Building
Industry
Authority

Building Industry Performance Report: March Quarter 2004

Published in July 2004 by
Building Industry Authority
PO Box 11-846
Wellington
New Zealand

This document is also available on the BIA website:
www.bia.govt.nz

ISBN: 0-478-18421-0 (document)
ISBN: 0-478-18422-0 (website)

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Introduction

The Building Industry Authority is a Crown entity established by the Building Act 1991. Its fundamental purpose is to manage New Zealand's building control regime. This has traditionally been achieved through amendments to the Building Code and its Approved Documents which are non-mandatory means of complying with the Code.

It is well known that New Zealand's building industry has experienced recent problems, most notably weathertightness failures that became apparent during 2002. In response, considerable work has been undertaken by government to understand the cause of these problems and to put measures in place to ensure that similar failures cannot occur again. The resulting agenda for improving building industry performance is being implemented across a range of fronts. One of the important focal points is the effectiveness of the central regulator. In addition to the BIA's core role of specifying building standards through the Building Code it is now clear that the central regulator must also be proactive in ensuring that the Building Code is applied correctly. It must maintain an understanding of building outcomes that are being achieved and it must use this information to actively address any emerging industry performance problems.

This report is one of the tools the BIA will be developing to support its proactive performance monitoring function. The BIA seeks to encourage the flexibility that performance-based regulation offers while maintaining a regulatory system that underpins quality and effectiveness in the building industry. Regular measurement of outcomes such as building quality, building cost and industry expediency is key to understanding and managing this performance-based system.

At the present time, this report is based on information that is already collected by central and local government and by industry participants for other purposes. The BIA is also actively developing a new framework for future systematic reporting of building industry performance. That work will result in new indicators being developed over time that will help the central regulator to better understand key performance issues and outcomes.

This first report examines building industry performance during the three-month period from January to March 2004 and more generally during the most recent full calendar year, 2003. In the future, the BIA will publish similar performance reports on a quarterly basis.

Performance summary

The body of this report is arranged into three sections.

The first section examines general trends in building activity. This section develops an understanding of recent trends in building volume and type and examines the outlook for these trends in the near future. It reveals that the boom in building that existed over recent years has been sustained during the early part of 2004. Statistics show that the boom is largely being driven by residential development and is most significant in the Auckland region. Commercial building activity is relatively static. There has been a flattening off in the building of new apartment dwellings. While the short-term outlook is for high levels of building activity to continue during 2004, the fundamental drivers of residential building demand, which are

immigration and consumer confidence, are beginning to indicate that reduced activity is likely to occur towards the end of this year. Building costs are also rising significantly, increasing beyond the rate of underlying inflation. These costs are being driven up by increased labour and material costs. It is important to note that the Building Bill is also predicted to result in an increased cost of building regulation in the near future although this cost will remain a relatively modest contributor to overall construction costs.

The second section of the report examines building quality. As mentioned in the introduction, the building industry has been confronting systemic performance problems over the past few years. This report shows that the quality of building outcomes continues to be mixed, although outcomes seem to be improving. There is an increasing awareness of the poor building practices that tend to result in weathertightness failures. There has also been improvement made to building controls to reduce these types of problem. However, there is potentially a long tail to the weathertightness issue that began during the 1990s. Currently the bulk of problems are being seen in buildings consented from 1993 to 1999. Given industry's relatively recent responses to address the problem, building work from 2000 to 2003 may also be affected.

Other quality improvement work is under way to prevent potential structural integrity failures arising from suspected poor commercial construction practice, particularly relating to the site handling of certain grades of concrete reinforcing steel and to the use of hollow core pre-cast concrete slabs.

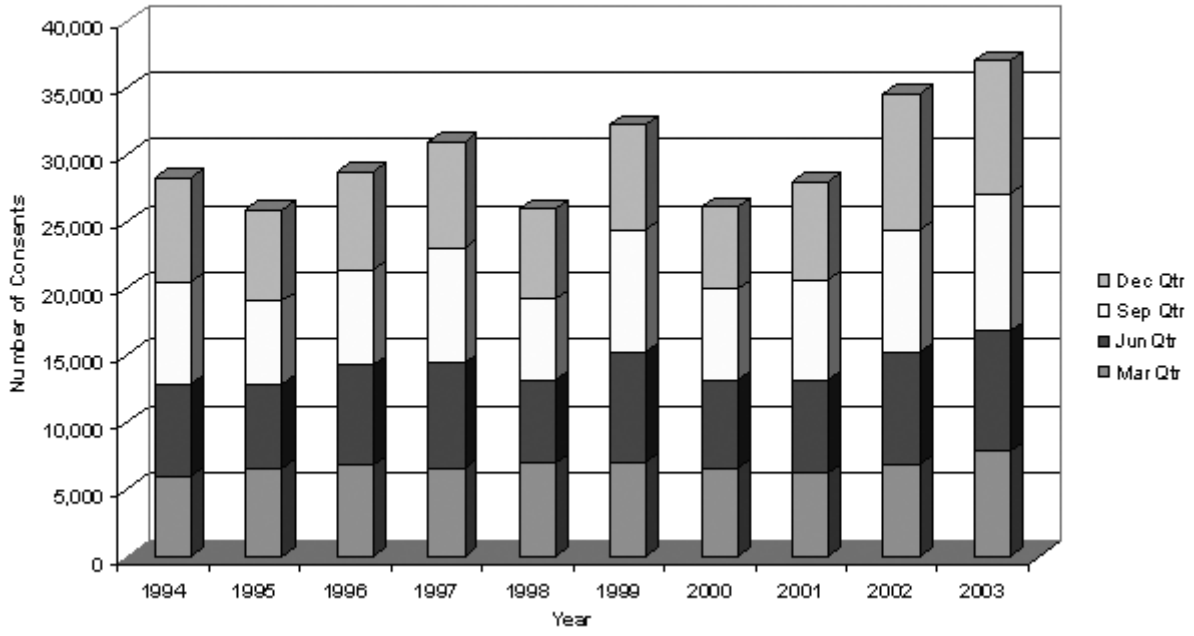
Other emerging building performance issues are becoming apparent as a result of diminishing floor areas in some new apartment designs, fire safety and accessibility.

The third section of the report addresses the effectiveness of building regulation. Territorial authority and building certifier regulators are responding to an increased expectation from the BIA to maintain their quality standards. There is an expectation that improvements will be made to their processes to ensure compliance with potential industry performance problems such as access provisions, weathertightness focus, producer statement regimes, and in their assessment of Alternative Solutions. A significant issue has emerged in respect of the performance of the certifier insurance scheme and this is now being formally reviewed by the BIA.

Building Activity

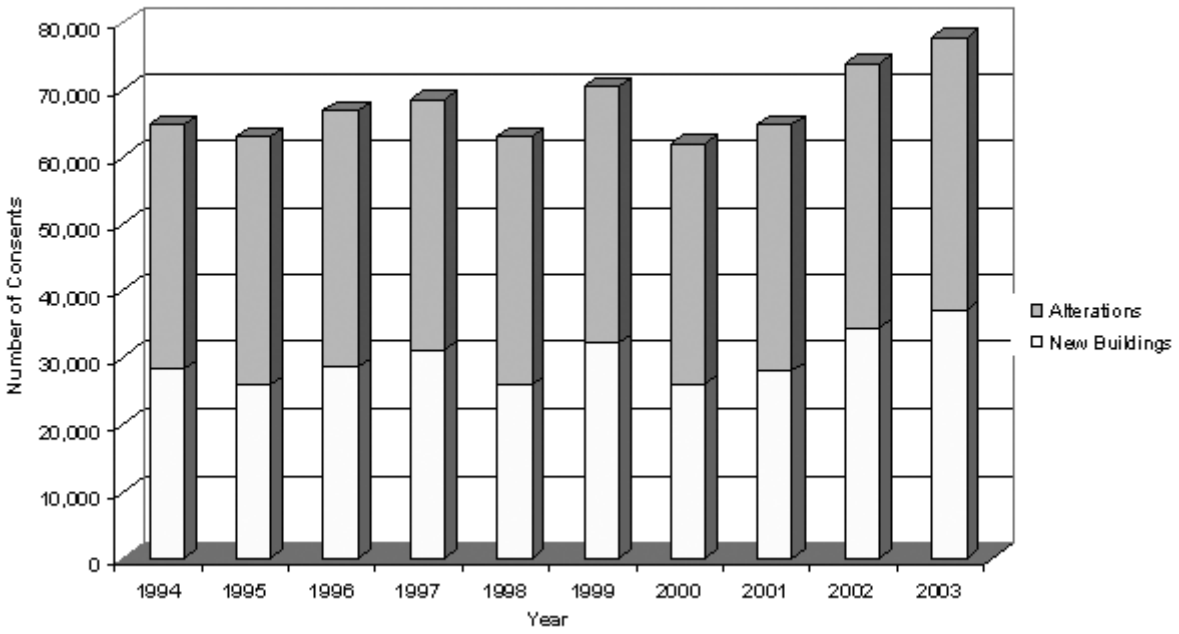
New Zealand is still experiencing considerable growth in building activity. A total of 77,761 building consents were issued in New Zealand during 2003. This is a 5 percent increase compared to the 2002 calendar year and follows a similar trend extending over the past three years (Chart 1). The average annual rate of increase in building activity over the past three calendar years has been 8 percent.

Chart 1: Consents Issued for New Buildings



The volume of this building work is evenly split between consents for new buildings and consents granted for alterations to existing buildings (Chart 2). There were 37,029 consents for new buildings and 40,732 consents for alternations during 2003.

Chart 2: Total Volume of All Building Work



The March quarter of 2004 has continued this upward annual trend with total building activity increasing by 17 percent compared to the March quarter of 2003 (see Table 1). Compared to the previous year, total January consents were up 12 percent, February consents were up 21 percent and March consents were up 16 percent. An increase in both new building consents and alterations drove these increases.

