

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 Delivery Plan Presentation - Short Version

Story: Central City Infrastructure Rebuild

Theme: Programme Management

A shortened version of a presentation outlining the approach to the central city rebuild.

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



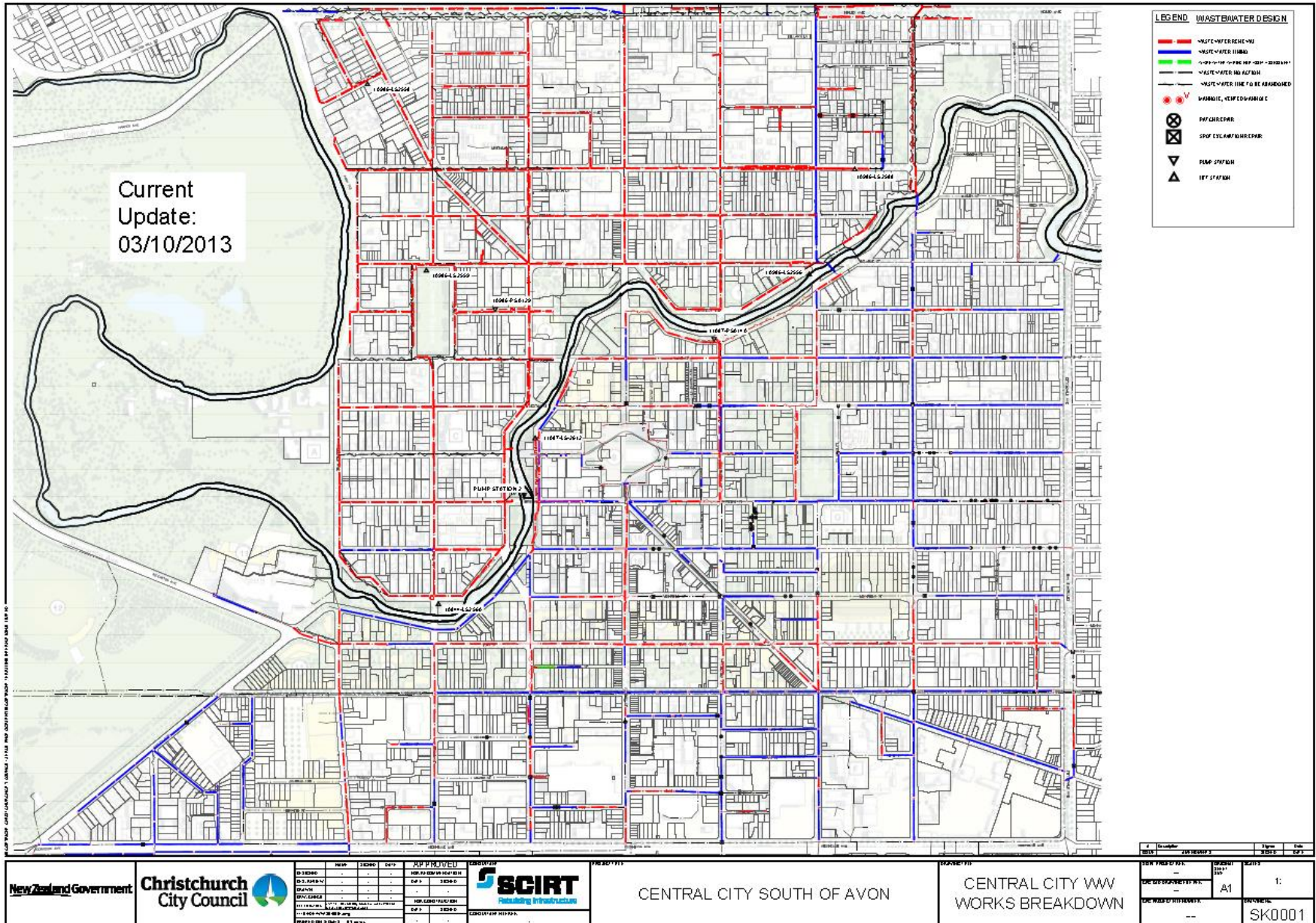
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CENTRAL CITY

