

**NATIONAL LIFELINES FORUM, CHRISTCHURCH: 21 AND 22 OCTOBER 2015**

Main points from the 2015 Forum:

***Resilience, Christchurch City Council***

Mike Gillooly, Chief Resilience Officer, Christchurch City Council, delivered the keynote presentation: *Greater Christchurch Resilience*. Mike emphasised the importance of community engagement in hazard management planning, noting that lifeline utilities have a central place across planning and engagement activities. The 1997 Christchurch lifelines vulnerability study, *Risks and Realities*, was again prominent as foundational in the good pre-earthquake risk reduction work undertaken.[[1]](#footnote-1)

The subsequent field trip organised by SCIRT and CERA showed Forum participants around recovery progress in the affected parts of Christchurch, including the residential Red Zone and the Sumner and Redcliffs area.

***Civil Defence Emergency Management***

Christchurch learnings featured in the opening presentation on the second Forum day.

Sarah Stuart-Black, the recently appointed Director of Civil Defence Emergency Management, has a pro-active programme underway now that Christchurch learnings (the ‘Corrective Action Plan’) have been progressed including revisions to the CDEM Plan and Guide.[[2]](#footnote-2) The review of the CDEM Strategy, due soon, will offer a further vehicle for developing resilience-enhancing approaches to lifelines and other sectors. A new global Sendai Framework, which focusses on managing risk as distinct from managing emergencies, sets a backdrop. The issues will be explored further at a national CDEM Conference in June 2016.

Sarah also summarised her recent Chief Executive-level meetings with six national utilities. Issues arising in the meetings included heightened customer expectations about infrastructure service reliability, increasing interdependencies between infrastructure types and the need to maintain an ‘outcome focus’ in the face of complex risks. “None of this is easy, and some of the conversations might be difficult” Sarah added. Representatives from organisations where she had met with their CEs noted the benefits of those high-level meetings for their work on resilience matters internally. Sarah is available to meet other CEs on request.

Jenna Rogers, MCDEM, summarised upcoming work including redevelopment of the national fuel plan, development of the lifelines portal in EMIS, continuation of Lifeline Utility Coordinator training and Exercise Tangaroa (tsunami preparation, response and recovery, August / September 2016, utility participation invited).

***In other presentations:***

Kester Gordon from Treasury’s National Infrastructure Unit (NIU) covered main points in the recently released 30 year National Infrastructure Plan. The Plan, which links to the Government’s Business Growth Agenda, features a response framework to promote “a step-change in our approach to infrastructure planning and management”. The framework elements are determining service levels, optimised decision-making and mature asset management / performance.

Greg Preston from the Quake Centre (University of Canterbury) described recent work, undertaken with Water New Zealand, to develop a pre- and post-event measurement framework for emergency water, wastewater and storm water levels of service following earthquakes. The framework will help illuminate investment needs, support community discussions and aid recovery communications and monitoring. Presentations to/ workshops with lifelines groups may offer a way to promote take-up beyond Christchurch. The needs for water for post-earthquake fire-fighting received attention in the ensuing discussions (Forum participants were reminded of the extensive fires in Napier, 1931).

Rod Cameron drew attention to the unique commercial model developed by the Stronger Christchurch Infrastructure Rebuild Team (SCIRT) (new tools were needed and a new culture had to be established). A ‘legacy project’ will help ensure that the many learnings are not lost as SCIRT draws to a close.

Jim Palmer, a member of the establishment board for the proposed Local Government Risk Agency, summarised developments in building a business case for agency establishment following the recent insurance review. Issues being addressed include levels of risk management expertise in local government, whether there are untapped economies of scale, restoration cost-sharing and the role of insurance.

The NZ Lifelines Committee and NIU both advocate that lifelines groups undertake vulnerability studies as a platform for understanding key regional hazard risks and mitigation priorities. Lisa Roberts presented on current approaches to development and content of these studies.

