

Resourcing the Canterbury Rebuild
Case studies of construction subcontractors
recruitment and retention strategies

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About the Resilient Organisations Research Programme

“Building more resilient organisations, able to survive and thrive in a world of uncertainty, through research and practice”

We live in an increasingly complex world dealing with a broad spectrum of crises arising from both natural and man-made causes. Resilient organisations are those that are able to survive and thrive in this world of uncertainty.

Who we are:

The Resilient Organisations Research Group (ResOrgs) is a multi-disciplinary team of over thirty researchers and practitioners that is New Zealand based and with global reach. A collaboration between top New Zealand research Universities and key industry players, including the University of Canterbury and the University of Auckland, ResOrgs is funded by the Ministry of Business, Innovation and Employment through the Natural Hazards Research Platform and supported by a diverse group of industry partners and advisors. The research group represents a synthesis of engineering disciplines and business leadership aimed at transforming organisations into those that both survive major events and thrive in the aftermath.

We are committed to making organisations more resilient in the face of major hazards in the natural, built and economic environments. Resilient organisations are able to rebound from disaster and find opportunity in times of distress. They are better employers, contribute to community resilience and foster a culture of self-reliance and effective collaboration.

What we do:

The ResOrgs programme of public good research is aimed at effective capability building through research activities with significant impacts on policy and practice. Activities and outputs of the group, in existence since 2004, include informing and focusing debate in areas such as Civil Defence Emergency Management, post-disaster recovery, and the resilience of critical infrastructure sectors, in addition to core activities in relation to organisational resilience capability building and benchmarking. We have produced practical frameworks and guides and helped organisations to develop and implement practical resilience strategies suitable to their environment.

Why we do it:

In an increasingly volatile and uncertain world, one of the greatest assets an organisation can have is the agility to survive unexpected crisis and to find opportunity to thrive in the face of potentially terminal events. We believe such resilience makes the most of the human capital that characterises the modern organisation and offers one of the greatest prospects for differentiating the successful organisation on the world stage. This resilience is typified by 20/20 situation awareness, effective vulnerability management, agile adaptive capacity and world class organisational culture and leadership. More resilient organisations lead to more resilient communities and provide the honed human capital to address some of our most intractable societal challenges.

For more information see our website: www.resorgs.org.nz

Executive summary

This report focusses on how employers' behaviours have changed in response to employment demand and supply for the Canterbury rebuild and recovery. The study in this report looks at the ways in which construction subcontracting businesses develop their resource capability, and the recruitment and retention strategies being adopted by Canterbury rebuild subcontractors. The challenges subcontractors are facing during the rebuild and their resourcing policies and practice are also examined.

Through case studies of 13 subcontractors, this study shows the extent to which subcontracting businesses account for workforce development in the construction industry in Canterbury.

The main findings are:

- Subcontractors tend to have a limited financial resource base and limited internal knowledge base. Their size of business operations and capacity is relatively small compared to larger contractors. Subcontractors are particularly vulnerable to market forces and fluctuating workflows, but they tend to have close links with the local communities.
- The scale of reconstruction tasks and increased workloads from new subdivisions has created skill shortages, particularly for drainlayers, excavator operators, plant/machine operators and truck drivers. Project management and general labouring are also in short supply within the subcontracting sector.
- Lead times needed to train a drainlayer to be qualified, coupled with the labour market test required for overseas drainlayers to work in New Zealand, are cited as reasons for the shortage of this resource. In contrast, plant operators and truck drivers are in undersupply largely due to the high turnover of new recruits, particularly among the younger workforce.
- There have been significant changes in subcontractor resourcing practices that have emerged following the Canterbury earthquakes. These include:
 - newly stated visions and/or commitments to providing job security for employees;

- a shift from casual employment to more permanent employment;
 - mechanisms for staff retention;
 - improved human resource management systems; and
 - investment in workers' skills and capacity development.
- On-going issues related to the construction industry's structure, such as an aging workforce, long lead times for training, high turnover (30% on average), and a lack of integrated workforce planning across the sector are all particular challenges that make workforce planning for subcontractors more difficult and increase their costs of recruitment and training.
- Some subcontractors are fully involved in infrastructure-rebuild related works, while others have reduced their rebuild commitments to focus on more business as usual projects. Overall there has been a shift in focus from 2013 to 2014 away from the horizontal rebuild towards work on new subdivisions in the Canterbury region.