Delivery Management Plan

Wastewater Proposals

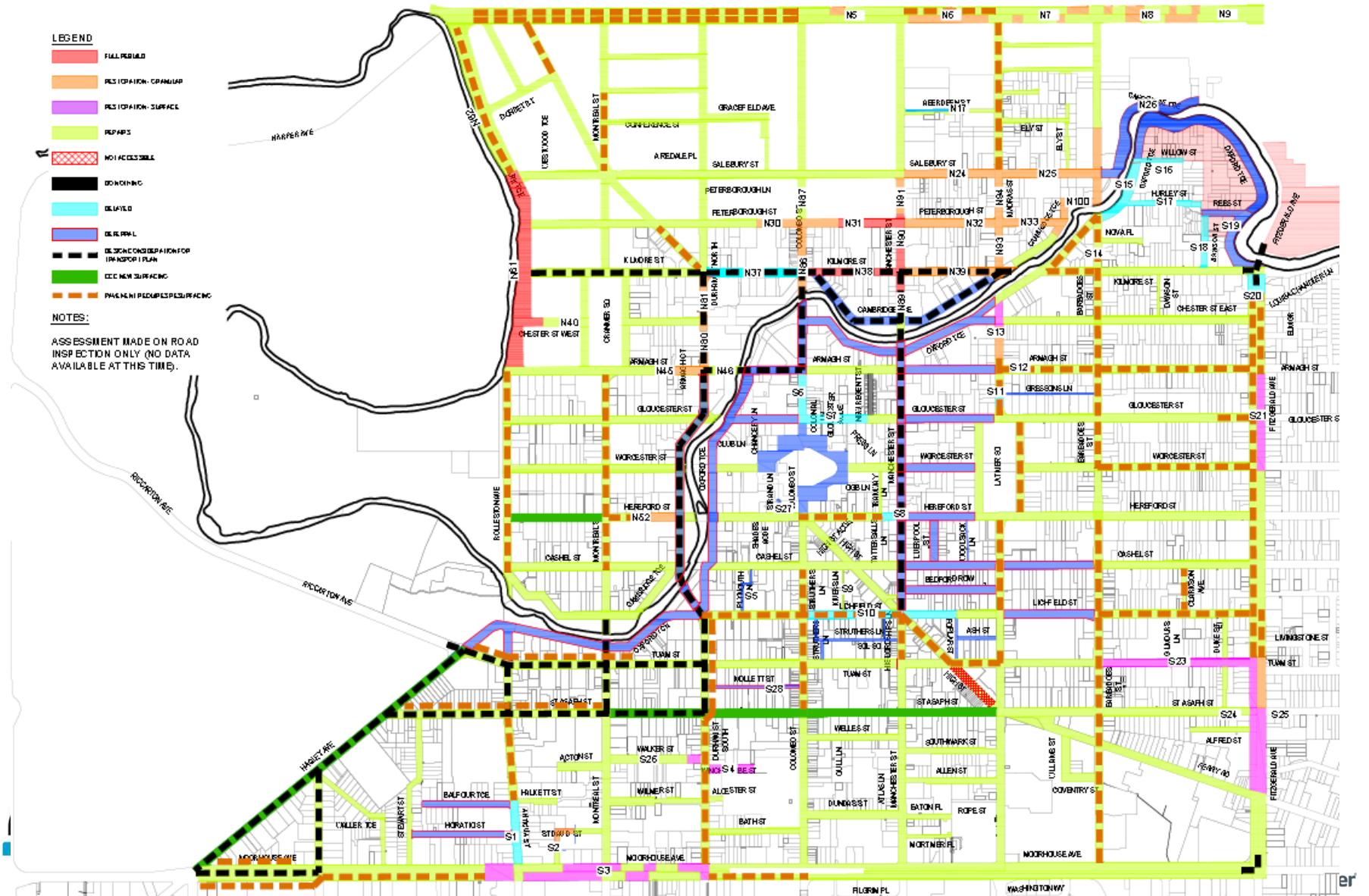


Current Update:
03/10/2013

LEGEND WASTEWATER DESIGN

- WASTE-WATER SEWERAGE
- WASTE-WATER STORM
- COMBINED WASTE-WATER SEWER-STORM
- WASTE-WATER TO BE ABANDONED
- MANHOLE, STUP OR INSPECTION
- ⊗ PRELIMINARY
- ⊗ PROPOSED
- ⊗ STOP EXISTING WASTEWATER
- ▽ PUMP STATION
- △ TEST STATION

