

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.

## APEC workshop presentation

**Story:** Women in Construction

**Theme:** People and Culture

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A presentation which outlines SCIRT's approach to raising the visibility of and enabling women working in construction across the SCIRT programme.

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](http://www.scirtlearninglegacy.org.nz)

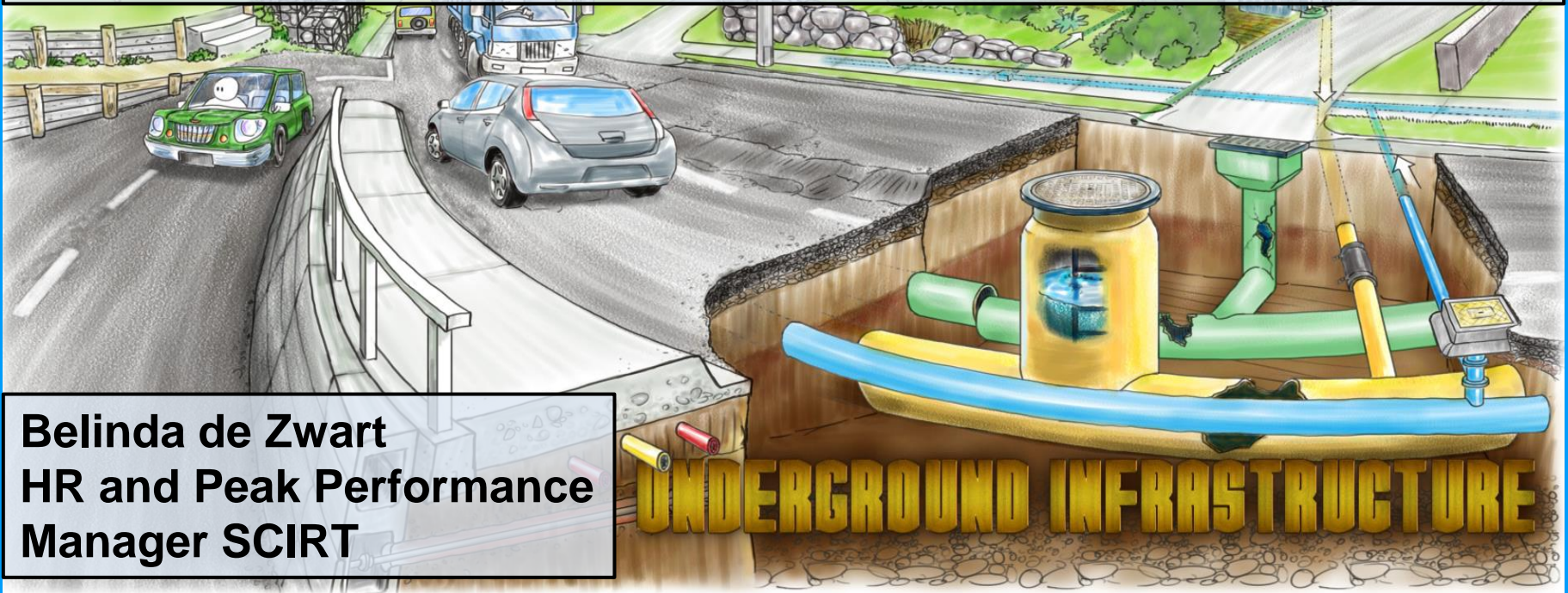


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# APEC Workshop 18<sup>th</sup> March

*“Good Practices of Women’s Entrepreneurship in Local Communities in the Process of Disaster Reconstruction”*



Belinda de Zwart  
HR and Peak Performance  
Manager SCIRT





# WOMEN IN CONSTRUCTION:

“It’s a Good Fit”



