

STUDY REPORT

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Small firms' work types and resources

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Preface

This is the first in a series of reports prepared during research into small building industry firms. It reports on the type of work done by industry firms, whom their clients are and where they get advice. It contains survey results on KPIs used by firms and what cost savings are possible in new housing by improved client briefing, better design and improved firm and project management. There is also an assessment of the types of work undertaken by small building firms and how these may change in the future.

Acknowledgments

This work was funded by the Building Research Levy.

Note

This report is intended for researchers, builders and officials.

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BRANZ Study Report SR 284

IC Page, MD Curtis

Abstract

Most firms in the building industry are small in size. Approximately 92% of industry firms have five or fewer employees. Measures developed to improve productivity in the industry need to be aware of this fact and tailor improvement programmes toward this small business sector. This report analyses what types of work are undertaken by building firms, the KPIs they use, if any, and where they get business advice. The aim is to develop a picture of the sector in order to assess the potential for productivity improvements and to better target productivity programmes. A baseline of firm behaviour is identified to help monitor improvements as a result of the Productivity Partnership work.

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1. INTRODUCTION

This project examines small building firms to better understand their types of work, and the behavioural characteristics of the firm owners. The industry is characterised by small firms with over 80% of employment in firms 5 persons or less in size. The research looks mainly at these firms, and we have used this as the definition of a small firm for the purposes of this report. A survey of firm characteristics and behaviour was undertaken and is part of the study. Both small and large firms were included in the survey, the latter for comparison purposes. The survey covered builders only, and the various trade groups (i.e. plumbers, electricians, etc) were not included.

2. EXECUTIVE SUMMARY

The main findings are:

- Small firms mainly do alterations and additions (A&A), and repairs and maintenance (R&M) work on housing averaging about 70% of their workload. The other 30% is new housing. Medium-sized firms (six to 50 persons) do a variety of work including housing and non-residential buildings in both new and A&A. Large firms, over 50 persons, mainly do non-residential work.
- The large majority of firms do not specialise in any particular segment. The highest level of specialisation entails 20% of medium-to-large firms (i.e. more than five persons) only doing new housing.
- Repeat clients and recommendations from clients is the major source of work for building firms. This indicates the need for good management of relationships, particularly with new clients.
- Fixed-price contracts with either one payment or progress payments, is the most common contractual arrangement as utilised by over 65% of firms. However, one and two-person firms often use an “hourly rate plus material cost” contract. Clients would be better served by fixed prices, where possible. Building firms get business advice from a variety of sources and for about 50% of firms the advice may be less than optimal based on a judgement of the reliability of the source.
- Potential cost savings of up to 30% are available on typical jobs based on builders’ opinions of where savings can be made. These occur in three main areas, namely client briefing, design detailing, and business and project management.
- Firms were asked about the use of KPIs. The indicators most commonly monitored are client satisfaction, forward workloads and cashflow. These are vital to a firm’s health.
- The main causes of downtime on projects include weather delays, waiting for materials, instructing/training labour and repeat work due to own errors. Reductions in these delays are amenable to good management.
- The work done by builders is changing in amount and by type. Growth in demand in the building sector is estimated at 9% per annum in the next few years. Some of the growth is in specialised areas such as leaky building repair and earthquake strengthening. However traditional small firm work, such as housing

R&M, is also expected to grow. There are some quite large firms working in R&M now and it is an open question as to whether their share will grow further in this area.

3. MAIN RESULTS

This section describes two sources of information on the types of work done by builders. The first is a survey of builders asking questions on work types and including other queries on how their firms operate. The second source is an examination of building consents, and in particular the descriptors used for A&A consents.

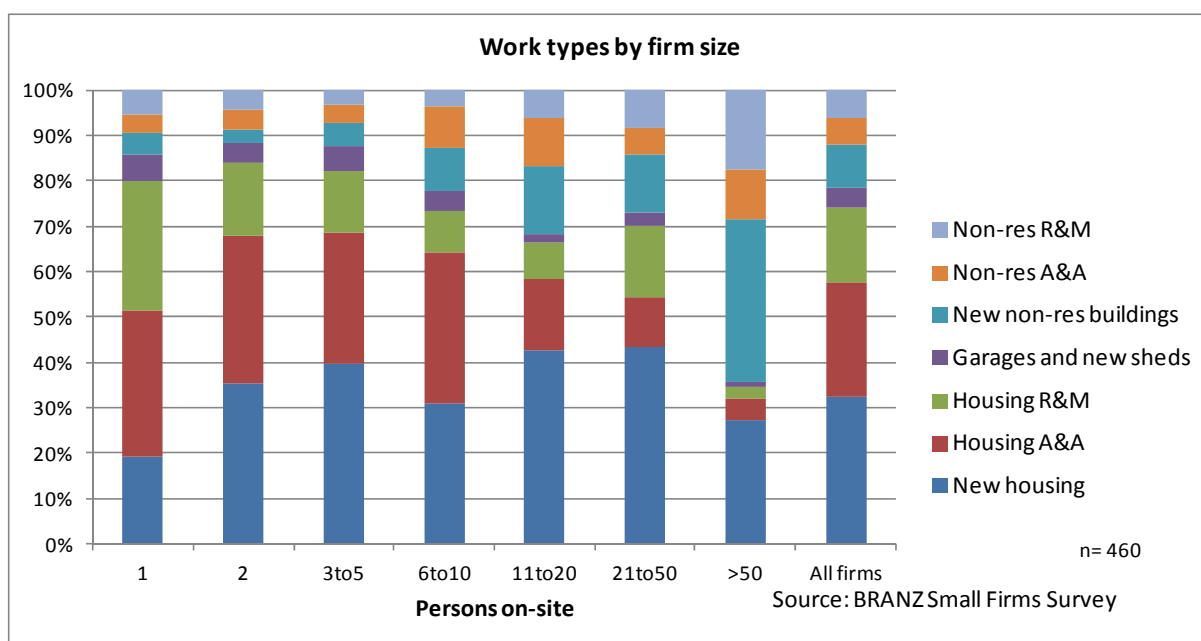
3.1 BRANZ building firms survey

BRANZ undertook a survey of building firms using the BRANZ database of names. The survey was sent to over 4000 builders and approximately 500 returns were received via e-mail or through the post. The survey was undertaken in mid 2012 and the survey form is included in the Appendix.

The survey results on work types, clients, business advice, potential savings, KPIs and downtime are reported in the following sections.

Figure 1 shows the work types. Housing A&A is separated from housing R&M because the former is consented work involving structural aspects whereas the latter is not required to be consented and includes minor replacements such as like-for-like replacements of components (e.g. windows). Small firms, less than six persons, are mainly involved in housing and their associated out buildings. Above five persons, the share of non-residential work increases, but it only the largest firms (>50 persons) that have a majority of non-residential building work. New housing is spread across all firm sizes above one person.

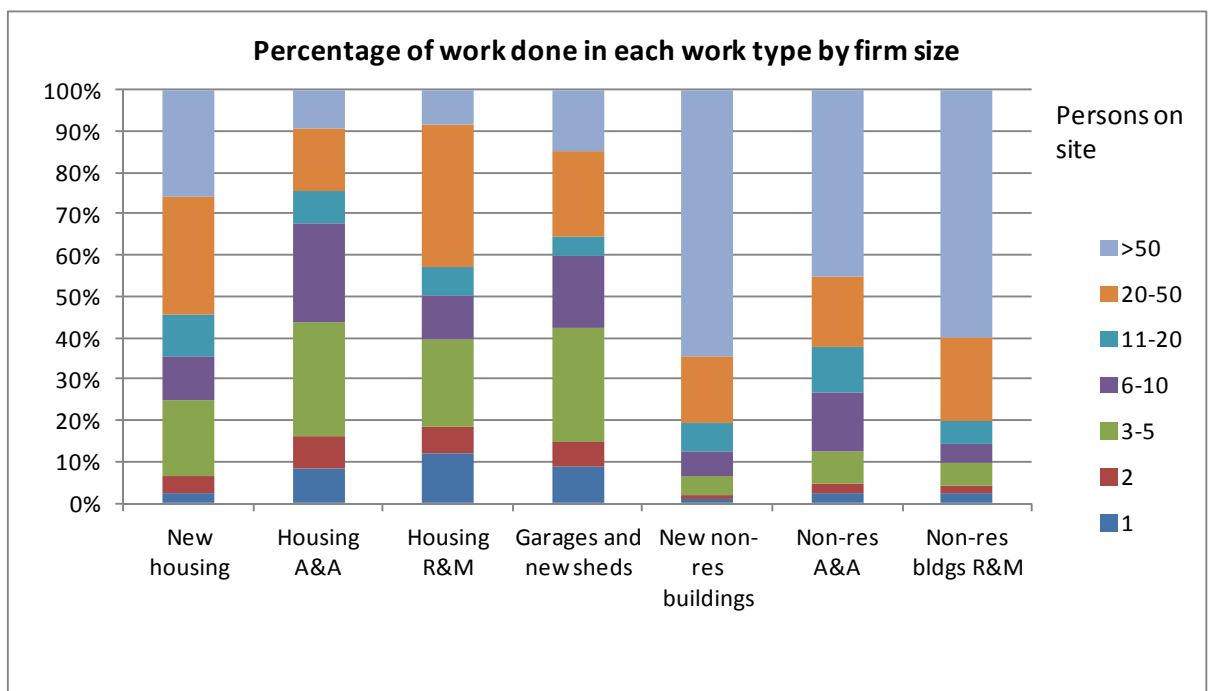
Figure 1 Work types by size of building firm



The last bar on the chart shows all firms adjusted for their relative number of workers and indicates that new housing, housing A&A and housing R&M accounts for 73% of all work that the building industry undertakes. Apart from new housing, most of these jobs are quite small-scale. So about half of all work done by the building industry is on small-scale projects, by which is meant work on residential alterations, small additions, out-buildings and housing R&M.

Figure 2 shows the percentage of work done by each firm size, for each type of work. For example, about 50% of new housing work is done by firms with 20 or more people employed. In contrast, housing A&A work is mainly done by firms of ten persons or less. Housing R&M work is interesting in that it attracts some quite large firms. Non-residential building work is mainly done by the large firms (>50 persons).

