



**Quake Tales Presents Sarah Barr**

**“It was like walking in a bouncy castle”**

**The Christchurch, New Zealand Earthquakes 2010/2011. Part One.**



**M 7.2 Darfield (Canterbury) Sat, Sep 4 2010**

The Darfield earthquake caused severe building damage in mid-Canterbury, particularly to the city of Christchurch. It revealed the existence of a hidden west-east fault under the gravels of the Canterbury Plains.

The magnitude 7.1 earthquake occurred at 4:35 am on 4 September, the epicentre was 40 km west of Christchurch City, and the depth of the quake was 10 km. The epicentre was close to the town of Darfield. There was no tsunami resulting from this earthquake, as it had occurred on land. It was the most damaging earthquake in New Zealand since the [Hawke's Bay Earthquake](#) in 1931, but there was no loss of life. It was fortunate the earthquake occurred when the central city streets were deserted, as there would almost certainly have been many deaths and serious injuries had it happened during a busy time of the day.

Source: <https://www.geonet.org.nz/earthquake/story/3366146>

In the BC Earthquake Alliance's third *Quake Tales* story, Sarah Barr, a North Vancouver resident and survivor of two earthquakes in Christchurch, was invited to share her experiences. A mother of two young children, Ms. Barr reflected on the two earthquakes that occurred five months apart and explained how she improved her preparedness between them.

### 2010 Canterbury Earthquake Experience

On September 4, 2010, Ms. Barr was home alone with her two young children while her husband was in Spain on business when a magnitude 5.7 foreshock struck at 4:35 a.m. As she rushed to reach her children and ensure their safety, a magnitude 7.1 earthquake (the Canterbury earthquake) followed shortly after.

On February 22, 2011, a second earthquake (the Christchurch Earthquake) measuring magnitude 6.3 struck closer to the city of Christchurch during the lunch hour. The devastation was immense, resulting in the loss of 185 lives.

Sarah explained that she was somewhat accustomed to earthquakes, having experienced them while living in a small town two hours north of Christchurch. However, when the foreshock woke her that night, she recalled thinking that she had never experienced an earthquake in Christchurch before.

*I was not scared initially, but out of curiosity, I got up to check whether the 5.7 foreshock had woken my children. As I reached for the light switch and tried to flip it on, I realised there was no power; everything was completely black. Then the 7.1 magnitude earthquake hit. This is when fear set in, then I recall thinking, "Which child do I go to first?" – Christchurch Earthquake Survivor, Sarah Barr.*

*"I called out to my daughter and told her to get under her bed, as the baby (Daniel) could not get out of the crib alone". But as Sarah stepped out of her bedroom, she could hear Charlotte calling "Mum", and realised her daughter was not under the bed. So, she hurried back to Charlotte's room, but could not find her in the darkness. She called out to Charlotte, with outstretched arms, much like playing a game of Marco Polo. Finally, she found her daughter, they embraced, and together they tried to walk down the hall to Daniel's room. Sarah recalls it feeling like "trying to walk on a bouncy castle with gravity boots on."*

Once she had both Daniel and Charlotte, she got them under the crib, but realised she could not fit under there with them. So she tried to pull over the change table for cover, but the earthquake's force was too strong. Sarah curled up as small as she could, protecting her head beside the crib, and waited for the shaking to stop.

When the shaking finally ceased, Sarah took both children back to her bedroom, but soon went into shock. I had no memory of what happened for about 20 minutes immediately after the shaking stopped.

#### Earthquake Safety Guidance

- **Immediately Drop** to your hands and knees.
- **Cover** your head and neck with one arm and hand under a sturdy piece of furniture if available.
- **Hold On** to your shelter with one hand.
- If no shelter is available, know the safe adaptations.
- If you are **in bed**, stay in bed, **turn** face down and **cover** your head and neck with pillows and **Hold On!**.
- **Guidance for parents of infants and young children:** [chrome-extension://efaidnbnmnibpcjpcglclefindmkaj/https://www.shakeoutbc.ca/wp-content/uploads/2021/07/ShakeOutBC\\_FactSheet\\_Infants\\_Young\\_Children.pdf](chrome-extension://efaidnbnmnibpcjpcglclefindmkaj/https://www.shakeoutbc.ca/wp-content/uploads/2021/07/ShakeOutBC_FactSheet_Infants_Young_Children.pdf)

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*This is when I decided that we needed to get out of the house. I grabbed some shoes and went to the front door, but it was stuck, as the force of the shaking had moved it in. I was not thinking clearly, and I panicked, even though there were other doors or windows I could have gone through to get out. I managed to jimmy the door and get out. We stayed with our neighbours until sunrise and ventured outside to see the damage. There were cracks in the sidewalks and houses. – Christchurch Earthquake Survivor, Sarah Barr.*

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*“There was horrible flooding everywhere.”, later, they learned it was caused by liquefaction. “It basically looked as if the streets had water on them, and when it subsided, all that was left was mud and silt all over the place. Parks were dotted with what looked like mini volcanoes erupting from the ground, and kids played with them as it looked fun.”*

*Photo by Becker Frits (Feb 22, 2011)*

But it turned out that sewage pipes had burst, contaminating the area, and they were told to stay away from the liquefaction, including these mini volcanoes. There was visible ground cracking, demonstrating the impact of the earthquake.