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1. Introduction

This study examines:

- Characteristics of the construction subcontractor businesses in Canterbury;
- The key resource challenges that subcontractors are encountering;
- Solutions adopted by subcontracting businesses to overcome these challenges

Following previous resourcing case studies of construction organisations in Christchurch (Chang-Richards et al., 2014), this study concentrates on the subcontracting sector. The case studies, which include interviews from a range of subcontracting businesses, provide a better understanding of the reality that construction employers and workers face in the subcontracting sector. The research findings with regard to key emerging issues facing subcontracting businesses were reported in Resilient Organisations Research Report 2015/03 (Chang-Richards et al., 2015). This report presents the resourcing strategies adopted by Canterbury rebuild subcontractors.

2. About the case studies

The case studies were selected in consultation with Christchurch employers organisations such as the Canterbury chapters of the Specialist Trade Contractors Federation and the New Zealand Building Subcontractors' Federation. A sample of 30 subcontracting businesses was drawn. The initial list was then reduced, based primarily on whether the company is involved in civil works for the infrastructure rebuild in Christchurch and the company's willingness to be interviewed in depth. However, other considerations such as the diversity of companies in terms of size, type of business, years in business and form of labour were also taken into account. In total, 13 subcontracting business were studied (Table 1).

The companies are all located in the construction subcontracting sector. Companies who were engaged in civil works for the infrastructure rebuild were chosen. Organisations with between 1 and 200 employees were selected, with most case studies having less than 50 employees.

Table 1: Basic profile of case study subcontractors

Case study subcontractors	Number	Organisational coding
<i>Business ownership category</i>		
Family business	4	S1, S2, S7, S11
Incorporated	3	S3, S9, S13
Incorporated family	3	S4, S10, S12
Limited company family	3	S5, S6, S8
<i>Organisational size</i>		
Micro-sized (Emp≤10)	3	S1, S2, S7
Small-sized (Emp≤50)	7	S3, S5, S6, S8, S9, S11, S13
Medium-sized (50 <Emp≤100)	2	S10, S12
Large-sized (Emp>100)	1	S4
<i>Years in business</i>		
Less than 10 years	1	S13
10-20 years	3	S1, S9, S11
21-30years	3	S3, S6, S7
31-40 years	2	S5, S12
More than 40 years	4	S2, S4, S8, S10

Note: Emp denotes the number of employees

Face-to-face interviews with 13 subcontractors were conducted in Christchurch between May and June 2014. Respondents were asked to describe:

- The characteristics of the construction subcontractor businesses in Canterbury;
- The key resource challenges that subcontractors are encountering;
- Solutions adopted by subcontracting businesses to overcome these challenges.

3. Subcontractors resourcing challenges and response strategies

3.1 Critical skills that are in short supply

Case study subcontractors reported that the scale of the reconstruction tasks and their increased workloads from the new subdivisions imposed skills shortages such as for drainlayers, excavator operators, other plant/machine operators and truck drivers. Case study organisations noted that although drainlayers were added to the revised Canterbury Skill Shortage List (CSSL), many of the overseas trained drainlayers are not readily employed and required a full labour market test process (i.e. an employer advertising to demonstrate that there are no New Zealand citizens or

residents available or trainable for the position on offer) to be able to take up opportunities locally.

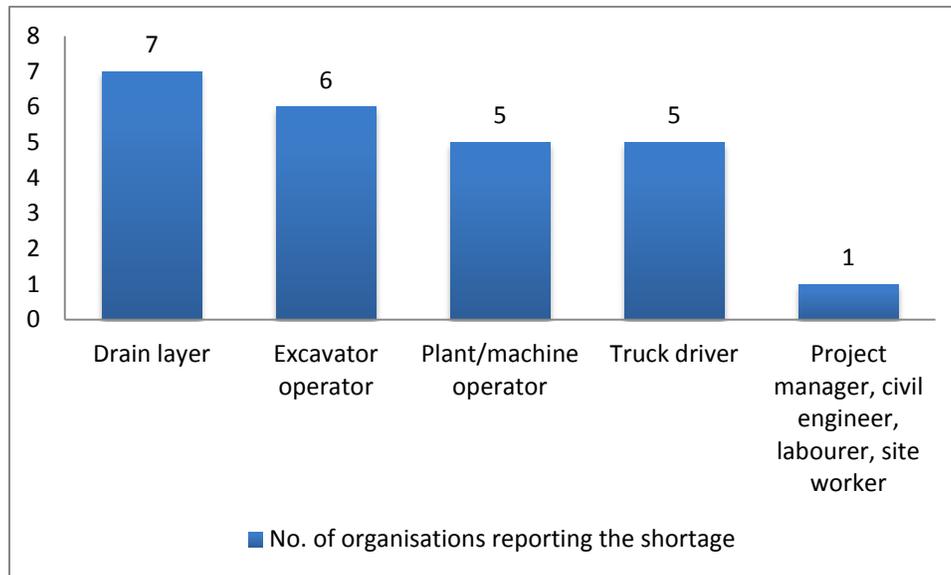


Figure 1: Reported human resources that are in short supply by case study subcontractors