Figure 2 Who does what percentage of the work



3.1.1 Do firms specialise?

The largest amount of specialisation occurs in new housing where about 20% of larger firms involved in new houses have that as their sole activity, see Figure 3. It is interesting to note that only small percentages of firms specialise in housing A&A work or R&M. When those two work types are combined, a greater amount of high specialisation is apparent, see Figure 4. The chart indicates over 25% of one-person firms specialise in residential A&A and/or housing repairs and maintenance. For all firms five persons or less the percentage is almost 20%. These two activities are similar in terms of scale and the skills required so it is perhaps not surprising to see these appear together as a higher percentage than when counted separately.

Figure 3 Specialisation by builders

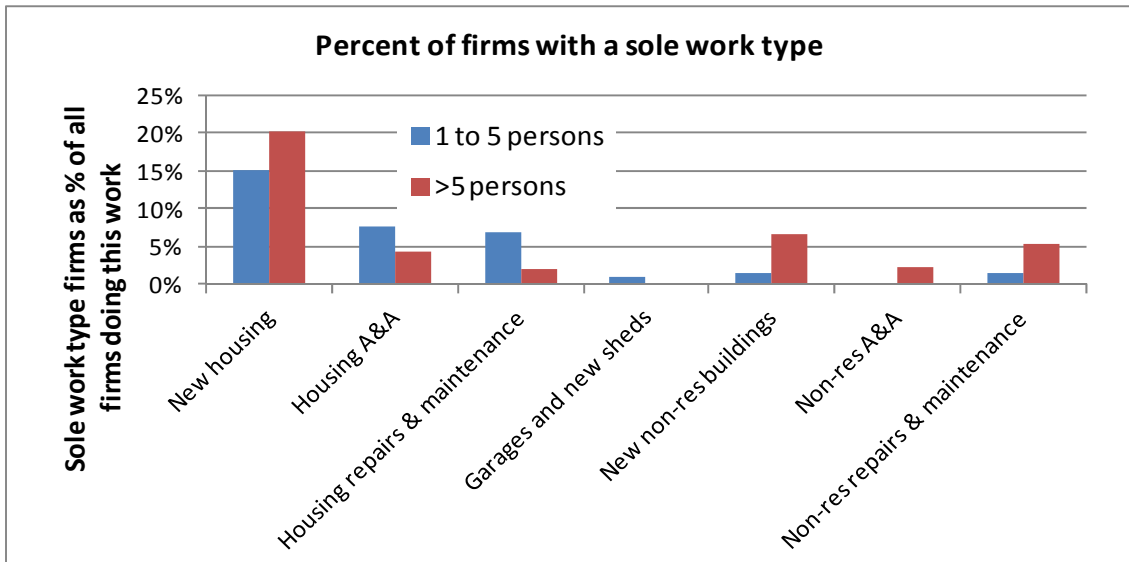
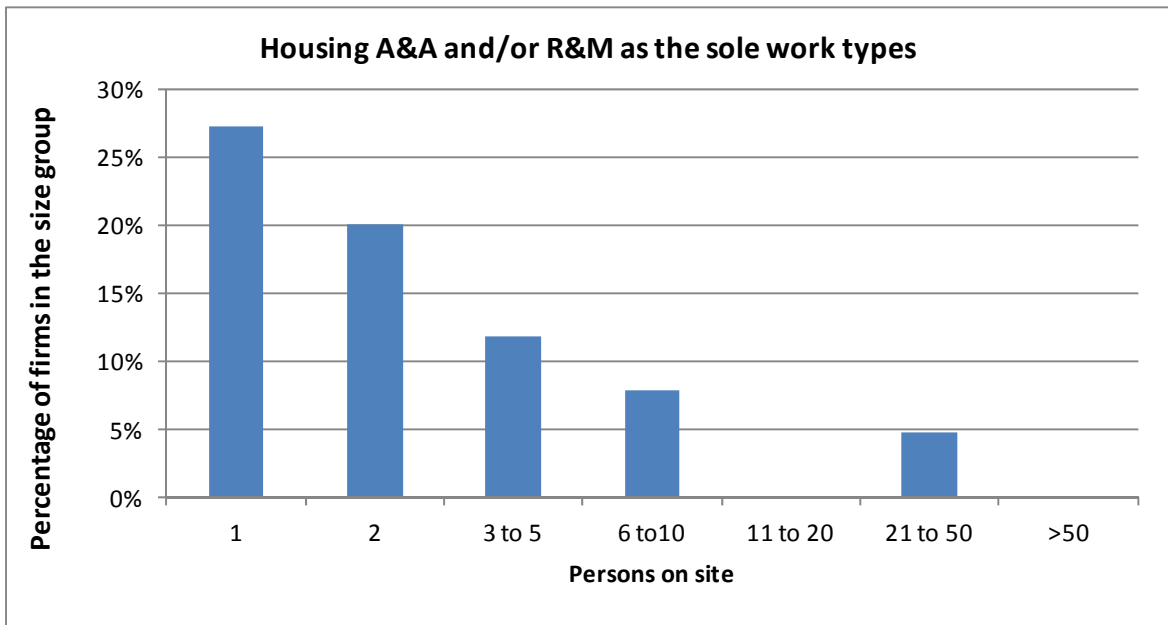


Figure 4 Housing A&A and R&M

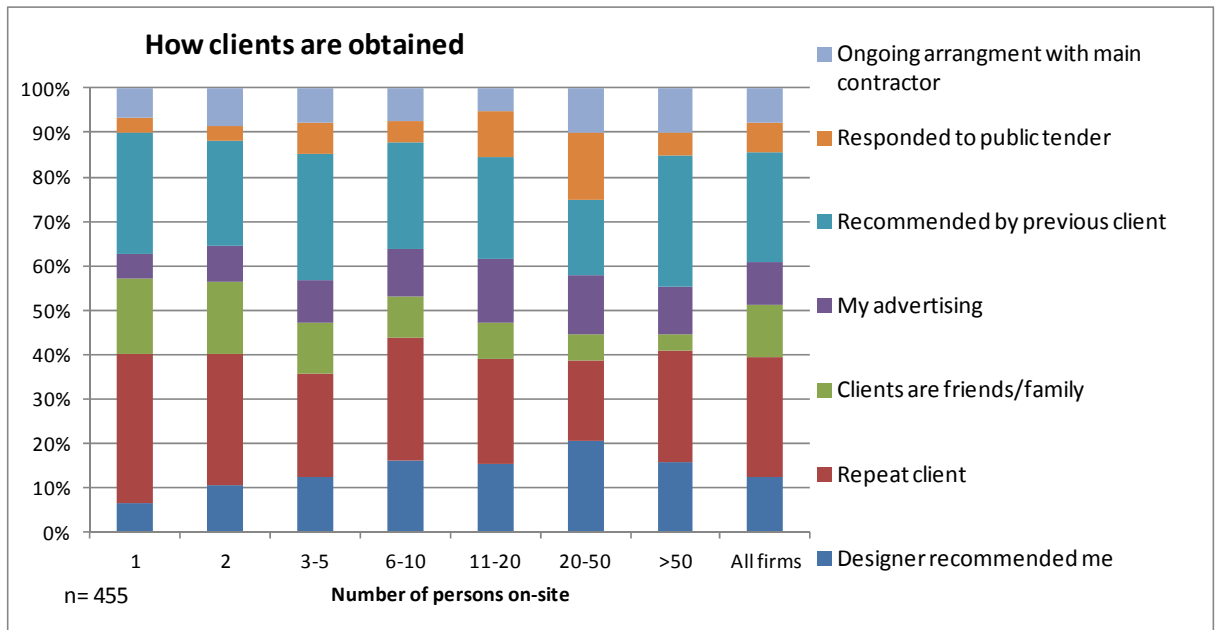


3.1.2 How do they get their clients?

The survey asked builders about their clients. Builders obtain their work by a variety of methods and the survey indicated the major method was either repeat clients or recommendations from previous clients, see Figure 5. For smaller firms, family/friend clients are about 15%. Public tenders as a work source occur mainly in the larger firms, as do ongoing arrangements with main contractors.

An alternative view of the results, in Figure 5, is to ask how knowledgeable each client is likely to be in terms of commissioning building work. The main contractor, public tender and repeat clients are likely to be more experienced than other clients. This group represents about 40% of the total work, while the other 60% of work appears to be commissioned by inexperienced clients. This indicates a need to educate clients on effective procurement processes that can work to their benefit.

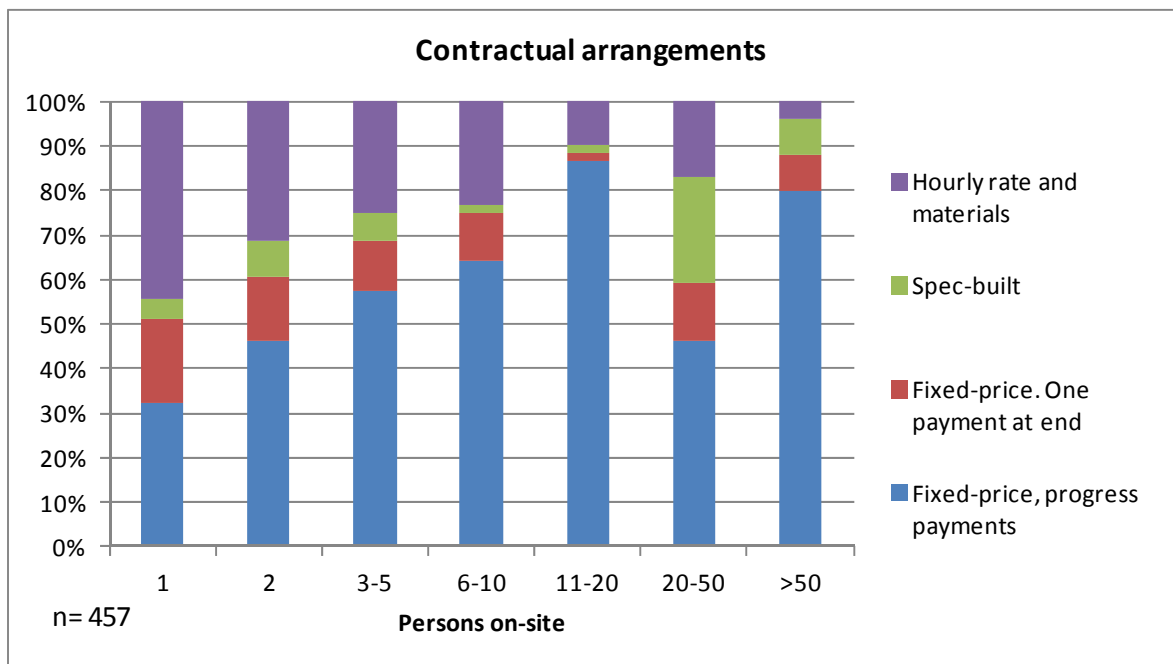
Figure 5 How clients are obtained by firms



3.1.3 Contractual arrangements

The main types of contract used by builders are shown in Figure 6. The use of fixed-price contracts increases with firm size, while hourly rate plus material costs contracts lessen in use as firm size increases.