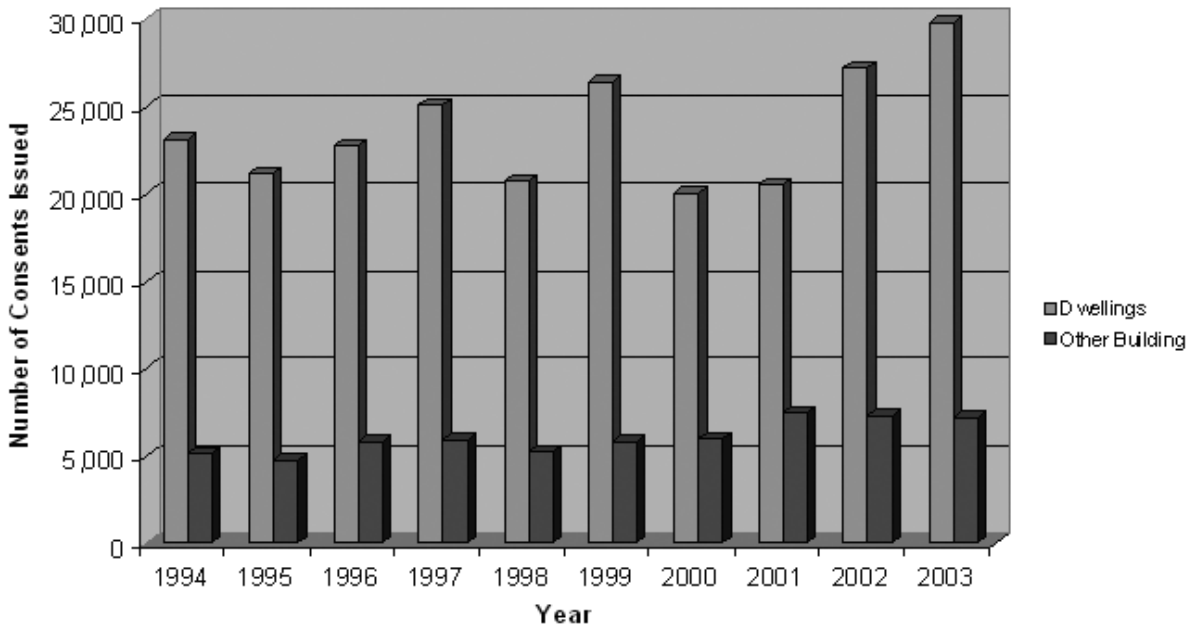
Table 1: March quarter consents

	Number of consents from 1 January to 31 March		
Year	**New**	**Alterations**	**Total**
2003	7,876	8,836	16,712
2004	9,755	9,731	19,486
Change	24%	10%	17%

Driven by rise in residential construction

The construction of new dwellings was slightly less than 30,000 dwelling units for 2003 which is the highest level of new dwelling construction since the mid-1970s (Chart 3). The boom in construction over the past two years has clearly been driven by this residential component of the market. Commercial construction on the other hand has remained steady for the past three years, albeit at a historically high level.

Chart 3: New Dwelling and Non-Dwelling Construction

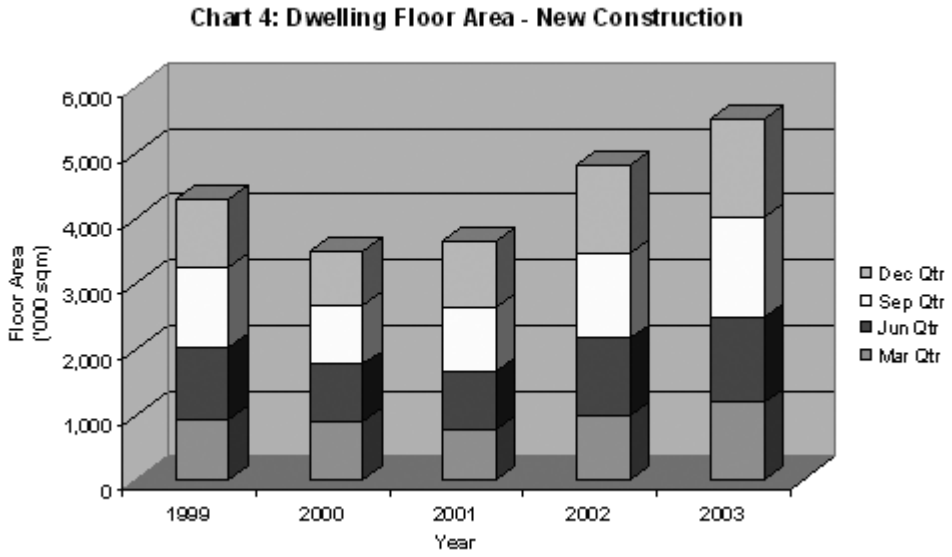


Consents for new dwelling units (see Table 2) increased by 26 during the March 2004 quarter compared to the previous year. Two thousand three hundred and eighty-five new dwelling consents were issued in January, 2529 in February and 3037 in March. These totals represent substantial increases on the same months during 2003. Annual dwelling construction has also now exceeded 30,000 units with 31,423 consents issued for new dwellings in the year ended March 2004, the highest total for a March year since 1976.

Table 2: Consents for new dwelling units

	Number of consents			
Year	**January**	**February**	**March**	**Quarter**
2003	1,995	1,797	2,537	6,329
2004	2,385	2,529	3,037	7,951
Change	20%	41%	20%	26%

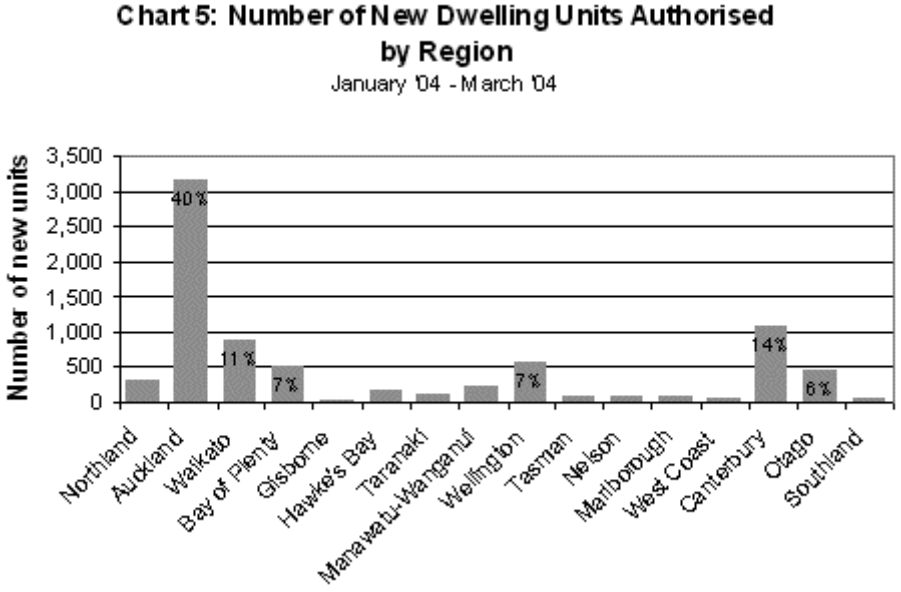
The annual rise that has occurred over the past three years in the number of consents issued for new dwelling construction is mirrored by a commensurate rise in the total floor area of new dwellings. During 2003 the total floor area constructed exceeded 5,000,000 m^2 (Chart 4).



Bulk of new dwelling construction in north

Geographically, the bulk of residential activity during the March quarter of 2004 has been centred on the Auckland region which contributed 3155 units (40 percent) to the total number of new dwelling units during the three-month period (Chart 5).

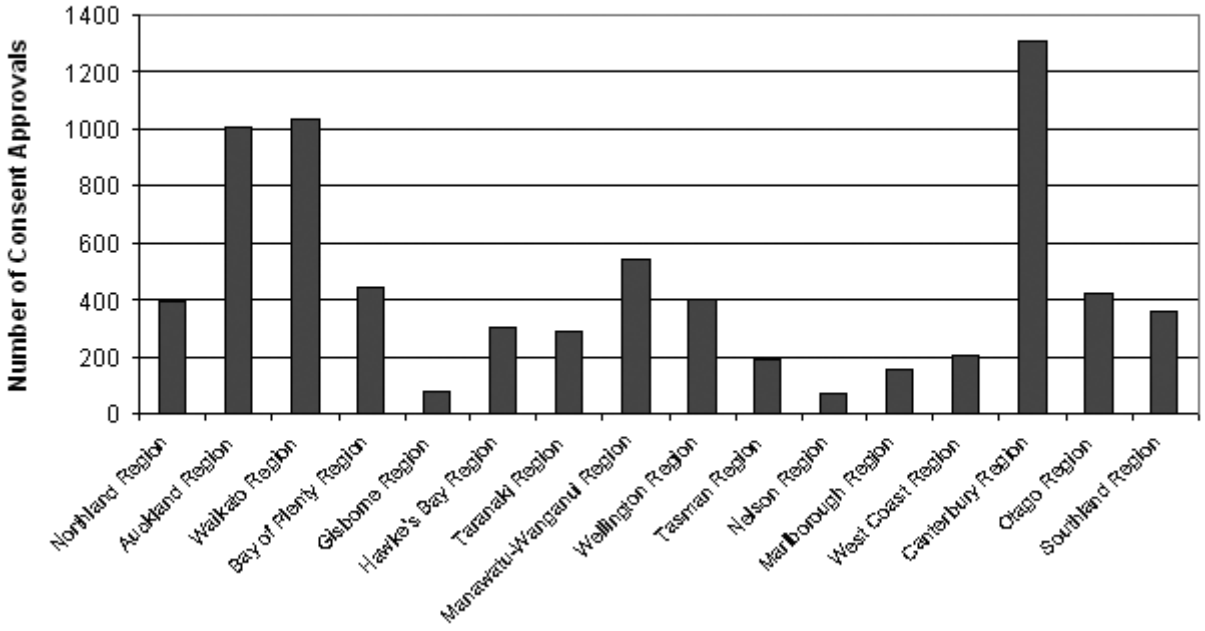
Fourteen out of 16 regions recorded more new dwelling units in the March 2004 quarter compared with the first three months of 2003. Auckland recorded the largest increase in new dwelling units when comparing these two quarters (increasing by 25 percent or 628 consents), although Otago recorded the largest percentage rise (increasing by 56 percent or 165 consents).