Results show that a shortage of qualified labour to operate machinery was a prominent issue. Our previous case studies found that plant operators in general, and excavator operators in particular, along with truck drivers, are in short supply largely due to the high turnover of new recruits, particularly among younger workforce (Chang-Richards et al., 2014). The subcontractors reinforced this point, and S3 explained that

‘The job of operating a machine or driving a truck is repetitive. The new trainees soon find that this is not the type of job which is exciting and rewarding. They often have to work non-regular hours, which is a disruption to their life styles.’ (Subcontractor S3)

Among those who reported the shortages of machine operators (S1, S3-S6, S8-S12) and truck drivers (S3, S6, S9-10, S12), four subcontractors (S3, S9, S10, S12) emphasised that the market has become more competitive where workers are able to bargain for higher pay. Poaching and turnover have occurred more frequently as companies are desperate to acquire these skills.

The shortage of project managers (S4), civil engineers (S9), labourers (S11) and site workers (S12) were also reported.

In terms of increasing their skills base, subcontractors S4, S9 and S12 had plans for expansion either through market penetration or by diversifying their service range. For instance, subcontractor S4 made a decision in 2012 to increase its skills base to support their strategy to diversify their business into other domains (civil construction, conservation and environment). Having successfully expanded, the company found that the management skills, especially project management expertise, became an increasingly important required skill. Project managers with at least 3 years' experience were added onto their resource requirement in 2014.

3.2 Resourcing response strategies used by case study subcontractors

Case study organisations were also asked how they solved their skills shortages. Typical responses included; steps taken to recruit or buy-in ready-trained staff from the labour market (either domestic or overseas); training and developing existing staff; or, in most cases, a combination of both. Subcontractors also improved their business practices.

Table 2 shows details of the resourcing response strategies applied by case study subcontractors according to the following criteria:

- Commitment to providing job security for employees
- Casual employment replaced by more permanent employment
- Established mechanisms for staff retention
- Established human resource management systems
- Investment in workers' skills and capacity development

Table 2: Examples of resourcing measures to improve capability of case study subcontractors

Resourcing response strategies	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13
Commitment to providing job security for employees	√				√								
Casual employment is replaced by more permanent employment													
Reduced number of casual and/or temporary employment	√					√	√			√			
Increased permanent employment	√	√			√	√	√			√	√		√
Investment in recruiting	√	√			√	√	√	√	√	√		√	
More structured and organised contracting process for new employees	√	√			√	√	√	√	√	√	√		√
Buy-out recruits from recruitment agencies							√						
Established mechanisms for staff retention													
Increased communication in order to be tuned to workers needs and concerns			√					√			√		
Increased internal promotion	√		√										
Offering market rates of pay			√	√	√								
Offering other welfare/wellbeing related benefits		√	√	√	√								
Good conditions/environment of work	√			√									
Delegating and empowering staff		√		√				√		√			
Established human resource management system													
More regular and standardised performance review					√						√		
Designing clear career path for employees					√								
One-on-one mentoring schemes								√					
Multi-skilling and skill diversification schemes				√		√							
Regular team building											√		
Investment in workers' skills and capacity development, particularly investment in:													
In-house skills training of existing staff and new recruits	√	√		√			√	√	√			√	√
IT facilities and expanded premises										√			√
Knowledge transfer between senior staff and younger or less-experienced staff			√			√		√					
Providing internship or apprenticeship for secondary school students or school leavers					√								
Providing access to ITOs/BCITOs training courses				√					√				

3.2.1 Casual employment replaced by more permanent employment

Although a certain level of informality still exists in their approaches to sourcing needed workers, most of case study subcontractors reported a shift in recruitment strategies. Rather than being work-focused to win contracts, most of them now had a people-focused vision; a vision to focus on clients and employees in order to sustain business. Creating a stable workforce was a key goal. As subcontractor S1 highlighted:

“It’s a big learning curve from the depression to such a boom. Coming out fresh from perhaps the most depressing time we have ever had in 2009; we had a better understanding of the internal and external factors that influence the survival of our business. We are conscious of the fact that a good, well-organised company attracts people and also attracts clients. Only by maintaining good relations with our clients and providing security for our people, can we gain the competitive advantage over others. This advantage can endure the test of time.” (Subcontractor S1)

Before they started to take on any jobs related to the rebuild, a formal or informal skills audit was undertaken within some organisations. Sources of information for such a process included consultation with existing staff, job descriptions for the essential experience needed for a post, identifying deficiencies in skills that cause problems for the business, and the company’s business plan for growth.

