

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 Collaborative Approach to Global Consenting Framework

Story: Looking after the Environment: SCIRT Global Resource Consents

Theme: Programme Management

An award application which SCIRT, the Christchurch City Council, Environment Canterbury and Beca submitted for the New Zealand Planning Institute Best Practice Award.

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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Programme funded by
New Zealand Government







Fulton Hogan



New Zealand Planning Institute Best Practice Award 2013: Integrated planning and investigations

SCIRT Collaborative Approach to Global Consenting Framework

Submitted by Beca











Covering letter: SCIRT Collaborative Approach to Global Consenting Framework

Background

Following the Canterbury earthquakes of 2010-2011, there was significant damage to Christchurch City Council's networks for water, wastewater and stormwater, and roads, bridges, and retaining walls. In an effort to undertake the repairs in a coordinated and cost effective manner, the Christchurch City Council (CCC) established an alliance with CERA and NZTA as the client funders, and Fulton Hogan, Downer, McConnell Dowell, Fletcher Construction and City Care as the 'delivery teams'. This alliance partnership (the Stronger Christchurch Infrastructure Rebuild Team or SCIRT) has the task of delivering the \$2.2 billion repair and rebuild programme of works to the city's infrastructure. The work programme is made up of hundreds of projects and has a 5-year timeframe with completion anticipated in 2016.

Global Consenting Framework

A collaborative effort between SCIRT, CCC and Environment Canterbury (ECan) has led to the development of a suite of global consents that together provide a consistent consenting framework across the entire infrastructure rebuild programme. The global consenting framework builds on an established concept already in place between CCC and ECan prior to the earthquakes.

The massive scale of the work across an entire city, with the additional complexity of extensive on-going investigations to assess asset damage and ground conditions throughout the project, provided a unique opportunity. The development of a consistent framework of global consents, together with a methodology of risk-based management planning, has provided value for money for the people of Christchurch across the rebuild. For example, there is one global consent for dewatering as compared to delivery teams obtaining their own consents for specific projects, and all contractors across the city work under one umbrella suite of consents. This has allowed a more efficient and seamless transition for contractors moving to a different work site/project, as well as for compliance staff monitoring the rebuild works. It also provided a unique environment for the 5 contractor delivery teams to work together to 'raise the bar' in complying with the global consents – a practice that is likely to leave a lasting legacy in the environmental and construction space.



Creativity and Innovation

From the beginning, there has been one key contact from each organisation as well as regular forums to discuss issues, track progress and resolve problems. The team agreed on the terms of reference for discussions, focussing on outcomes and having honest conversations with no surprises. This reduced the time spent covering 'old ground', thereby ensuring continued progress and swift decisions without unnecessary delay. Having the consent compliance officer as part of the consenting discussions from the earliest opportunity was essential to ensure that any conditions of consent were appropriate, enforceable, and realistic in the post-earthquake environment. Similarly, consent conditions for similar activities were replicated to reduce complexity for delivery teams.

Management Plan Approach

The number and variety of work sites across the city made it difficult to comprehensively identify the range of possible effects of the infrastructure rebuild. This resulted in a management plan approach to consenting and conditions. The first use of this approach was in the global Archaeological Authority applications to the Historic Places Trust (HPT) where a high level risk mapping tool for the Christchurch area was developed in consultation with runanga. This approach has also been applied to other consents under the global consenting framework.

Innovative Technology to Streamline Processes

The best available technology has been utilised to streamline the provision of information to delivery teams and regulatory authorities across hundreds of projects. Several high level risk mapping exercises have been undertaken for the Christchurch area, including archaeological risk areas, potentially contaminated groundwater, and HAIL sites. These have been linked to the comprehensive SCIRT GIS system. This has then enabled the relevant staff involved in each project to undertake a site-specific consenting checklist which highlights associated risk areas at an early stage of design. In addition, a shared information platform is used to record consent compliance across all projects. This is also shared between the delivery teams as well as regulatory authorities.

Training

Once consents were granted, these were then communicated to the delivery teams who had previously been working without consents. Training was provided to delivery team environmental staff and ECan compliance staff played a key role in this initial training. This information was then fed through to the project engineers and site crews via toolbox sessions delivered by the environmental staff. This training was essential to upskill the construction crews in environmental matters, many of whom were new to the city and unfamiliar with local conditions. To date the SCIRT projects have been issued no abatement notices or infringement notices.

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Changing Legislative Environment

Working under new (and changing) legislation has been a challenge. The resource consents were processed under the Canterbury Earthquake (Resource Management Act) Order 2011 with Christchurch City Council as the applicant and consent holder. The Archaeological Authority applications were processed under the Canterbury Earthquake (Historic Places Act) Order 2011. It was a challenge for both the consent processing staff and SCIRT as the applicant to work under this new and untested legislation.

