an AEG between the auditing profession and financial statement users (e.g., Best *et al.*, 2001; Dixon and Woodhead, 2006; Fadzly and Ahmed, 2004; Humphrey *et al.*, 1993; Monroe and Woodliff, 1994; Porter, 1993) and also between public sector auditors and audit report users (Chowdhury and Innes, 1998).

The definitions of the AEG however vary considerably. Porter (1993, p. 50) defines the AEG as "the gap between society's expectations of auditors and auditors' performance, as perceived by society". Here, the evaluation of auditors' performance depends on society's perceptions rather than the actuality of audit practice. An alternative view is offered by Sikka *et al.* (1998, p. 299) who claim the AEG signifies "the differences between what the public expects from an audit and what the auditing profession prefers the audit objectives to be". In this definition, the perceptions of the audit profession are considered, but in terms of audit *objectives* rather than practices or outcomes. In contrast, Jennings *et al.* (1993) define the AEG as the difference between what the public expects from the auditing profession and what the profession actually provides. This definition focuses on actual audit outcomes, rather than perceived outcomes or preferred objectives. In a further variation, the AEG has been described 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 (Koh and Woo, 1998; Monroe and Woodliff, 1994). This definition takes account of the perceptions of practising auditors, rather than those of society or the profession at large. It closely mirrors Liggio's (1974) original view that the AEG reflected different levels of expectation "as envisioned by the independent accountant and by the user of financial statements" (where the latter can be equated to 'society' or 'the public' in other definitions). In sum, definitions of the AEG vary according to whose perspective of auditors' performance is taken (that of society, the profession, or practising auditors) and how audit 'performance' is conceived (audit objectives, auditors' duties and responsibilities, or the outcomes of audit practice).

The literature also reflects attempts to deconstruct the overall AEG. One approach has been to divide it into two components: the ‘standards gap’, i.e. the part attributable to deficient auditing standards (CICA, 1993); and the ‘performance gap’, which results from actual or perceived shortcomings in auditor performance (De Martinis and Burrowes, 1996). Porter took a different approach, proposing that the AEG comprised three elements: deficient standards, deficient performance, and society’s unreasonable expectations of auditors (Porter, 1993). Of most relevance to this study is the element of the AEG concerned with the mismatch between (i) the expectations laid out in accounting standards and guidelines and (ii) the day-to-day practices of auditors.

We explore this under-researched area by drawing on the AEG perspective proposed by Specht and Waldron (1992) and Specht and Sandlin (2003). These authors refer to the overall AEG – that is, the gap between the expectations of financial statement users and practising auditors – as the “Expectation Gap I” (Specht and Sandlin, 2003). They then highlight a previously unrecognised audit expectation gap, which is “one between those responsible for formulating auditing directives ... and those responsible for implementing such directives, the auditing community” (Specht and Waldron, 1992, p. 90). They argue that this “Audit Expectation Gap II” (hereafter AEG-II) warrants further empirical investigation because “those [auditors] who must implement the standards will almost always influence the outcome” (Specht and Waldron, 1992, p. 88). This AEG-II is similar to Porter’s (1993) ‘performance gap’ in that it focuses on how well auditors implement the duties and responsibilities placed upon them. However, it differs from Porter’s conception because the AEG-II concept compares auditors’ duties (as defined by legal requirements and standard-setters) with actual audit practices, rather than with society’s perceptions of auditors’ performance.

This is an important distinction, because the AEG-II recognises the importance of the practising auditor in interpreting and operationalizing auditing rules and guidance. An auditor’s failure to operationalize them appropriately may be due to a lack of skill or competency, or problems with the scope and/or quality of audit work (Humphrey, 1991). In addition, Specht and Waldron (1992) and Specht and Sandlin (2003) assert that the implementation of audit standards and guidance statements depends on auditors’ perceptions of the efficacy of the promulgations. If auditors expect a low probability of success, this may result in decreased motivation and effort toward implementing an audit standard or guideline (Specht and Waldron, 1992). It is important to understand the perceptions of auditors when examining the AEG-II, therefore.

This study examines whether an AEG-II exists between New Zealand standard setters and auditors regarding the evaluation of audit materiality for environmental matters in financial reports. This is achieved by contrasting the two key positions suggested by the AEG-II concept: the guidance promulgated by standard-setters; and auditors’ reflections on their own practices. The next section outlines our approach to this study.