Roading Proposals

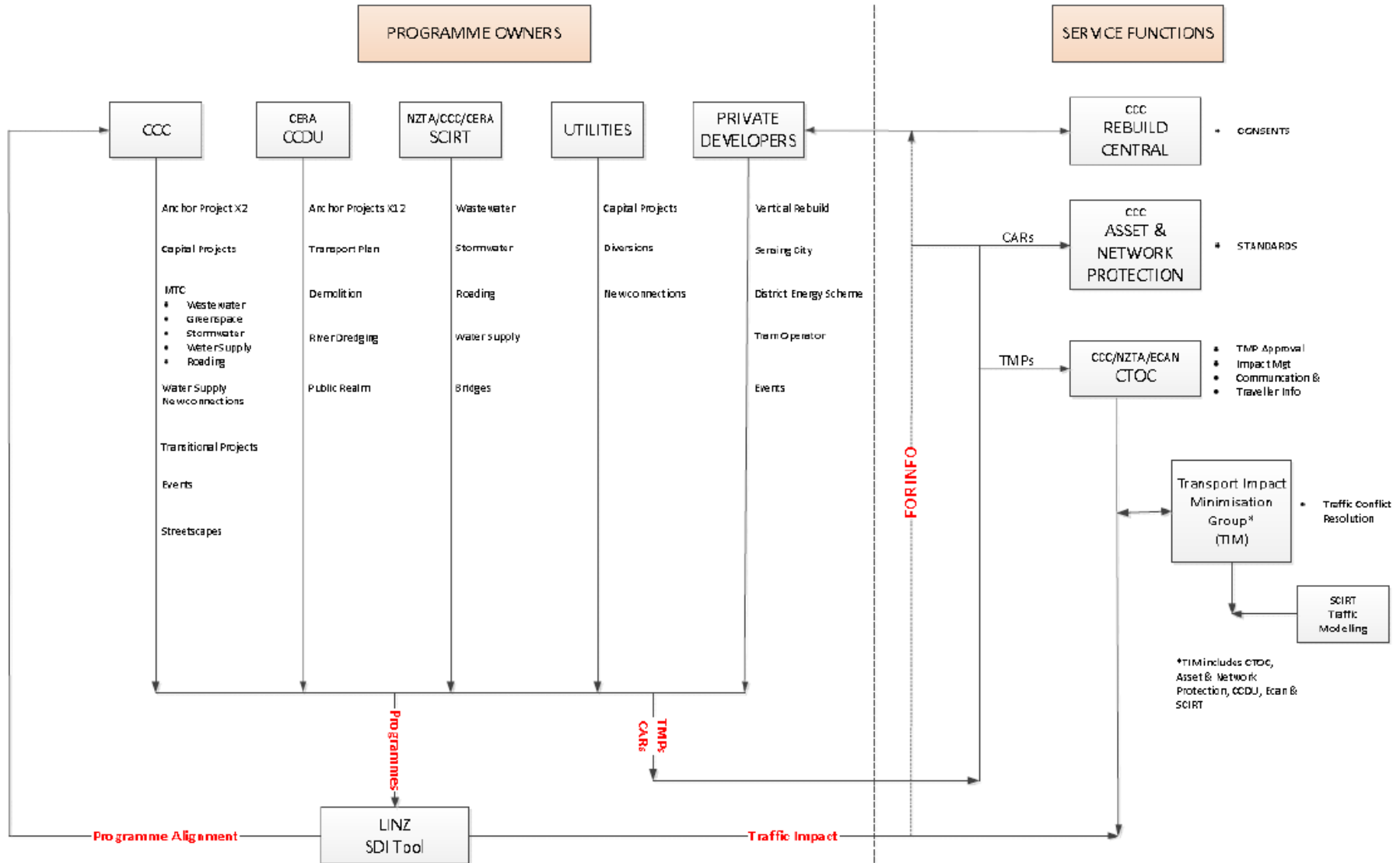


PROGRAMME ALIGNMENT