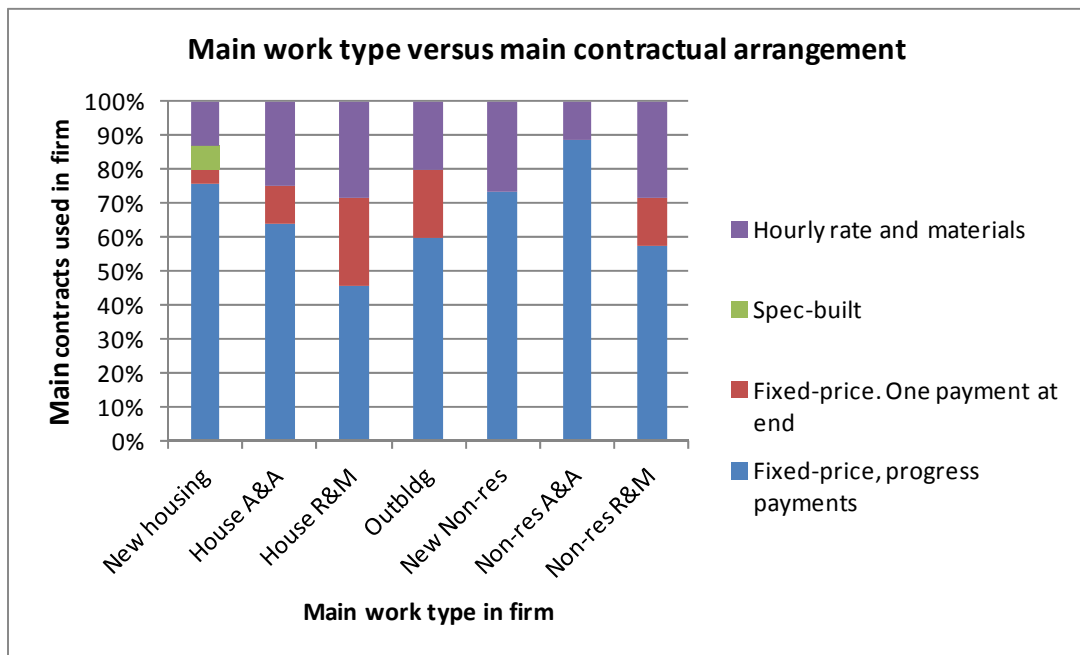
Figure 6 Types of contract used by firms



The type of contract use varies with the type of work the firm undertakes. Figure 7 indicates that where new housing is the major activity in the firm (i.e. over 50% of their

work) then these firms are most likely to use fixed-price, progress-payment contracts. In contrast, with R&M work it is often difficult to set the scope of work before starting and so a cost-plus arrangement (i.e. hourly rate plus material costs) is more common than in other work types. The single-payment fixed-price contracts are suited to small, well-defined jobs such as out-buildings (garages, sheds, sleep-outs etc) and some small housing R&M (replacement of a window, replace some weatherboards etc) and out-buildings.

Figure 7 Major work types in firms versus their contractual arrangements



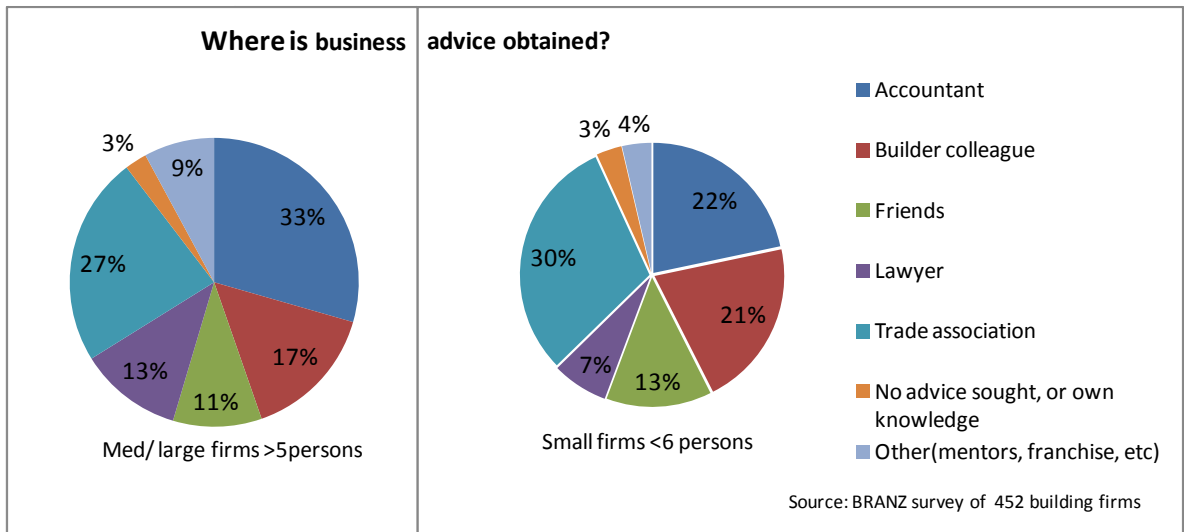
3.1.4 Where do firms get their business advice?

Anecdotal evidence suggests that while builders are technically skilled in their trade, they are often poor in business skills and the management of their firm. Builders say that they would rather be “on the tools than doing the books” and other tasks necessary to run a business. In small firms, the working proprietor’s partner is often involved in the paper work.

Figure 8 shows survey results for sources of business advice. We would expect accountant and trade association advice to be reliable, but the other sources of advice in the chart may be suspect, i.e. almost half of the advice received in small firms could be uninformed as to what genuinely makes a successful business.

Medium and large firms are more likely than small firms to use accountants and lawyers. This is not surprising as for bigger firms, managing cashflow and tax returns becomes more onerous, and legal issues related to contracts and industry legislation assume greater importance, compared to small firms.

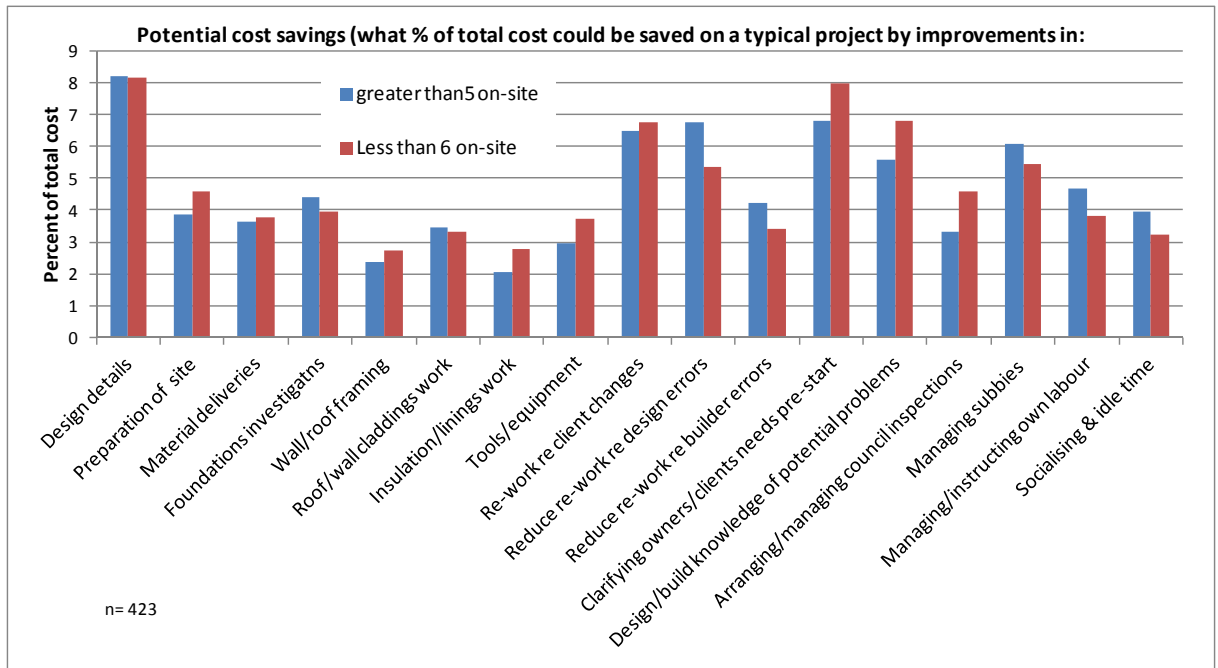
Figure 8 Builders' business advice



3.15 Where do firms think savings can be made?

A list of potential cost saving measures was provided in the survey and the respondents were asked to estimate the potential savings from using these measures. The results are in Figure 9.

Figure 9 Potential cost savings as a percentage of contract price



The chart indicates the largest savings are by clarifying the client’s requirements at the start, having good design details, reducing client changes after the start and reducing design errors. Some of these measures are overlapping and it is unrealistic to assume adding of all bars gives total potential savings. Instead the measures are in three main categories:

- Designs have sufficient detail and are “buildable”. Average potential savings are about 8%.
- Client education/briefing/clarity of requirements. Average savings are 7%.
- Project and firm management improvements. Average savings are 15%.

