

Lessons learned from one of New Zealand's most challenging civil engineering projects: rebuilding the earthquake damaged pipes, roads, bridges and retaining walls in the city of Christchurch 2011 - 2016.

SCIRT Application for the Civil Contractors New Zealand Awards 2015

Story: SCIRT Training Centre

Theme: People and Culture

An award application for the Civil Contractors New Zealand 2015 awards. SCIRT was a finalist in the "Connexis Company Training and Development Award – Large Company" category.

This document has been provided as an example of a tool that might be useful for other organisations undertaking complex disaster recovery or infrastructure rebuild programmes.

For more information about this document, visit www.scirtlearninglegacy.org.nz



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SCIRT Application for Connexis Company Training and Development Award 2015

Part One Profile

The Stronger Christchurch Infrastructure Rebuild Team (SCIRT) was formed to rebuild the earthquake damaged infrastructure in Christchurch by December 2016. SCIRT is an alliance between 3 funding partners (CERA, Christchurch City Council and New Zealand Transport Authority) and 5 Delivery Teams - (City Care, Downer, Fletchers, Fulton Hogan and McConnell Dowell). The organisation is governed by a Board of senior representatives from these eight Alliance members, along with the Executive General Manager of SCIRT. Over five years the programme will deliver over 600 projects with a value of more than 2 Billion across most aspects of civil infrastructure.

The SCIRT Programme to Date

WASTEWATER 	341 km pipe (57%) repaired/replaced
	53 pump stations (65%) repaired/replaced
STORM WATER 	33 km of pipe (42%) repaired/replaced
	4 pump stations (48%) repaired/replaced
FRESH WATER 	66 km of pipe (77%) repaired/replaced
	20 pump stations and reservoirs (69%) repaired/replaced
ROADING 	960,773 sq m of road (59%) repaired/replaced
	118 bridges/culverts (78%) repaired/replaced
	98 retaining walls (51%) repaired/replaced

SCIRT currently engages around 1,400 people from more than 100 different organisations including 18 professional services companies and more than 80 civil contractor firms who work with the Delivery Teams on the construction of projects. Team members are actively encouraged to work towards qualifications across the NZQA infrastructure spectrum – from Infrastructure Works Level 2 through to CPENG – and a broad range of skills: e.g. traffic management, civil labourers, drainage, plant operators, sealing operators, crew leaders. From November 2014 more than 20% of the SCIRT operational workforce were working towards a NZQA qualification, well above the industry standard of 5%. (see Appendix 2)

SCIRT has a strong organisational commitment to training and developing the people who work on its projects. The high value placed on training at SCIRT resonates from the SCIRT Alliance agreement signed by all SCIRT Board members in September 2011. Within the 11 legacy objectives written into this agreement is one to: “Purposefully lift the capability of the Sector Wide Workforce”. This coupled with a programme need to provide skilled resources to undertake this vast task, SCIRT’s approach to training is about delivering operational training now and to leave a legacy to industry that extends beyond SCIRT. (see Appendix 1)

Maikara’s Pathway



Maikara joined SCIRT through the For Real Entry Pathway. Prior to this he described his career as going from minimum wage job to job with no progression at all.



Part 2 SCIRT Training

SCIRT is committed to training its wider team to meet operational demands in the rebuild and to leverage this unique opportunity to improve industry training into the future.

SCIRT operates a Training Centre with five experienced Civil Trainers who train the team including sub-contractors. The Trainers hold Connexis assessor scopes and have helped over 65 team members complete National Certificates and have assessed more than 1,010 Unit Standards. They also deliver short courses attracting more than 6,000 attendees to date. The training team delivers a SCIRT civil specific Site Safe Course and has supported new entrants into the industry through the FORREAL! ready for work course linked to IW2. All SCIRT on job training and courses are linked to operational requirements through a Training Forum which is made up of operational representatives from all five SCIRT Delivery Teams who meet monthly and advise on training needs.

Unique to SCIRT is a commercial structure that rewards performing teams with more work. One of the measures of performance is a Training KPI that encourages teams to engage their workforce in NZQA qualifications. This KPI mechanism allows SCIRT to direct teams on areas requiring attention by adding additional weighting to qualifications that need focus (e.g. Level 4 and Frontline Leadership).

