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Comparison of New Zealand and US Institutional Lenders and Investors Attitudes and Policies Toward Property Contamination

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Comparison of New Zealand and US Institutional Lenders and Investors Attitudes and Policies Toward Property Contamination

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Abstract: *With the increase in more stringent environmental protection controls it has become increasingly difficult to finance property with on-site contamination, or ones located nearby such sites, and this has had an adverse effect on property values.*

This paper summarises the results of parallel studies undertaken within New Zealand (NZ) and America (US) to answer the question of how those who lend on, and invest in, property affected by contamination perceive the risks associated with this type of investment and evaluate its impacts. Of particular interest are the perceived effects of on-site contamination on property investment and its financing which will inevitably be reflected in price information. A further study of valuation practice is about to commence in New Zealand to determine to what extent such information is incorporated into estimates of value and the methods employed to do so. Together, these studies can be used to help develop specific industry guidelines on the procedures and methods to adopt when valuing such property.

1. LITERATURE REVIEW & BACKGROUND

1.1 Property Contamination, Stigma and the Ability to Obtain Financing: The United States Experience

Since the mid-1980s, there has been increasing recognition in the United States (US) that real property with on-site contamination is difficult to finance. This avoidance behaviour by institutional lenders has been documented, primarily through questionnaire and opinion survey research (Chalmers & Roehr 1993; Chalmers & Jackson 1996; Elliot-Jones 1991; Kinnard 1989; Mundy 1988, 1989).

By 1989, the concept of environmental "Stigma" had emerged in the valuation literature (Kinnard 1989; Mundy 1988, 1989, Patchin 1991, 1992), followed by systematic bibliographic efforts to document its impact on real property value (Kinnard 1989; Kroll & Priestley 1991; Mundy 1992a, 1992b). Yet market-wide specification of the character and scope of the effects of contamination or "Stigma" on the terms and availability of debt financing for real property were scarce and elusive until the publication of the pioneering survey results of Mundy (1988 and 1989), the supplementary questionnaire/interview study by Healy & Healy (1991) and the review article by Adams & Mundy (1993).

1.1.1 Summary of Prior Research

In the US, there is a reasonably consistent pattern of responses from lenders to indicate the following:

1. Nearly all institutional lenders have developed and apply a formal policy toward contaminated property loan applications. Indeed, the great majority of respondents (well over 90%) now require a Phase I Environmental Audit on all commercial and industrial loan applications, and nearly as regularly for residential subdivisions and multi-family residential projects as well.
2. A declining but substantial proportion of lender-respondents (40%) still indicate that they avoid,

whenever possible, making loans on property known or suspected to be contaminated.

3. Groundwater contamination, landfills and properties with on-site radioactive materials and chemicals are most avoided by lender-respondents, while underground storage tanks and asbestos have become much less feared (and avoided).
4. When loans are made on contaminated properties, respondent lenders generally require higher debt service percentages. This is the result of a combination of higher interest rates, lower loan-value ratios and shorter amortisation periods. (Exceptions to these general findings were reported in Wilson & Alarcon 1996.)
5. Indemnification is infrequently required by respondent lenders, but when it is provided to the satisfaction of the lender, it tends to offset otherwise onerous loan terms. Debt service is then comparable to that required for "normal" loans.
6. Only scattered anecdotal information about equity investors' attitudes and behavior toward contaminated properties is available. All the information together suggests that institutional investors (as opposed to users) are more likely to avoid the risks and hazards of joint and severalliability than are lenders.

However, subsequent to the completion of the study reported here the 104th Congress has passed an important amendment to the Federal Superfund Law. **The Asset Conservation, Lender Liability and Deposit Insurance Protection Act of 1996 (Subtitle E of Public Law 104-208)** limits the liability of lenders and fiduciaries for the costs of remediating environmental contamination at properties under their control. Future studies in the US are likely to find increasing tolerance, as a result of this amendment.