# New Zealand



# Christchurch

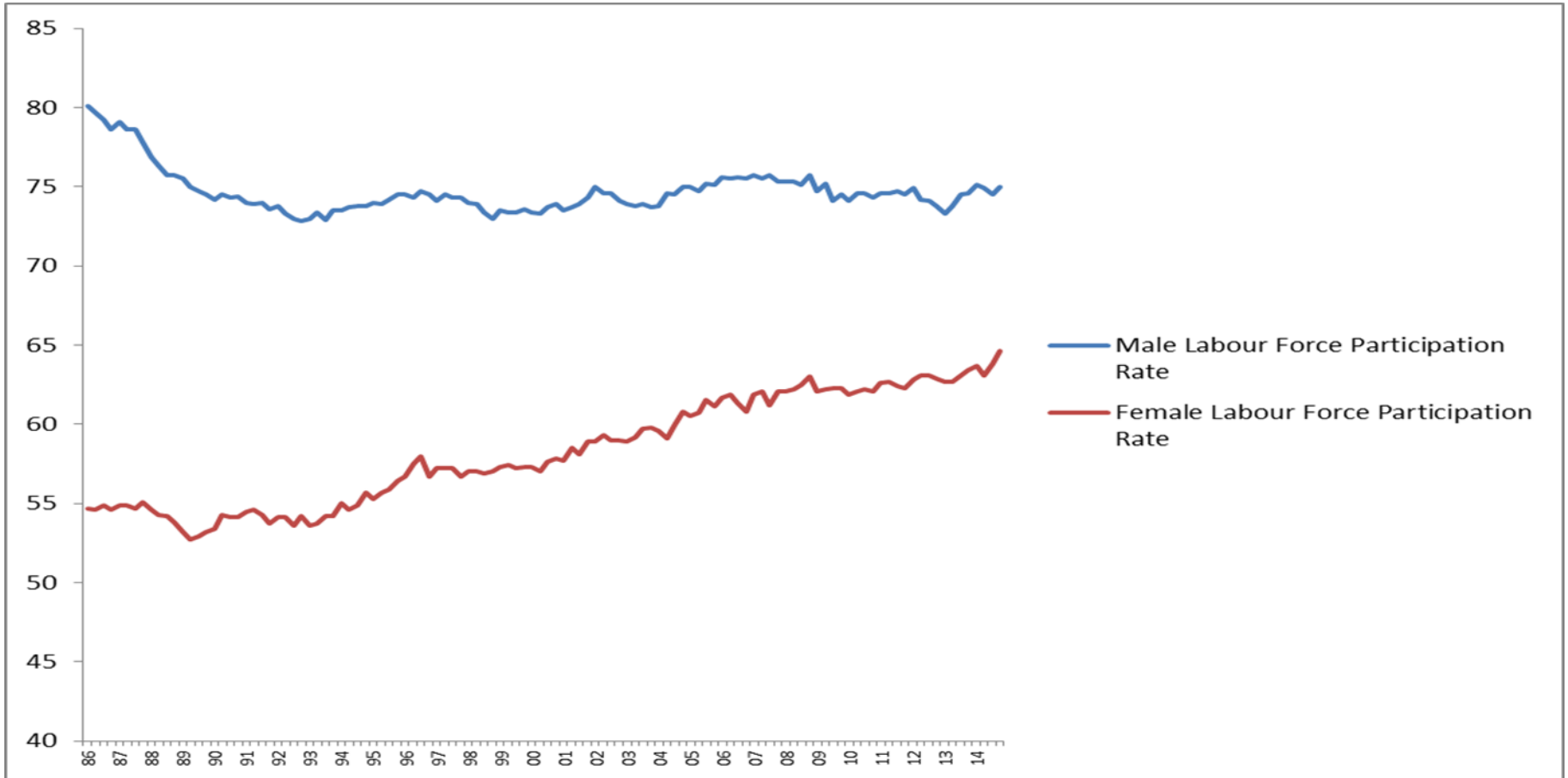


# WOMEN AND WORK IN NZ

## The Context



# Growing female labour force participation





# Air hostess still features as a top career choice for girls

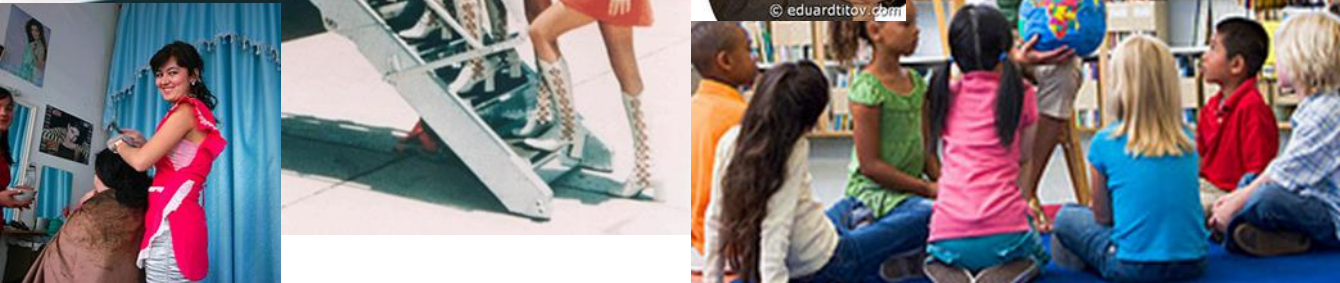
1979



1995



2010

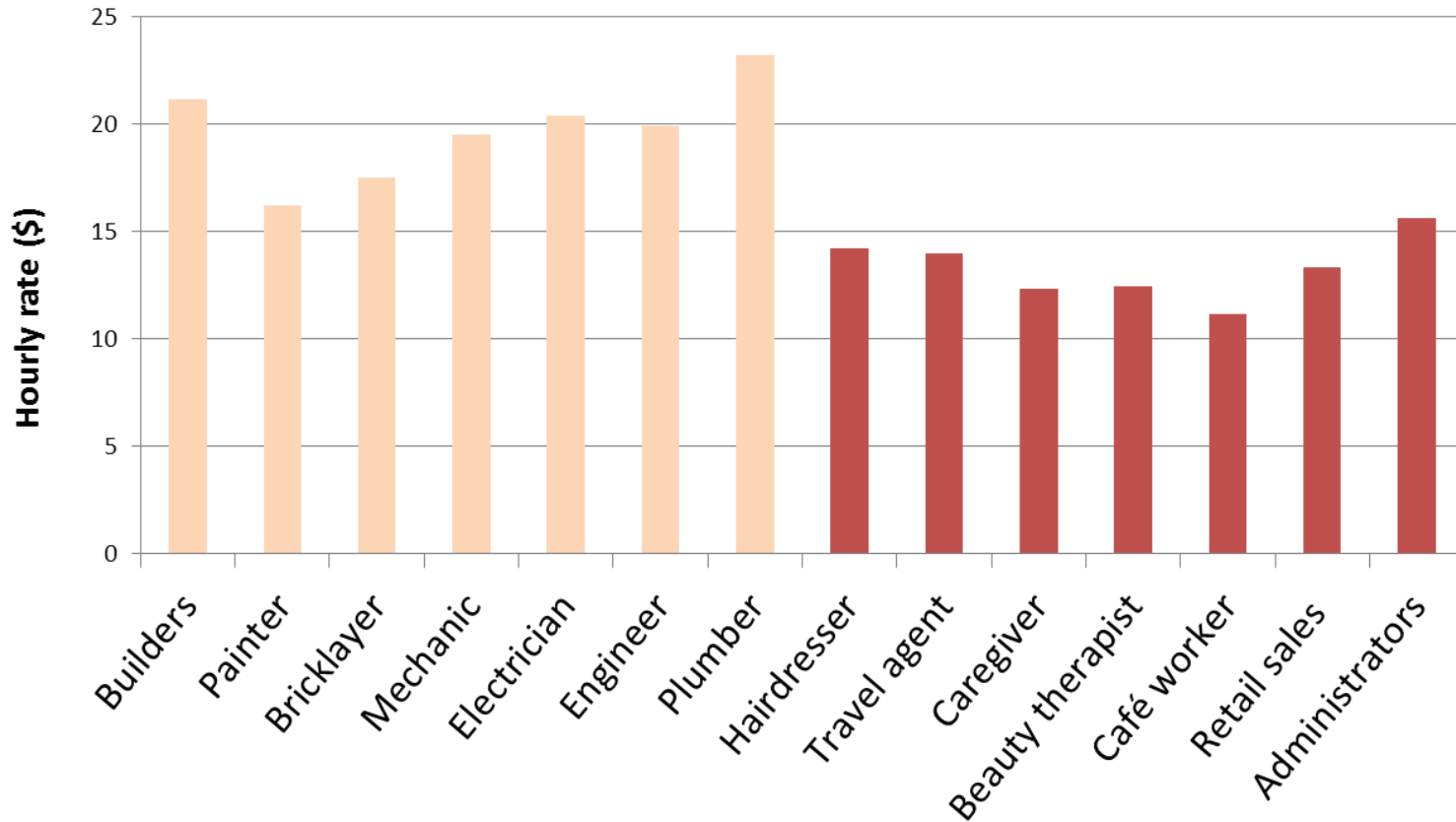


2016?