A Memorandum of Understanding in 2012 was signed with Connexis to leverage the unique opportunity SCIRT's alliance provides for the industry to speak with one voice and engage in qualification development. This has occurred across a range of Qualifications (IW2) and RCC (Civil Plant) products and has contributed to improved qualifications.

SCIRT's Board has also recognised the need for a Civil Industry Trade and has seconded a Project Manager to Connexis to work for the CCNZ Civil Trade Establishment Board to ensure this legacy goal is achieved.

Please see below a list of some of the achievements of the SCIRT Training Centre relevant to the criteria for this award.

Criteria 1 – Training Engagement

“Your training programmes cover a variety of skill sets and roles”

- ✓ Appendix 3 shows the many training programmes on offer.
- ✓ Appendix 4 shows the variety of NZQA qualifications team members are participating in.

“Training is part and parcel of your team's daily work practice and schedules”

- ✓ Training is a focus of Leaders due to the KPI driving that focus.
- ✓ The SCIRT Training Forum meets on a monthly basis to tactically plan training.
- ✓ SCIRT Trainers place emphasis on On Job Training. This is where they aim to maximise their time (Appendix 3)
- ✓ On-site training matrixes show which staff have done SCIRT training.

As part of FOR REAL he completed a six week pre-employment programme arranged by SCIRT. He then went to work for the City Care SCIRT Delivery Team.



While there he worked through his Infrastructure Works Level Two National Certificate with support from SCIRT on job trainers.

Maikara started to specialise in Traffic Management and was identified for Training in this area.

“Training is effective - good numbers of people complete their qualification, and move up into further training”

- ✓ Feedback on the effectiveness of the SCIRT Training Centre is very positive (see Appendix 5).
- ✓ 65 team members to date have completed qualifications and we are working with 133 more.
- ✓ The KPI had a weighting applied to higher qualifications (Level 3 and 4) from July 2014 to encourage teams to move their people up.
- ✓ Weighting has also been applied from 2015 for completions.

“Most staff across the business are involved in training”

- ✓ The SCIRT Leadership Team have set a goal to increase subcontractor engagement in training to 60% and applied a KPI weighting.
- ✓ A monthly Training Forum of operational Managers ensures that people who need training are identified.
- ✓ Reported statistics (Appendix 3) indicates that each month about 15% of the workforce are engaged in short courses; all would have done at least one course given the number of over 6,000 attendances to date.
- ✓ Over 20% are engaged in a qualification.

“You have staff who are responsible for, or play a part in training others. These staff should be trained to have the necessary skills.”

- ✓ Between them, SCIRT Trainers have 200 years civil construction experience.
- ✓ All have completed a National Certificate in Adult Education Level 4 or will be undertaking this soon.
- ✓ SCIRT Crew Leadership Courses includes a ‘train your team’ module.

“Innovation is used to make training interesting, and to meet everyone’s needs.”

- ✓ Many short programmes are adapted to be delivered on site with an innovation of screens on the back of utes to display PowerPoint presentations.
- ✓ “FORREAL!” was an innovative way to train new entrants: under the umbrella of IW Level 2, trainees completed a number of units in 6 to 8 weeks off job and then moved into employment and completed their training under the ‘wing’ of a SCIRT Trainer.
- ✓ A Memorandum of Understanding with Site Safe allowed SCIRT to adapt the presentation of the material to match the SCIRT context. Feedback from participants has been very positive (Appendix 5).
- ✓ A Memorandum of Understanding with Connexis enabled the Trainers to work closely with Connexis to constantly drive innovation in training resources.
- ✓ All the tools and programmes that the SCIRT Training Centre have developed are soon to be made available via the SCIRT Learning Legacy website.

City Care selected Maikara for the first SCIRT Crew leadership course in 2014 – aligned with the National Certificate in First Line Management Level 3. SCIRT Trainers worked with him on site to complete the NZQA work.



Maikara graduated this course in December 2014. At the awards Maikara thanked SCIRT and City Care for investing in him and his future.

Criteria 2- Pathways

“The business is committed to making sure staff are given the opportunity to learn new skills and to build a career.”

- ✓ This is driven from the top – the SCIRT Board included an Alliance Objective around purposefully lifting the capability of the workforce
- ✓ A KPI to measure enrolment in NZQA qualifications was put in place to keep the focus on this. This created a focus early in the programme. (see Appendix 6)
- ✓ The attendance levels at the SCIRT Training Centre programmes and the number of trainees working one on one with the SCIRT Trainers (over 100 at any given time), demonstrates how committed SCIRT businesses are to skill and career development.

