

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.

Central City Utilities Coordination

Story: Central City Infrastructure Rebuild

Theme: Programme Management

A copy of the plan detailing how the rebuild of the three waters and road infrastructure was to be coordinated with other utility operators.

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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Central City Utilities Coordination and Shared Corridors Project Execution Plan

DRAFT

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Project Directors	Richard Topham, Greg Wilson, Lizzie Pearson
Project Manager	Dave Bain
Document Controller	TBA

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1. INTRODUCTION

SCIRT is working with the CERA Central City Development Unit (CCDU) and CCC to ensure services are available and coordination occurs between horizontal utility providers and the vertical rebuild in the Central City.

Utilities are an integral part of SCIRT's implementation plan for the city and the Utilities Review Panel in conjunction with CCDU and CCC needs to agree how common laterals and street corridors can be included to service the new developments in the core of the city.

Benefits

- Protecting Assets – In Design and Delivery
- Provide the opportunity to share costs among multiple asset owners
- Facilitates Works Collaboration
- Minimising disruption
- Minimise the double handling of information
- More efficient planning and prioritisation when allocating resources

2. PROJECT OBJECTIVES

- To ensure that SCIRT and Utility operators are able to provide resilient infrastructure for the people of Christchurch by providing a working solution to coordinate services in common trenches or corridors.
- To support the rebuild of businesses and new commercial developments in an efficient and cost effective manner that provides long term sustainability for all stakeholders.

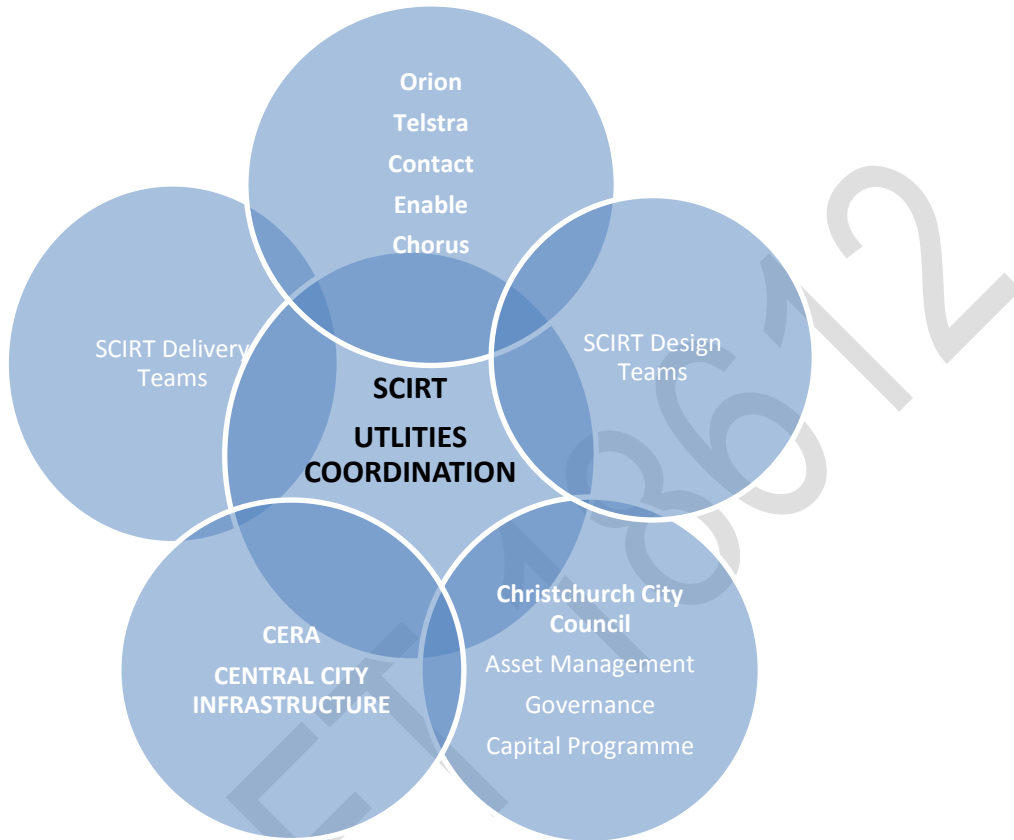
3. PROJECT SCOPE

- Provide a working solution that ensures the ongoing coordination of all utility network operators and the use of common utility laterals and corridors .
- Identify suitable areas throughout the central city that can utilise common corridors including the selection of trial sites which may include Gloucester, Victoria and Hereford Streets
- Negotiate commercial and contractual arrangements for the installation and ongoing operation of the corridor

In terms of timeline, a solution needs to be developed in time for the next stages of the city implementation plan which is scheduled for late 2012.