Source: AUT University for Ministry of Women's Affairs (2010) *Students' Occupational Choice Study: Auckland and Dunedin*

# There are differences in the pay of male and female dominated occupations

## Median Hourly Qualified Wages

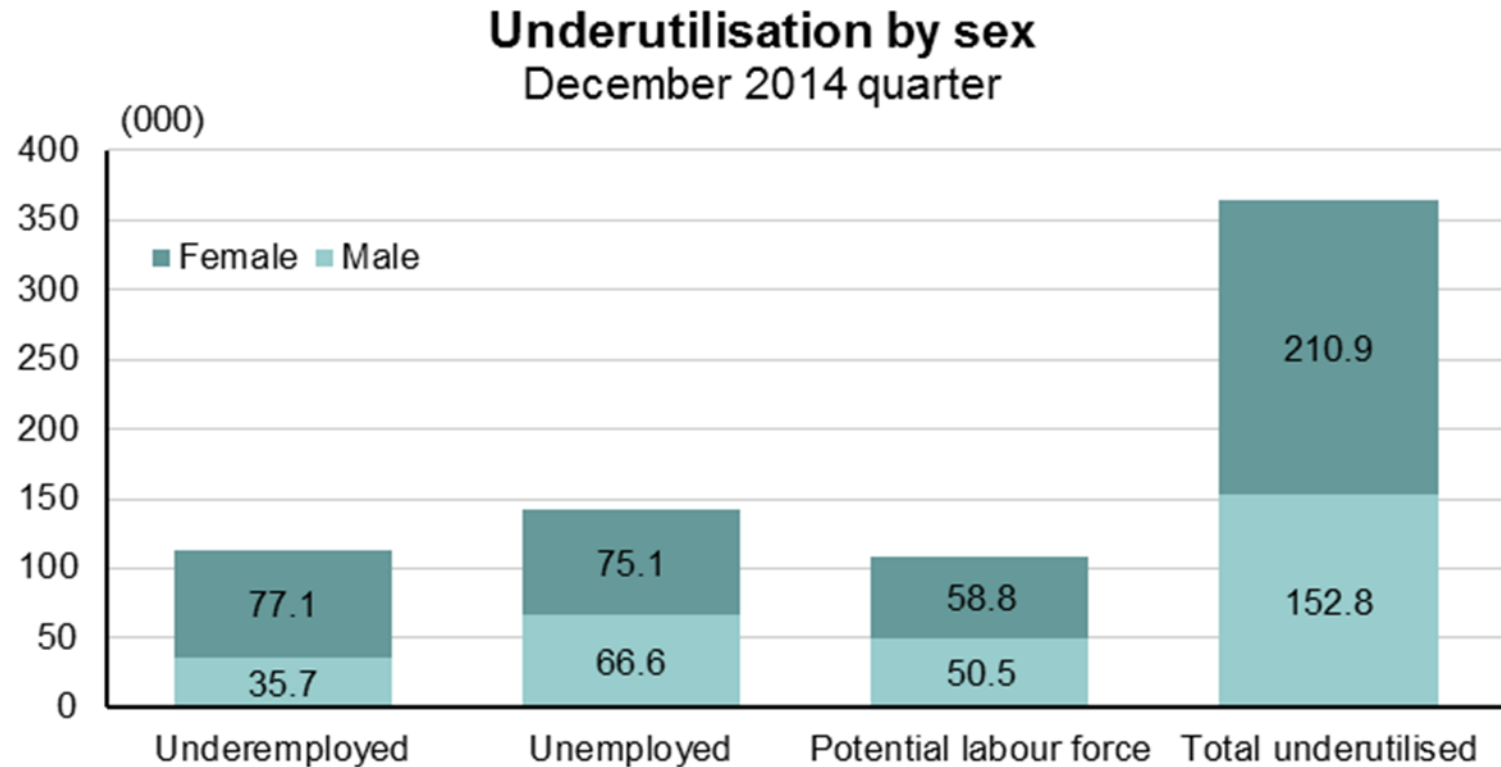


Source: Reward consultants for Ministry of Women's Affairs, Research on Wages and Costs of Education and Training, 2006