1.2 The New Zealand Experience

1.2.1 Background

Up until the early 1990's an *ad hoc* approach had been taken in New Zealand and Australia toward the assessment and management of contaminated sites resulting in a range of standards being applied. In 1991 the Ministry for the Environment (ME) commissioned Worley Consultants Limited to prepare a report, "Potentially Contaminated Sites in New Zealand: A Broad Scale Assessment". That report, released in December 1992, indicated that the severity of the problem was substantial with some 7,200 sites in NZ considered to be potentially contaminated (excluding a possible 800 sites connected with the timber industry), and approximately 1580 of these thought to be high risk. Clean-up costs for the high risk sites were estimated at over \$515 million, plus a further \$1000m for moderate risk sites. While the research was confined to a desk-top study the findings of which rely heavily on estimates and judgement only the report highlighted the severity of the problem and brought the issues surrounding contaminated sites to the top of the environmental agenda.

In January 1992, the Australian and New Zealand Environment and Conservation Council (ANZECC) in conjunction with the National Health and Medical Research Council (NHMRC) published the Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites. These guidelines are aimed at ensuring greater consistency in approach, however, they are advisory only and do not have legislative weight.

It was the introduction of the Resource Management Act (RMA) 1991, and the severe penalties the Act imposes, that brought environmental issues, and the need to find viable solutions to them, to the attention of all involved with contaminated or potentially contaminated sites. Rather than been prescriptive in nature, the Act has provided numerous opportunities for local authorities to be innovative in prescribing ways to deal with environmental issues, particularly in relation to funding for clean up costs, and incentives to reduce future potential contamination. However, this has resulted in a lack of national

standards for contaminated site management and confusion over the correct approaches to take.

The RMA presently only goes so far as allowing local authorities through the Planning Tribunal to issue enforcement orders and abatement notices to owners or occupiers of contaminated sites, or to those that caused the adverse effect on the environment (the polluter), requiring them to remedy this. There is no formal hierarchy of liability between these parties and any one, or all, are potentially liable. Alternatively, the local authority has the power to clean up the sites themselves and seek to recover the costs from the liable parties.

It is recognised that the RMA is deficient in providing specific national standards on a number of key issues such as:

- who is responsible for site contamination and the risk assessment of such;
- who is to pay for the clean-up costs, particularly where the owner or occupier cannot afford to do so, or where they did not actually cause the contamination;
- who is to pay for “orphan” sites where no party can be found to carry the liability;
- who is responsible for selecting appropriate remedies;
- how will it be decided how clean the site needs to be for it to be considered “clean”;
- will the RMA be able to be applied retroactively.

To overcome some of these deficiencies and taking into account the recommendations made in 1994 by The Australian and New Zealand Environment and Conservation Council, the ME released a discussion document in November 1995 on Contaminated Sites Management. This document sought input on new legislation to implement an effective management strategy for contaminated sites. The document covers such issues as the need to establish means of collecting and releasing information by local government on contaminated sites; the need to establish a liability regime which would apply retrospectively for historic contamination; relevant defences for innocent parties; and funding options for the clean-up of “orphan” sites.

Based on this document and the subsequent Summary of Submissions (April 1996), the ME has made the following recommendations that are soon to go before cabinet for a decision¹:

- joint funding of “orphan” sites by central and local government,
- liability for contaminated sites be on the owner, occupier or polluter with no hierarchy amongst these parties, similar to the US system of strict, joint and several liability but with two defences: 1) an innocent land owner, and 2) a secured lender defence,
- any decisions made by cabinet in this respect to be included as an amendment to the RMA rather than introducing new legislation to cover these issues.

1.2.2 Lenders’ and Equity Investors’ Liability for Environmental Risks

The implication of the RMA has caused concern about the financial liability for contaminated land on which lenders have made loans and in which equity owners have invested. Lenders’ liability for the cost of remedying environmental damage may arise 1) where the owner or occupant is unable to afford the clean-up costs of contamination and 2) is forced into receivership or bankruptcy; and the lender takes control of the assets secured. Further, there is also the possibility that lenders may become liable by their role as financier to a polluter, as has occurred in the USA and Canada.