3.2.2 Changing patterns of subcontractors’ use of different forms of labour

Many construction employers have historically used temporary workers as a relatively cheap and flexible form of labour (Forde & MacKenzie, 2007; Lobo & Wilkinson, 2008; MacKenzie, Kilpatrick, & Akintoye, 2000). There is still evidence of interest in using non-permanent labour. Those who used temporary labour reported that the prominent reasons for employing temporary workers were oriented around flexibility, such as providing short-term cover, fulfilling one-off tasks, easy adjustment of staffing levels and reducing the risk of high cost caused by high turnover.

However, some companies reported a retreat from temporary contract forms following the earthquakes. Indeed, 8 out of 13 subcontractors had a tendency to provide more permanent

employment to fill existing vacancies or to meet employment needs in the foreseeable future. However, four subcontractors reported making a conscious move towards the recruitment of temporary workers in meeting peaks of demand. Problems in recruiting suitably skilled direct labour were cited by these four subcontractors as a reason for employing temporary workers whom they usually source from recruitment agencies.

The subcontractors suggested that the majority of those undergoing the change from non-permanent labour forms of employment towards direct employment had put in place a more structured and organised contracting process for new employees. The most commonly cited reason for increased permanent recruitment was maintaining control over the quality of work. Some subcontractors (e.g. S1, S6, S7 and S10) found casual labour required more supervision and produced poor quality work which required costly rework. When found to be competent, temporary workers were offered permanent contracts. Subcontractor S7 offered a ‘buy out’ package to the recruitment agency for a temporary worker whom they found ‘extremely competent and reliable’ and the company went on to offer the worker a permanent position.

3.2.3 Established mechanisms for staff retention

Most subcontractors found that keeping specialised skills within the company was fundamental to the survival of their business. More than half of subcontractors focused on a three-dimensional retention strategy:

- Offering competitive pay
- Welfare- or wellbeing-related initiatives to improve job satisfaction
- Ensuring safe and pleasant workplace conditions

For instance, festivals, BBQs and other social events which include the entire staff, create opportunities for further interaction and loyalty-building between the company and workers.

Additional retention strategies included setting up effective forms of in-house communication between the management and workers (S3, S8 and S11). S8 has a policy whereby *ad hoc* discussions can be initiated by either workers or managers; and management has instituted

regular talks between the director of the company and every worker, where workers can raise any issue. S3 and S11 have instituted meetings at different levels. For instance, as S11:

“There is value in gathering together on a regular basis, regardless of whether a specific issue needs to be addressed. We found that workers are more open to us in terms of their interests, their needs and concerns. We are now instituting some channels of communication; we used to have periodic meetings between supervisors and workers which only address work-related issue; now we have periodic management-staff meetings to allow inputs of common concerns and to share ideas.”

S1 and S3 felt it was particularly important to retain skilled workers through internal promotion and development. Several advantages were recognised by the interviewees, frequently in terms of the loyalty generated from staff appreciating the promotion and/or development opportunities. Subcontractor S1 and S3 considered internal promotion, along with internal development, as an important aspect towards staff. In particular, S3 highlighted that:

‘Disaster recovery projects are often executed more quickly than most professionals are used to. The time needed to recruit externally can be problematic especially when local staff are hard to find, or cost above-average rates, or have to be transported from further afield. This is where internal development scores much higher than external recruitment. By providing a clear career path, along with an action plan for our existing staff, they see a clearer picture of where they can go in the future.’

In several of the subcontractors studied (S2, S4, S8 and S10), workers are regularly informed of what is happening within the company. The objective of this, according to the subcontractor S10, is to get staff to be involved in strategic initiatives and take ownership of the changes brought about by certain initiatives. Subcontractor S8 also emphasised that they have changed their focus of attention from what the business wants to achieve, to how to get employees to help the business. Delegation and empowerment were cited as key aspects of this culture shift.