## **METHODOLOGY AND METHOD**

As noted, the guiding theoretical concept of the AEG-II points to the importance of accessing the perceptions and experiences of practising auditors in order to contrast these with the expectations reflected in professional standards and guidance.

A qualitative, naturalistic inquiry approach (Lincoln and Guba, 1985) was appropriate for eliciting auditors’ thoughtful reflections on how they perceive audit materiality in regard to environmental matters. The research evidence was gathered from face-to-face interviews with practising auditors, therefore. A semi-structured interview guide was prepared (see the Appendix), comprising questions about the core



research themes (Patton, 2002) of auditors' *perceptions* of issues and challenges in auditing environmental matters and their *practices* related to assessing audit materiality. During the interviews, further prompt questions were used to encourage interviewees to expand on their answers and to provide examples where they had faced decisions on audit materiality.

Twenty-seven senior audit practitioners from three New Zealand cities agreed to participate (see Table 1). All were chartered accountants and members of NZICA with access to AGS-1010. Audit partners and managers were selected for interview because they usually plan audits and manage audit clients. The interviews were conducted in June to December 2005 and lasted on average one hour. All the interviews were taped with the consent of the participant (subject to confidentiality assurances) and later transcribed for analysis purposes.

[Insert Table 1 here]

Data analysis was informed by a range of literature (e.g., Appleton, 1995; Burnard, 1991) but focussed on the work of Miles and Huberman (1994). The process of analysing data began when the researcher read and re-read the text of the interview transcripts while listening to the interview tapes. During this time, data that did not add meaning or value to the analysis were removed. All the data from each question were gathered together and then coded, initially using preset categories and then with emergent categories as these became apparent. The preset categories were preconceived themes and concepts that formed the focus of the research. They provided direction as to for what to look for in the data. The emergent categories arose from the data and were defined after working with it. They were themes or issues that recurred in the data which had not been previously identified; they became new categories which were added to the preset categories. The interview transcripts were then completely re-read to ensure the data were appropriately interpreted and coded, given the context in which they arose.

The task of data analysis is reflective, subjective and iterative. After the first coding was completed, the data was returned to and re-coded to ensure consistency. As the data were organised into categories, themes and connections were observed both within and across categories. These themes and connections were then interpreted and the interpretations used to explain and communicate the research findings. Reflecting on the research findings also illuminated connections with the relevant literature and the guiding theoretical concepts related to the AEG-II.

NVivo 7, a computerised qualitative data analysis software programme was used to manage the data analysis process. All the transcription documents were imported into NVivo7 ready for coding. Nodes (or 'empty containers') were then created for the preset categories and emergent categories. Each node was labelled and given a description to ensure consistent coding. As each transcription was read, words or phrases or paragraphs that seemed significant were coded to the appropriate nodes. Once coding of the transcription documents was complete, coding reports were made for finding texts from all the transcription documents that were coded at the selected nodes. These coding reports were examined for patterns, themes and connections both within and across categories, which were then analysed and interpreted to form the basis for the research findings and theorising.

The next section reports and discusses the interview findings. To preserve their anonymity, the participating auditors are referred to according to their sectors (as per Table 1) and their roles: 'AP' for audit partner; 'AM' for audit manager; 'APR' for audit practice reviewer. The code numbers refer to each of the 27 interviewees.

## **PRACTICES AND PERCEPTIONS: INTERVIEW FINDINGS**

Several key themes emerged from the auditor interviews. Each is discussed below to illuminate auditors' perceptions about materiality in the audit of environmental matters. In the following discussion the views of private sector auditors are considered initially, followed by a separate discussion of practices and perceptions in the public sector context.

### **The concern for quantifiability**

Despite the recognised need for auditors to be alert to qualitative aspects of assessing materiality (Chewning and Higgs, 2002; Burrowes, 2006; Kranacher, 2007), most of those interviewed asserted that business effects cannot be considered material if they cannot be quantified. All the private sector financial auditors stated that they assessed materiality only in regard to the direct impact on the financial statements, and noted that this rendered environmental matters a problematic aspect of audit practice. For example:

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 [FA/AM 14]

Despite recognising the special and challenging nature of environmental matters, most auditors felt strongly that environmental matters must be quantifiable before they can be subject to an audit opinion. Rather than championing the scrutiny of environmental matters as promoted in AGS-1010, most were sympathetic to their clients' reluctance to disclose environmental matters where subjective judgements of materiality were necessary, as this quote reflects:

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

While some interviewees spoke of debates with clients about the need to assess and disclose environmental matters, the majority accepted that auditors must rely on their clients' co-operation and willingness to do so. In the main, the interviewed auditors perceived their primary role as checking any figures produced for the financial statements, rather than influencing clients' disclosure practices. For example:

If there is a direct major pollution issue... 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.... But, there are problems. How do you quantify it? Is the client willing to quantify it? Do you go to the trouble of quantifying it? [FA/AM 1]

However, it is not always possible to rely on quantitative criteria for deciding whether an environmental matter is material. The emission of a small amount of a toxic substance such as dioxin or mercury is certainly material to the receiving environment, for example (Blokdiijk and Driehuis, 1992). One interviewee, a retired audit partner and audit practice reviewer, reflected with concern on auditors' reluctance to look beyond quantitative metrics when assessing audit materiality. He attributed this approach to a lack of experience:

After many years of managing and reviewing junior auditors' work, I find that getting them out of the notion that materiality is a quantitative measure is hard work. They grow up eventually, but it takes a while... Assessing materiality qualitatively comes

with experience and understanding the nature of information... The more experienced auditors have an unwritten sense of what is material. [FA/APR 18]

In this auditor's view, a significant qualitative factor in the assessment of materiality is a good understanding of who the financial report readers are and what matters to them – an insight that develops with experience. This view accords with Rogers' (2004) position that materiality (in regard to environmental matters) depends on report users' perceptions of a disclosure's decision usefulness, and with the requirements of the New Zealand Auditing Standard *ISA (NZ) 320: Materiality in Planning and Performing an Audit* (NZICA, 2009d). It is of concern, therefore, that this important focus on report users seems largely absent from the materiality deliberations of New Zealand auditors working with firms whose activities impact the environment.

A further concern is New Zealand auditors' inconsistency with AGS-1010's requirement for auditors to treat environmental matters in terms of "provisions, contingent liabilities and contingent assets" (ICANZ, 2001, paragraph 17). As specified in *NZ IAS-37: Provisions, Contingent Liabilities and Contingent Assets* (the New Zealand equivalent to the International Financial Reporting Standard), a contingent liability need only be a possible or probable obligation; no monetary specification is required as the amount is often uncertain. Hence, even where environmental matters are not readily quantifiable, they may still represent contingent liabilities that require disclosure in the notes to the accounts. Auditors' tendencies to set aside such unquantifiable effects as immaterial preclude them from even considering environmental matters as contingent liabilities. As a fundamental impairment to the consideration of environmental matters, the failure to adequately consider environmental matters as contingent liabilities may be a key contributor to an AEG-II in audit practice.

In sum, the perception that materiality equates with quantifiability has serious potential consequences for the audit of environmental matters. Most auditors perceive them as difficult to quantify so treat them as immaterial, not warranting separate disclosure and not requiring audit verification. This stands in contrast to growing evidence that environmental matters *are* material to financial statement users and are an audit issue of public interest (Ananda, 2004; Anonymous, 1997; Bewley, 1993; de Villiers and van Staden, 2007; Heunis, 2004). As Kranacher (2007, p. 80) warns: "quantitative measures provide a deceptive sense of comfort...The issues behind the numbers often tell us more than the numbers alone". Auditors' conceptions of materiality need to broaden and embrace qualitative issues if environmental matters are to receive appropriate attention in audit practice.

### **Exercising professional judgement**

The importance of professional judgement in audit practice is evident in the literature (e.g., Bell *et al.*, 1997; Gray *et al.*, 1991; Hatherly, 1999; Lim-u-sanno and Ussahawanitchakit, 2009). It was also acknowledged by the interviewed New Zealand auditors; for example:

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

However, although auditors speak of the importance of exercising judgement, the interview evidence suggests many are reluctant to rely on their professional judgement in their day-to-day practice. As noted, several interviewees indicated a lack of concern to verify environmental matters and risk unless they had a quantifiable financial impact. This reluctance to encompass the more subjective, qualitative aspects of materiality assessments itself indicates a preference for rules over judgement. Further, even where environmental matters *could* be quantified, the small scale of their financial impact would often exclude

them from being considered material to the audit. One Audit Manager illustrated this, citing a case of a New Zealand company that polluted a river with discharged waste instead of building a waste treatment plant. This company was fined fifty thousand dollars. Yet, despite the signal this penalty provided to stakeholders about the firm's potential ongoing environmental impact, the auditor still considered it immaterial to the firm's "going concern" financial reports:

In terms of their balance sheet and profit and loss account, the fine means absolutely nothing in terms of materiality [so] we would not bother with it [FA/AM 11]

This tendency to assess materiality according to the financial scale of an environmental matter, rather than in relation to the potential information content of a disclosure to stakeholders, suggests auditors are favouring approaches that avoid subjective judgements. This is inconsistent with *ISA (NZ) 320: Materiality in Planning and Performing an Audit*, which requires auditors to consider the *nature* of the item or transaction when judging materiality, and *ISA (NZ) 250: Consideration of Laws and Regulations in an Audit of Financial Statements*, which requires that both the amount and nature of regulatory non-compliance be considered. As Kranacher (2007, p. 80) warns: "If [auditors] ... set aside their professional judgement, they do so at their own peril", since strict adherence to quantitative materiality guidelines impedes the performance of auditors and may be contributing to an AEG-II in regard to environmental matters.

### **Scope of the audit**

New Zealand auditors are required to audit environmental matters only insofar as they are (or ought to be) reflected in the financial statements (ICANZ, 2001, paragraph 2); there is no duty to express an audit opinion on other narratives about the environmental impact of business activities. However, the interview findings revealed that many auditors see environmental matters as completely outside their remit, as they feel they lack the skills to quantify any financial impact. Some noted their reliance on non-audit professionals for this purpose, for example:

In a narrow sense, the auditors specify only the pages in the financial report. Hence, if I couldn't quantify it [an environmental matter], some expert out there would need to quantify it [FA/AP 2]

In effect, this deference to another 'expert' abrogates the auditor's own responsibility for assessing the materiality and appropriate disclosure of environmental matters in financial reports. It also links to the previous point that auditors appear uncomfortable with exercising the professional judgement required to evaluate the materiality of environmental matters. Again, the auditor's argument takes the form of "if it is not quantifiable, it is not my concern".

An example of auditors' preferences to distance themselves from environmental matters arises in regard to clients' potential non-compliance with environmental regulations. Several interviewees noted that, while they may alert senior management to instances of non-compliance, they do not see them as a material audit issue and only investigate further if the non-compliance is likely to have a significant financial impact. For example:

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 [FA/AM 20].

Since auditors rarely assess the scale of such a ‘financial obligation’ to be material, they tend not to push for the disclosure of regulatory breaches, even though such breaches may threaten a firm’s future ‘going concern’ status and/or be of material interest to report users. In practice, the scope of the audit is often limited, therefore, and does not encompass environmental matters in the manner recommended in AGS-1010. These findings also raise questions as to whether the audit standard on materiality (ISA (NZ)-320) is fully operationalized when it comes to environmental matters.

### **Public sector auditors – role models?**

Often, public sector business and accounting practices are thought to lag behind those of the private sector. In regard to the audit of environmental matters in financial reports, however, the opposite seems to hold. Evidence from the interviews with public sector auditors suggests their attitudes and practices reflect audit guidance better than those of private sector financial auditors.

The conception of audit materiality held by the interviewed public sector auditors differed markedly from that expressed by their private sector counterparts. Their assessment of the materiality of an entity’s exposure to environmental risk is not predicated on quantifiable information alone. Rather, it is based on judgements about what is significant and material to the *users* of financial statement. The following quotation illustrates:

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. [FA-PS/AM 20]

Clearly, this approach relies on the exercise of professional judgement in assessing decision usefulness to report users; metrics or quantitative ‘rules of thumb’ are not relied upon as they are by the private sector auditors.