Non-residential construction more evenly distributed

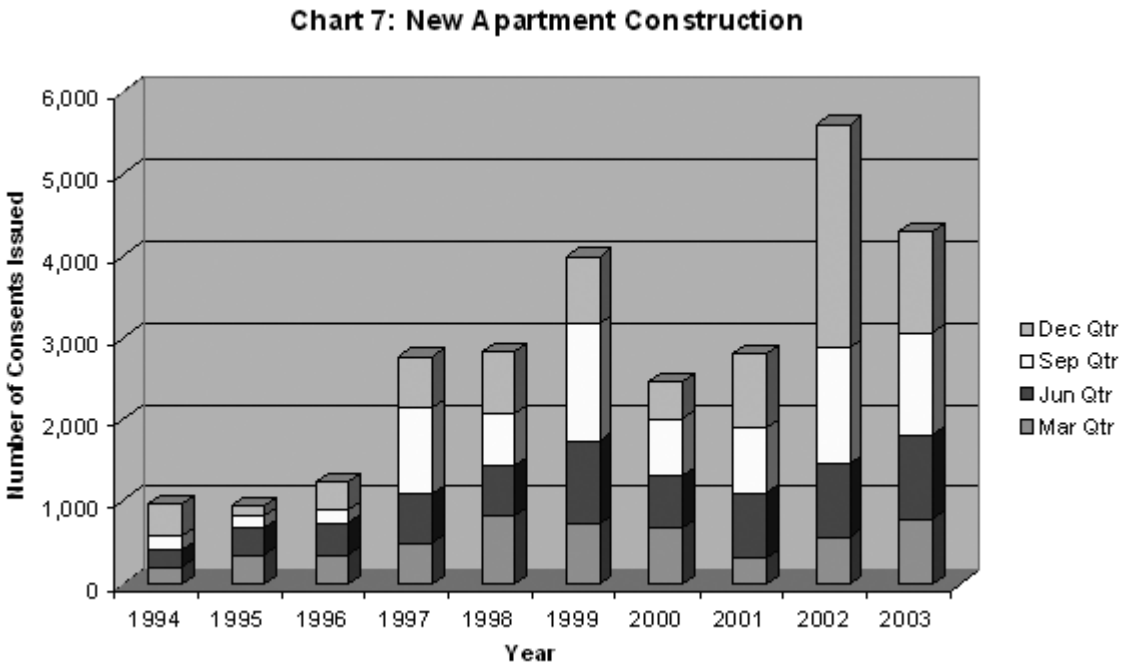
The level of non-residential building was highest in the Canterbury region during 2003 (Chart 6). Relatively high levels of non-residential activity also occurred in Auckland and Waikato.

Chart 6: Non Residential Consent Activity During 2003



Rise in apartment construction

The number of consents issued for new apartment construction has dropped from its 2002 annual peak of 5610 units to 4295 units in 2003, a 23 percent drop. The long-term trend, apparent since 1996, has been an annual increase of 30 percent of new apartment consents (Chart 7).



During the March 2004 quarter, consents issued for new apartment units doubled compared with the same period in 2003 (Table 3). Note, though, a low number of consents were issued in February 2003 which has impacted on this trend. There is a high level of variance in monthly numbers of apartment consents that are issued (during the past three years the monthly standard deviation has been 265 units) with January or February figures sometimes being low compared to other months.

Table 3: New apartment consents for the March quarter

	Consents for new apartment units			
Year	**January**	**February**	**March**	**Quarter**
2003	254	54	476	784
2004	471	559	548	1,578
Change	85%	935%	15%	101%

Economic outlook is for weaker building demand

Economic analysis undertaken by the Reserve Bank, published in its March 2004 monetary policy statement, indicates that the current strong housing market cycle may weaken during 2004.

Contrary to the continued high level of residential building activity, the number of house sales has declined since September 2003, indicating that the housing market may have peaked during late 2003. The Reserve Bank predicts the development of weaker demand conditions during

2004. A principal factor likely to lead to abatement in housing demand is that immigration has slowed markedly since mid-2003.

Any slowing of construction, however, may take some time to take effect. The Reserve Bank reports that builders are still seeing long backlogs of work and there are continued delays in building new houses. These delays exist despite a significant increase in employment and hence capacity in the construction sector over the past two years.

The ongoing high numbers of building consents that are being issued suggest that capacity constraints will not be overcome in the short term. The medium-term outlook is less certain. The Reserve Bank warns that, because of the increased capacity in the sector, a decline in the level of housing market activity, driven by lower net immigration, runs the risk of a potential sharp downturn if consent issuance slows.

In addition to immigration, consumer confidence is another leading indicator of domestic building investment. The last few quarterly Westpac McDermott Miller (WMM) Consumer Confidence surveys have shown consumers remain overwhelmingly optimistic, and the March 2004 survey indicates that this is still the case. However, there has been a dip in the expectations for the short-term outlook for the economy as whole. Consumer confidence fell in the March 2004 quarter, slipping to 124 from 126 in the previous quarter.[1] The fall in confidence was driven by a drop in the number of consumers expecting better economic conditions in New Zealand a year from now.[2,3]

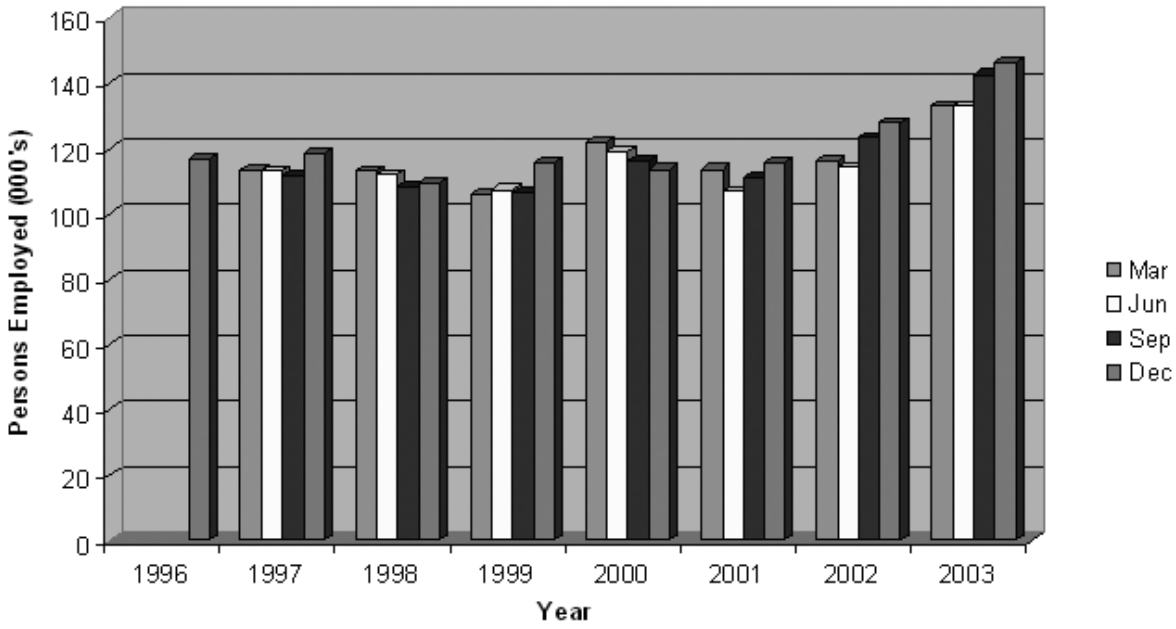
Tight labour supply

The December 2003 quarter Household Labour Force Survey results published by Statistics New Zealand reveal tight labour market conditions for the construction sector.[4] Employment in this sector continued to grow during the December 2003 quarter, up 2.5 percent on the September 2003 quarter (Chart 8). This compares to an average growth rate of 3 percent per quarter during the past two years. These figures outstrip employment growth trends across the rest of the economy. The entire economy grew by 1.5 percent during the December 2003 quarter and has averaged quarterly growth of only 0.6 percent over the past two years.

The Reserve Bank expects that these capacity constraints in the industry, and the resulting construction backlogs, to hold residential construction up at a relatively high level throughout 2004.

[1] An index number over 100 indicates that there are more optimists than pessimists.
[2] The WMM Consumer Confidence Survey and Index is not an official economic statistic but a recognised leading indicator of consumer intentions.
[3] From 2004Q1 Westpac McDermott Miller Consumer Confidence Index, published 23 March 2004.
[4] The construction industry classification includes both building construction activity and other types of construction activity, such as the construction of roads, bridges and other structures.

Chart 8: Persons Employed in Construction Industry



A shortage of skilled staff continues to be recognised as a limitation in the building trades. The Building and Construction Industry Training Organisation (BCITO), which deals specifically with the building trades (carpenters, plasterers, concreters, etc), achieved 5000 trainees in late November. This represents the number of people in training at any one time. This number of trainees is a 56 percent increase over a two-year period. The BCITO is anticipating further trainee growth of 15 percent during 2004.