The ongoing development of a Works Collaboration software platform is not in scope of this project. A solution is currently being developed under a separate project running in parallel, sponsored by LINZ and CERA, and managed by the SCIRT Business Services team.

4. PROJECT ORGANISATION



Name	Role	Key Responsibilities
<i>Dave Bain</i>	<i>Utilities Coordinator</i>	<i>Project Management</i>
<i>Richard Topham</i>	<i>Central City Coordinator</i>	<i>Project Lead Central City Implementation Plan</i>
<i>Utility Technical Representatives (incl CCC)</i>	<i>Operations Design and Construction</i>	<i>Technical and Design Input</i>
<i>Utility Strategic Representative</i>	<i>Commercial and Strategy</i>	<i>Strategic and Commercial Negotiations</i>
<i>CERA Representative Greg Wilson</i>	<i>Governance</i>	<i>Governance and Strategy</i>
<i>CCC Representative Lizzy Pearson</i>	<i>Governance</i>	<i>Governance and Strategy</i>

5. STATUTORY & REGULATORY

- CERA Recovery Strategy
- CERA Act
- NZUAG Code of Practice
- Electricity, Telecommunication and Gas Acts
- SCIRT Cost Sharing and Operating Principles Agreement
- CCC Special Conditions for Corridor Access and Building Consents
- CCC IDS and CSS
- ASNZ Standards for underground gas electrical and telecommunication installations

6. PROJECT SCHEDULE

The Project is broken into three workstreams within the SCIRT CENTRAL CITY INFRASTRUCTURE implementation plan. Workstreams specific to this project are

- Design and Constructability
- Commercial and Strategic Negotiations
- Project Reviews

Baseline Schedule for this project

- 15th June - Operational meeting to gain each Utilities feedback on Central City. Establish condition of their assets and how their network can be designed into a shared corridor within the City - **Completed**
- 22nd June – Commence drafting of proposal and establish preliminary costings for inclusion in business case to CCDU/CCC and Strategy and Governance representatives from each utility.
- 29 June – Finalise technical specifications, costings and agree Draft proposal
- 16 July – Presentation to CCDU and Strategy and Governance representatives from each utility
- 31 July – CCDU Blueprint released including SCIRT Intergrated Implementatinon Plan
- 1 August - Commercial agreement commenced between CCDU and Strategy and Governance representatives from each utility
- September – Initiate work to support CCDU Central City Blueprint

7. PROJECT MANAGEMENT CONTROLS

- This project will fall under the management controls detailed in the SCIRT/CENTRAL CITY INFRASTRUCTURE implementation plan
- SCIRT's Project Centre will be used for filing documents and logging correspondence related to this project

8. PROJECT ASSURANCE

Project Reviews being held on a regular basis with Asset Owners with other assurance measures covered in the SCIRT/ CENTRAL CITY INFRASTRUCTURE Implementation plan

9. COMMUNICATION & STAKEHOLDER MANAGEMENT

In addition to the comms and stakeholder detail in the SCIRT/CENTRAL CITY INFRASTRUCTURE implementation plan, this project will include regular weekly/monthly meetings with key stakeholders that include

- Design and Constructability meetings with technical and operational teams
- Commercial negotiations with strategy and commercial teams
- Project review meetings with Asset owners and Governance team

Name	Business area	Nature of Stake
CERA	CCDU	Governance - Central City Blueprint
CCC Asset Owners	3 Waters, Roading Strategy and Governance	Funding and Project sponsorship
Utility Asset Owners	Utility Strategy and Governance	Funding and Project sponsorship
SCIRT	Horizontal Infrastructure Rebuild	Develop coordinated implementation plan for rebuild of horizontal infrastructure in Central City
Utility Operations	Technical feasibility, Operations and Maintainence	Project development, testing, ongoing operations and maintenance
CCC Maintainence	Technical feasibility, Operations and Maintainence	Project development, testing ongoing operations and maintenance
CCC Enforcement Team	Building Consents and Corridor Access	Governance and Operations
Property Owners and Developers	Central City Investment and property development	Customers and Investors
A.	B.	C.
D.	E.	F.