For instance, management at subcontractor S4 made effective delegation a priority, with positive results. Interviewee S4 expressed confidence in workers being involved in operational decision-making, including allowing some workers to decide how much overtime they would like to work and letting them to deal with issues with clients the way they think appropriate. Subcontractor S4

reported that the company has benefited from a high number of worker referrals of new recruits and the relatively low turnover rate; these have reduced recruitment and retention costs for the company. Similarly, other firms allowing delegation and empowerment of staff also benefited from lower staff turnover. Subcontractor S4:

‘We used to follow a very paternalistic approach to managing our people, providing sufficient welfare as the basis of building trust in the company. We kept losing good people... But now we provide delegation, promoting the prospects of secure employment and development opportunities that we can offer by valuing their potential and input in every decision we make.’ (Subcontractor S4)

3.2.4 Established human resource management system

Among the 10 small-sized subcontractors (See Table 1), 8 have what could be referred to as a formal human resources policy. There are differences in detail and degree of formalisation, depending on the size of the workforce, the business environment and the management style. Subcontractors S5 and S11 reported to be in the process of transition to adopting a formal human resources policy. The most common evidence of more formal human resources management policies, as cited by the subcontractors studied, was the introduction of employee trial periods and the introduction of some form of employee induction guidelines which provides guidance to new workers on terms of reference and the rights and obligations of both employer and employee. Their key objective was to clarify expectations on both sides and provide new workers with a good orientation of the organisation and business undertaken.

There were 6 subcontractors using a probationary period to ensure that the candidate is suitable. For most of them, the choice to remain relatively flexible by having a three month trial is due in part to an unstable business environment, high turnover of workers and concerns about high operational costs if an unsuitable worker is employed. For instance, subcontractor S9 had experienced high turnover of truck drivers in 2013 as a result of heightened market demand at the time and consequently has been reluctant to accept candidates who only look reliable on the CV. On the other hand, subcontractor S12 is contemplating a more formal system which would

include a recruitment policy and a career development plan to enable the firm to retain committed truck drivers and to develop rules for the disengagement of non-performing workers.

When asked what additional systems were put in place or what changes had been introduced since the Canterbury earthquakes to better manage people, subcontractors gave the following examples:

- Performance appraisal and the reward system (S5, S11)
- New workers support system (S5, S8)
- Skills development system (S4, S6, S11)

The smaller subcontractors studied generally commented positively on the outcome of good performance and reward in terms of motivating workers. Subcontractors S5 and S8 amended their appraisal system by introducing more clearly defined procedures. The learnings they had before became inputs into their new systems, as subcontractor S8 commented:

‘Our previous system only involved managers who conducted semi-formal individual appraisals based on criteria like employee performance, discipline, attendance and other attributes. It seemed to create low motivation and competition among staff, rather than collaboration. Now our system is more formal, transparent and inclusive. We introduced a three-step performance appraisal process: first workers appraise themselves; then supervisors appraise workers and lastly workers and supervisors meet to discuss and agree on the appraisal. It works pretty well, and avoids discord among staff.’

Two subcontractors studied had added support systems for new employees. For instance, management at S8 have introduced a one-on-one mentoring scheme for new workers to build up the skills by pairing each with one senior member. An action plan was provided which lists the critical skills and knowledge that the new worker should acquire and the expected completion dates.

The majority of subcontractors had undertaken work for the Stronger Christchurch Infrastructure Rebuild Team (SCIRT), and relied on the alliance for organising the allocation of work. However, a number of companies recognised the need to prepare for future markets when the alliance terminates. Several businesses (e.g. S4, S6 and S11) have begun to diversify the range of

services. Multi-skilling or the diversification of expertise was added to their skills development for existing staff. In particular, subcontractor S11 tried to instil a life-long learning culture in its skills development programme. As S11 commented:

‘Both the company and our people have learned from the past volatile situations that as individuals, you’ve got to help yourself, build up your skills, and diversify your expertise. It can open up more opportunities for you and the company when times become bad.’

10 out of 13 studied subcontractors indicated that one of the learnings from the global financial crisis is good selection and staff development strategies as essential prerequisites for efficient business performance. This was thought of as ineffective unless backed up by carefully designed reward system to suit employees’ needs. As subcontractor S8 indicated:

“This was where we went wrong ... cutting corners by offering minimal wages or very basic other benefits, then experiencing enormous levels of staff turnover, which blew our operating costs through to the roof.”