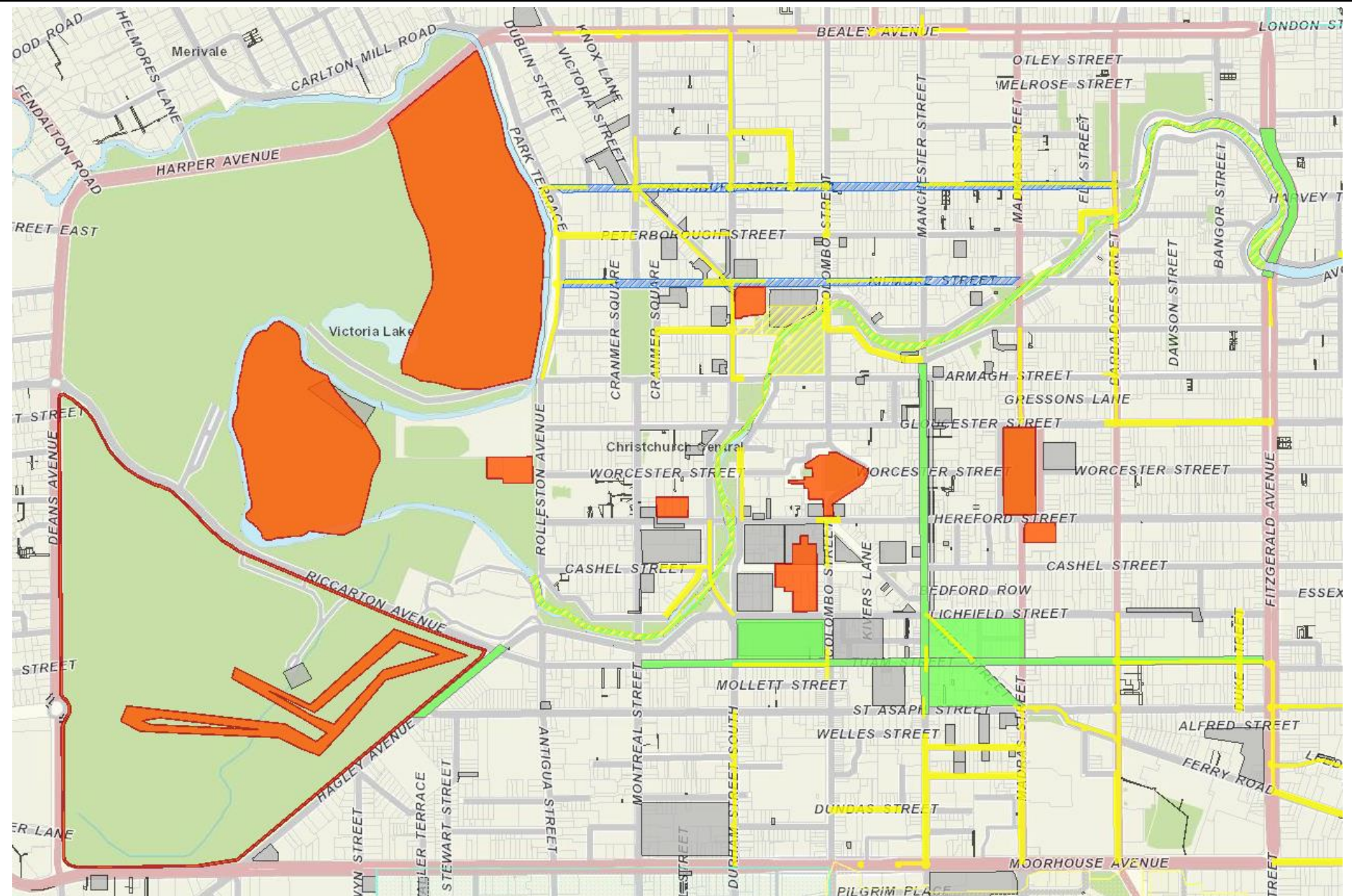
Delivery Management Plan

Programme Alignment – Other External Projects