Similarly, the NES on Soil Contaminants came into effect part-way through the project. This required consistency between the ECan earthworks consents and the NES consent application to CCC. Again, a risk management based approach was adopted, and worked well. The use of low, medium, and high risk zones in the management plan provided a reasonable level of certainty for the consent authority about the process that would be followed without requiring extensive baseline work to be included in the applications.

Concurrent Rebuild and Consenting

Work was underway while consents were being processed. There was an agreement by all parties that the priority was to restore functioning services to households, and regulatory requirements were addressed retrospectively after the initial emergency phase. Due to the collaboration and goodwill of the project, Environment Canterbury was flexible with allowing the work to proceed while consent applications and processing were underway. This provided an opportunity to 'test' conditions in the field, acknowledging the exceptional and unexpected ground conditions, and the potential for future seismic events. This has ensured flexibility within the consent conditions so they will last for the lifetime of the rebuild programme.

Value to the Community

Every dollar spent on consenting is a dollar not spent on repairing earthquake-damaged infrastructure. There is a real emphasis on value to the ratepayers and tax payers funding the infrastructure rebuild. The aim has been to reduce the need for any individual consents for specific projects. For example, this led to the granting of a global consent for the rebuild of new pump stations across the City, rather than separate land use consents for each one. Accompanying this global consent is an Architectural Design Guideline for Pump Stations that SCIRT developed to guide the visible design elements of these pump stations and address amenity concerns. This guideline will be used as a quality benchmark for future pump stations.

Collaboration and Sustainable Management

In responding to an unprecedented natural disaster, our team has collaborated (and continues to do so) to help deliver the repair and rebuild of Christchurch's earthquake damaged infrastructure in such a way that enables the physical works to be carried out in an environmentally sound manner while not slowing down the recovery with regulatory barriers.

In a stressful and fast-paced environment, the team developed a relationship characterised by trust and goodwill, working across organisational boundaries to achieve the best outcome for the people of Christchurch. A pragmatic philosophy underpins our teams approach to achieve desired outcomes for the community and the environment without placing unnecessary constraints on the people actually delivering the rebuild. These strong relationships between the delivery teams, SCIRT, ECan, CCC and NZHPT mean that any issues are resolved quickly. This is of particular importance for environmental issues that arise on site as the strength of relationships and trust between the parties allows us to immediately focus on working together to find a solution.

Fundamentally, the collaborative and pragmatic approach to consenting SCIRT activities serves the Christchurch community by delivering value for money, while also providing an efficient repair and rebuild of the city that protects environmental values. It is evidence of a collaborative and integrated approach to planning for the delivery of New Zealand's largest civil engineering project and embodies the sustainable management ethos enshrined in the RMA.

"The approach taken by all parties towards global consents is a real success story of the infrastructure rebuild so far. It clearly demonstrates how collaboration and a 'can do mentality' by everyone involved can achieve the best result for programme outcomes. Although this approach is not new, the environmental leadership team have built on existing relationships within the key stakeholders and developed the global consenting processes and environmental risk management framework to fit the scale of the rebuild."

Will Doughty Infrastructure Rebuild Client Manager Christchurch City Council

Award Citation

Following the Canterbury earthquakes of 2010-2011, the damage to infrastructure such as the water, wastewater and stormwater networks, and roads, bridges, and retaining walls was extensive. To undertake the \$2.2billion repair and rebuild programme in a coordinated and cost effective manner, the Christchurch City Council established an alliance with CERA and NZTA as the client funders, and Fulton Hogan, Downer, McConnell Dowell, Fletcher Construction and City Care as the 'delivery teams' – the Stronger Christchurch Infrastructure Rebuild Team (SCIRT).

With up to 150 work sites open at any one time across the city, the massive scale of the work has had the additional complexity of extensive and on-going investigations to assess asset damage and ground conditions. These challenges presented a unique opportunity to develop a consistent consenting framework for a suite of global consents for typical construction-related activities. This was achieved through intensive and ongoing collaboration with between SCIRT, Christchurch City Council , and Environment Canterbury. The global consent solution provided a unique environment for the five SCIRT delivery teams to work together to 'raise the bar' in complying with these global consents, developing a risk-based management plan approach and developing innovative tools and techniques to address the challenges.

These responsive and collaborative solutions enabled the physical works to be carried out in an environmentally sound manner, while not slowing down the recovery with undue regulatory barriers, meaning the planning solutions have provided value for money for the people of Christchurch. These innovations are likely to leave a lasting legacy in the environmental and construction space.

Appendix A Photos











Appendix B A3 Poster



SCIRT Collaborative Approach to Global Consenting Framework





In responding to an unprecedented natural disaster, this framework has helped to deliver the repair and rebuild of Christchurch's earthquake damaged infrastructure in such a way that enables the physical works to be carried out in an environmentally sound manner while not slowing down the recovery with regulatory barriers.

SCIRT, Christchurch City Council and Environment Canterbury collaborated to develop a suite of global consents that together provide a consistent consenting framework across the entire Christchurch infrastructure rebuild programme.