“The business has thought about succession planning, and training is part of this”.

- ✓ In 2014, SCIRT identified that only 7 of its 150 crew / frontline leadership had leadership training.
- ✓ In response SCIRT initiated, in collaboration with Connexis, a First Line Management (Level 3) Crew Leaders programme (5 programmes of 12 participants each), subsidised for sub contractors, and put an emphasis on this qualification in the KPI.
- ✓ 12 months on, this number has moved to 45 and the goal of 75 by December 2015 is going to be achieved.
- ✓ From new entrants via FORREAL through to Trades level, SCIRT has shaped the focus of the businesses by putting weight onto ‘step ups’ to level 3 and 4 in the KPI. This has driven training for succession planning.
- ✓ In supporting the implementation of a Civil Trade, SCIRT demonstrates that it has thought about succession planning that extends beyond the life of SCIRT.

“People are trained in skills that are useful across the business”

- ✓ The SCIRT Trainers link into operational Training, Safety, Quality and Environmental forums to get feedback on what skills need addressing (eg. service strike awareness, mobile plant risks)

Appendix 1: SCIRT Training Framework

Appendix 2: Engagement in Training September '13 – April '15

Appendix 3: May 2015 Board Report shows: Short Courses, On Job Training Hours and other training data

Appendix 4: NZQA Qualifications Team Members Engaged In

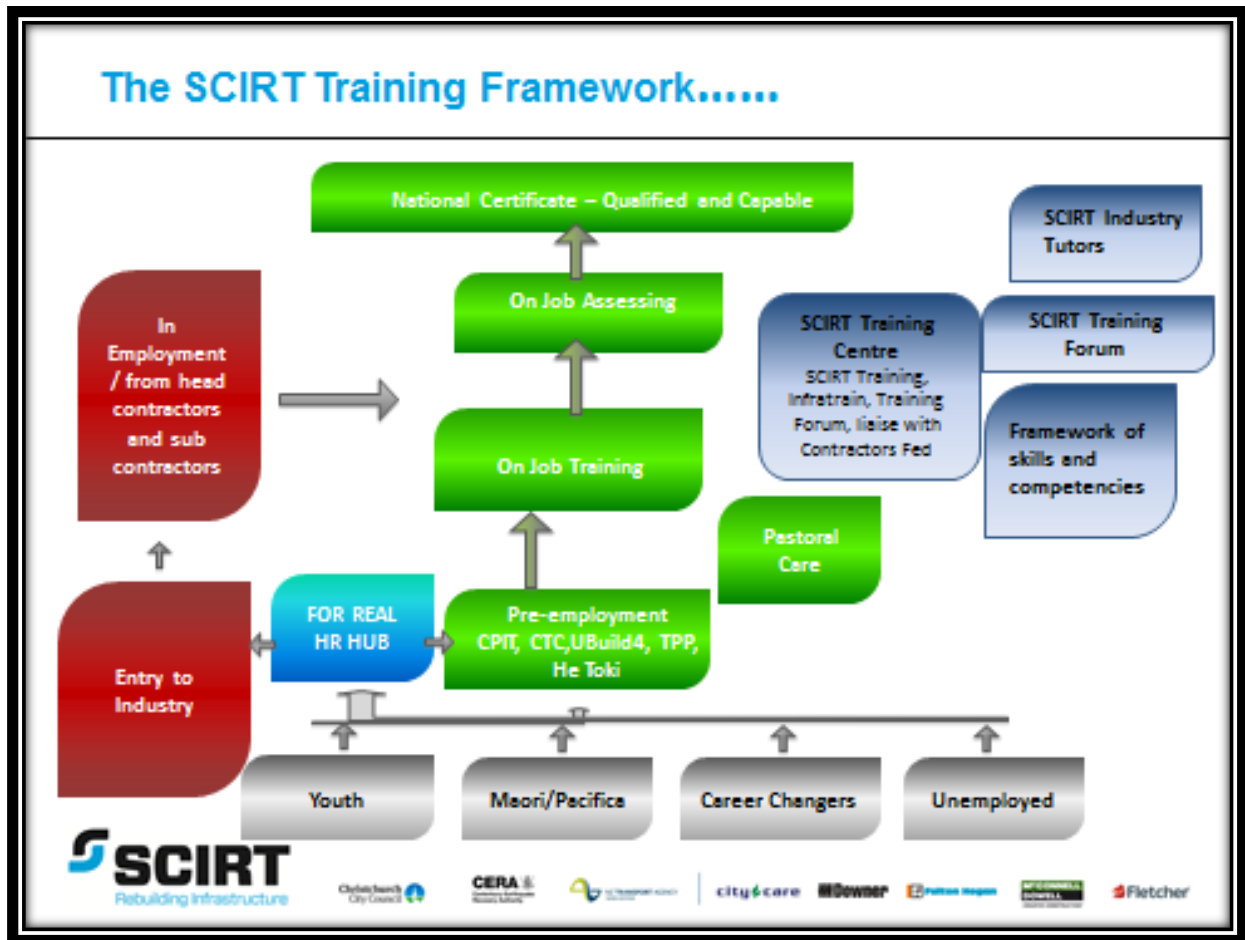
Appendix 5: Site Safe Feedback

Appendix 6: Engagement in NZQA Training August 2012 to April 2014

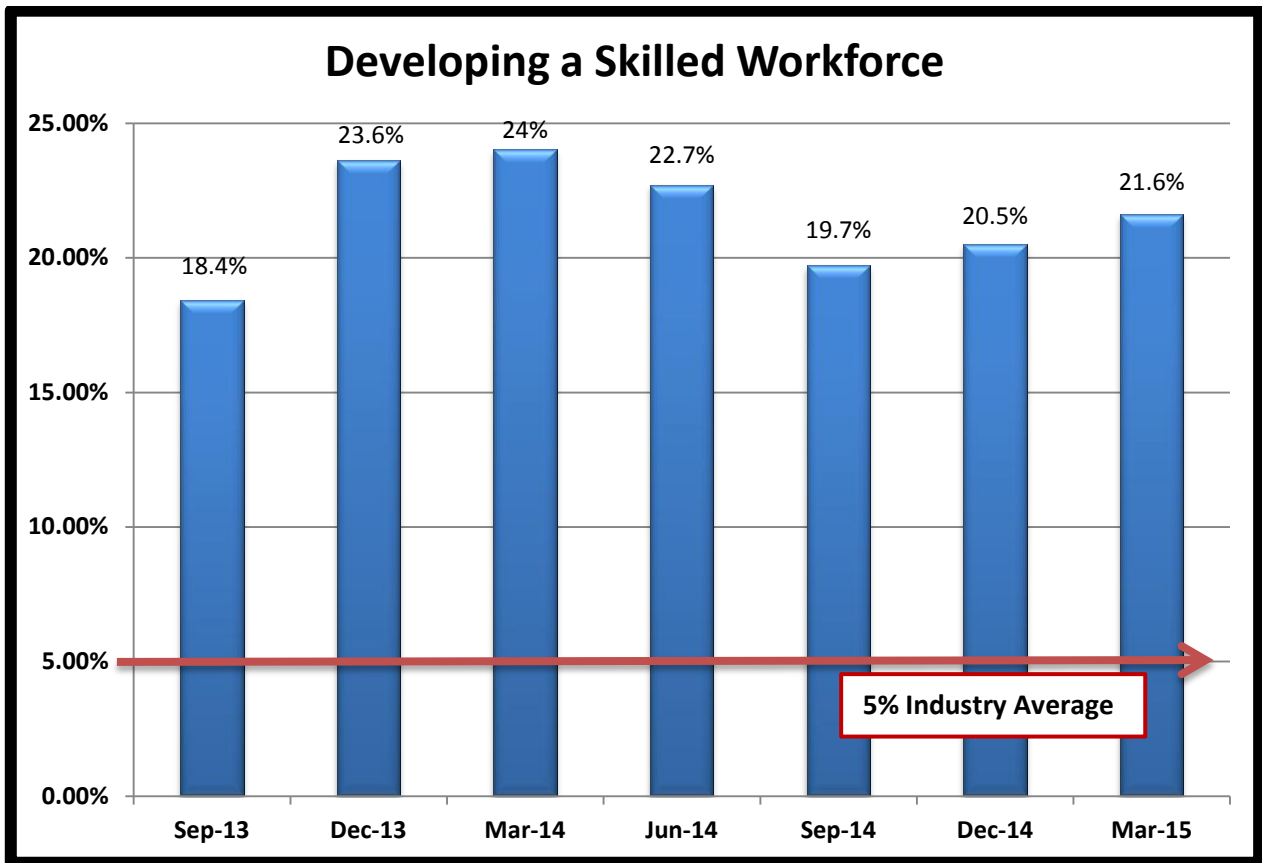
Appendix 7: Article: Contractor Magazine Article on SCIRT April 2014