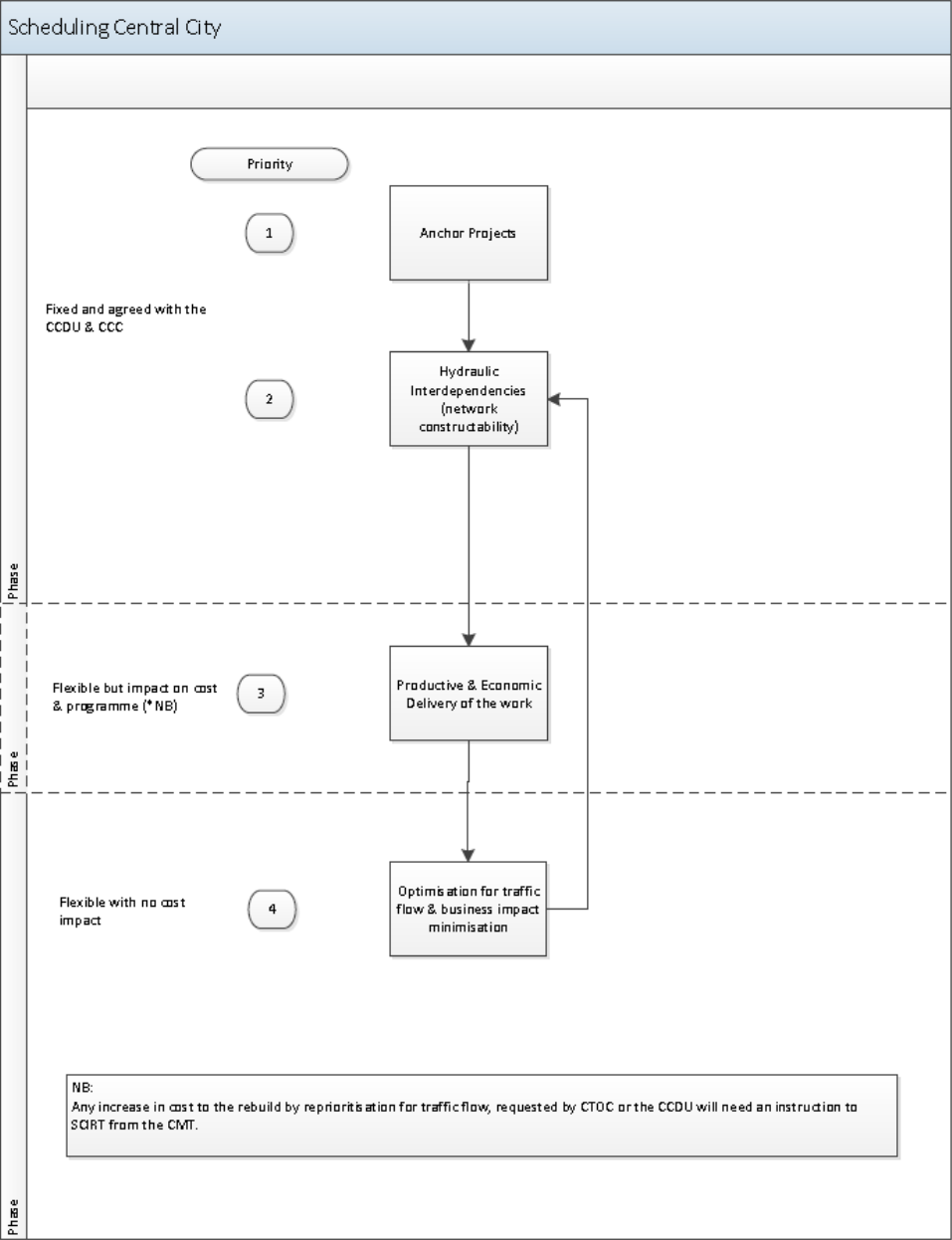
REBUILD PROGRAMME COMMUNICATIONS STRUCTURE