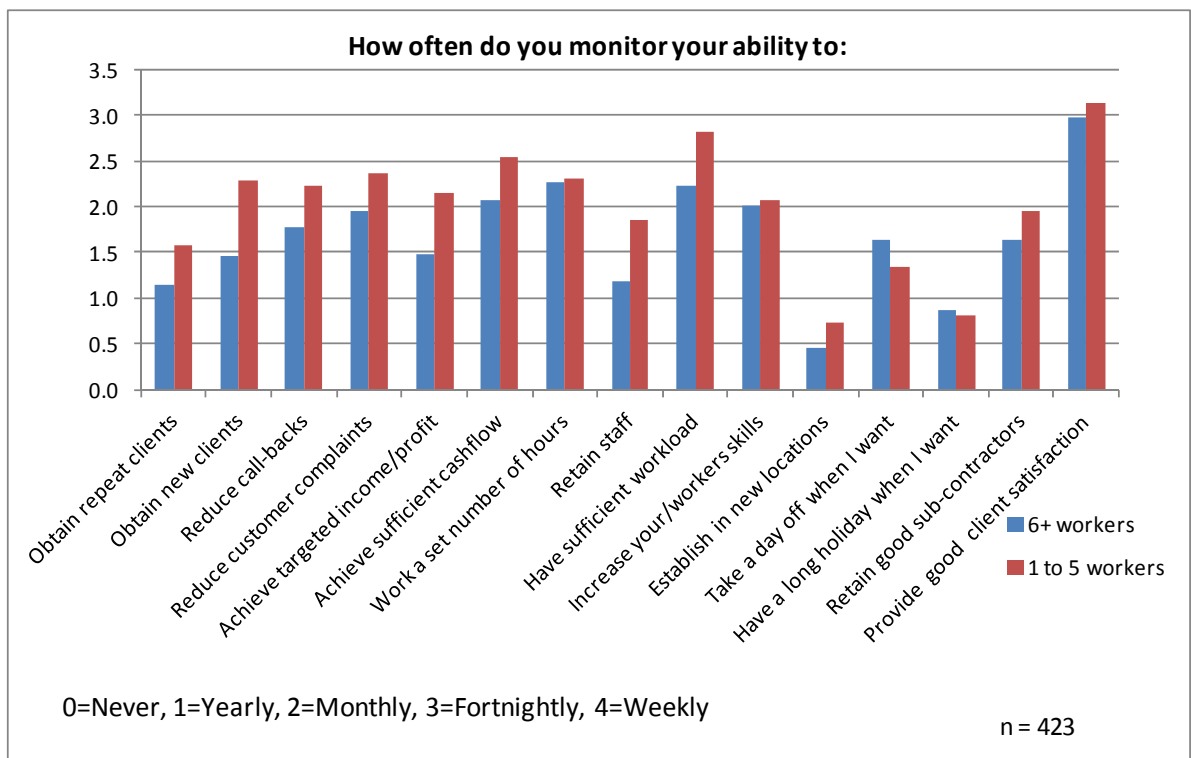
These three broad measures amount to 30% and are the potential savings on a typical job assuming all the planning, client briefing and management is close to ideal.

3.1.6 What KPIs do firms use?

Some of the KPIs used by builders are illustrated in Figure 10. Rather than asking how important the builders think these KPIs are, it was decided to ask them how often they used these measures of performance. As expected, forward workloads and cashflow were closely monitored. Builders realise the importance of client satisfaction, though other surveys show a high level of call-backs in new housing (Curtis 2011). Business expansion does not rate highly. On the whole, the ranking of the indicators are believable because those rated most important are vital to the viability of a firm and are assessed at least monthly. In contrast, those indicators which are less immediate to the firm’s health are checked less often but within yearly intervals.

For almost all indicators, the smaller firms use the KPIs more frequently than the larger firms.

Figure 10 KPIs used by firms

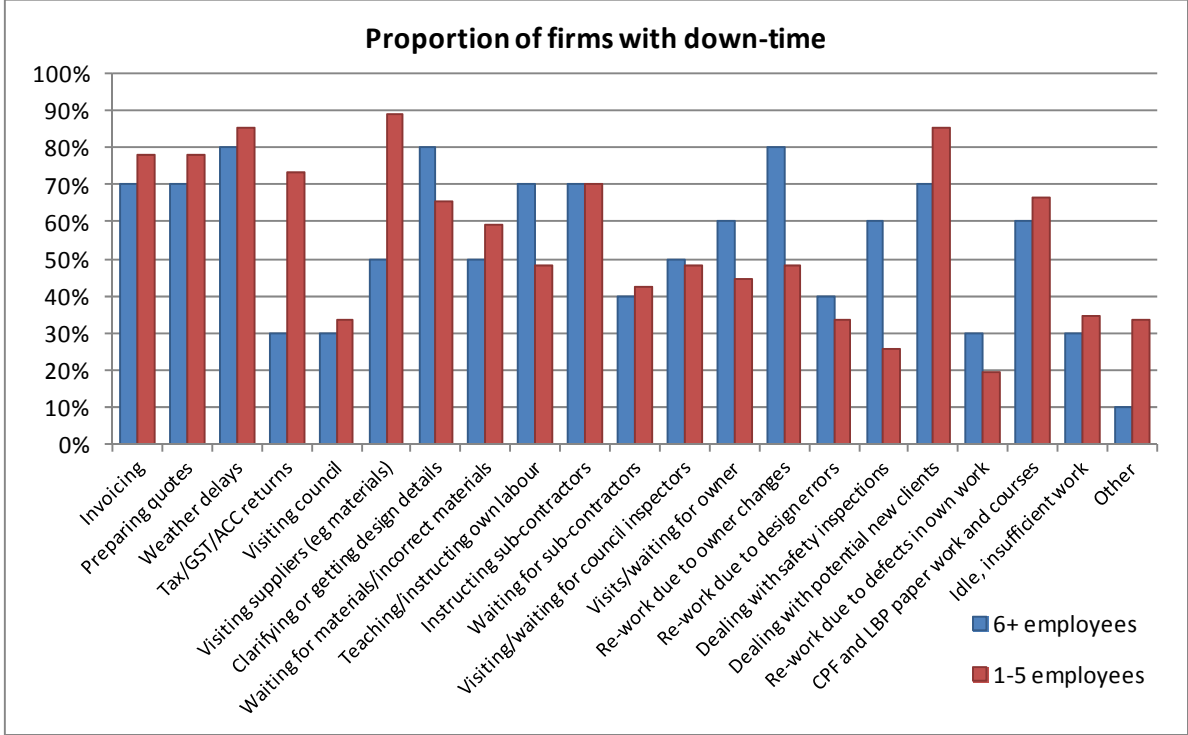


3.1.7 Time use survey

A second survey was undertaken to look further in to the amount of time wasted in the industry. Respondents to the first survey were e-mailed a form asking how many hours in an average week were spent on 20 particular aspects and 37 responses were received.

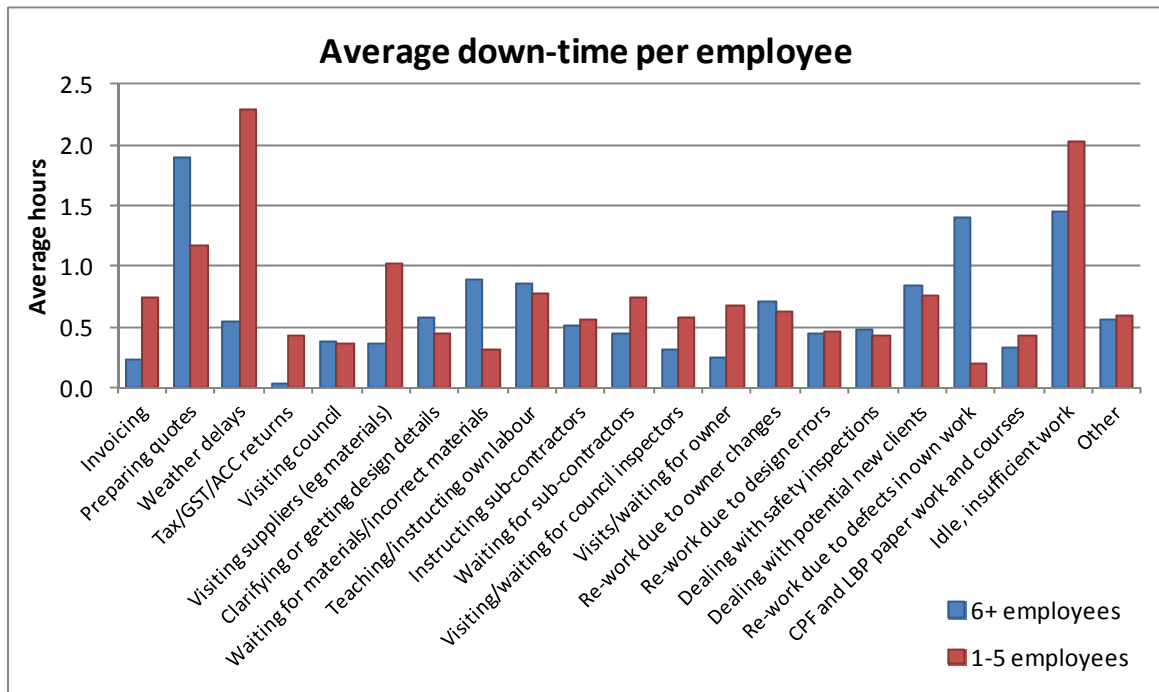
The most common cause of downtime for small builders was visiting suppliers (e.g. materials), whereas for larger builders it was for weather delays, clarifying or getting design details and re-work due to owner changes, see Figure 11.

Figure 11 Proportion of firms with downtime



Where downtime in a particular area was present, the amount of hours of downtime per employee was noted. The two longest downtime areas for smaller firms were for weather delays and being idle/insufficient work. For larger firms, this was for preparing quotes, see Figure 12.

Figure 12 Average downtime per employee



3.2 Building consent data

The above survey shows that small firms mainly undertake A&A and R&M work to existing houses. They also construct new housing, but well over half of their work is the former. Hence in this section, an examination of the types of work done in A&A consents is undertaken.