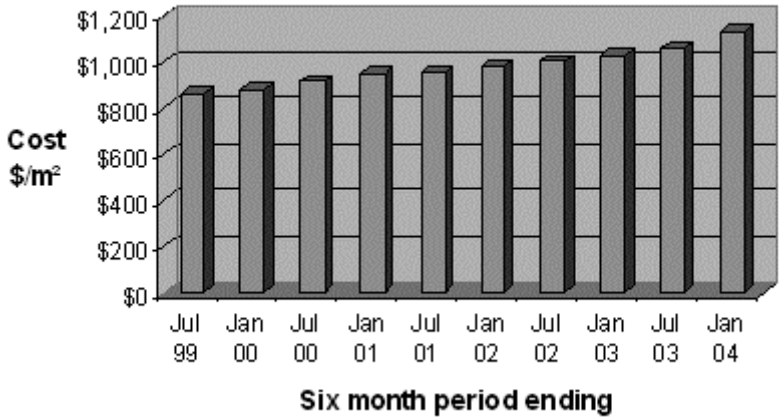
Increased building costs

The BIA regularly estimates building costs to assist territorial authorities in arriving at realistic estimated values when they review the job value provided with a consent application. The parameter that is monitored is the 'cost per square metre' for a range of common building types including residential and commercial construction.[5] Dwelling construction data, taken from the latest costing information calculated for the six-month period ending January 2004, indicates that the cost of building a typical dwelling with a floor area of 212 m^2 is now $1,135 per square metre (Chart 9). This is a rise of 7 percent compared to the previous six-month period and is an annual increase of 10 percent.

The costs of construction for group houses are approximately 21 percent cheaper than speculative houses, while architecturally designed houses are approximately 20 percent more expensive. Houses with smaller floor area plans are also more expensive to build.

[5] The model costs are calculated by Maltby and Partners Ltd, a firm of construction cost consultants. They price from a set of authentic construction documents in order to establish a unit cost that is as accurate as possible.

Chart 9: Estimated cost of building a 212m² house



Statistics New Zealand Consumers Price Index (CPI) data indicates that prices for the purchase and construction of new dwellings rose by 3.2 percent during the March 2004 quarter. This is the 20th consecutive quarterly increase in construction prices. In the March 2004 quarter, 49 percent of surveyed construction prices rose, compared with 61 percent in the December quarter. Respondents in the Statistics New Zealand CPI survey were asked to indicate one or more reasons for any change in their reported construction prices. Of those respondents reporting increases in the March 2004 quarter, 86 percent cited increased subcontractors' charges as a reason for the increase, 80 percent cited higher prices for construction components, 72 percent cited rising labour costs and 58 percent cited rises in the cost of fittings.

From the March 2003 quarter to the March 2004 quarter, construction prices rose by 8.7 percent which is the largest annual increase since the June 1995 quarter.

Increased cost of housing generally

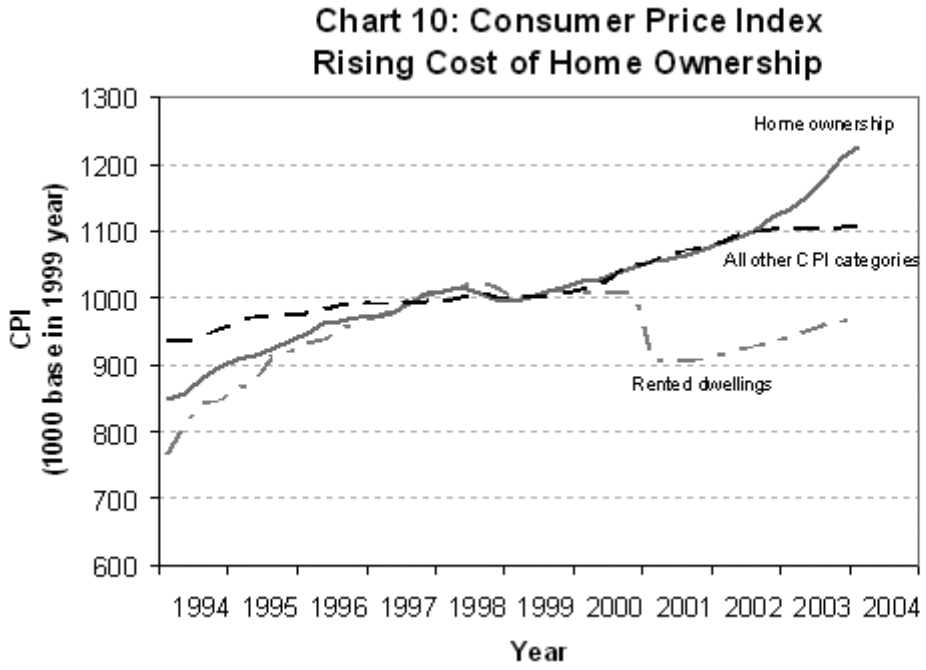
The overall CPI recorded a 0.4 percent increase in the March 2004 quarter. This followed a 0.7 percent increase in the December 2004 quarter.

Housing was the most significant upward contribution to the overall CPI in the March 2004 quarter, up 3.2 percent (Chart 10). This is the seventh consecutive quarter that housing prices have made the most significant upward contribution to the CPI and follows an increase of 2.2 percent during the December 2003 quarter.

As well as increased construction prices (mentioned above) housing costs have been driven up by increased local authority rates, increased expenses of dwelling purchase and increases in rents.[6]

[6] Note that the rented dwellings subgroup recorded a fall of 9.7 percent in March 2001. The most significant contribution to this fall came from a decrease in Housing New Zealand rentals of 48 percent, following the introduction of income-related rents. Since that time, rental costs have been tracking up, but not at as high a rate as the costs of home ownership.

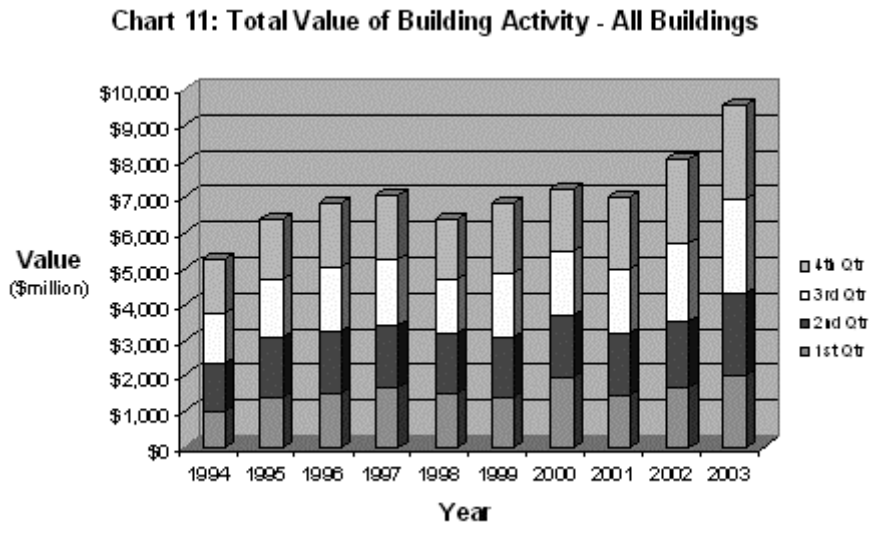
From the March 2003 quarter to the March 2004 quarter, home ownership costs have increased by 8.3 percent.



Increased value of building activity

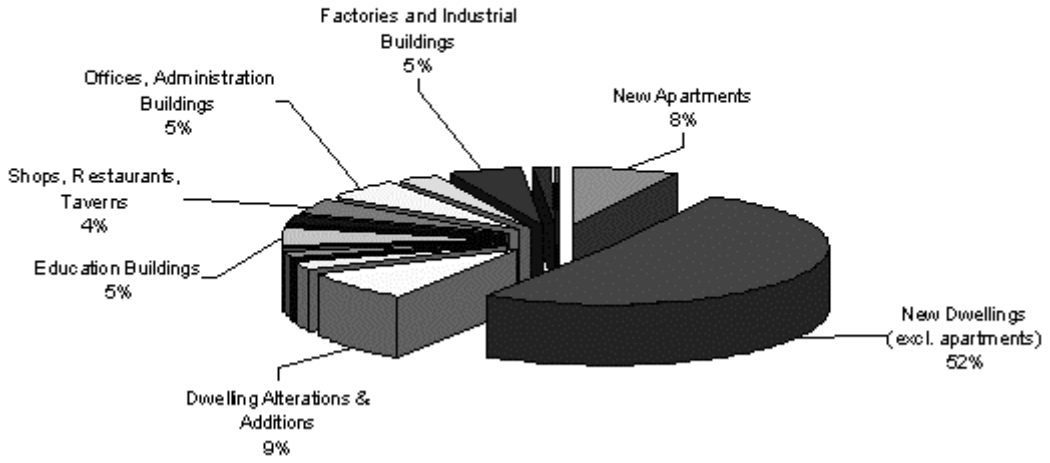
Not surprisingly, the combination of a high volume of building activity and increasing building costs have contributed to a sharp increase in the total value of building work being put in place.

For the 2003 calendar year, the total value of consents for all buildings was $9.5 billion, up $8.0 billion (an increase of 19 percent) when compared with the 2002 year (Chart 11).



