

Visit to Christchurch, CBD, Avonside, Port Hills & Sumner October 2011

The group comprised seven people from NCC plus nine from TDC.

Along with Carl Devereux, Shane Haydon, Ari Fon and Jan Kupec from Aurecon and CERA and Simon Chambers, Ministry CDEM.

There was backlash in the media in regard to outsiders going into the city when locals were not permitted. Arrangements are being finalised for residents to access the CBD by bus in November.

The Nelson Mail article attracted an on line comment from Queensland, saying there was no need to go as the coverage had been sufficient for people to understand the earthquakes and it was a waste of fuel/oil contributing ultimately to climate change. There were numerous on line comments on the Press article and Richard Branson's subsequent visit, Christchurch people are deeply upset about sightseers near their homes and having access to the Red Zone.

I have commented on this "backlash" as I had no concept of the depth of feelings held by Christchurch people, this is a matter to be taken on board by councillors, staff and those involved in civil defence, when there is any event of this size to be dealt with in the top of the south. The human cost, depth of feelings and reaction over and above the loss of life.

I have since found very useful information online and have sent links to councillors and staff. If you Google Porritt Park and Avonside loop there are excellent photos that compliment the Jan Kupec video. The demolition of Avonside GHS can be found on "Christchurch EQ photos"

CBD Red Zone Carl Deveraux from CERA was our guide.

Christchurch CBD is "nothing" - but totally a gigantic demolition site, with none of the activity, people or vehicles expected in a city.

There are damaged buildings outside the red zone, a more general mix of broken buildings in use and empty, alongside functioning businesses, empty lots and a trickle of moving vehicles using the streets that are open.

Because of the weather conditions there was little demolition of buildings in CBD Red Zone - the noisy heavy vehicles were not constantly removing debris as usual so the bus could safely navigate through the streets.

Bridges across the Avon had been shaken and twisted in every way imaginable, many are closed as they are no longer structurally sound, arches and support hopelessly buckled and twisted, tarmac above is rippled like fabric. Example outside the CBD the Moorhouse Avenue traffic bridge over Colombo has been propped with enormous RSJ girders in order to keep traffic moving.

Navigation on the road way is no longer logical or straightforward, to go east firstly head south toward the hills. Navigation by landmark is impossible, as there are enormous expanses of empty land, remaining buildings are damaged, exposed on all sides, simply look empty, sad and lost. Curtains wave quietly from broken windows. Some are being renovated internally for people to return to work. Business records have been lost or are not able to be accessed for example wills & stock broker information. No **normal** business life.

Many more buildings are waiting a final decision, some owners want retention of the entire building or facade. Renewing the city is going to take years, much expertise and planning, considerable evaluation

of best building practice for the land conditions and I expect considerable debate. An example outside the CBD, the corner of Bealey Avenue opposite the remains of Knox Church, the old two story block of shops has gone - tilt slabs are sprouting the beginning of the new - only time will tell what the public face will be.

The loss is millions and millions of dollars matched or surpassed by replacement cost above and below ground. To get to today, the strategic planning has been enormous, identifying the "right" construction methods still to come, land has to be filled to allow construction compliance, services have to be relaid and interconnected and so it goes on.



Regent Theatre Dome Cathedral Square - Claredon Towers beyond

CCC will be in this for the long haul the task of rebuilding a city, a city centre (will it be too late?) and stable Normal urban living conditions will take time. What was normal will need to be adjusted and re-established as a "New Normal" or a "Different Normal". Will it be too late for the city centre as it was - will people readapt, developers re focus - they have much to lose, will service providers and business find new places and deliver services differently. Satellite towns and new subdivisions are rapidly establishing in the surrounding farmland and gaining popularity.

Civil defence set up in Latimer Square as the identified base area appeared to have returned to marshland during the quake - note for Nelson an undamaged area would need to be quickly identified as a base camp for USAR teams etc.

Christchurch was built on swamp/wetland interlaced with sandbanks and for decades had a drainage board, deep "halfpipe" gutters and gutter men who walked for miles sweeping them clear to keep the land dry.

Avonside and the cliffs We were joined after lunch by Jan Kupec. CERA & Aurecon Expert Geotechnical Advisor (a passionate focused expert)

Following a confusing circuitous route from Durham Street we reached the Avon river via Woodham Road near Avonside Girls High School, from here onwards the plight of people hit us. For youth the huge main school block has been demolished, girls will return next year after \$6million of new building work. The damage from earthquakes in this area was extraordinary, with land displacement, land dropping, lateral and vertical spreading and compacting (staff can give the correct terms) the

river has been squeezed, narrowed and dropped - but is not deeper, where the land has spread, literally pulled apart there are deep wide cracks. Consequently the walking bridge near Medway Street (see photo below) has buckled & twisted because the abutments have moved closer together. Sewage went straight into the river.

The water level was high when we visited and during the afternoon flooded, the road also flooded in some sections and new stop banks had to be breached in one part to drain water into the river. The residential properties here are not suitable to live in, some are clearly boarded up & overgrown, some are being lived in - the conditions are heart breaking. Homes are twisted up and down and around completely out of any alignment with foundations. We were told that in this general area some residents have tidal rise and fall through their home twice a day and insurance is the word not to use because of policy fine print. This area was mainly red stickered as there is both land and building damage unlike nearby Retreat Road where one side is red, the other orange and further down where a sand bank runs across the road, it is green.