The analysis examined descriptors in the dwellings A&A consents issued by councils. Individual consent data is available from the Whats-On dataset and generally the work description is quite detailed and provides a picture of the various types of work. It has records for over 16,900 A&A consents issued during 2012.

Two types of analyses are shown in the following graphics. The first is a simple count of the number of times a particular component is mentioned and is expressed as a percentage of all work types. The second looks at single-component consents, for example a new room only, and calculates the average value. The numbers in brackets on the descriptors is the sample size for single-work-type consents. There were about 6000 single-work-type residential consents and the remaining 10,900 residential consents had more than one work type, in mainly cases involving four or more components. The advantage of looking at single-component consents is that the value on the consent can be totally attributed to that component or work type.

The first chart indicates garages, bedrooms, decks, bathrooms and kitchens are the most common addition to a house. They account for over a third of all work types.

The second chart indicates the average spend on single-component items, with wall reclads, basement development and a living room addition the most expensive. Reclads are mainly leaky housing repairs and average spend was \$123,000 for these. Basements are often a relatively cheap way to add floor space to a house and are usually cheaper than an upper storey extension. Even so, the average spend of \$90,000 is high and beyond the reach of most households.

The high percentage for bedrooms suggests owners prefer to expand their existing house as their family increases in size, rather than shift to a larger house. The large average expenditure on basements suggests the same reason.

Some of the other top-ranked categories reflect lifestyle spending on their house by households, such as decks, bathrooms, kitchens and ensuites.

All these projects can be readily undertaken by small builders and generally represent their “bread and butter”.

The same process was repeated for non-residential building A&A consents, see Figure 15 and Figure 16. The Whats-On dataset covered over 6500 non-residential A&A consents. Again, the analyses were of multiple-work-type counts and for single-work-types the average value was calculated. Figure 15 indicates fit-outs and office and retail work was the most common. Work on hospitals, clinics, warehouses and factories were on average the most expensive. It is likely the health sector expenditure involved renovations, whereas the industrial activities were probably additions to an existing structure. Canterbury earthquake repair work also features and at approximately \$350,000 each, see Figure 16, are quite large repairs, presumably undertaken to get businesses operating again as soon as possible.

The picture gained from the four charts is the wide variety of A&A work that builders undertake. Each project is different in size, layout and materials used, and differs from new housing where there is some degree of repetition between houses involving similar layouts and materials.