Also, the scope of the public sector audit appears broader and more likely to encompass the investigation of environmental matters. The public sector auditors explained that they perceive users’ interests to encompass the disclosure of a range of risk factors, not just financial risk. One public sector audit manager noted that his materiality assessments take into consideration public risk, health risk and safety risk, stating:

We use a different kind of materiality assessment for non-financial information.... We need to make sure the client reports properly. Even if the figures are out by 0.1 %, it is still a big deal because the public is at risk if [for example] the water is polluted. Hence we don’t concentrate just on the financial aspects. [FA-PS/AM 22]

In sum, the perceptions and practices of New Zealand public sector auditors appears distinct from that of private sector auditors in regard to identifying and assessing the materiality of environmental matters. All three themes arising from the private sector auditor interviews seem not to apply in the public sector. Qualitative factors are given status alongside quantitative factors; professional judgement is routinely exercised in the assessment of materiality from the perspective of report users; and the scope of the audit is broader, with greater emphasis on risk factors beyond potential financial impacts. These practices are consistent with New Zealand standards and guidance on the audit of environmental matters, outlined earlier. Avoiding an AEG-II seems more likely if private sector auditors could learn from the practices of their public sector colleagues, therefore. To assess whether this is a reasonable expectation, it is useful to

reflect on *why* public sector auditors' attitudes to environmental matters differ from those of private sector auditors, when the latter are also charged with protecting the public interest.

### **Incentives to re-evaluate the materiality of environmental matters**

A key difference exists in the duties placed on public and private sector auditors, one which points to a possible way of incentivising private sector auditors to pay greater attention to environmental matters and thus minimise the AEG-II in this area. Private sector auditors must apply auditing standards and observe the recommendations of guidance statements such as AGS-1010. However, public sector auditors are subject to an additional requirement. The interviewed public sector auditors indicated that their heightened awareness of environmental matters is driven in large part by the legislative mandate imposed by the New Zealand Local Government Act 2002, which requires all public and government entities to report on environmental matters:

The Local Government Act 2002 places a lot of emphasis on the environment, and the councils and local authorities now need to factor environmental considerations into their decision making. From the [public sector] auditors' perspective, we need to give an audit opinion on environmental considerations [FA-PS/AP 21]

In order to raise the level of consciousness of environmental matters amongst private sector auditors, something more compelling than an audit guidance statement (AGS-1010) may be similarly required. If AGS-1010 were a standard rather than merely a guideline, there would be "the obligation to comply" (NZICA, 2009a, paragraph 2) and the current AEG-II issues identified above would likely abate.

A second issue is the potential benefit of applying greater penalties to breaches of environmental regulations, so they become financially significant to transgressing firms. One private sector auditor noted how a past increase in penalties influenced his thinking about the materiality of an environmental matter:

If that company was to pollute the river again, and if I was auditing it 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. [FA/AM 1]

Since private sector auditors favour quantitative measures of materiality, the fact that legal penalties have historically been small (Billington, 1995) removes them from audit consideration. Larger penalties would help propel environmental issues onto the audit materiality radar and remove the potential to sidestep them as too challenging to quantify.

Third, more guidance is needed on how materiality tests ought to be applied for less traditional aspects of firms' business activities, such as environmental matters. McKee and Elifsen (2000) caution that audit standards provide little guidance on how to implement materiality concepts in practice. This lack of guidance presents a particular problem in regard to environmental matters, as practising auditors grapple with identifying, quantifying and making materiality appraisals about their effects. Since auditor perception of a low probability of success may result in decreased motivation and effort toward implementing audit standards or guidance (Specht and Waldron, 1992), the lack of audit materiality guidance may contribute to an AEG-II. Improved guidance on materiality tests may therefore increase auditors' optimism about the efficacy of including environmental matters in the scope of their audits, thus promoting improved practice. Further, since materiality considerations are fundamental to audit practice, it would seem appropriate to promote a move away from traditional, quantitative materiality tests which preclude the consideration of qualitative signals of current and future business performance.

## CONCLUSIONS

This paper has examined how New Zealand auditors evaluate the materiality of environmental matters in financial reports and the implications of their practices for the audit of firms whose activities impact the environment. Specht and Waldron's (1992) notion of an 'audit expectation gap type II' (AEG-II) informed our evaluation of whether auditors' practices demonstrate an appropriate match with the intentions of standard-setters as reflected in AGS-1010 *The Consideration of Environmental Matters in the Audit of Financial Statements* (ICANZ, 2001) and relevant auditing standards.