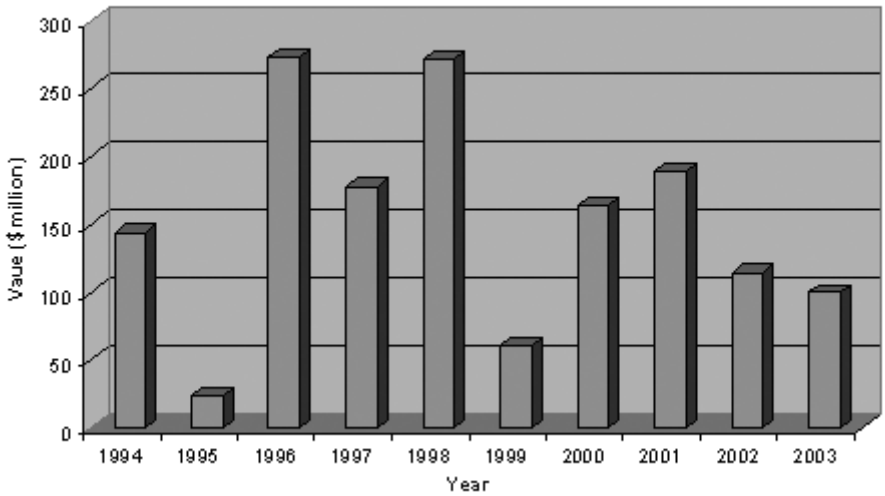
Residential construction dominates the total value of building work being put in place. The combination of new dwellings, apartments, and dwelling alterations and additions represents 69 percent of the value of all consents issued during the first quarter of 2004 (Chart 12).

Chart 12: Type of Building Activity by Value of Work
March Quarter 2004



There has been a long-term decline in the total value of large non-residential consents. These are individual consents which exceed $3 million in value and are an indicator of the volume of large commercial building activity. The most recent year saw a further decline in these large consents from $115 million in 2002 to $100 million in 2003 (Chart 13).

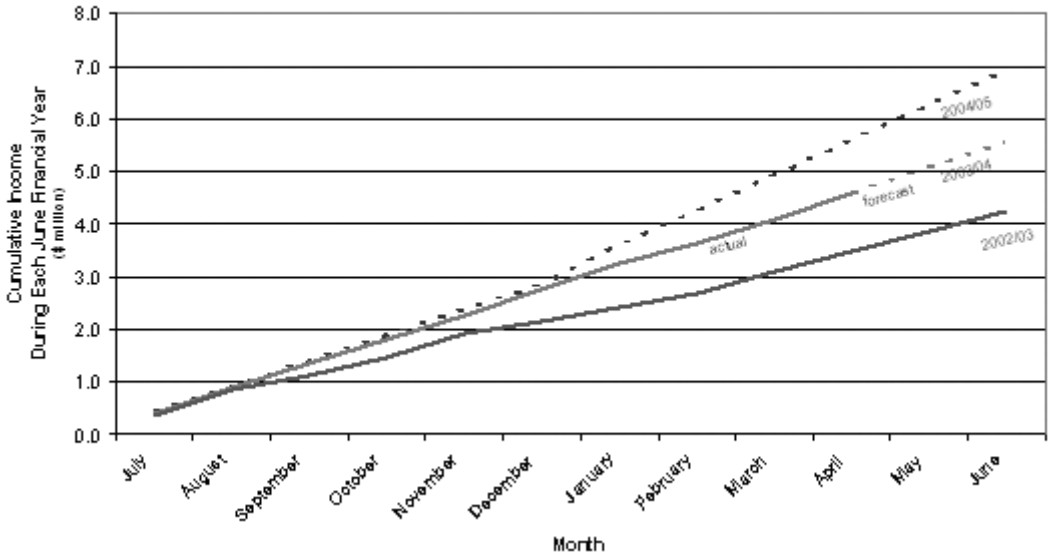
Chart 13: Value of large non residential consents



Building levy revenue is forecast to rise as a result of the increasing value of building activity (Chart 14). The forecast for the current year ending June 2004 is for levy receipts of $5.6 million which will be up 30 percent on the $4.3 million received for the 2002/03 year. Forecast levy receipts for the next financial year, assuming continuation of the high levels of building activity through 2004, is for receipts to further increase by 25 percent to a total of $6.9 million.

This forecast is based on a continuing levy rate of 65c per $100 charged on consents with a total value exceeding $20,000 and is net of the territorial authority 3 percent commission.

Chart 14: Levy Income is Forecast to Increase



Building Quality

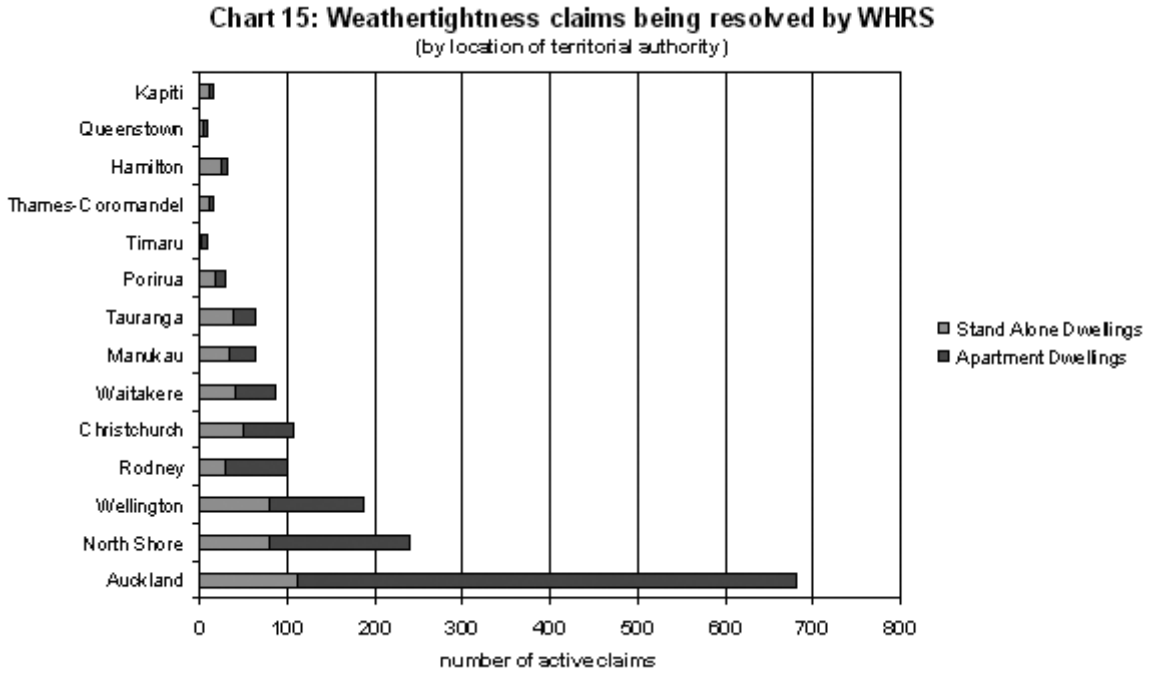
Two significant building quality issues have confronted the industry during 2003 and early 2004. These are the widely publicised weathertightness problem and issues regarding the structural integrity of commercial buildings. Considerable progress has been made over the past six months, particularly in addressing the weathertightness issue.

In addition, there are several other ongoing performance issues, the most notable of these being emerging concerns with medium- and high-density housing, building access and consumer protection.

Weathertightness problem

Ongoing weathertightness claims

The number of claims being made to the Weathertight Homes Resolution Service (WHRS) as a result of moisture damage to buildings continues to grow. The WHRS had 1816 active claims as at 1 April 2004.[7] It is important to note that these claims have relatively limited geographic distribution (Chart 15). Notably, claims arising in Auckland City exceed by three times the claims in any other territorial authority location. The estimated median remediation cost for these active claims is $35,000 and the average cost is $50,000.



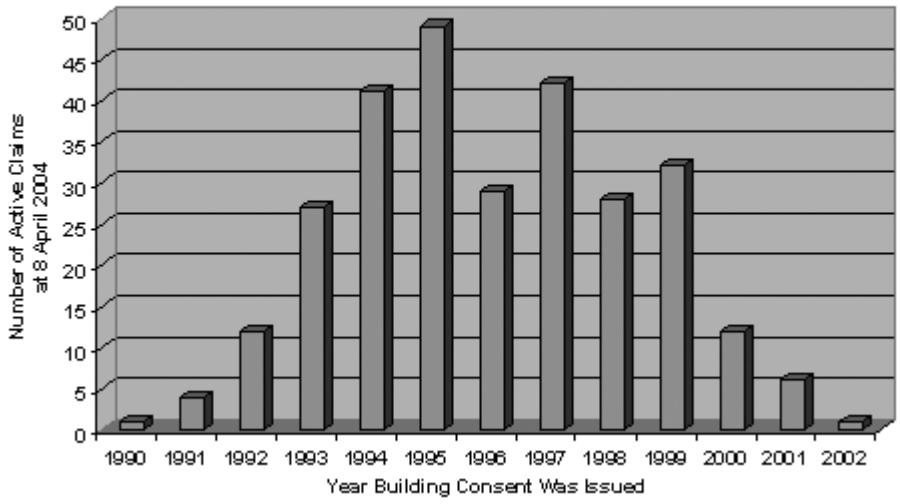
[7] At 29 May 2003 the WHRS had received 727 applications from homeowners covering 1616 individual dwellings. These figures, however, are not comparable with the currently monitored 'active claims' because WHRS has applied a different method of counting claims.

The BIA has assessed information collected by WHRS assessors in an effort to understand what has caused weathertightness failures. The data shows that the leaks are most frequently associated with decks and balustrades, cap flashings, cracks in claddings, penetrations and window flashings. Risk factors associated with building design include the use of parapets, narrow eaves, complex rooflines, tall structures in high wind zones, balconies or decks that are exposed in plan, no cavities behind the cladding, and untreated framing timber with low resistance to decay when it gets wet. Various publications, advice and education have alerted the building industry to these risk factors over the past six months.