Currently, the equity investors are potentially liable whether or not they had any knowledge or awareness

¹ As at December 1997 no decision has yet been reached on the ME’s recommendations.

of any earlier “historic” contamination or actually caused the detriment. Based on a recommendation of the Australian and NZ Environment and Conversation Council where the actual polluter who is strictly liable for remediation costs is insolvent or unidentifiable, the current owner or occupant ought to be liable.

Should cabinet approve the ME’s recommendations these issues will be resolved with the introduction of the secured lender and the innocent landowner/occupier defence proposals (already agreed to in principle by government).

The lenders’ defence will apply where it can be shown that they:

- were not responsible for the contamination;
- did not exercise any control or impose requirements which contributed to or caused contamination;
- participated only in financial matters.

The innocent landowner/occupier defence will apply where it can be shown that they are a party who is:

- not a related party to the polluter of the site;
- had no knowledge of contamination at the time of acquisition or occupation;
- undertook appropriate investigations.

The third criterion of the test would vary depending on the type of purchaser and type of land use, but for commercial and industrial sites the ME has indicated this might include a LIM report; a consideration of past uses; and through a due diligence process, including the undertaking of environmental audits. With the inclusion of this defence in legislation the need for more extensive investigations and formal reporting procedures will become essential to avoid liability.

However, until the proposals are finally approved the position for lenders and equity investors remains unclear. The prudent approach is to undertake risk management strategies including more extensive investigations and formal reporting procedures to avoid any potential liability. For some international banks a commitment to this has already been made with the signing of the Statement of Banks on the Environment and Sustainable Development at the 1992 Rio Earth Summit that ensures they include environmental risks in the normal checklist of risk assessment and management.

1.2.3 Research in New Zealand

No opinion or interview surveys similar to those conducted by Mundy in particular (and by Healy & Healy) appear in the NZ literature. The only survey cited relates to determining the discount made to the price of farms with high DDE levels, a residue of the pesticide DDT used in the mid-1950s (Bilbrough 1996).

Other literature in NZ documents contaminated land liability. For example, Palmer (1996) details the approach to contaminated land liability in the United Kingdom and compares it with the approach in New Zealand under the Resource Management Act (RMA) 1991. He suggests that the UK regime provides a useful model for refinement of the innocent owner/occupant liability and enforcement powers under the RMA. This regime, established under the Environment Act 1995 sets out a step by step methodology to apply, each stage of which is supplemented by statutory guidance rules. One of the steps requires a local authority to identify the appropriate person, or persons, responsible for remediation. The actual polluter (person/s who caused or knowingly permitted contamination) is targeted as far as practicable in the first instance, and only where they cannot be found, is the “innocent” owner or occupier looked to for remediation. Where land has both an owner and an occupant, the power to issue a remediation notice on either party would first require determination of the appropriate share of responsibility between them.

This is, in effect, a hierarchical approach not currently advocated in New Zealand.

Harrick, McCutcheon and Kus (1993), McArley (1993) and Hodges (1994) highlight the potential costs and liabilities for bankers in New Zealand and Australia. In particular, they show that liability can arise when lenders take possession of assets when enforcing a security or where they become receivers and expose themselves to liability by virtue of their management and control of secured assets. They outline the protection measures that can be taken to avoid these.

Saul and Janissen (1994) examine the problem of funding for the clean-up of contaminated sites in NZ and discuss the difficulties faced in the US with the Superfund approach under CERCLA and suggest what can be learned from the US experiences.

Joyce and Parker (1994), Harding (1994), Hemmings (1994) and the Australian Institute of Valuers and Land Economists (1995) highlight the responsibilities of valuers involved with valuing land known, alleged, or suspected to be contaminated and provide guidance and approaches for valuing such land.

2. THE NEW ZEALAND (BOND) SURVEY

2.1 Objectives of the Survey

In contrast with the availability of published research in the US, here remains a research void in NZ on both the character and scope of the effects of contamination or stigma on the terms and availability of debt financing as well as the perceived risks from this by market participants. As such, a study of lenders and investors attitudes and policies regarding debt and equity investment in contaminated properties is seen as a timely step toward narrowing this gap. Their attitudes strongly influence the prices paid for contaminated properties which in turn affects value estimates that rely on this information. Thus, this research will provide useful information that will aid in the valuation of such property.