Most studied organisations realise that fair rates of pay and good working conditions must be sufficient to attract staff, to retain them and to motivate them to willingly contribute to achieving the goals of the organisation. Following the Canterbury earthquakes, nearly half of case study organisations had invested in their internal systems. Some examples included:

- Job-based pay with regular reviews to encourage loyalty and stability in the workforce
- Keeping an eye on local wage rates so that rates of pay can be aligned with the market level
- Upgrading the payroll systems
- Offering other benefits such as medical and health insurance, uniforms, pensions, annual leave, cover for sickness etc.

3.2.5 Investment in workers’ skills and capacity development

In most of the subcontractors studied, skills development was done by in-house training. Where training policies exist, most of them are designed to provide the company with the minimum requirements needed to retain a productive workforce. Budget constraint was the most

commonly cited reason for subcontractors not being able to provide employees with the access to external training courses (course offered at Christchurch Polytechnic Institute of Technology (CPIT) and/or other Building and Construction Industry Training Organisations (BCITO)). The two subcontractors S4 and S9 who were able to do so were more well-established companies in Canterbury region. Subcontractors (S3, S5, S6, S11) reported that some of the training programmes from which their employees could benefit were offered by SCIRT, as the alliance team has a strong orientation for skills development.

Although facing budget constraints, more than half of the studied subcontractors reported that they have increased investment in training-focused skills development since the earthquakes. Subcontractors S3, S6 and S8 particularly emphasised the importance of internal knowledge transfer from older generation to younger ones through internally organised training or mentoring programmes. The subcontractors studied had expressed their concern about the potential knowledge gap that exists between the senior workers of near-retirement age and young workers in their 20s and early 30s. Subcontractor S4 commented that:

‘Over the past decade in particular we have seen a larger skills vacuum in the industry where more and more senior people have retired and not many young workers have caught up in skills. Aging problems become more prominent. This knowledge gap has become wider as the earthquake rebuild requires more specialised expertise which cannot be simply fast tracked.’

It was found that a lack of knowledge transfer at the firm level largely derives from the need to minimise disruption to the senior staff member’s work. Previous case studies of construction organisations in Canterbury show that companies were generally concerned that knowledge transfer which takes the form of on-the-job training can affect the productivity performance of core personnel who offer training (Chang-Richards, Wilkinson, Seville, & Brunsdon, 2013; 2014). Subcontractors are now becoming more selective in offering one-on-one skills training to those who show longer-term commitment to the company.

There is a growing recognition of the importance of operational capacity development to business expansion. Subcontractors S10 reported that a doubling of their workforce since the earthquakes has created a proportionate increase in the administration system, to ensure that

payslips go to employees on time and that tax is paid promptly. Subcontractor 13 commented that:

‘At the beginning of the rebuild, we were excited about the opportunities ahead of us to revive the business from recession. We were too much focused on the human side of resourcing, while forgetting the other management systems to organise and co-ordinate this. It is not simply employing an extra administrative assistant, but also the need to upgrade the computerised accounting systems and training staff to operate it. Getting an assistant might take a few days but getting the systems right can take weeks or months to become fully functional.’

Subcontractors S10 and S13 reported that they have upgraded of their IT facilities and relocated to a new office premise to accommodate expanded workforce.

8 out of 13 subcontractors raised the need to engage prospective school leavers in secondary school to join the construction workforce. However, only 1 subcontractor, S5, had an internship programme in place. Such internship is offered to secondary school students who might want to consider work in the construction field in the future. However, recruitment was carried out informally through employees, families and friends. The biggest barrier to implementing such a programme widely in Christchurch, according to subcontractor S5, was that internship may involve issues beyond construction, such as safety and health of interns, costs and closer supervision.

4. Conclusion

This report has collated information about the resource challenges faced by the studied subcontractors in Christchurch. The cases indicate that the majority of subcontractors made conscious efforts to put in place policies and practices that create a competent workforce and motivate workers to contribute to business performance.

The resourcing strategies adopted by subcontractors (e.g. investment in skills development, skills diversification, using casual or permanent workers) are shaped by their own characteristics and a range of internal and external factors. Overall, business strategy and a vision to achieve a sustainable business appear to be driving forces for investment in employment and skills development. Having been through the challenges of the Canterbury earthquakes, most subcontractors realised that having a productive and competent workforce is the key to creating quality work and a sustained client base in a small company. Some of the issues identified in this report, such as high turnover, youth employment, lack of knowledge transfer, and lack of investment in training and skills development, need to be addressed in a more systematic way.