An analysis of the cladding systems involved in WHRS claims has also revealed significant results. There is a clear indication that stucco-style cladding systems have a high failure rate. Conversely, brick veneer is substantially underrepresented in the WHRS data. This revelation regarding the high risk of stucco led the BIA to amend Clause E2 of the Building Code and its Approved Document to require a drained and ventilated cavity to be installed behind all stucco systems in the future.

The BIA is continuing to track the year-of-consent issue for homes exhibiting weathertightness failure.[8] Currently the main window of failure appears to be the seven-year period from 1993 to 1999 (Chart 16). The time that typically passes before weathertightness defects become apparent may exceed several years, so this window may extend to include subsequent years as time passes. However, it is predicted that increased industry awareness of weathertightness risk factors, changes in construction practice and changes to Clauses B2 and E2 of the Building Code and their Approved Documents will limit the majority of these claims to buildings that were constructed prior to 2003/04.

Chart 16: Year of Building Consent for Active WHRS Claims



[8] The data is based on an analysis of 348 active WHRS claims that have been assessed to 8 April 2004. The consent issuance date is available for 284 of these claims. Note that the WHRS has 1600 current claims.

Measures to reduce moisture ingress

As mentioned above, the BIA has amended its Acceptable Solution (E2/AS1) that sets out the requirements for the way buildings should be constructed to manage external moisture. The new edition relates specifically to buildings using solid plaster (stucco) cladding on timber framing. It now requires the use of drained and ventilated cavities behind all stucco in houses built to the Acceptable Solution. This means that if moisture penetrates the cladding, it has an opportunity to drain or dry before causing damage to timber framing.

The BIA is also focusing on further amendments to E2/AS1 which will provide more detail on a wider range of cladding types than the current Acceptable Solution. This will result in safer construction practices when using the range of cladding types prevalent in contemporary residential buildings.

Measures to reduce fungal decay

Changes to the Building Code requirements for framing timber have also been made recently. Higher levels of timber treatment will be required in parts of buildings that are more at risk from leaking. This change will reduce the risk for fungal decay for timber framing elements. The amendments took effect on 1 April 2004 for new building consents.

Problems with code compliance of monolithic clad buildings

Towards the end of 2003 some territorial authorities decided that all forms of monolithic cladding should have a drained and ventilated cavity behind them if they were to be approved as Alternative Solutions. They began declining consents or code compliance certificates for buildings using systems without cavities.

While it is possible some homes built with monolithic cladding might not comply with the Building Code, the BIA has pointed out that blanket policies are unlawful and that all buildings must be assessed for code compliance on a case-by-case basis.

Councils have been encouraged to apply to the BIA for formal Determinations on matters of doubt or dispute about compliance with the Building Code for buildings using monolithic cladding and no cavities.

To date the BIA has received around 30 applications for a Determination on this matter. The first few Determinations have now been completed and have led to the conclusion that houses that have been built to good practice and which display low weathertightness risk features can be built to provide protection against water ingress.

Work to address potential structural weaknesses

An open letter by John Scarry, a structural engineer, published in early 2003 raised questions about standards of engineering practice in New Zealand. His concerns related to a broad range of design and construction deficiencies in commercial buildings rather than housing. Many of the shortfalls he noted would be most evident during severe earthquake loading.

Two subsequent investigations, by the BIA and the Institution of Professional Engineers (IPENZ), were undertaken into these matters. The BIA commissioned a technical report, prepared by engineering firm Sinclair Knight Merz, which pinpointed a number of practices that will be the subject of further research. This report has also identified areas where specific guidance information is required and these advisories are already in preparation.

In addition, work is ongoing to establish the nature and extent of pre-cast concrete floor installations since the introduction of hollow core flooring, and the use of cold worked steel in inappropriate situations. The BIA is supporting investigations and research into the performance of pre-cast concrete floors, slender walls, use of cold worked steel and the performance of diaphragms.

The BIA is also working to improve the quality and availability of guidance information on design and structural issues and has commissioned Standards New Zealand to address deficiencies that exist in current New Zealand Standards governing concrete design.

Improvement to timber selection for use in structural elements

During the past year performance concerns have also arisen regarding the structural strength of visually graded timber. In July 2003 the BIA advised that, in light of concerns that visually graded timber may not be as strong as previously thought, it was moving towards amending the B1 Approved Document. Since then a new draft Standard has been proposed which enables the verification of timber properties for both visually graded and machine stress-graded timbers. This addresses the BIA's structural timber performance concerns and the finalisation of the new Standard is now awaited.

Other building performance issues

High-density housing

There has been a substantial rate of new apartment unit construction during recent years (Chart 7). As well as apartments becoming a significant proportion of new dwelling units, there has been a trend towards smaller floor area designs. Several territorial authorities, including Auckland and Wellington, have publicly expressed concerns at trends toward smaller apartment sizes in their areas. Auckland City, for instance, has already indicated that it will not approve building consent applications for apartment-style accommodation where the floor area of the apartment is less than 30 m^2 or where natural light is not considered to be adequate. In the event of a dispute, applicants are being advised by territorial authority officials to seek a Determination from the BIA. To date the BIA has not received any such applications.

The Building Code does not directly address the issue of apartment size. However, it does cover a number of areas relevant to the apartment issue such as noise transfer between units, levels of natural light, awareness of the outside environment, personal hygiene and ventilation. The dominant view internationally is that a well-designed small apartment can provide adequate levels of amenity. Size is therefore not necessarily the best criterion by which to judge amenity.

There can, however, be a link between size and amenity. Consequently, the BIA has commissioned a study to identify the issues related to high-density housing which commenced in December 2003. The study findings will assist the BIA in developing any regulatory response that may be necessary.

Determinations

In addition to the 30 applications lodged for the determination of monolithic cladding construction (outlined earlier), since 1 July 2003 there have been seven other applications lodged with the BIA for determination. These Determinations were in relation to:

- motel access
- insulation concerns regarding change of use to habitable space
- access for people with a disability
- weatherboard cladding without grooves
- cladding of holiday homes
- fire safety provisions in a medical centre
- a foundation wall detail for a house.

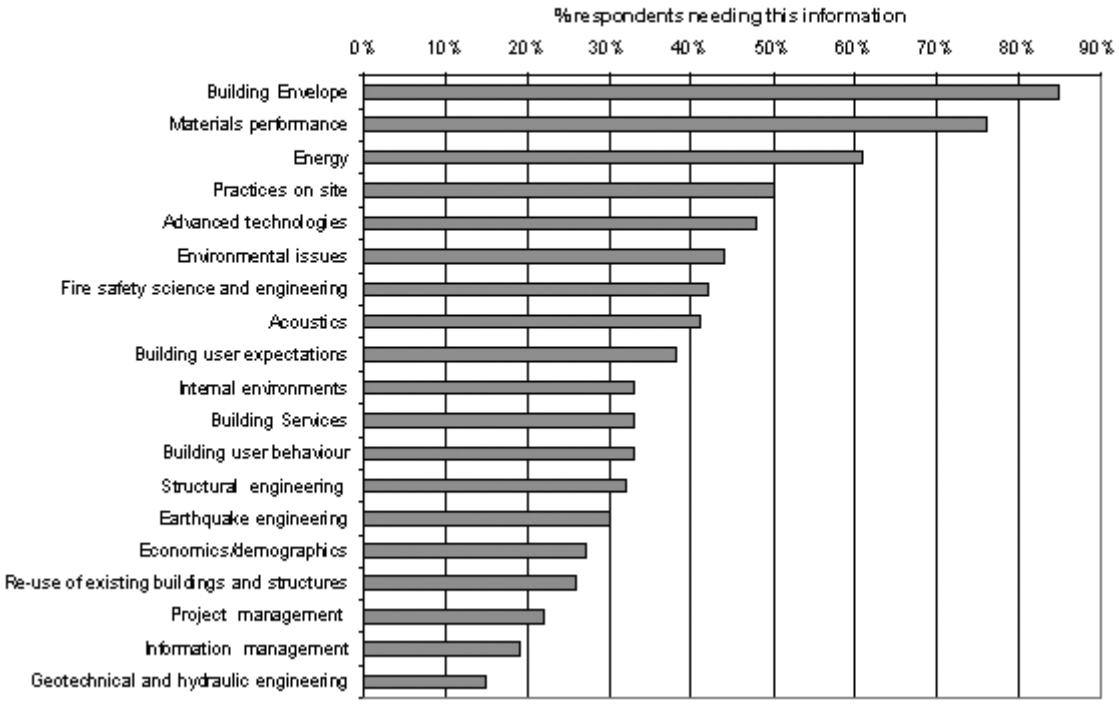
These applications cover a range of different issues and do not reveal any new widespread performance or regulatory concerns.

Industry information needs

Each year BRANZ conducts a needs survey to identify building industry views of areas where new information is needed (Chart 17).[9] This year's results show a continuing high need for further information on building envelope and material performance (weathertightness) issues.[10] BRANZ suggests that this reflects the extent to which the industry now recognises that it has a major problem. A rise in the need for information related to environmental issues continues a slow trend over the past few years.

[9] This year's BRANZ survey reached 181 industry participants, including designers, builders, subcontractors, manufacturers and building owners and had a response rate of 36 percent.
[10] Note that the survey was completed before the release of the proposals for a revised B2.

Chart 17: Information Requirements (General Topics)



Building Regulation

The predominant role of the BIA as the central regulator is to set the framework for building compliance through maintaining the Building Code, communicating its requirements and monitoring its implementation. The territorial authorities and building certifiers apply this framework and their performance is critical to the success of the building control system.