The survey methods adopted utilise those developed by Kinnard and Worzala (1996) and adapt them specifically for the New Zealand institutions. This paper reports on the results of the New Zealand survey and compares those results to the results reported by Kinnard and Worzala (1996).

2.2 The Questionnaire and Sample

As mentioned, this study uses the methodology developed by Kinnard and Worzala (1996) to enhance the validity of comparative findings between this study, the Kinnard/Worzala study, and future studies. As their survey achieved an overall response rate of 31% without the aid of follow-up reminders, their questionnaires were adopted for this study. Minor modifications were required to adapt the instrument for NZ as follows:

- Where necessary American terminology was translated to the New Zealand equivalent.
- The features listed in question nine which asks whether respondents would lend or invest on properties within 30 meters of various contaminants were amended to include those that have been shown from the literature review to be of significance to investors and lenders in New Zealand.
- To glean more information two new questions were added. First, Question 14 was added to both questionnaires, "Where environmental risks are identified do you require an environmental compliance or remedial programme to be undertaken?" Second, Question 16, was added and for the lenders' questionnaire it was asked: "Are environmental issues such as periodic audits; ongoing compliance and remedial procedures documented in loan contracts?", while in the investors' questionnaire it was asked: "Does your organisation implement a formal due diligence environmental programme which includes such matters as periodic audits,

monitoring and reporting, and procedures for ongoing compliance, and remediation?”.

As it was not possible to identify those individuals or companies specifically investing in or lending on contaminated property a broad approach was taken in the creation of a respondent database and mailing list. Names of potential respondents came from a range of sources but primarily from personal contacts and lender and investor categories of the “Yellow Pages” from the three main urban centres within NZ. These categories included:

- Commercial banks
- Insurance companies
- Merchant banks
- Finance companies
- Credit unions
- Superannuation funds
- Property investment trusts
- Property companies
- Private property investors

In some instances, the same institution was identified as both a lender and an investor, so separate questionnaires were sent to them. It was expected that due to the difficulty of identifying the small proportion (or sub-group) of each respondent type involved in investing in, or lending on, contaminated property that the response rate would reflect this.

Questionnaires were sent to 345 lenders and investors - 136 to lenders and 209 to investors in December 1996. Twenty-one responses were received from lenders and forty-eight from property investors. Thus, the sample consisted of 69 total responses received indicating an overall response rate of 20%: 15 % for lenders and 23% for investors.

3. COMPARISON OF SURVEY RESPONSES: NZ and the US

3.1 Introduction

This section presents a summary of the major findings that emerged from the analysis. Tables are presented in the Appendix. To keep this section brief, only a limited amount of data is cited directly. Question responses are separately tabulated for lenders and investors. The US results from the Kinnard & Worzala study are reported in parentheses for ease of comparison.

3.1.1 Type of Respondent Organisation

In NZ, property companies and insurance companies represent the largest number of respondents among investors, whereas commercial and merchant banks were the most frequent lender respondents. This is similar to the US where insurance companies, pension funds and foundations were the largest group of investor respondents and commercial banks and insurance companies were the largest lender respondent groups.

3.1.2 Experience with Contaminated Properties (Q's 3-5)

Questions 3-5 dealt with the respondents' experiences with contaminated properties. Question 3 asked if they had ever invested in contaminated properties. Question 4 asked if they would invest in contaminated properties; and Question 5 asked if the responses would differ based on the source of contamination. The responses are shown in Table 1, attached in Appendix I.

It is clear from Table 1, that the NZ respondents are more adverse to investing or lending on properties either known, alleged or suspected to be contaminated compared to the US group. When the combined sample is considered, 73% of the NZ group answered they would “No” not make either equity investments or loans on property known to be contaminated, compared to 53% in the US. They were less resistant to making investments or loans on property suspected to be contaminated in NZ (68%), whereas in the US there appears to be little difference in response whether the property is known or suspected to be contaminated (52-53%).