# Women in trades 1%



# Women are more likely to be 'underutilised'

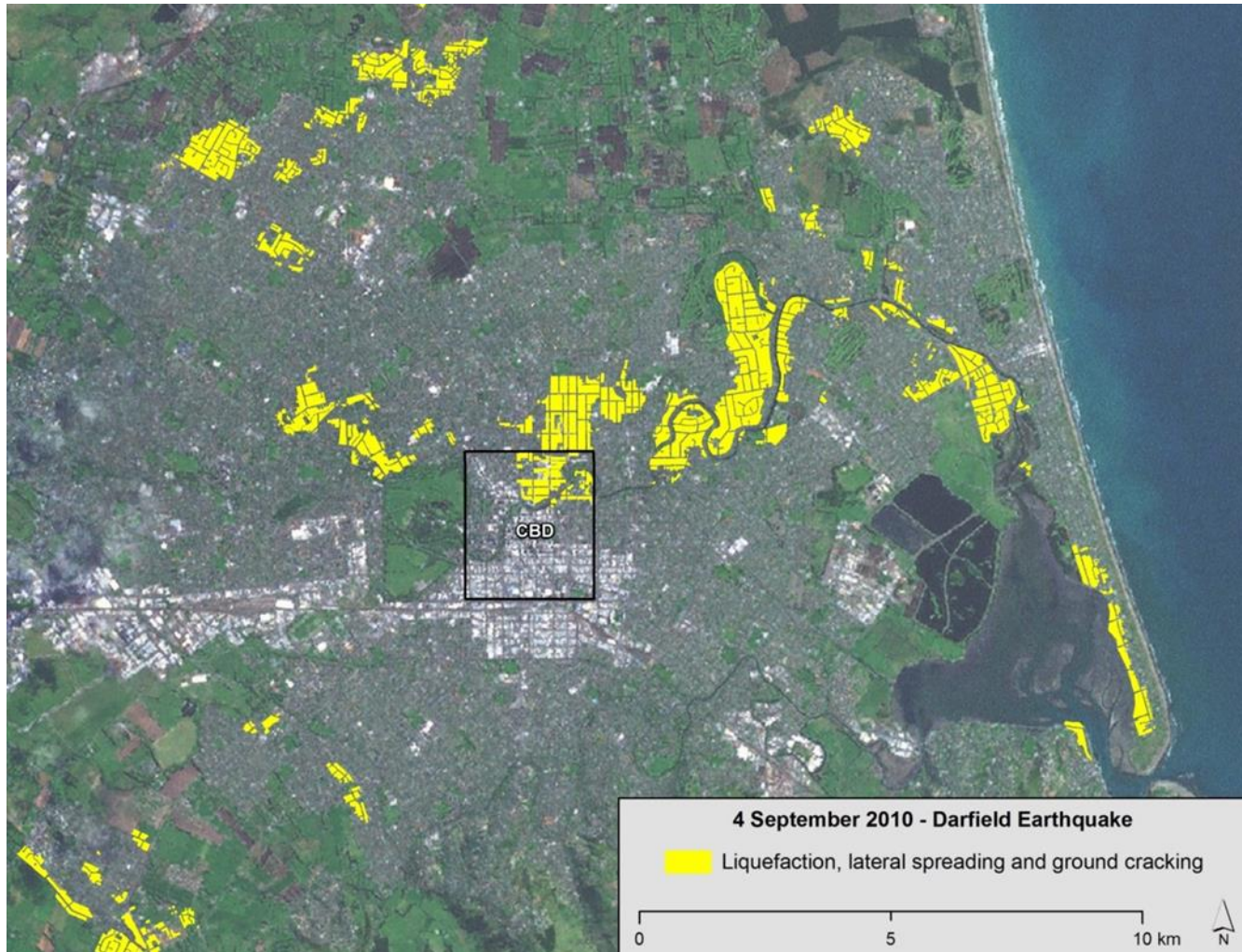


Source: Statistics New Zealand

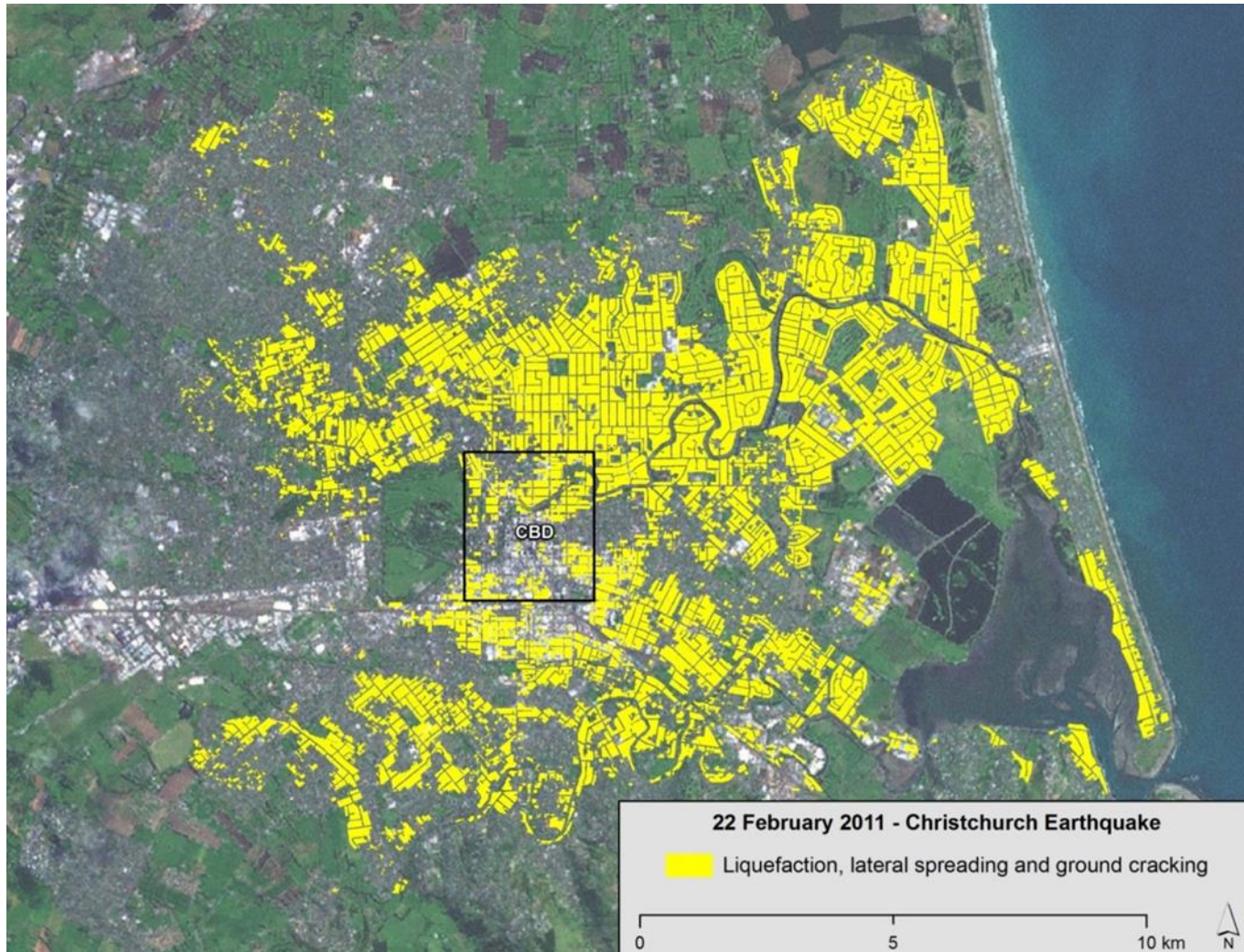
# THE CHRISTCHURCH EARTHQUAKES



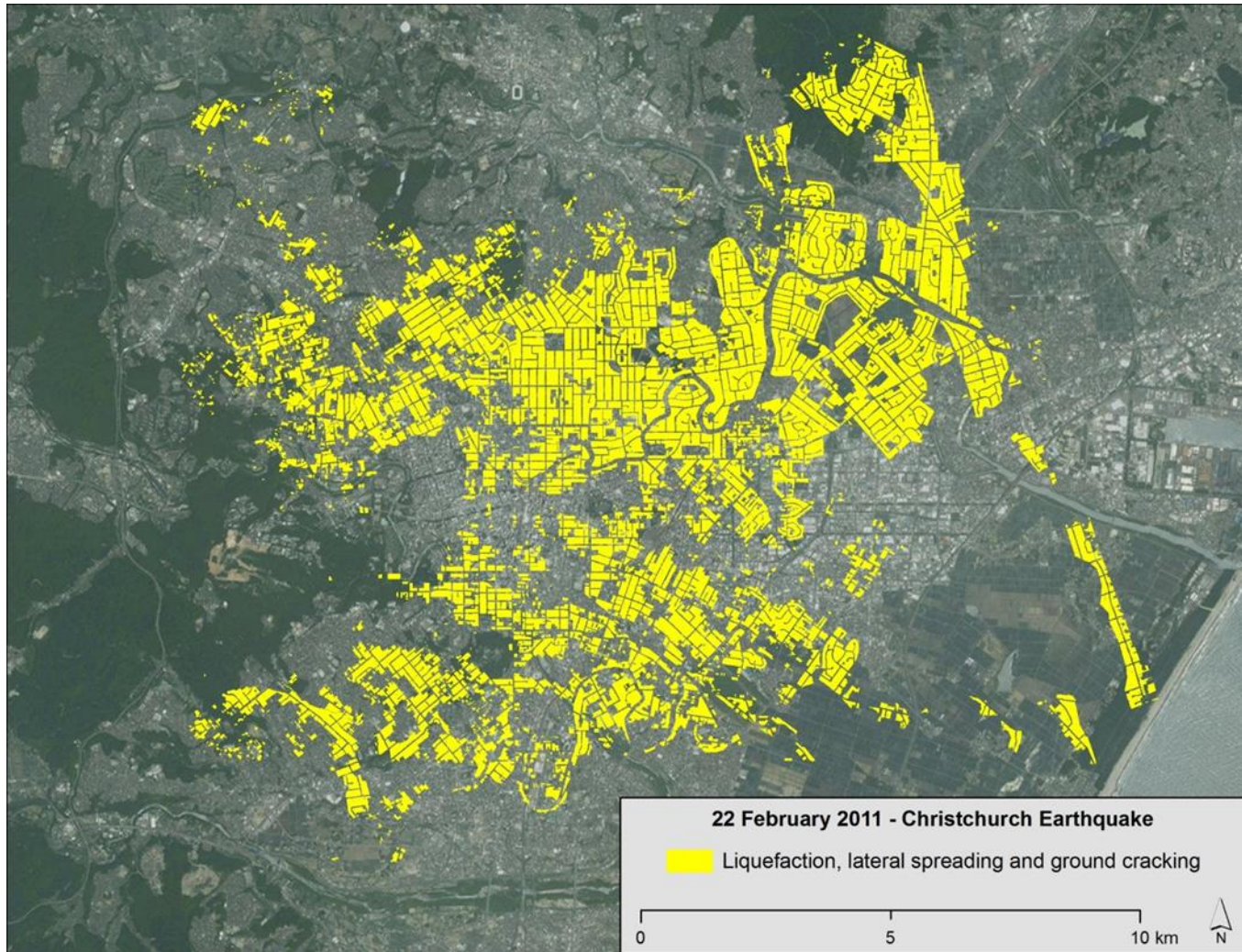
# Earthquake Impact September 2010



# Earthquake Impact February 2011



# What that would look like in Sendai





# Christchurch City...Before



# Christchurch City....During



# Christchurch City 22.2.2011



# Christchurch City 22.2.2011



# Christchurch City 22.2.2011



# Overseas Help



# Christchurch City 22.2.2011



# Christchurch City 22.2.2011





# Christchurch City 22.2.2011



# Christchurch City 22.2.2011



# WOMEN IN CONSTRUCTION

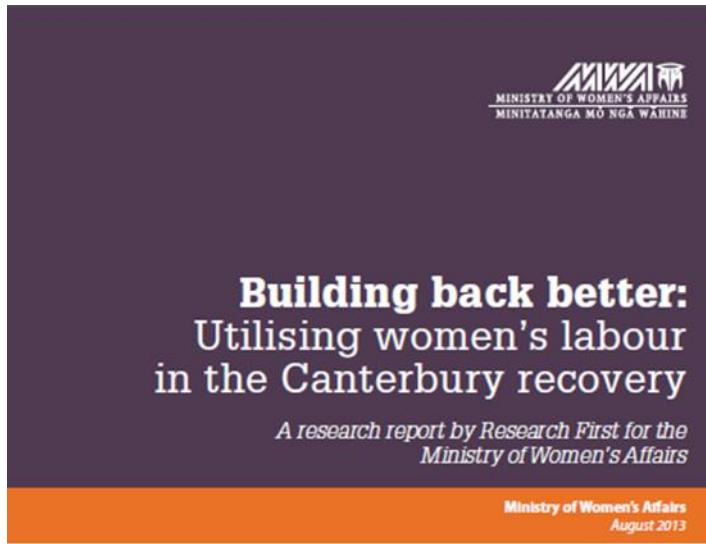
## Collaboration in Christchurch



## The Rebuild begins: Supply v Demand



# Women's Views Captured



- > 50% would consider rebuild jobs
- Construction seen as 'jobs for men'
- Access to information?
- Access to Training
- Good Money
- Flexible Work



# Women in Construction Forums



## Activities

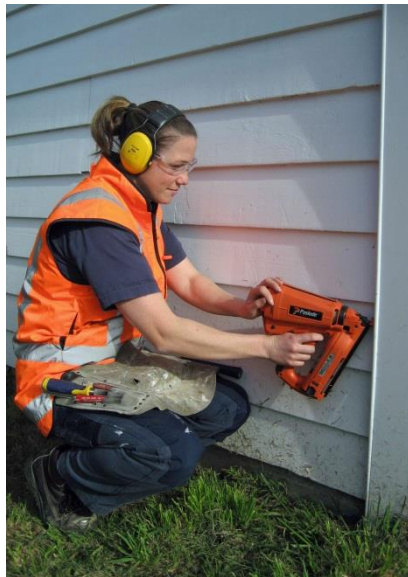
# celebrating WOMEN in construction

Photos by Toya Heatley (Digitalpix), Cathy Tracey & Margaret Yiannoutsos

An exhibition documenting and celebrating the contributions of women to the construction industry.

This exhibition creates a photographic montage of women in many of the disciplines within construction, and forms a backdrop of information and support, encouragement, appreciation and celebration of the diverse skills that they, alongside their male colleagues, contribute to the building and construction industry.

presented by  
National Association of Women in Construction



## Activities – Accessible Training

**FREE trades training  
for women and  
anyone under 25\***

Find out more >

\*Conditions apply



**FREE trades holiday  
workshops for  
Years 11 – 13**

Get a taste for construction,  
plumbing, electrical and  
engineering trades.