The findings point to several factors contributing to an AEG-II in this emerging domain of audit practice. New Zealand private sector auditors expressed concern that environmental matters are difficult to quantify. Consequent on their qualitative nature, environmental matters are often discounted by these auditors as immaterial. Even where they can be quantified, such as when financial penalties are incurred for regulatory infringements, the small scale of the financial effect means it often falls below applied materiality rule-of-thumb measures. Private sector auditors seem reluctant to exercise their professional judgement about the significance of environmental matter disclosures to report users. Consequently, their interpretations of materiality guidelines tend to exclude environmental matters from the scope of the audit. Contrary to the expectations of standard-setters, these auditors' attitudes and practices limit the information content of financial reports and contribute to an AEG-II in regard to environmental matters. Public sector auditors, on the other hand, described views and practices more consistent with New Zealand standards and guidance on the audit of environmental matters.

These findings point to a need for private sector auditors to reflect on their approach towards environmental matters. Key to this is a reassessment of audit materiality. Although environmental effects may be difficult to quantify or may involve financial consequences that are small or delayed, they can constitute contingent liabilities that warrant disclosure in financial reports. Their disclosure can also signal a firm's stance in regard to the environment. Such information may influence investors, impact consumer choices and future profitability, or even warn of going-concern issues in the event of significant future breaches. In terms of the definition provided by New Zealand Auditing Standard *ISA (NZ) 320: Materiality in Planning and Performing an Audit*, such environmental matters meet expected standards of materiality since their omission, misstatement or non-disclosure could affect the perceptions of financial report users (NZICA, 2009d, paragraph 6). In practice, environmental matters call for materiality assessments that recognise the perspectives of report users and consider risk in terms broader than just financial risk. To achieve this, auditors must be willing to move away from familiar, 'objective' metrics for assessing materiality and engage their professional judgement. This would help to bring auditors' practices into line with the duties outlined in New Zealand accounting standards and the direction offered in AGS-1010, thus addressing the AEG-II (Specht and Waldron, 1992) identified in this study.

This study has highlighted several possibilities for promoting environmental matters onto the agenda of New Zealand auditors: instituting audit standards (or even a legislative mandate, as exists for public sector auditors) to replace existing guidelines; imposing greater penalties on reporting entities to raise the financial profile of regulatory breaches; and promoting more appropriate and instructive materiality guidelines for audit practice. Further, private sector auditors appear to have much to learn from their public sector counterparts, whose practices better reflect the intentions of standard-setters as laid out in AGS-1010 and relevant auditing standards.

Currently, narrow views of materiality present a significant barrier to meaningful audit assurance on environmental matters in financial reports. While this continues, the call for auditors to ensure that environmental matters are properly accounted for and reported (Gray and Bebbington, 2000) will remain

unanswered. For auditors to comply with the duties imposed upon them by standard setters and meet their responsibilities to protect the public interest, changes in attitudes, practices and incentives are needed in this important and emerging domain of audit practice.



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## **Appendix: Interview Guide**

1. What do you see as the key, practical issues that arise in the consideration of environmental matters in the audit of financial reports?
2. In your view, what are the perceptions of auditors on the significance of environmental matters to their audit practice and also to their clients?
3. What usual approach and practice do you undertake when auditing environmental matters?
4. Do you assess materiality levels in auditing environmental matters and if so, how?
5. Do you face any challenges in the audit of environmental matters? If so, what are they?
6. Does AGS-1010 impact your current practice and if so, how?
7. How do you think current practice could be improved and further developed to better meet the espoused aims of AGS-1010?
8. Have I omitted any questions that in your opinion are important for understanding the audit of environmental matters?

**Table 1: Interviewee details**

| <b>Financial auditors</b>                             | <b>Total</b> | <b>Auckland</b> | <b>Wellington</b> | <b>Christchurch</b> |
|---|--------------|-----------------|-------------------|---------------------|
| Financial auditors (FA)                               |              |                 |                   |                     |
| the 'Big 4'   | 10           | 8               | 2                 |                     |
| Medium sized firms                                    | 8            | 8               |                   |                     |
| Public sector auditors (FA-PS)                        | 7            | 3               | 2                 | 2                   |
| Auditors from the Office of the Auditor General (OAG) | 2            |                 | 2                 |                     |
| <b>Total</b>  | <b>27</b>    | <b>19</b>       | <b>6</b>          | <b>2</b>            |

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**Endnotes**

<sup>i</sup> The New Zealand Institute of Chartered Accountants (NZICA) was formerly known as the Institute of Chartered Accountants of New Zealand (ICANZ). Several of the promulgations referred to in this paper were issued by the Institute prior to its name change.