3.1.3 Attitudes Toward Property Known to be Contaminated (Q’s 6-7)

A series of questions on the equity investors’ and lenders’ attitudes toward property known to be contaminated with different kinds of contamination were posed. The aim was to identify a hierarchy of different types of contamination which equity investors and lenders strive to avoid. The first question asked for attitudes about three basic locales of contamination: ground water, soil and building contamination.

Table 1 illustrates that NZ lenders and investors are more adverse to lending or investing on any of the three locales for contamination compared to the US respondents. Building and soil contamination are the least feared (41%) by the NZ aggregate group, with ground water being the most feared (59%). As with the NZ group the US aggregate avoided ground water the most.

The next question examined seven different types of contaminants by asking respondents to indicate if they would invest/lend on property with the contaminant. The original a priori expectation was that few investors or lenders would be willing to work with any category of contamination (except perhaps asbestos in the US), so the results are somewhat surprising. These indicate that **all** of the contaminants were viewed more seriously in NZ than in the US, with asbestos having substantially higher percentages of negative responses (42% vs 9% of the overall responses). The order of which was *least to most* avoided also differed between countries. Respondents from both countries agreed that property contamination from radioactive materials were to be most avoided, with toxic and volatile chemicals rated similarly and in second and third places. After that the ordering changed.

3.1.4 Attitudes Toward Property Alleged to be Contaminated (Q. 8)

This question asked about attitudes toward *alleged* contamination rather than *known* contamination. The main difference seen between countries is the ordering of asbestos and petroleum products. NZ respondents rated asbestos more adversely than petroleum products. Interestingly, the US investors and lenders and the NZ lenders appear to be more adverse to most of the *alleged* contaminants (with the exception of radioactive materials) than they were to the *known* contaminants. The reverse was the case for NZ investors who rated each *alleged* contaminant less harshly than the *known* contaminants. Results from Questions 6 - 8 are indicated in table 1, attached.

3.1.5 Attitudes Toward Property Located Within 30 Meters of Contaminated Property (Q9)

To test whether investors and lenders are also concerned with, and limit their lending and investing on, properties relatively close to a source of contamination, respondents were asked if they would invest/lend on property where the source of the contamination was within 30 meters of the property.

Of the contaminants listed for both countries the ordering was much the same with an industrial landfill (hazardous, toxic) having the most frequently recorded negative response (67% in NZ, 73% in the US), an oil refinery next (45% in NZ, 56 % in the US), with a high-traffic roadway having the least negative response. In NZ, investors were universally more averse than were lenders to all contaminants. Table 1, attached, outlines these results.

3.1.6 Modification of Terms to Compensate for Increased Risk Associated with Contaminated Property (Q. 10)

Because of the respondent groups differing business requirements this was the only question in the survey that differed significantly between respondent groups and was aimed at determining their respective investment or underwriting criteria, especially as related to the increased risks associated with investing or lending on contaminated property. From the results it appears that most investors both within NZ and the US would adjust their expected yield rate; discount rate or capitalisation rate upwards to reflect the environmental risks. They might also apply a shorter capital recovery period and lower the break-even point. NZ investors were more likely to make these adjustments when compared to US investors.

Though not surprising that the various investing rates would be modified upwards, the extent of this adjustment, and the motivation for it, are not clear from the survey results. This would warrant further investigation as it would greatly aid valuers involved in making assessments of worth on such property.

Interestingly, the results indicate that the lenders in both countries place most emphasis on personal liability (in NZ 88% indicated “yes”, and 54% in the US) but would also lower the loan to value ratio. Again, NZ respondents were more likely to make these adjustments than the US group. NZ lenders would also shorten the amortisation term and maturity for the loan. Both countries’ lenders would make the loan recourse² but this was more likely for the US group, who rated this as second of the most preferred adjustments to make, ahead of lowering the loan to value ratio. Refer to Table 2.

The next question focused on whether several different forms of seller indemnification might make the purchase or loan terms less stringent. Results show that in NZ the aggregate group indicated that contractual commitment were most highly favoured, while in the US bonds were the preferred seller indemnification. Table 3 summarises these results.