# Activities – Accessibility for Employers



## Growing your trades workforce:

how to attract women to your jobs



“ I've got nothing but good to say about working with women. They are careful, methodical, good with the gear. I'd love to see more women coming into the industry. ”

Peter Turner, Managing Director,  
Peter Turner Contracting

# Activities - Accessibility for Women



## Activities - Recognition



## Activities – Leadership



## Activities – Leadership



# WOMEN IN CONSTRUCTION

## Raising the Visibility



## Continually keeping women visible



**YOU UP FOR A  
REAL JOB?**

GET TRAINED. GET QUALIFIED. GET A REAL JOB REBUILDING CHRISTCHURCH.

**CHCHFORREAL.CO.NZ**  
or text 'REAL' to 5885

Stronger Christchurch  
TRAIN FOR REAL  
WORK LEARN  
SCIRT  
Rebuilding Infrastructure

# Continually keeping women visible

## GREATHER CHRISTCHURCH Recovery Update ISSUE 20 Women in the recovery



**Dhara Holland**  
**Occupation: Bricklayer, T O Brick & Block**  
Dhara Holland has been working as a bricklayer for about the past year. She was looking for a career change from farm work, likes working in the outdoors and doesn't mind working hard. Dhara says there was a bit of training but it's mostly common sense.

**What does working in the recovery mean to her?**  
"We do a lot of fences and walls and people are just really pleased to have their fences back up. Owners will come round and you can see the sheer joy on their faces, after years and years of waiting."

"I encourage any woman to work in the recovery - women and young girls leaving school. There's plenty of training out there for lots of different trades. Just go for it, it's not that intimidating, I've never had a negative word."



**Tessa Flaws**  
**Occupation: Engineering design coordinator, Stronger Christchurch Infrastructure Rebuild Team (SCIRT)**  
Tessa's current position is assisting SCIRT's design manager with overall delivery of \$100 million project cost estimates of engineering concept and detailed design each month. Tessa coordinates activities between SCIRT's four design teams (170 designers) and other teams.