Figure 13 Residential A&A consents work types

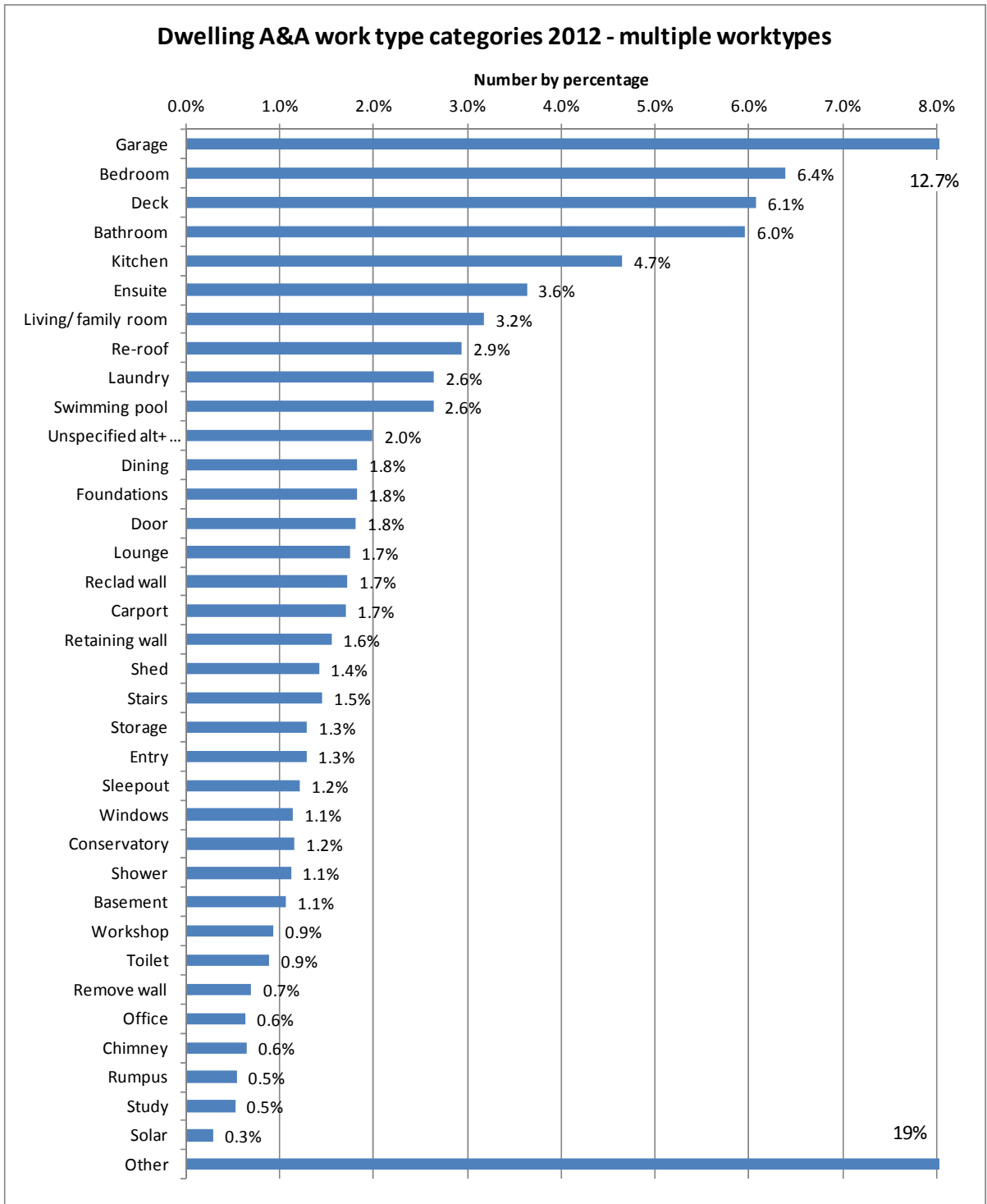


Figure 14 Residential A&A consents – average value by type

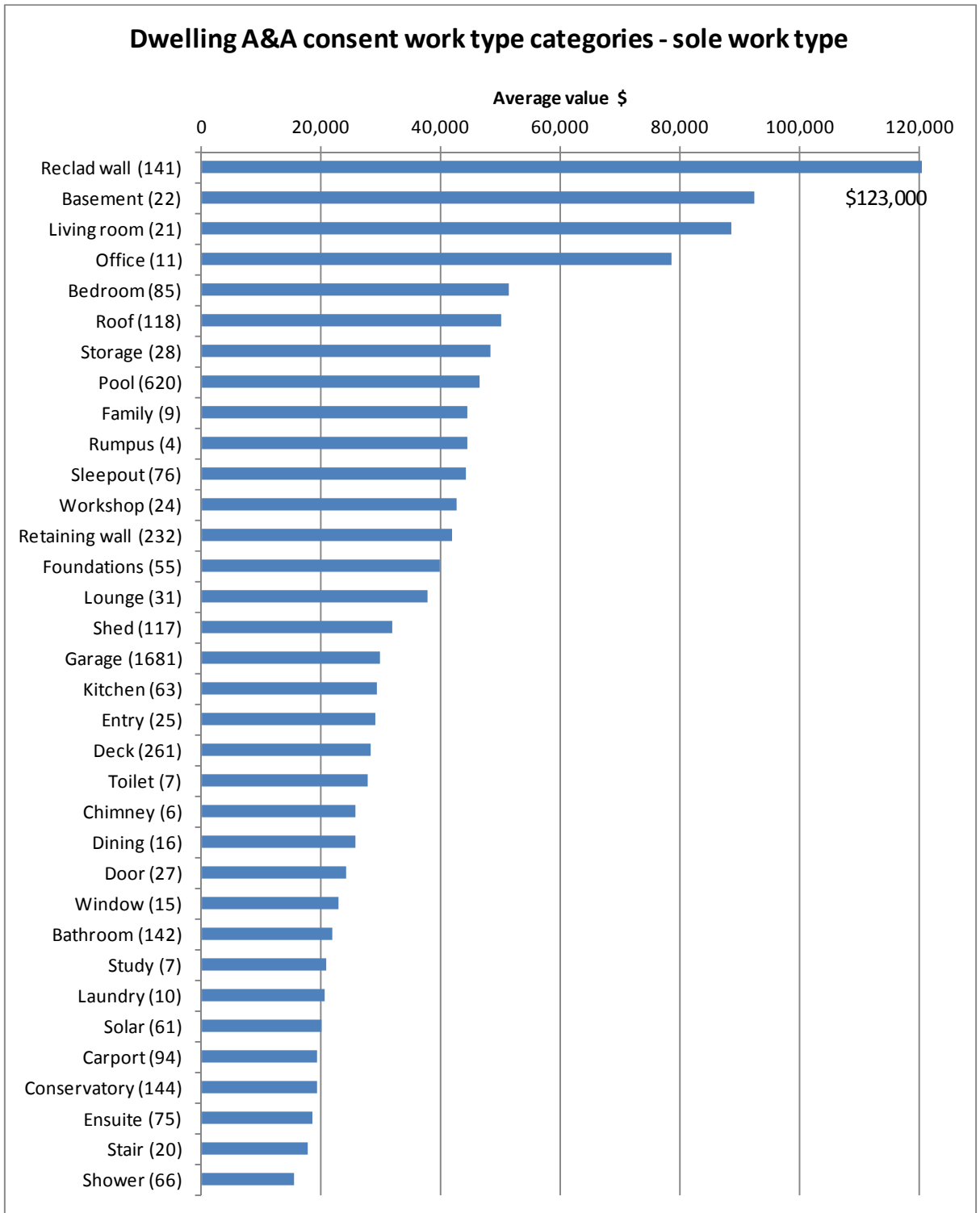


Figure 15 Non-residential A&A consents by work type

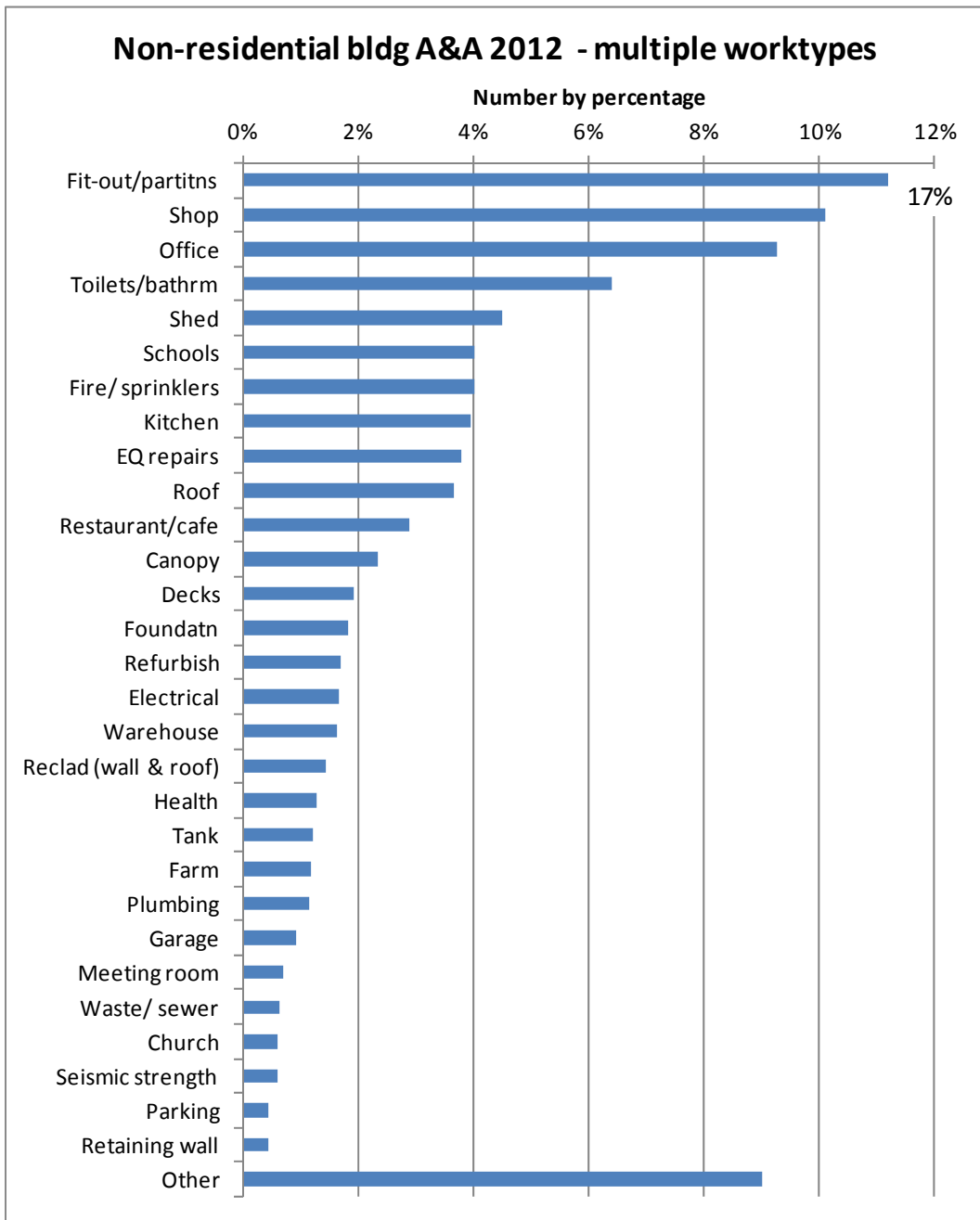
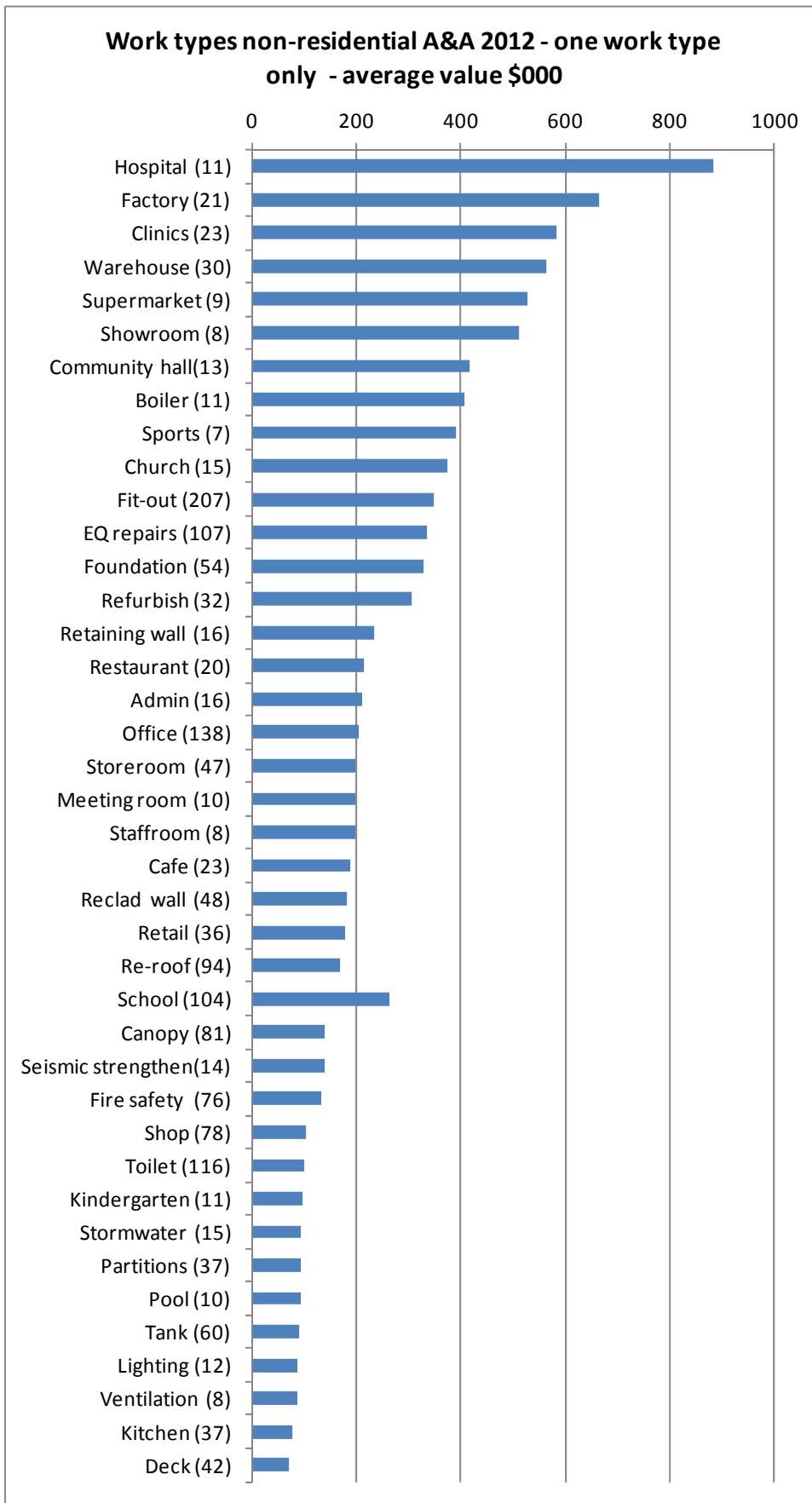


Figure 16 Non-residential A&A consents by average value



3.2.1 BRANZ Dwelling A&A Survey

BRANZ undertakes a regular survey of work done on A&A consents, the main purpose being to get data on materials used. The type of work is recorded and generally the distribution is similar to that found by the consent analysis in the previous section. The additional information collected in the survey includes the age of the house. These results are in Figure 17 and Figure 18.