3.1.7 Attitudes Toward Environmental Policies When Investing in Contaminated Property (Q’s. 12-16)

Some final questions were included to identify what types of policies existed within the institutions toward dealing with contaminated properties, and whether attitudes had changed toward dealing with environmental problems since the earlier studies had been published. In this survey sample, a lower percentage of respondents reported established policies toward investing or lending on properties known, alleged or suspected to be contaminated when compared to previous reported studies. Results show that in the aggregate group only a third of the NZ respondents and 59% of the US respondents reported policies for investing or lending on contaminated property. Previous studies (for example, Adams & Mundy), indicated that the percentage of lenders who have formal policies was as high as 91%.

By respondent type, in both countries, lenders were more likely to have a formal policy than were investors. Respondents in the US appear ahead of NZ in this regard with both types more likely than those in NZ to have a formal policy.

Respondents in the US were asked if they require Phase 1 studies, and in NZ environmental audits, to be completed on investment or loan proposals. For the US aggregate sample, a high percentage (91%) of respondents “Always” or “Usually” require Phase 1 reports or environmental audits, whereas in NZ only 27% of the respondents answered in this way, indicating more stringent due diligence procedures in the US. A higher percentage of investors in the US require these studies (98%) compared to the lenders (85%). This result was mirrored in NZ with investors requiring an environmental audit more often than the lenders. This is an interesting result given the NZ lender respondents were more likely to have a formal

2 A “recourse loan” is a loan which includes, in addition to property collateral, the personal assets of the borrower are secured as collateral. The lender has recourse to both the property and personal assets in the event of loan default.

policy. This may be because they take a hands off approach rather than completing the appropriate due diligence.

In the NZ survey a question was asked whether an environmental compliance or remedial programme was required to be undertaken on investment or loan proposals where environmental risks are identified. This was to determine what action was taken once risks had been identified, whether or not an audit had been carried out prior to the investment or loan. From the results it appears that two-thirds of the respondents “Always” or “Usually” require such action, with lenders showing a higher likelihood of requiring it. Results from these two questions indicate that NZ respondents do not take the same preventative risk measures as the US respondents prior to investing or lending, but rather wait until a problem arises before they take action to correct it.

The next question was whether environmental insurance (or, in the US, remediation cap insurance) was used or required. The responses were similar in each country, with less than 10% of the aggregate group responding that they “Always” or “Usually” require it. The low response rate, in NZ at least, may be due to the unavailability of specific environmental insurance. The only environmentally-linked insurance currently available in NZ is for legal liability generally arising out of resource consent applications under the RMA, with such policies being custom made. In the US environmental insurance is becoming increasingly difficult to obtain with the world-wide move by re-insurers to restrict legal liability cover for cases involving environmental contamination. Another possible reason for the low response rates may be due to the introduction of formal due diligence policies which effectively mitigate the need for environmental insurance.

The final question in the NZ survey asked whether respondents implement a formal due diligence environmental programme with half of both respondent types “Never” or “Rarely” implementing this. This mirrored and confirmed the responses to question 13, that few preventative or ongoing risk measures are taken when investing or lending on property. Table 3 attached, outlines results to questions 12 - 16.

All responses in the NZ survey were separated into two groups: lenders and investors and analysed on this basis. Comparing the results of the Mann-Whitney³ tests from the two groups indicated the responses were significantly different for the following variables:

- Do you lend/invest in property with building contamination? (More investors (74%) than lenders (37.5%) would invest at least sometimes).
- Do you lend/invest in property alleged to be contaminated with asbestos? (More investors (44%) than lenders (0%) would invest at least sometimes).
- Does your organisation have a set policy on lending/investing in properties known, or alleged, to be contaminated? (Fewer investors (25%) than lenders (58%) have a set policy).
- Do you purchase comprehensive environmental insurance for any of your investments? (Fewer investors (15%) than lenders (39%) purchase such insurance at least sometimes).

From these results it appears that, in NZ, lenders are more cautious than investors when lending on property known, alleged or suspected to be contaminated. Refer Appendix 4 for a summary of these comparisons.