**What does working in the recovery mean to her?**  
"There's a real purpose to your daily work - everyone has this shared goal to get the city back on its feet and we are all working in the same direction."



**Alicia Janssen**  
**Occupation: Site Traffic Manager**  
SCIRT's Downer team  
Alicia has been working in traffic management for four years but followed the work in Christchurch about two years ago. It's layout plans to manage traffic while re-undertaking. Alicia is currently managing project on the Travis/Frodo Road site.

**What does working in the recovery mean to her?**  
"It's awesome. You go to a road that's damaged. After you've spent quite a bit of time doing all the harking and channelling and people come out and say 'thank you' for what you've done. There's no reason here doing it. There's heaps of us. We

### Building back better

As the rebuild gains momentum, demand for construction labour is increasing in greater Christchurch and it yet to peak. Canterbury's economic recovery depends on a labour supply that meets demand now and into the future. Many women are already working in the recovery, but recent research by the Ministry of Women's Affairs shows that there is a hidden pool of female labour which, if better utilised, will help build a prosperous and productive Canterbury.

The research *Building back better: Utilising women's labour in the Canterbury recovery* is based on a survey of 500 women. About half the respondents were unemployed but not resourcing a benefit, the remainder were working but indicated they would be open to changing occupation.

The research found that the top three factors that would encourage women to consider any job in the rebuild were: flexible hours and environment; good pay; and more information about rebuild opportunities.