***In brief presentations on lessons from the Canterbury earthquakes:***

* John O’Donnell noted Orion’s ongoing resilience improvements since the earthquakes including design features in their new head office building to mitigate seismic and flooding hazards, investment in control, data and contact centres, and construction of a new 66kV ring to extend supply options in the eastern part of the city.
* Gerard Cleary, Waimakariri District, commented on their risk-based approach to water infrastructure renewal including funding.
* Rob Blakemore, Wellington Water, drew attention to the challenges facing emergency water supply in Wellington including the linear metropolitan layout and the number of water main fault crossings. Ensuring sufficient potable water, locally available for household use, is an area of focus (145 5,000 to 25,000 litre tanks are now installed at schools and other accessible locations).
* Pam Johnston, MBIE, noted steps underway following the September *Built Environment Leaders Forum*. The key role of lifelines groups was acknowledged. An action plan covering building and infrastructure issues is under development.
* John Scott, MBIE, described the benefits of the Canterbury Geotechnical Database. The database, currently holding much Canterbury data, is being used actively (40,000 uploads, 800,000 downloads, typical re-use = 20 times). The database is being extended to Hawke’s Bay and Auckland and national roll-out is envisaged.
* Professor Misko Cubrinovski described path-breaking analysis of Christchurch liquefaction experience, which was unpreceded in an urban setting. Implications for bridge abutments and buried pipes were described including clear evidence of the benefits of flexible pipe and the importance of attention to connections. A ‘Liquefaction Resistance Index’ was outlined – the approach is transferable to other regions.

***Other snapshots:***

* In a session convened by Roger Fairclough of the NIU, five *researchers* presented briefly on current infrastructure-related research. The models developed in the *Economics of Resilient Infrastructure* project are now being used to assess economic impacts of infrastructure outages in several case studies.
* Richard Mowll (Wellington Lifelines Group Project Manager) and Nick Horspool (GNS Science) reported on their field investigation of *tsunami impacts* on infrastructure following the recent earthquake and tsunami in Chile. The observations from this visit are feeding directly into the EQC-funded joint Auckland and Wellington Lifelines Group project on tsunami impacts. Lisa Roberts updated on *hotspots* work in Auckland (also an EQC-funded projects). The results from the tsunami study will be available soon and the hotspots methodology will be transferable to other regions.
* Ken Gledhill, GNS Science, noted that a next phase business plan for *GeoNet* is under development – it features system upgrades and user uptake.
* Josh Hayes drew attention to recent activities of the *Volcanic Impacts Study Group* including upcoming events and a new newsletter.[[3]](#footnote-3)
* Dave Brunsdon said that only limited progress has been made on the revision of *Building Code Clause B1 Structure.* It is likely that the Earthquake-Prone Buildings Amendment Bill (when enacted) will provide an opportunity for TLAs to identify *key transport routes of strategic significance*, an issue that overlaps with critical route studies undertaken by many lifelines groups. MBIE is to develop criteria drawing on lifelines group work.
* Stephen Ferris, CERA, drew attention to publically available Christchurch *geospatial data*[[4]](#footnote-4), noting that the platform is available for others with data available for dissemination.
* Mary-Sue Critchlow invited comment on extending lifelines *resilience assessments* to address ‘maturity’ (comparing current and targeted resilience together with an action plan).

The Forum closed with an outline of NZLC’s planned activities:

* Support for lifelines groups’ work programmes and projects
* Outreach to national utilities to assist their resilience developments
* Liaison with central government agencies (advocacy and information dissemination)
* Facilitation of specific projects, e.g. by drawing connections with related work (water sector levels of service, research and building issues are examples mentioned above).

Forum presentations are available at <http://www.aelg.org.nz/events/national-lifelines-forum-2015/>.

*EQC’s financial support for the Forum is gratefully acknowledged. Thanks too to CERA and SCIRT for organising the field trip to earthquake impact sites in the afternoon of 21 October.*

30 October 2015

1. *Risks and Realities* is available at <https://caenz.squarespace.com/lifelines/>. [↑](#footnote-ref-1)
2. MCDEM publications are at [www.civildefence.govt.nz](http://www.civildefence.govt.nz). [↑](#footnote-ref-2)
3. Email N.Deligne@gns.cri.nz to be added to the mailing list. [↑](#footnote-ref-3)
4. See <http://cera.govt.nz/maps>. [↑](#footnote-ref-4)