Appendix 8: Robyn Laurenson- Project Manager "U Build 4 the Rebuild" Christchurch Recovery Employment Training Programme

Appendix 1: SCIRT Training Framework

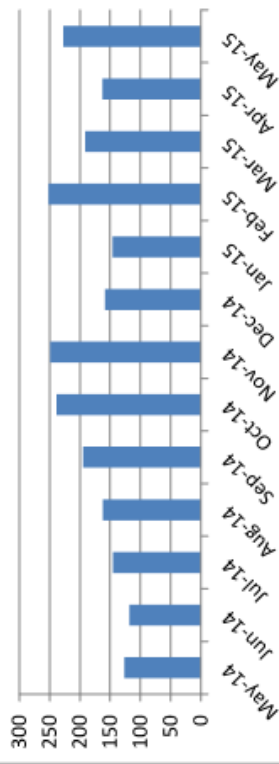


Appendix 2: Engagement in Training September '13 – April '15

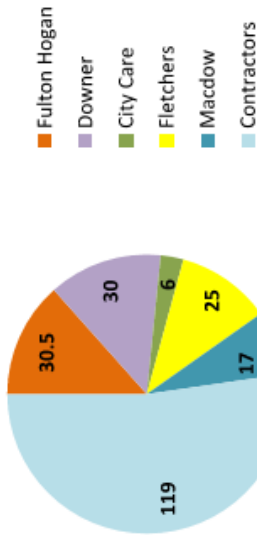


SCIRT Workplace Training- On Job Training – May 2015

Hours Workplace On Job Training Spent On Job Training



On Job Training Per Company (Hours)

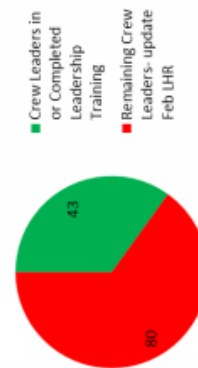


Course	May	Total
Cable Location	4	717
Reading Plans	0	210
Spotter Training	0	1442
Site Safe	64	1894
Slinging and Lifting	15	560
Concrete Saw	41	196
Spill Kit	0	849
Small Tools	9	101
Ops. Around Mobile Plant	0	67
Total	133	6036