Over half the women surveyed were not opposed to rebuild positions, but many had not considered these jobs, or were not sure how to access them. Women saw construction jobs as 'jobs for men'. That kind of idea is what the Ministry of Women's Affairs is keen to see disbanded.

SCIRT design engineer, Jeanette White sees rebuild work as something anyone can do. She says the greater Christchurch rebuild is the biggest civil engineering project ever undertaken in New Zealand's history.

"Why would you not want to be a part of that? I've never been one to sit on the side-line and it's an exciting, since it is a life time opportunity to be a part of a team that is reshaping a whole city."

Ministry Chief Executive Dr Jo Crabb says making the most of the female labour force in the construction sector may mean changing employer practice, including recruitment; providing more information about rebuild opportunities; and encouraging women to train or retrain.

### For women looking to get started in the Canterbury...

- Christchurch Polytechnic Institute (CPTI) is offering women free Tu Trade and Engineering program. To find out more about CPTI's e of programmes, go to: [www.epi.govt.nz](http://www.epi.govt.nz) call 0800 24 24 70.

Contact the Canterbury Skills and Hub at [www.opportunitycent.govt.nz](http://www.opportunitycent.govt.nz)

For a copy of the full research report: *Utilising women's labour in the recovery as well as a summary of it go to: [www.mwa.govt.nz](http://www.mwa.govt.nz)*

**CERA** Canterbury Earthquake Recovery Authority  
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Spotlight on the next stage of the Avon River Precinct  
page 2

New central city art revealed  
page 7

Earthquake A - support for Canterbury  
page 8

New Zealand Government | 0800 RING CERA | 0800 7464 2372 | Fax (03) 963 6382 | [www.cera.govt.nz](http://www.cera.govt.nz)



### women in neon

High-vis vests aren't just for big, burly men; women are increasingly taking up roles in the construction industry and helping the city back on its feet.

Words: Pattie Pegler  
Photos: Danielle Colvin



# Continually keeping women visible



Programme funded by  
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## NEW SCHOOL TERM – watch out for cyclists and pedestrians

### NEW WORK

#### New Brighton Road, one way west/city-bound only past Avondale bridge

Part of New Brighton Road will be one-way westbound, possibly for the rest of this year, while a crane is working on the Avondale bridge from the Bassett St intersection. Detour eastbound onto Lake Terrace, Burwood and Travis Roads.

#### Innes Road one way, Mairehau

Between Philpotts Road and Nancy Ave, Innes Road is one-way westbound only for six weeks.

#### Stammore Road, at Avonside Drive and south, lane closure

A manhole and lift station is being built, then crews move south on Stammore, closing the southbound lane.

#### Garlands Road, between the river/ Aynsley Terrace and Opawa Road

Closed to traffic work hours to early November. Resident access from the Opawa Road end during the day, one way system after work hours.

### ONGOING WORK

#### Centaurus Road, two hot spots

A wastewater main is being replaced between Aynsley Terrace and Lancelles St. From the Wilsons Road roundabout towards Ramahana Road, there is wastewater work until mid November.

#### Travis Rd – change to roundabout Frosts Rd/ QEII

No through traffic westbound on Travis Road. Frosts Road closed for three months.

#### Opawa's Heathcote River bridge

Next weekend closure likely to be in November.

#### CENTRAL CITY

#### Durham St North, south of Bealey, one lane for six weeks

Durham St will be one lane only for six weeks, with two crews working north and south from Salisbury.

#### Victoria St at Salisbury/ Montreal, end in sight

Work is almost finished on Victoria St wastewater, with three weeks of mostly night work, 7pm to 7 am. Short term road closures, parking restricted.



City Care's hard working Beckford Road, St Martins landscape crew – left to right, James Gapper, Emily Sutton and Dave Giddens. Beckford Road, near the St Martins New World Supermarket was closed to traffic until recently for extensive SCIRT pipe work. Beckford Road and its local cafe, Cafe Max, are welcoming their smooth road in time for spring.

Email info@scirt.co.nz or phone 941 8999 | Twitter @SCIRT\_info #scirttraffic | Check www.transportforchristchurch.govt.nz | Catch a bus www.metroinfo.co.nz or 366 8855 | Maps and works in your area www.strangerchristchurch.govt.nz



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## Opawa / Heathcote bridge, Brougham St, closure

**CLOSED THIS WEEKEND, FRIDAY 6PM TO MONDAY 6 AM.**

- Detour is Opawa Road, Aynsley Terrace, Garlands Road.
- This is the first of four weekend closures.
- The temporary bridge will be removed and pre-cast walls and approaches installed.
- Thanks to drivers for taking it slowly on the detour.

## COME AND HAVE A CLOSER LOOK

Three areas with major SCIRT projects are opening their doors to the public next weekend, **SATURDAY, 30 NOVEMBER, 10am to 5pm.**

### Colombo St historic bridge repairs (near the Town Hall)

- **Morning, 10am – 12pm.** Free parking in the empty lot on Kimore St near the bridge. You will be escorted onsite from Cambridge Terrace.

### Bridge of Remembrance and Triumphal Arch

- **Morning, 10am – 12pm.** Metered parking in Cashel and Lichfield Streets and Re-Start Mall. SCIRT's Downer team will meet you on the Oxford Terrace side of the bridge, facing Re-Start.

### Anzac Drive/Travis/Frosts Road roundabout & Frosts Road reconstruction

- **Afternoon, 1pm – 3pm.** Parking is available in the QEII area, meet on grass area adjacent to Atlantis Drive (off Waygreen and Wattle).



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## THANKS TO YOU...

...we are more than half way through.

SCIRT has two more years to complete its pipe, road and bridge repairs and rebuilds.

This Christmas, thanks to everyone who is making a special effort to support shops affected by road work sites. SCIRT aims to always have at least one access point to shopping centre car parks, but our work inevitably takes its toll when easy parking access is reduced over many months.

Most SCIRT work sites will be active until 19 December and re-open from 5 January.