³ **The Mann-Whitney (Wilcoxon) Test** tests the null hypothesis that the distribution of two independent samples are equal. It was used to analyse the responses from the two response groups: lenders and investors to determine if there was a statistically significant difference in these. The test calculates the significance of the difference between the distribution of two independent samples by combining and ranking them. The null hypothesis that the two distributions are equal is rejected when the observed significance level is judged small enough, (i.e. in the current study less than 0.05).

3.2 Summary

One of the most important findings in this study is that NZ respondents are far more cautious than their US counterparts in making the decision whether to lend on or invest in contaminated property. Only a quarter of the NZ respondents, compared to at least 60% of the US respondents, indicated any kind of willingness to lend or invest on properties contaminated with all but the most feared and avoided types of contamination: radioactive materials and toxic or volatile chemicals. Furthermore, whereas US respondents are more averse to “alleged” contamination, NZ respondents were more averse to “known” contamination. Both US and NZ respondents indicated a willingness to lend on or invest in properties where the contamination was “off-site” rather than “on-site” except where the environmental hazard is highly toxic, such as radioactive waste.

In the US, lenders reported rather more tolerance toward contamination than did equity investors. This appears to reflect that investor-owners would be more likely to be held responsible for remediation expense than would be lenders, irrespective of the pattern of due diligence followed prior to the purchase of the property. Things are not so clear cut in terms of who the liability would fall on in NZ which perhaps explains the greater caution of NZ lenders, compared to investors. The more cautious groups (equity investors in the US and lenders in NZ) reported generally stricter adherence to formal policies toward becoming involved with contaminated properties. Further, the US investors almost universally insisted upon a Phase 1 environmental study. Less emphasis is placed upon such formal studies in NZ, with the investors tending to carry these out rather than the lenders. This could be a result of the ready availability of capital in NZ. The desire of lenders to have the capital working may cause them reluctance to tighten lending policies due to the potential of losing valued customers.

4. CONCLUSIONS

This study is a comparison of the attitudes and policies of investors and lenders in NZ and the US toward investing in and lending on property known, or alleged, to be contaminated in 1996/7. It should be recognised, however, that these attitudes and policies could vary over time. As a matter of fact, the US study results appear to indicate that attitudes have changed with a greater tolerance toward contaminated property indicated. Future research in the US is likely to find increasing tolerance, particularly now that the amendment to the Federal Superfund Law has been passed limiting the liability of lenders and fiduciaries for the costs of remediating environmental contamination of properties under their control. Such a change is likely in NZ once the innocent land owner and secured lender defences are introduced.

The most telling conclusion that emerges from the two studies is that both debt financing and equity investment funds are available for the acquisition and ownership of properties affected or impacted by contamination, but more particularly in the US, than in NZ. Exceptions to this included properties with on-site radioactive waste or radioactive handling materials, and properties in close proximity to such facilities. Another exception, related only to the NZ study, is the presence of volatile and toxic chemicals, which are rated high among the contaminants avoided by both respondent types. The last exception in both countries is any property within close proximity to a landfill containing or permitted to contain toxic and/or hazardous materials.

It is expected that the greater caution evidenced by market participants in NZ would be reflected in sale price information and hence estimates of value. A further study of valuation practice is about to commence to determine to what extent such information is incorporated into estimates of value and the methods employed to do so. Together, these studies can be used to help develop specific industry guidelines on the procedures and methods to adopt when valuing such property.