Annex: Profiles of studied subcontractors

Company code	Year established	Ownership structure	No. of Emp	Products/services	Market	BAU Vs. EQ-related	Pinch resources	Resourcing strategies	Business strategies
S1	1999	Family business	7	Commerical machine laid kerb and channel for roading Subdivisions and car parks	Canterbury	80%:20%	<ul style="list-style-type: none"> • Excavator operator • Kerb & channel machine operator 	<ul style="list-style-type: none"> • Ensuring job security • Recruitment on a permanent basis • Investment in training and offering promotion to identified 'loyal' staff • Good conditions of work 	<ul style="list-style-type: none"> • Strong client orientation • Expanding client network • Quality improvement of workmanship
S2	1968	Family business	10	Drain laying and maintenance Manhole installation Trench shield work and excavation	Canterbury	100%:0%	Drain layer	<ul style="list-style-type: none"> • Investment in recruiting and training local young people • Empowering workers to take initiatives • Good benefits 	<ul style="list-style-type: none"> • Strong brand/reputation • Improving company-wide communications
S3	1985	Incoproated	45 (30 in Chch)	Drainage/pipe laying Sheet piling/trench shields Pump stations and manholes Dewatering Pipe bursting and thrusting	Hamilton Christchurch	10%:90% in Christchurch	<ul style="list-style-type: none"> • Excavator operator • Truck drivers • Civil pipe-layer/drain layer 	<ul style="list-style-type: none"> • Retaining mature staff aged between 30 and 50 • Encouraging knowledge transfers among staff 	<ul style="list-style-type: none"> • Service diversity • Market expansion
S4	1950	Incoporated family	190	Construction, surfacing, bitumen products, transport, quarrying, contract management services	South Island	80%:20%	<ul style="list-style-type: none"> • Excavator operator • Drain layer • Project manager 	<ul style="list-style-type: none"> • Reduced recruitment and increased retention and skills development • Improved career path • Good conditions of work 	<ul style="list-style-type: none"> • Forming long-term relationship with other subcontractors • Product and service diversification • Regular review of business plan
S5	1983	Limited company Family	16	Construction of driveways, vehicle crossings, car parks and small subdivisions Asphalt Laying and excavations	Canterbury	30%:70%	<ul style="list-style-type: none"> • Drain layer • Excavator operator 	<ul style="list-style-type: none"> • Retaining family-committed staff aged between 25 and 40 • Strong preference for recruiting local people in Christchurch • Fast track of career path • Good pay at the market rate and other benefits 	<ul style="list-style-type: none"> • Maintain the current size of the company • Maximise business stability • Build good reputation • Employee multi-tasking
S6	1984	Limited company Family	50	Drainage, subdivision, traffic management, project management, quantity surveying, road infrastructure and bridge construction	Canterbury	15%:85%	<ul style="list-style-type: none"> • Truck driver • Excavator operator • Drain layer 	<ul style="list-style-type: none"> • Recruit staff in other newly established services (e.g. electrical services, dairy effluent disposal design and resource consenting application) • Investment in recruiting by using Big Splash and Hayes & Stellar recruitment agency • 2 weeks probationary period 	<ul style="list-style-type: none"> • Reduce rebuild-related work from 85% to 15% by end of 2015 • Expand client base • Diversity services • Instil corporate structure with family values • A possible partnership by joint venture