### AFTER HOURS

Any concerns about activity on SCIRT sites over the Christmas/ New Year period, phone the company named on site posters: City Care 0800 632 889, Downer 0800 400 310, Fletcher Construction 0800 444 919, Fulton Hogan 0800 277 3434, McConnell Dowell 0508 718 719, or the Christchurch City Council Call Centre 941 8999.

Thanks to everyone who is helping rebuild the city and to everyone who slows down and takes care around work crews in or near traffic lanes.



Kiri Ward, keeping the road cones in line.



Otto Lonia, working on the new Gayhurst Road bridge, completion date mid-2015.

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## SCIRT TRAFFIC UPDATE

### CENTRAL CITY CHANGES

- Colombo St will be closed to traffic for a week north of Peterborough St. After that, one city/southbound lane will be opened for six weeks between Salisbury and Peterborough Streets.
- Many city streets have lane restrictions for pipe-laying and trenching including Park Terrace, St Asaph, Madras, Barbadoes, Durham St city-side of Bealey Ave, Ferry Rd, and Moorhouse Ave east of Fitzgerald.

### RECOMMENDED CROSS TOWN ROUTES

- Take Montreal St if you are going north.
- Take Fitzgerald Ave if you are going south.
- Bealey Ave and Moorhouse Ave are good for east-west travel, although Bealey Ave, east of Papanui Road, has lane drops.

During March and April SCIRT will have up to 45 crews in the central city, so please take care and plan ahead. More than 40% of the central city SCIRT work is done. Check the TransportforChristchurch website for daily updates, or watch CTV News. <http://www.transportforchristchurch.govt.nz/daily-reading-updates>

### OUTSIDE THE FOUR AVES

#### St Martins – Wilsons Road/Centaurus Road/ Albert Terrace roundabout

Work on the wastewater mains under the roundabout runs from 10 March to the end of April. A manual stop-go system will be in place initially. After that, Centaurus Road, from Wilsons Road to Ramahana Road, will be one way heading towards Cashmere.

#### Opawa Road/ Garlands Road

The wastewater main from Opawa Road/ Brougham St intersection along Opawa Road to Grange St is being repaired in March, at times restricting entry to Garlands Road, city-side, off Opawa Road.

#### North New Brighton – Keyes Road roundabout

Work has begun on the storm water pipe from Keyes Road to Bowhill Road and water main repairs will follow to mid this year. Parking for the Frame 'n Copy Shop is via Bowhill Road or Keyes Road south of the roundabout. Parking for the Keyes Road dairy is on Bowhill Road by Baker Street.



City Care traffic supervisor Deb Cooney shows two Hunsbury children, Mable, 7, and Benjamin, 5, how she helps keep the road safe for them. The children and their mum won a tour of a SCIRT site as part of an A and P Show competition.

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# Continually keeping women visible



# WOMEN IN CONSTRUCTION

## Results



## Positive

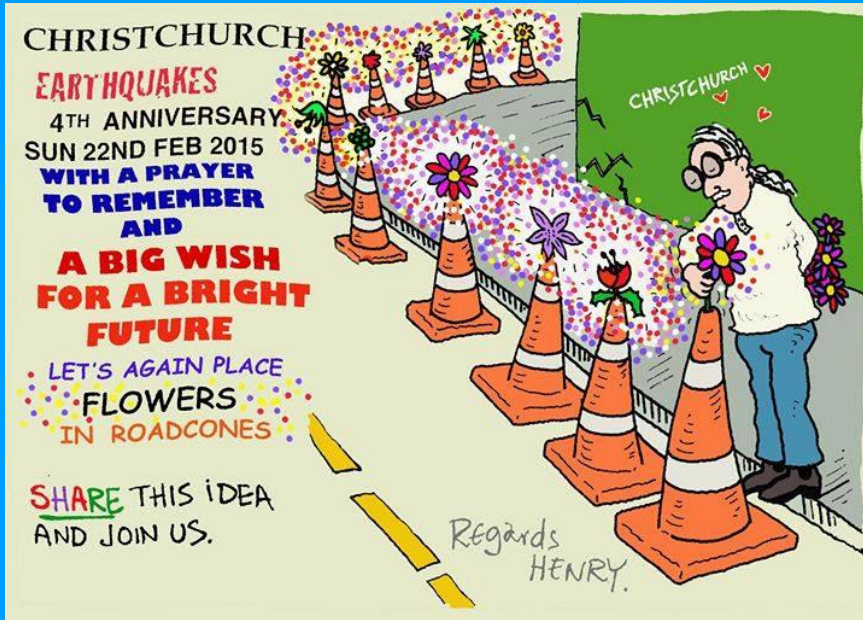
MEASURE	BEFORE		NOW	
	Year	No.	Year	No.
Number of women enrolled in Trades Training (CPIT)	2011	<b>60</b>	2014	<b>414</b>
Women employed in construction in Christchurch *	2009	<b>2,400</b>	2014	<b>8,000</b>
Percentage of Women in Construction in Christchurch*	2009	<b>9.3</b>	2014	<b>16</b>
Number of women in trades roles in SCIRT	2013	<b>20</b>	2014	<b>30</b>
NZ Construction UN Women's Empowerment Principles Signatories	2013	<b>1</b>	2014	<b>4</b>

# WOMEN IN CONSTRUCTION

## Where to From Here ?



# IT ALL STARTS WITH ONE



WE REMEMBER  
22 FEB 2011

# IT ALL STARTS WITH ONE



WE REMEMBER  
22 FEB 2011

IT ALL STARTS WITH ONE....



 **SCIRT**  
Rebuilding Infrastructure



# Impressions of Japan



# Impressions of Japan - Compact



# Impressions of Japan – ultra organised



# Impressions of Japan – A country of Contrasts



# Japan Roadworks = ultra organised



# Japan Roadworks – Ultra organised





# Presenting at the Public Forum





# Presenting on the Panel



# The Panel – Impressive Women



# Other Disaster Perspectives



# Strong Interest from Japan in Women in Construction