We stopped at Kerrs Reach on Porritt Park alongside the rowing club, again everything buildings and land was twisted, dropped, compacted, liquefaction was evident. The whole area was full of huge cracks because the land has been pulled apart including sealed walkways. A door straddled one crack to allow people to cross, the hockey astro-turf is damaged by liquefaction - this park is on marshland by a river - **remind you of a new Nelson sporting area with known poor drainage, creeks and near an estuary?**



The other side of the river, Richmond, Burwood, Horseshoe Lake is also damaged Jan indicated that some homes on the other side might be in worse condition. A quick Google indicates that around Kingsford Drive/Burwood Park this might be correct.

To view the Port Hills, Redcliffs, and Sumner areas we drove through Bexley along Pages Road. This area was badly damaged with some land sinking, spreading, displacement etc & lots of liquefaction. The road was left like a roller coaster, required building up, levelling and resealing. The houses lining the street are badly damaged structurally and from liquefaction seeping through the floor boards and left sitting lower than the road. We drove by the sewage ponds and were informed that they took on a tsunami effect with a massive wave overflow. The Humphries Drive Heathcote estuary

mudflats are no longer flat but a series of humps and bumps; the land opposite appears to have reverted completely to wetland.

This area was the centre of one earthquake g forces reading 2.5 - the monitor only registers 2.5 so the exact force is unknown. I read on line 42,000 tonnes of energy made the Port Hills 1/2 metre taller. This fault line connects to the CBD explaining the damage to the city centre.

Apparently houses just lifted up and were dumped down, up and down until roofing tiles were completely ripped off and dumped back down in piles on top of those that stayed put. Some roads are safe only on one side, some have a double row of two high containers lining the side by the cliff to protect the transport link from rock and house fall. Redcliffs School was involved in a massive rock fall, reopened but was advised to close because of further falls and the danger of flying rocks. Individual large rocks often hit each other and shatter into numerous smaller missiles. Most of the miles of cliffs are completely unstable, rocks continue to fall, there are enormously deep ground cracks, the cliffs are splitting away, houses collapse with the cliff, falling hundreds of metres below.

A cluster of maybe seven or more houses on one hillside were all empty, abandoned; the age range spanned 1910,s to 2010. The collapse of the newest was imminent; it seemed another 30 metres of cliff face would go with it. The cliff retreat will be ongoing, one hillside is split in two, remedial work, how to fix this is unknown. Heavy rain, climate conditions will contribute to this ongoing problem. Some have Section 124 notices, about 30 properties are red zoned the remaining are re zoned green

Up the valley from the Sumner RSA another double decker train of containers are protecting homes from rock fall, one house has a rock the size of a single bed inside. The containers had already protected properties from a small rock fall. CC Councillors have to make a decision how they will protect homes in this street. There are three natural terraces of rocks up the hillside that require stabilizing to retain or restrain any movement. During the earthquake grazing animals were unable to out run the falling rocks. The cliffs surround the majority of existing homes in this whole area, rocks will continue to endanger them, the cliffs are unstable and shearing away, and further development would seem unlikely. Below rocks beside a fence and footpath Sumner



This is a desperate ongoing problem that can easily be transferred to the Nelson Tasman region.

Recently built tilt slab commercial buildings that line the road back towards the city were largely sound, with one showing some damage

What has happened over the last year is completely overwhelming, Jan estimates it will take 5 -10 years to re establish CHCH, my feeling is it will be longer unless means are found to fast track consents and building permits and how to mitigate the danger to existing homes.

This is an overview of the day as I observed it, there is a great deal of information online that I had no idea about, including sad and emotional comments from those now in very serious situations. I understand numerous support groups have been established, individual suburb residents associations who are working in conjunction with each other and organising rally's in different areas. " Can CERN (or similar), and a group for the uninsured. More have evolved I am sure.

People are in impossible situations facing enormous problems, decisions and cost, trying to comprehend insurance policies or none, damage assessments, RMA and Building constraints, stress and health issues not to mention the plight of uninsured tenants

I have been told on our streets we need to make Nelson "Safe" how do we do this in hindsight - against all forces of nature (I read that the February event could be the "first time it ruptured in a 100 million years").

I firmly believe

- Business/commercial property owners heed to take responsibility for upgrading business and industrial properties to earthquake standard to provide continuing operation and avoid building loss. (NB there are no guarantees)
- Council need to push forward and ensure the requirements of the Earthquake Act for evaluation & strengthening are brought forward with some urgency, especially for places of assembly. CHCH was fortunate.
- We need to re -evaluate land signalled as suitable for new residential subdivision (just to make sure)
- Established land areas likely to be involved with liquefaction need to be identified as well as new build land
- Councils need to comprehend the enormity of this event, the ongoing nature after the initial emergency, rescues and loss of life, the feelings of the people, the importance of communication with people - the total grief and feeling of loss for homes and their city and to follow the need to look to the future after living in an emergency focused city.

Christchurch and New Zealand has had to grapple with the aftermath of this catastrophic situation with few guidelines nor a "manual" but working step by step "how to" "what next" - any future event in NZ will have positive and negative examples to refer back to and use from this "exercise".

In the meantime NCC and TDC need to look at what is able to be done to provide an upgraded level of protection remembering that after the fall out, the refocus and rebuild will provide a fresh start for people and the region.

Postscript. - The use of search and rescue dogs was proven to be invaluable. Dogs could pin point where people might be under rubble so the removal of debris was immediate and in a specific position. Saving so much time and possibly lives. I understand that New Zealand needs more dogs trained for this purpose and wonder how this could be achieved?

Gail Collingwood