*Photo by Sarah Barr (Sep, 2010)*



The image depicts a grass field covered with light-coloured mounds of silt and sand formed by liquefaction. These features, often referred to as sand or liquefaction “volcanoes,” occur when saturated soil is forced to the surface during an earthquake. The ground appears uneven and unstable, and in some cases, the material may be contaminated due to damaged underground infrastructure. This illustrates the visible environmental and safety impacts of liquefaction following seismic activity.

*Photo by Ross Becker (Mar, 2011)*

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*I don't know what to do. Do we have enough water? At that time, only a small amount of water came out of the tap, so I started filling up containers because I had not stored any water beforehand. – Christchurch Earthquake Survivor, Sarah Barr.*

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She filled up the bathtub, but it would drain away in a few hours. The containers she used were old powder formula cans, which rusted quickly and often tipped over during aftershocks.

Sarah notes that she was horribly unprepared. With the aftershocks being so hideous and strong, her neighbours started leaving the community. She recalls waking up one morning and feeling like she was the only one left in the entire neighbourhood. Many of the strong aftershocks struck in the middle of the night, so she moved the dining table into her bedroom, and the three of them slept underneath it.

Her husband offered to return home from Spain, and she downplayed the severity of the situation. However, it got worse in a short period of time. The entire city was under a boil water advisory, and she recalls it was very hard.

### **School closures and effects on young children following the earthquake**

Sarah recalls that when the schools were closed for a week or two during the earthquakes, her children, aged 1 and 3, were not significantly affected. Though their preschool was also closed, she notes that at the time, people were generally reluctant to be separated from their kids. Her children remained relatively calm as she made a conscious effort to stay composed herself. She would say lighthearted things like, "*Phew, that's a shaky one,*" to ease the tension. Sarah believes it's important to remain calm and remind yourself that earthquakes are natural occurrences—the earth simply moves.

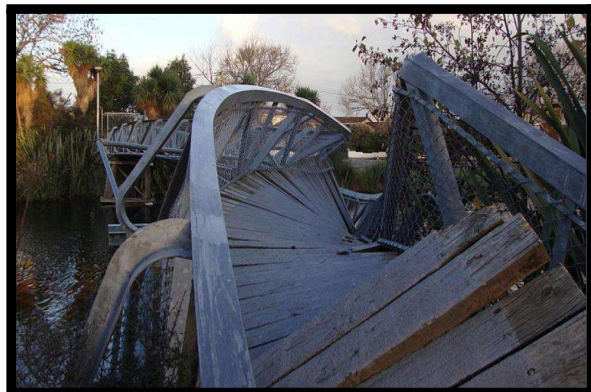
### **Communication lags due to power outages**

That morning at her neighbour's house, she realised she needed to contact her husband to let him know that they were all okay. Then she noticed that her cell phone had fallen out of the pocket of her pyjamas. After deducing that the only place it could be was inside her house, she decided to go look for it with her daughter, who would not leave her side.

Once back in her house, she saw the extent of the damage; things were knocked over, and she finally grasped how severe the earthquake was. She found her phone under the bed, and remembers thinking that in those 20 minutes of lost time, she and the kids must have been under the bed.

This image depicts a metal and wood bridge that has been significantly displaced and structurally altered due to the effects of the earthquake.

*Photo by Martin Luff (Mar 15, 2011)*



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*When I finally reached my husband, he had more information about the devastation than we did, since we had no power! The news channels were broadcasting details about the earthquake. – Christchurch Earthquake Survivor, Sarah Barr.*

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Sarah also recalled a popular radio show, with a usually cheerful host, who came on air with a serious tone saying, “*There has been a 7.3 earthquake, (it was downgraded to a 7.1 magnitude). Buildings are down, it is bad.*” He had kept repeating this information over and over, sounding scared, and Sarah remembered thinking to herself *If the radio guy is scared, it must be really bad.*



Sarah shared another memory from Christmas 2010. She described giving water containers as gifts to family members, and her mom asked her:

*Photo by Ross Becker (Feb, 2011)*

**“What are the chances of this happening again?”**

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*What is Quake Tales?*



*The BC Earthquake Alliance curates the Quake Tales Project and features stories of people in British Columbia who have survived an earthquake or tsunami. Stories with local connections resonate deeper with audiences, so we collect them to help spread awareness and further increase preparedness across British Columbia.*

*For more information about what to do in an earthquake:*

<https://www.shakeoutbc.ca/what-to-do-in-an-earthquake/>.

*Want to share your story? Contact us at: [office@bcearthquakealliance.ca](mailto:office@bcearthquakealliance.ca)*

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#### **Image Credits:**

*Sinking car* — Photo by Becker Frits (Feb 22, 2011). Retrieved from

<https://nzraw.co.nz/photography/this-car-in-silt-photo/>

*Sarah Barr’s mother-in-law and her daughter* — Photo by Sarah Barr (Sep, 2010). Taken and uploaded by Sarah Barr

*Sand volcanoes field* — Photo by Ross Becker (Mar, 2011). Retrieved from

<https://digitalnz.org/records/43081714>

*Medway Street Bridge* — Photo by Martin Luff (Mar 15, 2011). Retrieved from

[https://commons.wikimedia.org/wiki/File:Footbridge\\_over\\_the\\_Avon\\_River\\_damaged\\_in\\_the\\_2010\\_Canterbury\\_earthquake.jpg](https://commons.wikimedia.org/wiki/File:Footbridge_over_the_Avon_River_damaged_in_the_2010_Canterbury_earthquake.jpg)  
*Gould House* — Photo by Ross Becker (Feb, 2011). Retrieved from <https://natlib.govt.nz/records/30623341>