Volume of building regulation work

The bulk of building regulation activity is undertaken by only a small proportion of territorial authorities and building certifiers. Chart 18 (consents processed by the top 13 territorial authorities), Chart 19 (total consents issued during 2003 by territorial authorities) and Chart 20 (volume of work processed by private building certifiers) reveal that 15 to 20 of the approximately 100 regulatory agencies process more than half of the building consent activity in New Zealand. This work is mainly distributed among the territorial authorities and certifiers that service the metropolitan areas of Auckland, Hamilton, Tauranga, Wellington and Christchurch (Chart 19).

Chart 18: The 13 Territorial Authorities That Process 50% of New Zealand's Building Consents

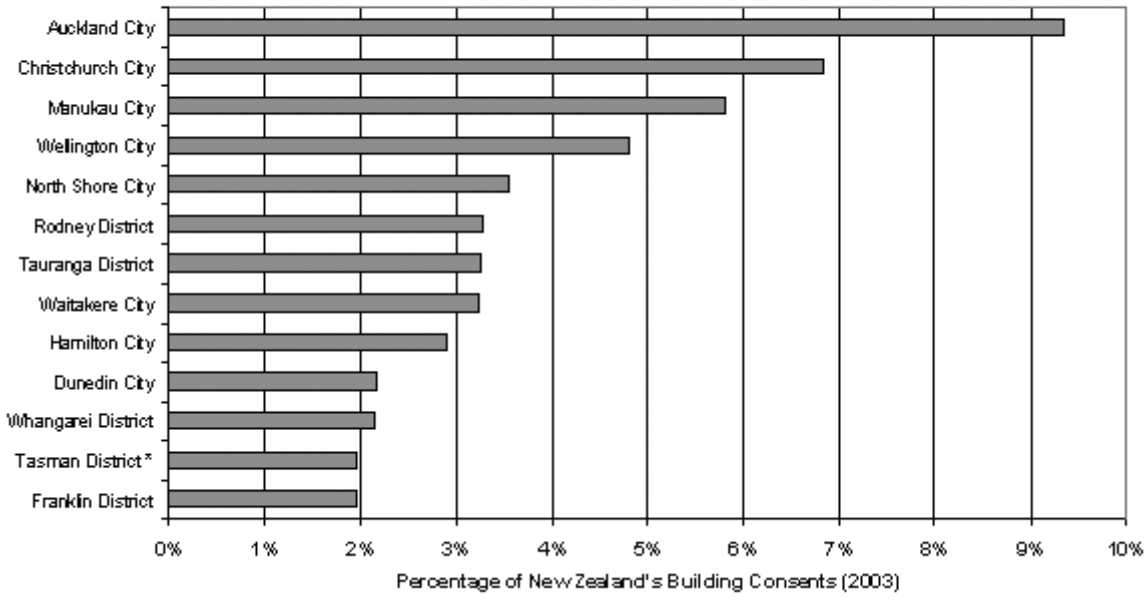
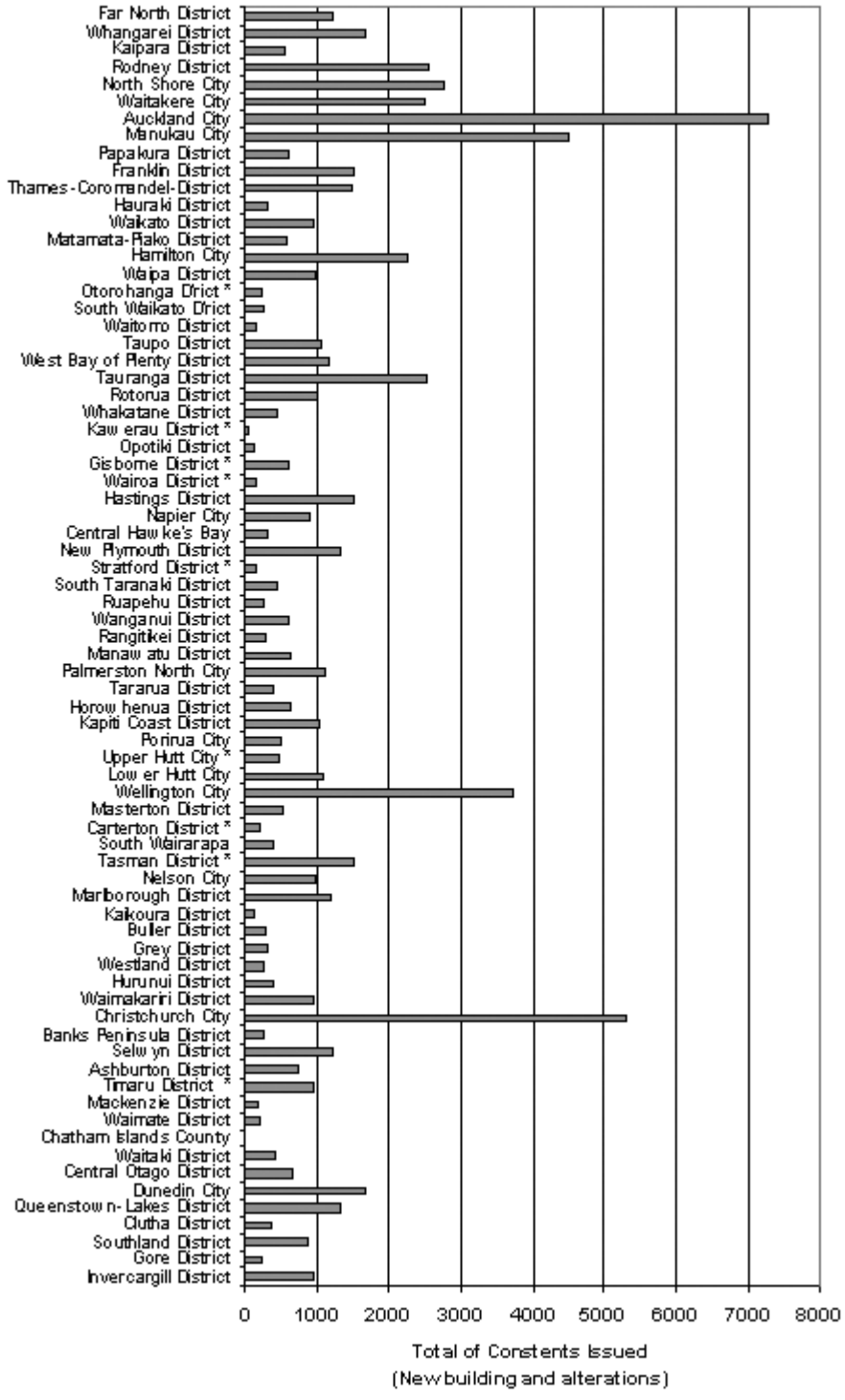


Chart 19: Total Consents Issued During 2003 by Territorial Authority



Territorial authority and certifier performance

One function of the BIA is to review the performance of territorial authorities and building certifiers. Eight territorial authorities (TAs) and four building certifiers have been reviewed during the period July 2004 to March 2004.

During these reviews, the BIA has conducted a comprehensive review of the TAs' and certifiers' whole building control function. This includes assessing the performance of their legislative functions and also wider aspects of building control without which the legislative requirements cannot be met. The reviews have highlighted a number of performance issues confronting these regulatory organisations who operate the front-end building control system.

Shortage of skilled staff

Just as the overall building industry is facing a shortage of skilled staff, the building control industry is facing a similar issue. The average age of building inspectors is estimated to be 55 years.[11] Technical reviews indicate that most TAs and certifiers face similar issues in respect of an aging work force, accelerating numbers of retirements, difficulty in recruiting suitably skilled staff and difficulty retaining staff. In the larger metropolitan areas the BIA reviews have noted it is common for staff to transfer between TAs which can create staff retention problems.

There is an identified need for more training courses in various aspects of building control. Unfortunately, at the present time there are very few courses or seminars available. Some organisations such as the Barrier Free New Zealand Trust and several consultants offer limited industry training, however, they do not provide comprehensive coverage of industry training needs. WelTech has recently launched a more comprehensive building control course. The BIA is currently redeveloping its training strategy and is taking account of these issues.

Mixed weathertightness focus

In the Auckland region weathertightness compliance is now a key building control focus, at a policy level at least, although mixed quality still exists in practice.

Outside of Auckland, however, the majority of TAs and building certifiers do not have as high an appreciation of weathertightness issues or the urgency with which these problems need to be tackled. There is often a low awareness of the requirements for weathertightness compliance in these other locations.

The Building Industry Performance Group has worked together with BRANZ, BOINZ, TAs and various other industry stakeholders to develop a guidance document for assessing and inspecting monolithic claddings which have a high risk of weathertightness failure. Other work with the TAs and certifiers is assisting them to develop better policies and procedures for ensuring weathertightness compliance.

[11] BOINZ 2003 industry survey result.

Accessibility compliance is poor

The BIA places a strong emphasis on accessibility compliance. Nationally the level of accessibility compliance achieved appears consistently poor. One of the reasons for poor compliance is a lack of knowledge among building officials of what is required to meet the accessibility requirements of the Building Act. The BIA continues to provide technical advice to the industry on a case-by-case basis and to make Determinations relating to accessibility. The work of the Barrier Free New Zealand Trust continues to provide valuable ongoing accessibility training to the industry and the BIA has been directing TA and building certifier staff to this training. The results of the technical reviews suggest that further guidance is needed in this area.

Alternative Solutions

In all of the TAs and building certifiers reviewed there has been a consistent failure to adequately assess Alternative Solutions. The Alternative Solution assessment process for most TAs and building certifiers requires improvement. A guidance document addressing the assessment of Alternative Solutions is planned for publication by the BIA to assist building officials to improve their performance in this area.