Site Team Members Linked to On Job Trainers

Sub-Contractors	55
Fulton Hogan	28
Fletcher	21
Downer	18
City Care	12
MacDow	7

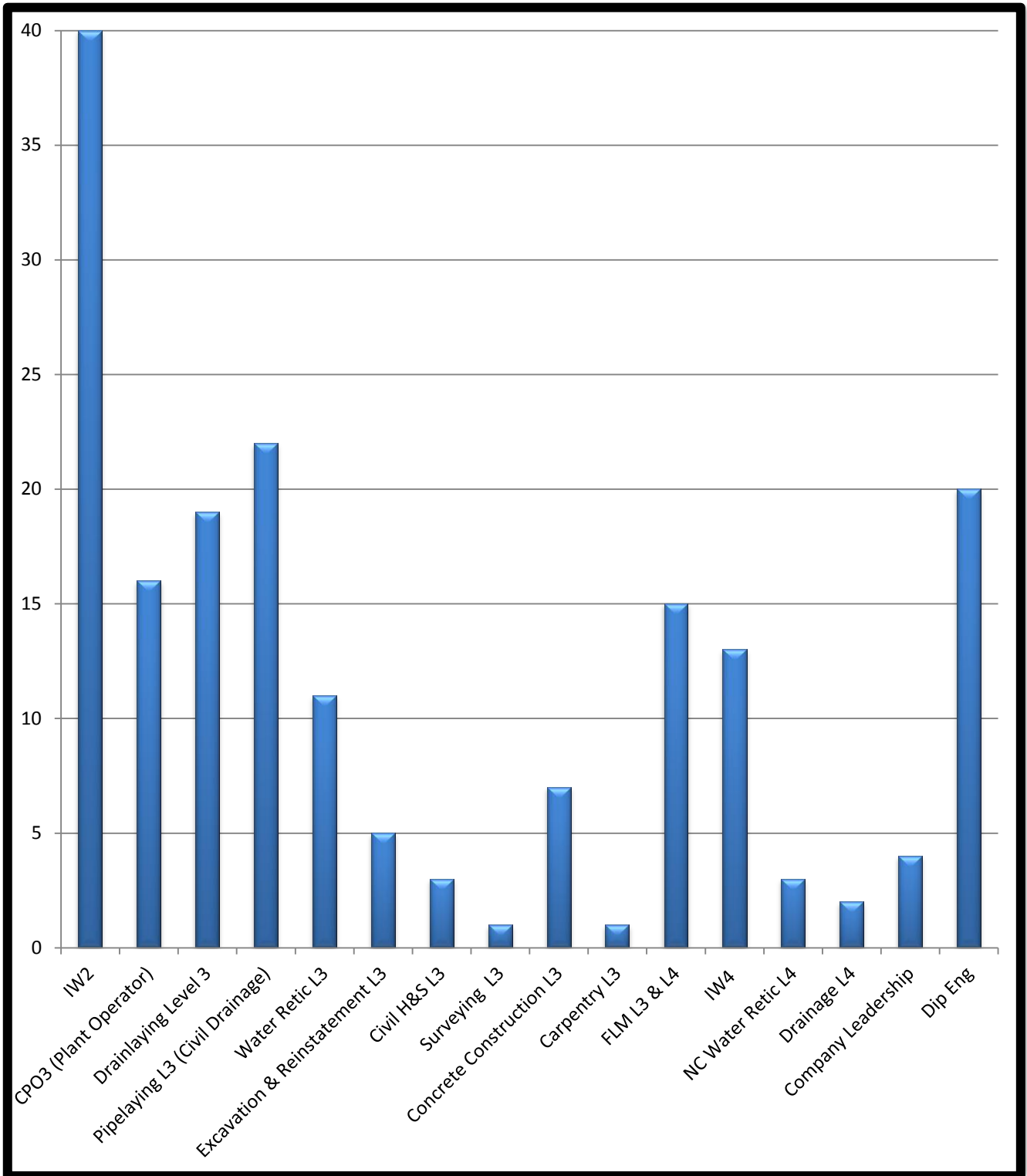
Site Leaders with Leadership Training



NZQA Qualifications- Tutors Assisting On Job to Complete

Infrastructure Works (Labour)	56	17	2	20	36	2	133
Plant Operator	1	1	3	5	1	4	64
Infra. Works Supervision	40	5	3	5	1	4	64
Pipe laying	40	5	3	5	1	4	64
Pavement Surfacing (asphalt)	40	5	3	5	1	4	64
Water Retic.	40	5	3	5	1	4	64
FLM Level 3	40	5	3	5	1	4	64
Totals	133	1	3	5	1	4	64

Appendix 4: NZQA Qualifications Team Members Engaged In



Appendix 5: Site Safe Feedback Form

Course Evaluation



Site safe Wes Tetterys 11/01/15
Type of Course Trainer Name Date of Course

How strongly do you agree or disagree with the following statements.

Please tick the appropriate boxes, and provide us with your feedback:

The Course:

- 1 was well paced
- 2 had a good level of activity
- 3 taught me things I can apply to my job
- 4 was at a level that is useful for me in staying safe

If Site Safe could do one thing to improve the course, what would it be:

The Trainer:

- 5 was well prepared
- 6 was knowledgeable
- 7 encouraged active involvement
- 8 maintained my interest

If your Trainer could do one thing to improve, what would it be:

General:

- 9 I would recommend this course to my colleagues
- 10 I will improve my safety practices because of this course