10. HEALTH, SAFETY & ENVIRONMENTAL MANAGEMENT

SCIRT QSE Management plan applies and the project will be undertaken within the SCIRT risk management and consenting framework. Risk workshops for each stage of the project will identify any specific environmental risk.

11. ISSUES AND OPPORTUNITIES

Issues and Actions	Treatment action	By Who	When
Vacant Lots	CCC Building and Consents team to provide monthly update of consents and permits	CCC Building Policy and Consents – Ethan Stetson, Patrick Schofield	Monthly from 1 July
Underground Space is constrained for common Corridor	Confirm sites where common access is practical and identify what underground space is available	SCIRT Design team and Utility Operators	29 June 2012
Shared Work plans	Utility operator to provide their input and work programs toward developing an intergrated implementation plan for Rebuild of Horizontal infrastrucutre	SCIRT and Utility Operators	31 July 2012
Technical Feasibility vs Stakeholder expectation	Integrated implementation plan includes details of what can be achieved and any constraints	SCIRT and Utility Operators	31 July 2012
GIS to include Vertical consents and building permits	Centralised platform for Sharing information	SCIRT Central City Coordinator Richard Topham	29 June 2012
Early involvement from Developers and property owners	Work with CCC Building Consents team to develop common approach for all utilities and communicate to developers and property owners	CCC Building Policy and Consents team along with Utilities Review Panel	Common approach and communication agreed by 31 July
Diversified supply points for some customers	Work with developers,property owners and their tenants to identify requirements early	Telecommunication and Electricity Network operators	Work with sites that are known from now

Opportunities and Actions	Resolution action	By Who	When
Embed Utilities as part of Central City Blueprint	Utilities incorporated in CCDU Blueprint and SCIRT Implementation plan for rebuild of horizontal infrastructure	SCIRT and Utility Operators	31 July 2012
Enable UFB Rollout	Identify opportunities to share cost of corridor	Utility Operators	29 June 2012
Crown Fibre Holdings and TCF strategy for Christchurch	CFH and TCF identify opportunities for telecommunication providers joint approach in Christchurch and confirm strategy	CFH, TCF, CERA	31 July 2012
Sharing Chorus Ducts	Chorus to confirm policy	Chorus Rob Ruiter/Geoff Austin	29 June 2012
Temp road surface	Identify opportunities for temporary road surface whilst vertical build is completed	SCIRT Utility Operators CCC Roading Asset Owners	31 July 2012 and ongoing.
Incorporate reinstatement options as part of Streetscape design	Work with CCC Road Asset Owners and Streetscape Designers to develop options	SCIRT and Utility Operators	29 June 2012

12. CONTRACTS & PROCUREMENT MANAGEMENT

As detailed in the SCIRT Central City implementation plan

13. FINANCIAL PLAN

Summary of the approved budget for the project including any approved contingency allowances. - TBA

Cost breakdown across financial stakeholders - TBA

14. QUALITY MANAGEMENT

The SCIRT Central City Infrastructure implementation plan, will be followed to ensure this project's deliverables meet quality requirements
Relevant industry quality assurance and quality control actions will be taken over the course of the project to achieve the quality standards.

Relevant industry standards and Christchurch City Council Infrastructure Design Standards/Construction Specification Standards will provide the process for ensuring vendor conformance to project specifications, approved drawings and datasheets

The quality acceptances (external & internal) which must be performed before handing over the project outputs to the operator are **yet to be defined**

15. TESTING AND COMMISSIONING

Plant test and commissioning plans - TBA

Operational handover process - TBA

16. OPERATION / MAINTENANCE

Maintenance and support requirements, agreements and requirements for manuals, drawings, etc - TBA

Training programme to be provided for plant operators and maintenance personnel TBA