Mixed quality of producer statements

There is a heavy reliance placed on Producer Statements by the building control industry. TAs generally have been found not to have satisfactory Producer Statement acceptance regimes, whereas building certifiers generally do have these in place because they have been required to do so in their quality assurance manuals. The BIA continues to work with specific TAs where it is recognised they have specific weaknesses in this area. Publications are also being prepared that will help highlight this issue and provide some direction to the regulatory building control and engineering design industry.

Building Code waivers

Section 34(4)(a) of the Building Act states that a TA may grant a building consent subject to certain conditions. This power is being used infrequently by territorial authorities with nine waivers being issued during the three-month period January 2004 to March 2004 (Table 4). The majority (two-thirds) were waivers to Code Clause C3 Spread of Fire. These figures compare to a long-term average[12] of approximately 30 waivers per quarter, approximately one-third of which have been issued to Code Clause C3.

A common situation leading to a C3 Code waiver is where a building is close to a boundary which requires walls on or close to the boundary to be fire rated to prevent spread of fire. Where these boundaries are beside public parks or rights of way, or other areas which are not going to be built on, the TA often waives the fire rating requirements. Sometimes, though, the title is also

[12] Refer to *BIA News* number 132 for a 19-month summary of the Code Clause waivers that were notified to the BIA to March 2002.

marked so that, in the event of any building being erected on the adjacent area, the waiver could be withdrawn.

Table 4: Building Code waivers

	C3 Spread of Fire	E1 Surface Water	E2 Internal Moisture	F4 Safety from Falling	Total
Auckland City	1				**1**
Gisborne District	1				**1**
Napier City	1				**1**
Buller District		1			**1**
Selwyn District	2			1	**3**
Invercargill City	1		1		**2**
Total	6	1	1	1	**9**

Longer-term patterns in the use of waivers by TAs have shown that a number of C3 waivers have been granted for car parks in apartment buildings. Where each car park has a unit title, the Building Code requires a fire wall between adjacent parks. Generally this requirement is waived by TAs on the condition that nothing other than a vehicle is stored in the park.

The BIA continues to monitor TAs' use of Code waivers to determine whether to highlight any problem with the Building Code or other performance issues. There are plans to amend the Code to address issues that recent waiver patterns have highlighted.

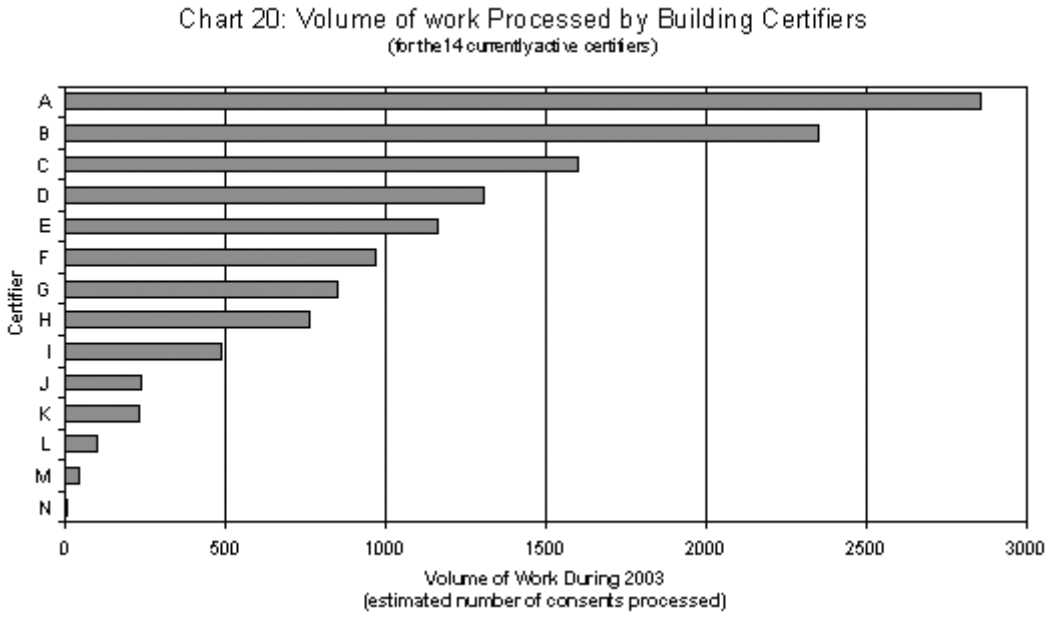
Certifier industry activity

Approximately 120 people are employed in the private building certification industry. There is a concentration of capacity in the Auckland region, Wellington, Bay of Plenty and Canterbury regions although some other locations are also serviced.

Chart 20 provides an overview of the volume of work undertaken by the 14 'active' private building certifiers.[13] Five of these organisations process more than 1000 consents per year which is equivalent to the volume of work processed by mid-sized TAs. Private building certifiers themselves estimate that since the inception of the scheme in the mid-1990s, they have issued approximately 60,000 building certificates, including 40,000 code compliance

[13] These figures are estimated from information collected during the BIA's technical reviews and other interactions with certifiers. Note that the consent is actually issued by a TA on the basis of a building certificate provided by the building certifier. These consent figures are inclusive in TA consent volumes, not additional to them.

certificates.[14] During the past three years, private building certifiers have processed approximately 17 percent of all building consents in New Zealand.[15]



Certifier technical competence satisfactory

In general, the reviews of private building certifiers have shown satisfactory compliance with their duties under the Act. Although a systematic comparison is difficult, the level of overall certifier technical capability compares favourably with the capability identified in recent reviews of TAs. There are, however, some specific exceptions to this general observation.

Technical reviews often reveal general problems at the interface between private building certifiers and TAs. These problems appear to have at least two causes.

- Competitive pressures.
- Perceptions of risk and possible legal liability by TAs if they become drawn into 'partnership' in some types of private building certifier activities.[16]

These tensions create problems that affect the continuity and timeliness of consenting, inspection and certification processes. Customers can experience inconvenience, delay and costs because inspection functions have been split or shared between private building certifiers and TAs. This can happen for a number of reasons. For example, if the private building certifier is:

[14] 'Building certificates' in this context are taken to include code compliance certificates and other documents issued to certify that any items of the building work comply with specified provisions of the Building Code.
[15] Statistics New Zealand data indicates that 63,451 building consents were issued in New Zealand during the 2001, 70,015 during 2002 and 75,217 during 2003. The BIA estimates that the proportion of these consents processed by certifiers during this period was 16 percent during 2001, 18 percent during 2002 and 17 percent during 2003.
[16] For example, scope restrictions, applied to certifiers by the BIA for technical or insurance reasons, can result in certifiers and TAs both needing to complete parts of the consenting, inspection and certification activities of a building.

- only engaged to perform some but not all inspection functions
- not approved to certify a particular aspect of a building project (eg, their scope has been restricted by the BIA because they lack the skills or experience)
- required to hand over their functions to the TA because of an inability to complete work.[17]

Complaints against private building certifiers

Approximately 20 complaints against private building certifiers have been recorded by BIA staff during the past two years. Some of these matters have been followed up by BIA staff and either found to have no substance or have been resolved between the parties. Several complaints have been sustained and have resulted in the BIA taking disciplinary action against the private building certifiers concerned. Significantly, only three of the 20 private building certifiers feature prominently in complaint statistics.

Over the past year, the BIA has dealt with two substantive issues involving one large private building certifier and disciplinary action was taken in both instances. In March 2004 the BIA resolved to conduct an inquiry into the activities of another building certifier.

The majority of private building certifiers have not been the subject of any formal complaints to BIA staff during the past two years.

Certifier insurance review

The BIA's biggest concern with private building certifiers is with the approved insurance scheme and the level of protection available to consumers from it. If a private building certifier is found to be negligent in its performance and has caused a loss to the homeowner, then the private building certifier must accept legal liability on the same basis as a TA had it undertaken the building control work. While TAs have the mechanisms to cover damages awarded (effectively from their rating base), private building certifiers do not have these mechanisms. The Act addresses this risk by requiring the BIA to approve a scheme of insurance.

Issues have emerged over the last few months in relation to general insurance cover and insurance policy terms and conditions that have caused the BIA to initiate a formal review of the insurance scheme. The purpose of the review is to determine whether any changes are required to the current scheme. This review is expected to take four to five months to complete.

[17] Section 57 of the Building Act requires a building certifier to notify the TA if the building certifier becomes or expects to become unable to inspect all or any items for any reason. On receiving notification the TA must make such inspections and issue such Notices to Rectify as it considers necessary.

Conclusions

This document is the first of a planned series of quarterly reports into building industry performance. A number of issues have been identified, including the following.

Significant activity

- A continuing high volume of building activity.
- Considerable growth in the residential sector of the market.
- Steady commercial building activity.
- Drivers of high levels of immigration and buoyant consumer confidence.
- An expectation that growth is predicted to slow during the latter half of 2004.
- Rising building costs, beyond the rate of underlying general inflation.
- Cost drivers of increased labour and material costs.
- Prediction of further increases in building costs as a result of the Building Bill.
- A tight labour market for building trades generally and in building regulatory control.

Mixed-quality outcomes

- Increasing awareness of the poor construction and design practices that cause weathertightness failures.
- Improvements being made to building control processes to reduce weathertightness problems.
- A potential long tail of weathertightness failure, still to be felt in homes built between 2000 and 2003.
- Quality improvement work under way to prevent potential structural integrity issues arising from poor commercial construction practice.
- Potentially emerging amenity issues in apartment design.
- Overall, mixed-quality outcomes, although practices seem to be improving.

Improving regulatory performance

- Territorial authority and certifier regulators responding to increased expectations from the BIA to raise quality standards.
- Difficulties obtaining and retaining skilled building control staff.
- Mixed compliance among these frontline regulators in respect of building access provisions, weathertightness focus, producer statement regimes and assessment of Alternative Solutions.
- Problems with the building certifier insurance scheme which is now being formally reviewed.