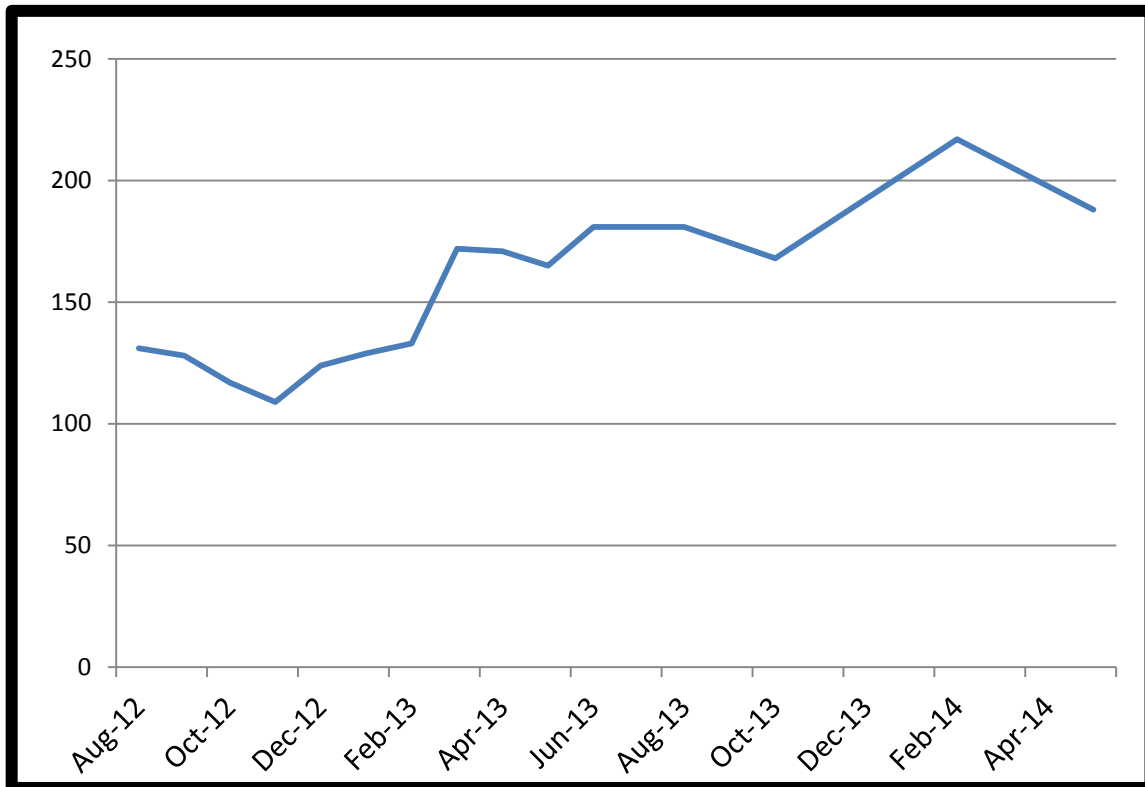
What was the most valuable part of this course?

Other comments:

Strongly Agree	Agree	Disagree	Strongly Disagree
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Appendix 6: Engagement in NZQA Training



CONTRACTOR TRAINING



The SCIRT Training Centre Workplace Tutors (from left to right): Kingsley Hannah, David Tumbridge, Bill Hicks, Roy Parkin, Dennis Smyth. Tutor Alan Corbett is not pictured.

The stronger Christchurch Infrastructure Rebuild Team (SCIRT) opened its Training Centre in mid-2012 to provide a service to the men and women who are working on the city's damaged infrastructure. So far, the centre has had 3100 attendees through its training courses, has assessed over 800 unit standards and, most importantly, provided one to one on-job coaching for over 150 trainees.

SCIRT – changing the face of training

ABI KIBBLE talked to the SCIRT team about how the organisation is working collaboratively with key stakeholders to change the face of training in Christchurch – and the legacy it will leave for the sector-wide industry beyond the life of SCIRT.

SCIRT WAS SET UP to rebuild the city's publicly-owned, earthquake-damaged horizontal infrastructure (wastewater, fresh water, storm water, roads, bridges and retaining walls) following the devastating earthquakes of 2010 and 2011. The organisation is an alliance between three owner participants – Canterbury Earthquake Recovery Authority (CERA), the NZ Transport Agency (NZTA) and Christchurch City Council, and five non-owner participants who carry out the construction work – City Care, Downer NZ, Fletcher Construction, Fulton Hogan and McConnell Dowell. The work could not be done without the engagement of a number of civil construction sub-contractors.

There was (and still is) an unprecedented amount of work to be done, and a key focus for SCIRT has been to grow workforce skill levels to meet the demands of the rebuild and beyond. This has included upskilling people already working in the industry, and providing new entrants with a baseline skill level so they can work safely and efficiently.