Figure 17 Residential A&A work by decade of house

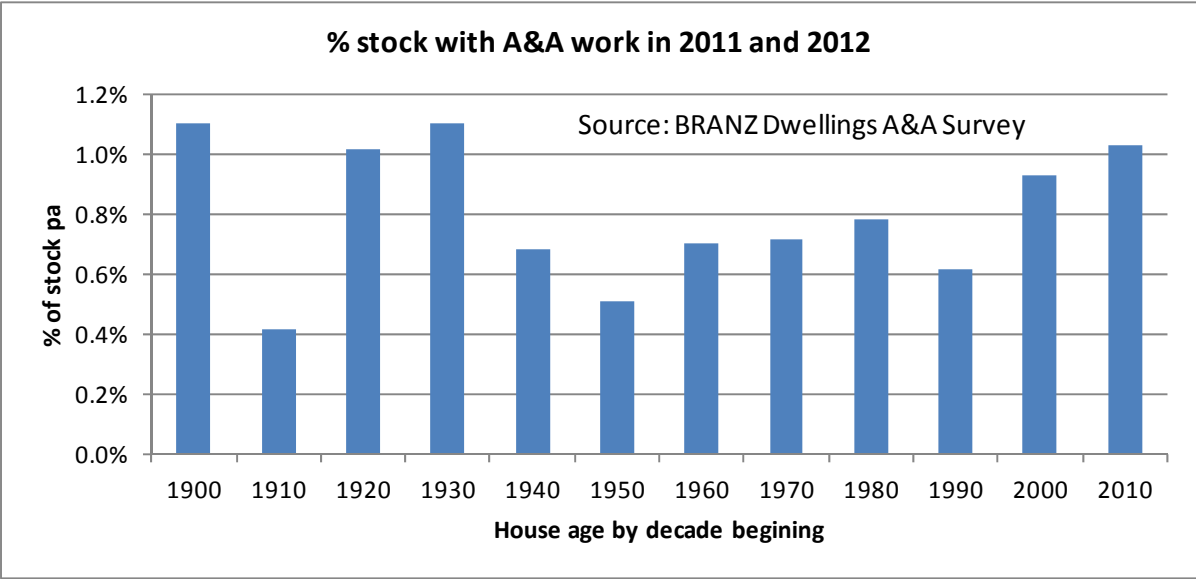
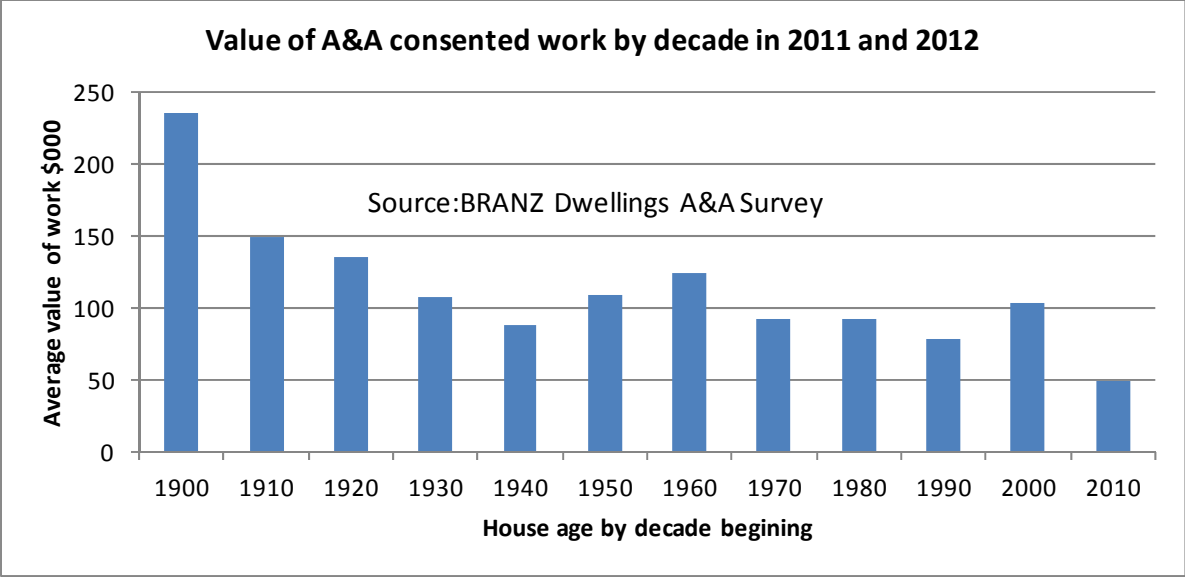


Figure 18 Residential A&A work average values by decade



In Figure 17 the percentage of stock affected in each age cohort is shown and indicates between 1.1% and 0.4% undergoes some A&A work per annum. The older houses are more likely than most to have some work, which was not unexpected. However, it was surprising to see more recent houses with quite a high level of A&A

work. Part of the explanation is a number of re-clads due to leaky buildings in these latter decades, as well as a high number of sheds and other out-buildings. The most common A&A is the addition of rooms, usually bedrooms, bathrooms and family rooms, and these occur from 1920 through to 2000. From 1900 to 1960 the incidence of roof replacement was quite high and wall re-cladding was high in the 1990s age group.

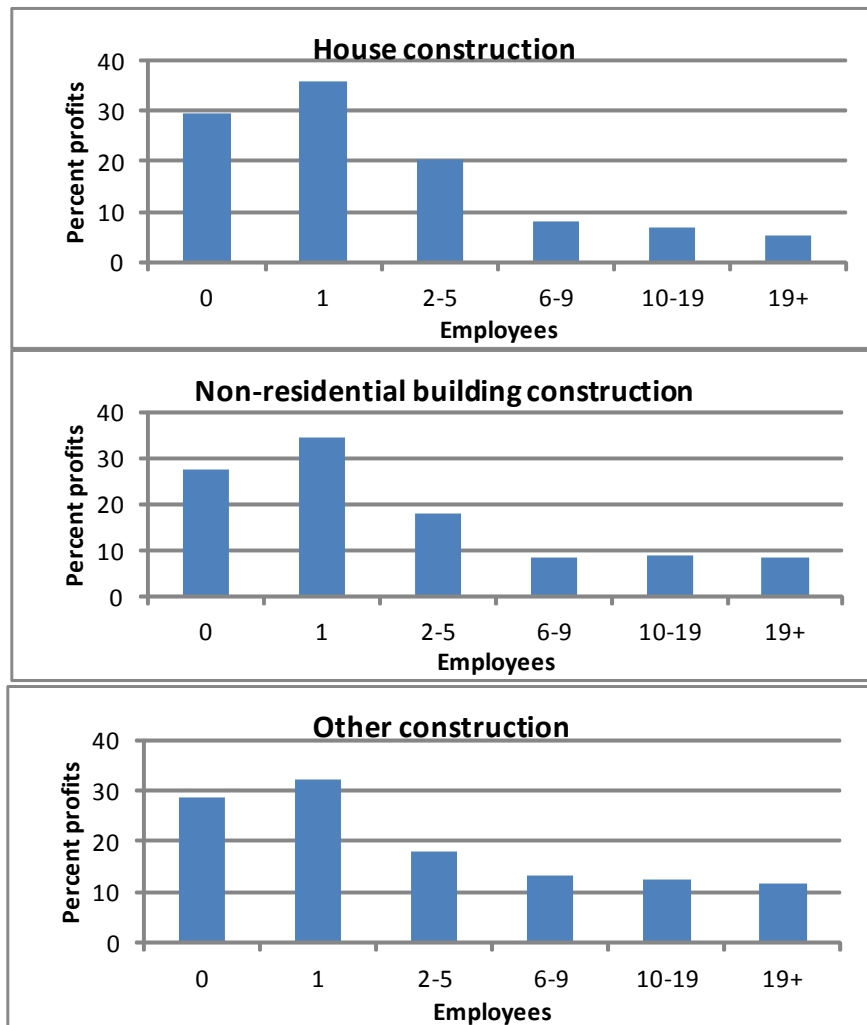
A large increase in the housing stock occurred with new builds in the 1960s and 1970s. These houses are between 34 and 53 years old now and many need major refurbishments. The charts indicate about 0.7% of the stock is upgraded per year and it is possible to see this approaching over 1% per annum which represents over 5000 upgrades per year from these two decades. This is a significant workload at about \$100,000 for each upgrade.

3.3 Profit and productivity of small firms

Statistics NZ is able to provide aggregated data on firm profits by industry and firm size, see Figure 19. A three-year sample was used because the numbers in each category are somewhat limited with fewer years.

The period shown is for 2007 to 2009, a time of high activity except the last six months of that three-year period. The percentages shown are taxable profits divided by sales. The three main sectors shown have a similar pattern with the largest profit percentage in the two-person firms (one working proprietor and one employee). Larger firms have lower profit percentages, though the amount of profit increases, on average, as the firm size gets larger.

Figure 19 Average profit ratios 2007 to 2009



4. THE FUTURE OF THE SMALL FIRM

What type of work will the small firm undertake in the future? Are types of work likely to change? What changes do small firms need to make? These are questions for not only small firms but the whole building industry because what happens in the overall industry will probably be driven initially by larger firms but still require support from smaller firms.

We know from forecasts that workloads are changing (Page 2013). An increase of 40% on current workloads is forecast by 2017, see Table 1, and this is growth of about 9% per year. The work includes a massive rebuilding process in Canterbury, the leaky building problem has barely been addressed, the housing stock is aging and needs renovation and repair, new housing demand is shifting away from detached housing to more multi-unit construction, particularly in Auckland where new starts need to double from current levels to meet demand in the next few years. The Canterbury earthquake has raised awareness elsewhere about the need to strengthen existing non-residential buildings. In parallel with these trends, affordability issues are arising and these may be

addressed in the future by increased Government involvement. This could be in the form of direct funding of new housing, more multi-unit construction, smaller houses and well designed standardisation with some scope for customerisation.

Builders' worktypes									
	\$ billion			\$ billion			\$ billion		
	2013			2017			2021		
New housing detached one-offs	3.41	16%		3.58	12%		2.52	8%	
New hse customerised standard plan	2.79	13%		3.58	12%		3.78	12%	
New housing low rise multiunit	1.08	5%		1.62	5%		1.47	5%	
New apartments - med to hi-rise	0.19	1%		0.40	1%		0.63	2%	
Canterbury EQ housing new/repairs	1.30	6%		2.60	8%		0.65	2%	
Housing additions/alterations	2.11	10%		2.90	9%		2.95	9%	
Leaky housing repairs	0.27	1%		0.64	2%		1.20	4%	
Housing maintenance and repairs	4.22	19%	70%	6.38	21%	70%	7.39	24%	66%
New non-res buildings	2.38	11%		3.01	10%		3.30	11%	
Canterbury EQ non-residential bldgs	0.90	4%		1.35	4%		0.90	3%	
Non-res bldgs additions/alterations	1.59	7%		2.01	6%		2.20	7%	
Non-residential bldgs leaky repairs	0.03	0.1%		0.11	0.4%		0.30	1%	
Non-res bldgs maintenance & repairs	1.59	7%		2.21	7%		2.86	9%	
Non-res bldgs EQ strengthening	0.10	0.5%	30%	0.50	1.6%	30%	1.00	3.2%	34%
	21.96	100%		30.89	100%		31.17	100%	
Forecasts from BRANZ Study Report "Construction industry data to assist in productivity research - part two (2013)."									
\$ values are fixed capital formation, which is higher than consent values.									

Table 1 Builders' workload forecasts

All these changes impact on the small firm. There are opportunities in sub-contracting to larger builders in Canterbury and Auckland. Increasing multi-unit construction new starts within the next few years means that small builders may need to amalgamate if they decide to take these projects on. Leaky building repairs are usually done by specialist firms of medium size, so again small firms may need to up-skill and link up.

These factors appear to imply significant changes in small firm work. However, at present small builders mainly undertake one-off new houses, housing A&A and housing R&M. This currently totals about \$9.7 billion, rising to \$12.9 billion by 2017, and hence there is more than enough future workload for small builders undertaking the same work as at present. So while there are different work type opportunities appearing, it is possible most small firms will continue with current activities, but there will be more of it. One issue for small firms is that larger enterprises already have a significant stake in R&M, as noted earlier. Some small firms may have to amalgamate in this "traditional" area in order to compete.