Current Work

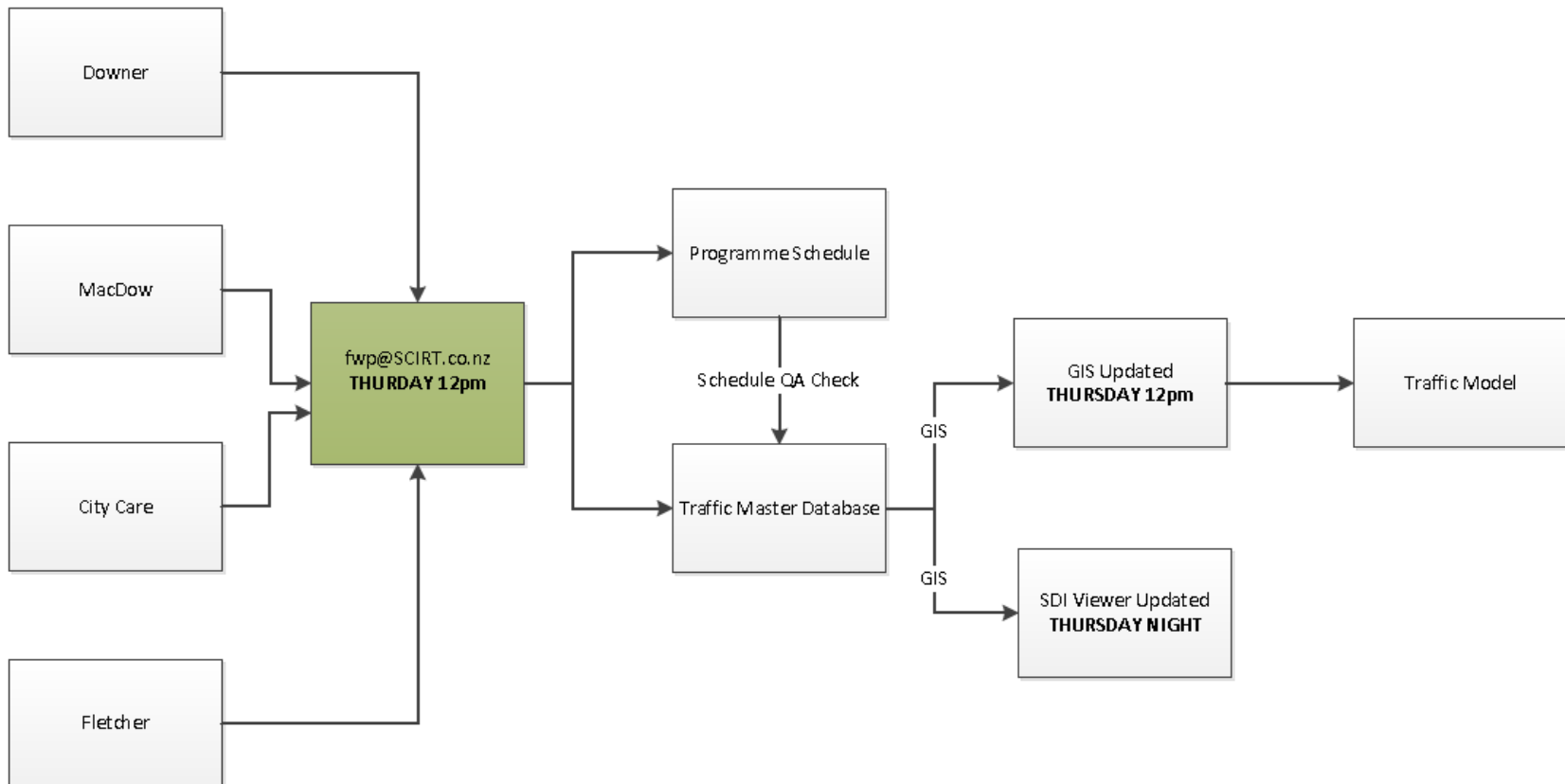


Schedule Prioritisation & Flexibility



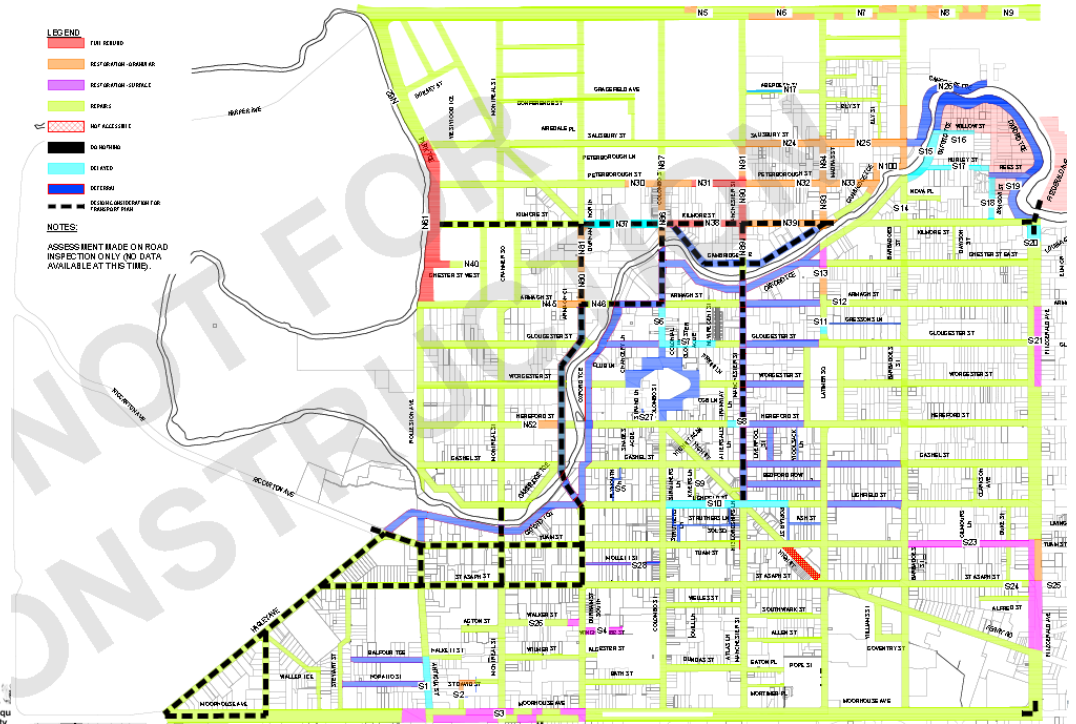
Schedule Updates

- ▶ **Process Name:** CENTRAL CITY SCHEDULE Weekly Reporting Process
- **Owner:** Richard Topham
- **Frequency:** Ongoing
- **Purpose:**