The SCIRT Training Centre has engaged a team of Workplace Tutors, seconded from the non-owner participant organisations, who are dedicated to providing training and assessment for people working on the rebuild. A major point of difference is that the tutors go out on site and provide practical, work-based training free of charge. This enables site supervisors, managers and business owners to focus on the day to day running of their business, knowing that their staff are receiving expert tuition. The tutors can also add value for supervisors and managers by helping them gain the skills they need to manage their crews more effectively.

SCIRT is committed to raising standards in the industry by linking training to national qualifications. This commitment is realised through a programme-wide Key Performance Indicator (KPI) which encourages teams to enrol their field staff in qualifications. SCIRT training manager Mason Tolerton explains, "We are really focused on working with and for industry to assist in the here and now of the rebuild while also leaving some real legacies to the infrastructure training environment."

Many SCIRT field staff are currently engaged in qualifications with the newly merged Infrastructure Industry Training Organisation, as well as with a number of other ITOs. These qualifications are suitable for people working from introductory

through to front line leadership level and cover a wide range of work including civil plant operation, infrastructure pipelaying, excavation and reinstatement, horizontal directional drilling, pavement surfacing, roadmarking, surveying, health and safety.

Infrastructure ITO regional manager Fiona Malloch says, "Our partnership with SCIRT has really enhanced the learning experience for our trainees. My team's role is to provide support and guidance to trainees to keep them on track with their qualifications, while the workplace tutors add a more technical perspective. Their hands-on approach makes the training more relevant, and enables people to gain the practical skills and experience they need to achieve their qualifications."

Workplace tutor Kingsley Hannah agrees that making training functional and relevant is the key to success. He says, "This is a very practical industry. Most of the people working in it learn best by doing, rather than by reading a book or sitting in a classroom. All of our tutors have years of experience – and that resonates with trainees and employers. We've forged some strong relationships with our clients and demand for our services has gone from strength to strength. We've gone from two tutors to six in order to keep up with demand."

Kingsley continues, "Our short courses are also popular, although we view them as complimentary to qualifications – not as a replacement. The qualifications are a benchmark of industry expectations and are vital to succession planning for the future. The short courses are ideal for people who need a basic level of knowledge quickly, or for those who need to update their skills because of changes to legislation or technology. We work closely with industry to make sure that we are meeting their needs. Our short courses have been developed in response to recurring issues or critical risk areas, such as cable location or slinging, lifting and placing."

Kingsley adds, "The SCIRT training model is helping to change attitudes towards training and qualifications. People are recognising the value of on-job training linked to qualifications and it is becoming an integral part of a company's culture. The way I look at it is that we're setting good habits for now and the future. When SCIRT ceases to exist in 2016, our aim is for the industry to pick up where we leave off."

Appendix 8: Email from "U Build 4 the Rebuild – Feedback on Training Centre

From: Robyn Laurenson [redacted]
Sent: Thursday, 19 June 2014 4:38 p.m.
To: Mason Tolerton
Cc: Deborah Peters
Subject: Value of SCIRT Tutors

Hi Mason

We have been working with SCIRT since the conception of the U Build Course in June 2012 . Having the support of industry assessors to our course has been worth "Gold" to the program . The advice and connection with what is happening in the Christchurch Infrastructure Rebuild has enable us to revise and make sure what we are delivering in the 6 week course prepares the trainee to meet the industry needs and requirements . Roy and Bill both deliver the Cable location and Spotter training to our trainees for every course and the trainees get a certificate once it is completed.

The benefits of the 40 + years of experience and the wisdom from both these Assessors coaches and mentors the trainees every time they come to visit (minimum one or twice a week) . They have also mentored trainees once they leave the course and we will call and get them to go and meet with the foreman and trainee if any issues come up in the first few weeks of employment post course..

Without the support and the connection we get into the industry through the SCIRT Assessors the value of our course and the respect it gets in your 'industry would be lessened hugely . The advice they give our trainees about what to expect , how to deal with problems . expertise regarding the training pathways through the Unit Standards and the advice we have asked for re the assessments and Unit standards the course tutor has been delivery has been invaluable.

It has contributed to the growth of our Course Tutors professional development as a tutor and industry assessor. The gift of the SCIRT assessors encouragement and the confidence they give us all that we are on track and can contribute to your industry with this training and the trainees that graduate and start to help with the Rebuild of Christchurch has been fabulous. We cannot thank SCIRT enough for the support we get from you and your Assessors . "

Kindest regards
Robyn

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