5. DISCUSSION

In Section 3.1 the survey found that about half of all work undertaken by the building industry was on small-scale residential additions, alterations, repairs, maintenance and out-buildings. The small size of these projects and the firms involved is one reason why it is a challenge to upgrade the productivity performance of the industry. Each of these

projects is different and physically isolated from other projects, hence efficiencies from repetition and economies of scale are difficult to achieve. It is possible the firm structure will change in the future in order to meet new workload patterns, as outlined in Section 4. However, significant volumes of work lie ahead for small firms in residential maintenance and additions work, which is attractive to one and two-person operations. So the predominance of small firms in the demographics is expected to continue and measures to improve productivity need to be tailored towards them.

It was somewhat surprising to find that firms do not generally specialise. Only 20% of small firms specialise in housing A&A and/or housing R&M. It is shown in Figure 1 that small firms do a significant amount of new housing but during 2012, the time of the survey, this work was fairly scarce and to keep employed many firms would have undertaken A&A and R&M work as well. With increasing workloads there is scope for more specialisation in the future, and this is one factor that will help productivity for the building industry to improve.

Figure 5 shows how firms attract their clients but are also an indication of how knowledgeable the client is likely to be. It is likely work obtained through main contractors, public tenders and repeat clients represents clients who are “knowledgeable” about the building process and is 40% of all work. It is postulated that the other client sources, representing about 60% of work, are less likely to be knowledgeable clients. These include “recommended by previous client” and “designer recommendation”. This source of work is important for firms and is an incentive to provide quality work and value for money. However, it does not necessarily guarantee good value for the new client, particularly when the client is a “one-off” purchaser. It is concluded there is a need for client education, particularly when they are households rather than in the business sector. This education would need to include how the building industry works, advice in obtaining designers and builders, minimising changes, and the trade-offs between bespoke design and standardised design.

Figure 8 shows where firms receive their business advice. For small firms, over a third of advice comes from friends and colleagues. Unless these sources are themselves running successful businesses it is likely the advice is sub-optimal. Quite often small firm proprietors are not good business persons and there is a need for more training in general business advice for builders.

The use of performance indicators is quite high according to the survey. While the ranking of KPIs is believable, the frequency and the greater use by small firms is somewhat doubtful. Small firms do not have dedicated resources to apply to some of the KPIs (e.g. training, customer marketing/liaison, sub-contractor liaison) and we would expect them to have lower scores than larger firms in Figure 10. Alternatively, the small firms tend to undertake smaller jobs and hence need to be looking for new work more often and keeping a closer eye on cashflow than larger firms. Generally, firms put emphasis on client satisfaction, workloads and cashflow and all three are vital for business success. Whether they are doing it as often as stated in the survey may be an open question.

The potential cost savings on typical jobs are shown in Figure 9. Respondents were asked to estimate the percentage of potential savings for various actions. If all actions are summed the total is over 100%, which is obviously unrealistic. Two modifications to the responses are required. First, there is considerable overlap in some of the measures and hence there is potential for “double counting” of savings. Second, respondents have over-estimated the percentages because they do not appear to have allowed for good projects where no action of a measure is required, i.e. they have ignored the nil percentages for those measures and projects where no action is required. Ignoring overlapping measures and reducing the savings in some other measures, we have estimated total potential savings of 30% on typical projects, assuming perfect performance by all participants. This is an unattainable goal but progress towards it can play a major part in achieving the productivity partnership goals of a 20% improvement in industry productivity by 2020.

The building activity forecasts in Table 1 indicate a significant increase in workloads over the next few years. Part of the increase is in non-traditional areas such as leaky building repairs and earthquake strengthening. There will also be more multi-unit housing and new detached housing numbers are likely to remain static or slowly decline in the long term. So small firms may need to change their skills and/or amalgamate in order to take on the new work. If done correctly this will improve overall industry productivity. Concurrently, the forecasts say housing maintenance and repair work will increase significantly. This is traditional work for small firms but we already have some large firms in this segment. It appears that there are economies of scale in this work and traditional small firms will need to be aware of developments to remain competitive. These developments overseas include central and local Government offering maintenance advice to owners, where to get inspection services and how to select builders. Some community groups in New Zealand already offer advice in these areas (see www.goodhomes.co.nz). For the builders there is a major need for the R&M segment to become better organised, possibly requiring some type of licensing for R&M work to be introduced.

6. REFERENCES

Curtis M, (2012) New house owner satisfaction survey 2011. Study Report No. 270, Building Research Association of New Zealand.

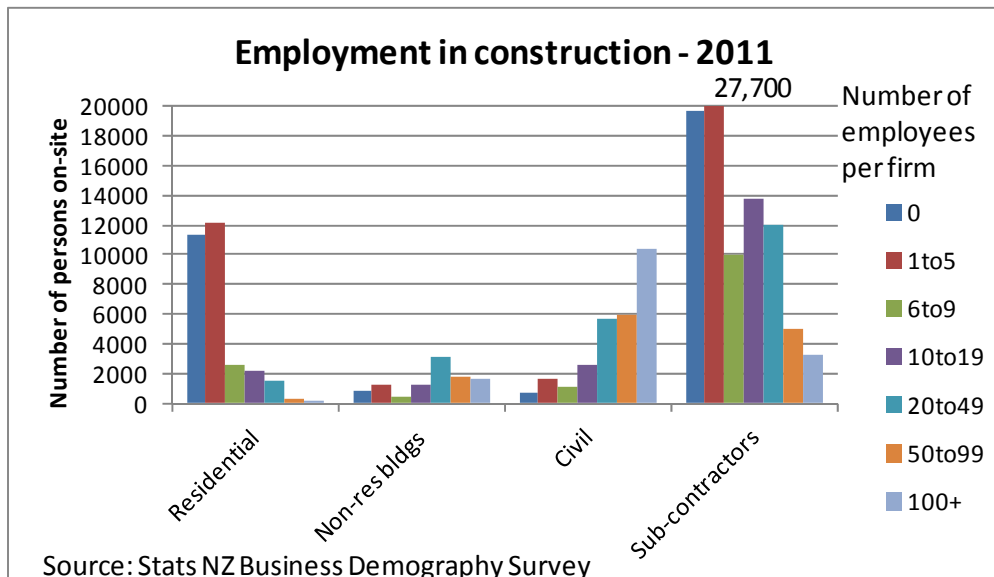
7. APPENDIX

This Appendix contains data on the industry firm size and the survey form sent to building firms.

7.1 Firm sizes

The Business Demographic Survey is undertaken by Statistics NZ every year. The latest results are in Figure 20 and indicate most employment occurs in firms with less than seven persons (assuming a working proprietor in the smaller firms). It is only in larger civil construction firms that the proportion of employment is high compared to the smaller firms. The other point of note from the chart is the high numbers in the sub-contracting sector. This includes all trades (plumber, electrician, plasterers, painters, tilers, concrete workers etc). This report only examines building firms but the sub-contractors have a similar demographic distribution to building firms. There is a large number of sub-contracting firms with one or two persons engaged, as in residential, and these firms are likely to have similar behaviours to small building firms. However, there are proportionally a greater number of larger firms in the sub-trades, compared to residential, and it is possible these firms are better organised in their processes than the small firms.

Figure 20 Employment by sub-industry sector



FIRM WORK TYPES AND PROCESSES SURVEY						
1. How many people does your firm employ?		3 to 5	6 to 10	11 to 20	21 to 50	more than 50 persons
(please put X in one box)		One person	Two persons	persons	persons	persons
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. What type of work does your firm do?		Housing additions & alterations	Housing repairs & maintenance	Garages & new sheds	New non-residential bldgs	Non-res additions & alterations
(Enter the percentage for each work type. The total for all boxes is 100%.)		New housing				Non-res repairs & maintenance
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Which methods do you use to procure clients and what percentage are procured by each method during a typical year?						
(please put X in one box in each row)		Never	1-10%	11-25%	26-50%	51-100%
Designer recommends me		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Repeat client		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clients are friends/family		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My advertising		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recommended by a previous client		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respond to advertising (i.e. In newspapers, etc)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On-going arrangement with main contractor		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (state)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Types of contract and payment, and what percentage are used during a typical year.						
(please put X in one box in each row)		Never	1-10%	11-25%	26-50%	51-100%
Quoted price and progress payments.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quoted Price and one payment at the end.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spec Build.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hourly rate for project duration.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (state		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Where do you get business advice and what percentage is obtained from each in a typical year?						
(please put X in one box in each row)		Never	1-10%	11-25%	26-50%	51-100%
Accountant		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Builder colleague		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friends		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lawyer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trade association		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (state		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Your option on opportunities to save time and cost in the building industry by better processes and management						
What percentage of the total cost on a typical project could be saved by improvements in:						
Design details .	<input type="checkbox"/>	%	Clarifying owners/clients needs before start.	<input type="checkbox"/>	%	
Preparing the site before construction.	<input type="checkbox"/>	%	Designer/ builder knowledge of potential problems.	<input type="checkbox"/>	%	
Material deliveries.	<input type="checkbox"/>	%	Arranging/ managing council inspections.	<input type="checkbox"/>	%	
Foundations investigations.	<input type="checkbox"/>	%	Managing subbies (electricians, plumbers, etc).	<input type="checkbox"/>	%	
Wall and roof framing.	<input type="checkbox"/>	%	Managing / instructing own labour.	<input type="checkbox"/>	%	
Roof and wall claddings work.	<input type="checkbox"/>	%	Socialising, idle time.	<input type="checkbox"/>	%	
Insulation and linings work.	<input type="checkbox"/>	%		<input type="checkbox"/>	%	
Tools and equipment.	<input type="checkbox"/>	%		<input type="checkbox"/>	%	
Reducing re-work due to client changes.	<input type="checkbox"/>	%	Other (state)	<input type="checkbox"/>	%	
Reducing re-work due to design errors.	<input type="checkbox"/>	%		<input type="checkbox"/>	%	
Reducing re-work due to builder errors.	<input type="checkbox"/>	%		<input type="checkbox"/>	%	
(if no improvements are possible enter 0% in that box).						

Table 2 Work type survey of building firms