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APPENDIX I: TABLES

Table 1			
<i>Factor</i>	<i>Overall Frequency % NZ (US)</i>	<i>Lenders Frequency % NZ (US)</i>	<i>Investors Frequency % NZ (US)</i>
Q3. Invested/Lent on contaminated property			
Yes	39 (75)	45 (85)	37 (65)
No	61 (25)	55 (15)	63 (35)
Q4. Would Invest/Lend on possibly contaminated property (% of “no” responses)			
Known	73 (53)	84 (51)	69 (56)
Alleged	70 (55)	79 (49)	67 (62)
Suspected	68 (52)	74 (46)	66 (58)
Q.6 Would you lend/invest on property with the following contamination (% of “no” responses)			
Ground Water	59 (44)	70 (45)	54 (42)
Soil	41 (30)	50 (34)	38 (25)
Building	41 (24)	62 (25)	26 (23)
Q7. Would you lend/invest on property with known contamination from: (% of “no” responses)			
Radioactive materials	87 (63)	88 (55)	87 (71)
Volatile chemicals	67 (35)	63 (39)	68 (31)
Toxic chemicals	64 (38)	63 (43)	64 (33)
Petroleum products	46 (20)	38 (25)	48 (15)
Asbestos	42 (9)	50 (7)	40 (12)
Tenants that contaminate	38 (25)	50 (28)	36 (20)
Underground Storage Tanks	30 (15)	25 (20)	32 (10)
Q8. Would you lend/invest on property with alleged contamination from (% of “no” responses)			
Radioactive materials	84 (61)	86 (56)	83 (67)
Toxic chemicals	66 (44)	71 (48)	64 (39)
Volatile chemicals	59 (43)	71 (46)	60 (39)
Asbestos	44 (18)	57 (15)	40 (20)
Petroleum products	41 (29)	43 (35)	40 (23)
Q. 9 Most Avoided Sources of Contamination within 30m (% of “no” or “probably not” responses)			
Radioactive contamination	(85)	(82)	(89)
Radioactive materials handling	(74)	(66)	(83)
An industrial landfill (hazardous, toxic)	67 (73)	62 (73)	68 (74)
A chemical plant	64	50	68
A waste treatment plant	48	37	52
An oil refinery	45 (56)	25 (47)	52 (64)
Ground water plume	(35)	(32)	(38)
High voltage electric lines	27 (23)	0 (20)	36 (28)
A landfill (non-hazardous)	21 (30)	12 (35)	24 (25)
Defence site	15	0	20
High-pressure gas line	(8)	(9)	(6)
High-traffic street	6 (1)	0 (2)	8 (0)

Table 2	
<i>Investing/Lending terms</i>	Frequency % <i>NB. Frequencies indicate % of respondents answering “Yes”. NZ (US)</i>
Q. 10 Investors: Modification of Investing Terms to Compensate for Increased Risks	
Higher yield rate	59 (41)
Higher discount rate	57 (43)
Higher cap rate	52 (45)
Lower break-even point	45 (27)
Shorter capital recovery period	43 (29)
Longer debt amortisation term	17 (2)
Shorter maturity for the loan	16 (11)
Q. 10 Lenders: Modification of Lending Terms to Compensate for Increased Risks	
Personal liability	88 (54)
Lower loan/value ratio	50 (32)
Shorter amortisation term	38 (20)
Make the loan recourse ⁴	29 (47)
Higher debt service coverage ratio	25 (23)
Shorter maturity for the loan	25 (14)
Increase closing costs	14 (8)
Income participation	14 (6)
Higher interest rate	13 (15)

⁴ A “recourse loan” is a loan which includes, in addition to property collateral, the personal assets of the borrower are secured as collateral. The lender has recourse to both the property and personal assets in the event of loan default.

Table 3			
Policy <i>NB. Frequencies indicate % of respondents answering "Yes".</i>	Overall Frequency % NZ (US)	Lenders Frequency % NZ (US)	Investors Frequency % NZ (US)
Q.11 Seller Indemnification to Ease Purchase/Loan Terms			
Contract Commitment	38 (12)	25 (7)	42 (18)
Bond	22 (22)	25 (13)	21 (31)
Remediation Cap Insurance	19 (13)	13 (7)	22 (20)
Q. 12 Have a Policy on Investing/Lending (% of "yes" responses)			
Have a Policy	34 (59)	58 (65)	25 (54)
Q's 13-16. Attitudes Toward Environmental Policies When Investing/Lending (% of "always" and "usually" responses)			
Require an environmental audit or phase 1 report?	27 (91)	11 (85)	34 (98)
Require environmental compliance or remedial program where risks identified?	67	72	65
Purchase environmental or remediation cap insurance?	8 (3)	11 (3)	6 (3)
Implement due diligence environmental program?	26	21	28

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