								<ul style="list-style-type: none"> • An information sharing policy for knowledge transfer 	
S7	1985	Family business	4	Drainage	Canterbury	10%:90%	Drain layer	<ul style="list-style-type: none"> • Recruiting through recruitment agencies and 'buy out' good recruits from them • Direct in-house training provided by directors • Prefer to recruit workers aged between 30 and 50 	<ul style="list-style-type: none"> • Joint venture with a local main contractor and be in charge of the drainlaying jobs • Adding Health and Safety into training schemes
S8	1954	Limited company Family – a subsidiary of Fletcher	31 in Chch	River and marine works Engery pipelines, civil structure and foundation work	Auckland Hamilton Wellington Canterbury	55%:45%	• Plant/machine operator	<ul style="list-style-type: none"> • Having a mentoring and knowledge transfer scheme for new staff • 250 hours of on-job-training before employees are permitted to undertake unsupervised work • Using recruitment agencies for recruiting temporary staff 	<ul style="list-style-type: none"> • Gradually reducing the rebuild-related work and increase the BAU road contracts from NZTA • Having access to all benefits provided by Fletcher
S9	1998	Incoproated	40	Ground remediation, excavation and other earthworks Driveways and footpaths Foundations, retaining walls Civil construction Truck and excavator hire	Canterbury	70%:30%	<ul style="list-style-type: none"> • Truck driver • Plant operator • Civil engineer 	<ul style="list-style-type: none"> • Using recruitment agencies to find skilled engineers and machine/plant operators • Recruitment from Ireland • Encouraging workers to achieve higher qualifications and participate in Health and Safety training 	<ul style="list-style-type: none"> • Improving relationships and form partnership with other companies • Exploring the potential of recruiting secondary school students
S10	1955	Incoporated family	57 (9 based in chch)	Civil construction in roading, subdivisions, drainage, water reticulation, site works, traffic management, aggregate supply, transporting, landscape supplies	Whanganui Canterbury	0%:100% in Christchurch	<ul style="list-style-type: none"> • Truck driver • Plant operator 	<ul style="list-style-type: none"> • Relocating staff from Whanganui office • Recruiting people from other cities of NZ and from overseas • Strong perference for employees aged between 25 and 40 	<ul style="list-style-type: none"> • Building presence and reputation in Canterbury • Diversifying client base
S11	1999	Family business	11	Construction, surfacing and maintenance, bridge maintenance and construction, civil construction and commercial works	Canterbury	25%:75%	<ul style="list-style-type: none"> • Machine operator • Labourer 	<ul style="list-style-type: none"> • Strong perference for recruiting locally through 'Word of Mouth' • 'Equal productivity' policy to increase staff morale and reduce animosity • Rapid growth of staff • Relationship building activities between managers and staff 	<ul style="list-style-type: none"> • Expanding client base by including major consturction companies • Strong barnd/reputation • Quality improvement of workmanship
S12	1979	Incoporated family	90 (50 based in chch)	Subdivisions, road works, site clearance, house foundations, drainlaying, landscaping, and forestry work	Canterbury (Timaru and Christchurch)	85%:15%	<ul style="list-style-type: none"> • Excavator operator • Site worker • Truck driver 	<ul style="list-style-type: none"> • Intensive in-house training other workers to become skilled excavator operators • Strong preference for local recruits • Using recruitment agencies for recruiting temporary staff 	<ul style="list-style-type: none"> • Christchurch office established after the earthquakes • Relationships formed with large contractors in the SCIRT Alliance team

									<ul style="list-style-type: none"> • Increase the workloads from new subdivisions in Christchurch
S13	2008	Incoproated	20	Pipe and drainage	Auckland Christchurch	0%:100%	Drain layer	<ul style="list-style-type: none"> • 90 day trial for new recruits • Strong preference for candidates with interpersonal skills • Increasing organisational capacity to attract local people 	<ul style="list-style-type: none"> • Semi-alliances with Christchurch subcontractors • Investment in building company capacity (premises, facilities) • Increasing the subdivision work by end of 2014

Note: BAU denotes business as usual; EQ denotes earthquake; Emp denotes employment

References

- Chang-Richards, Y., Wilkinson, S., Seville, E., & Brunson, D. (2013). *Resourcing of the Canterbury rebuild: Case studies of construction organisations*. Auckland: The University of Auckland, BRANZ, Resilient Organisations.
- Chang-Richards, Y., Wilkinson, S., Seville, E., & Brunson, D. (2014). *Workforce behaviour and business responses: Case studies of construction organisations*. Resilient Organisations Research Report 2014/03.
- Chang-Richards, Y., Wilkinson, S., Seville, E., & Brunson, D. (2015). Resourcing the Canterbury rebuild: Emerging issues facing subcontracting businesses, May 2015. *Resilient Organisations Research Report 2015/03*
- Forde, C., & MacKenzie, R. (2007). Getting the mix right? The use of labour market contract alternatives in the UK construction. *Personnel Review*, 36(4), 549-563.
- Lobo, Y. B., & Wilkinson, S. (2008). New approaches to solving the skills shortages in the New Zealand construction industry. *Engineering, Construction and Architectural Management*, 15(1), 42-53.
- MacKenzie, S., Kilpatrick, A. R., & Akintoye, A. (2000). UK construction skills shortage response strategies and an analysis of industry perceptions. *Construction Management and Economics*, 18(7), 853-862.
- SCIRT. (2013). Rebuilding central city horizontal infrastructure - update from Stronger Christchurch Infrastructure Rebuild Team (SCIRT). *Greater Christchurch Recovery Update, August 2013*(24), 9.