Requirements

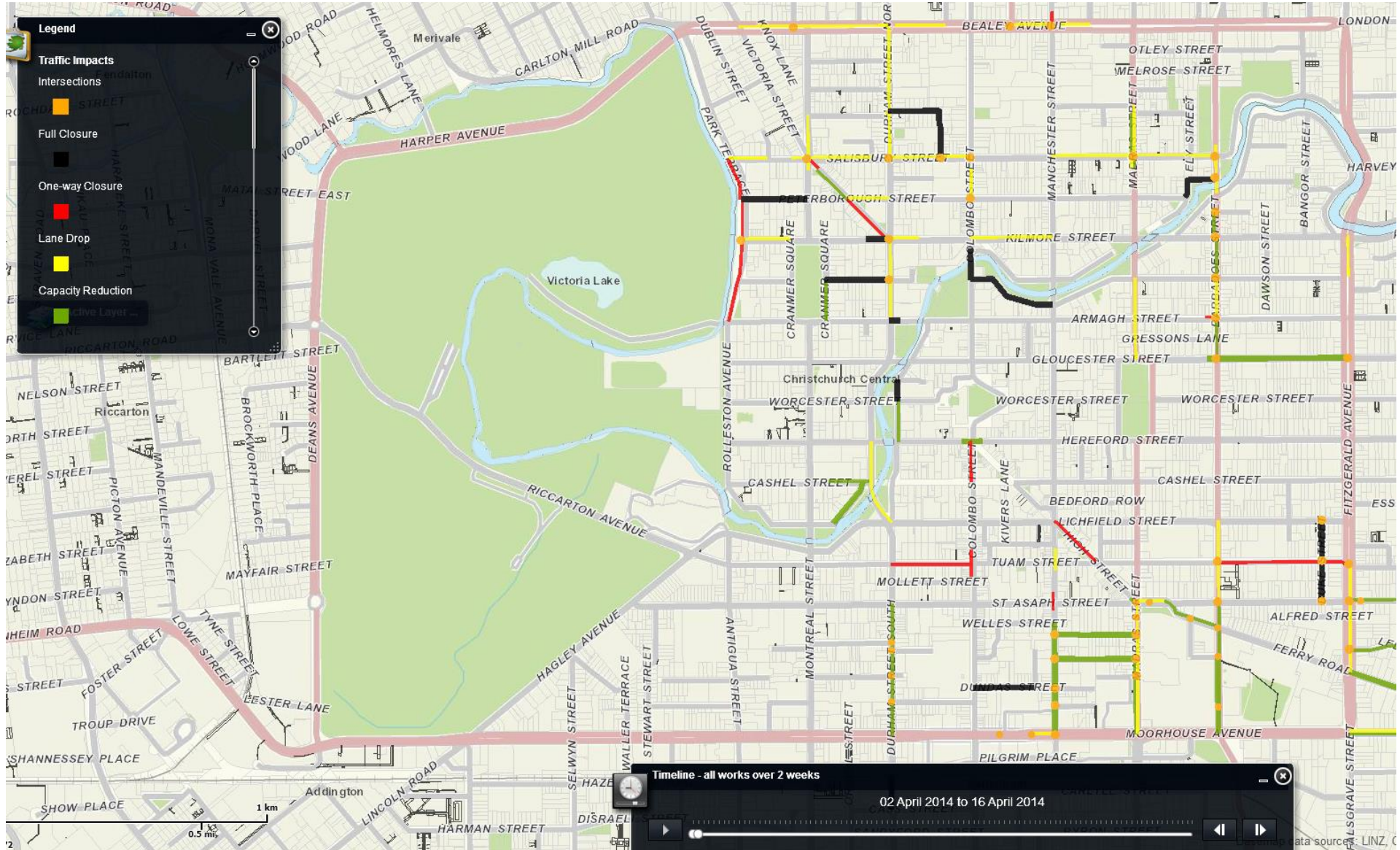
- Attendance at monthly CCDU Operational Meetings
- Weekly updates to Schedules
- Liaison with other programme Holders
- Reprioritisation of Schedules through formal process only
- Provide support to the CCDU CMO for coordination
- Management of overlaps (scope, timing and details)



TRANSPORT MANAGEMENT

Delivery Management Plan

Conflict Management



3 Tier Traffic Assessment

- Tier 1 => Available Lanes Across CBD
- Tier 2 => Route capacity across wider central city
- Tier 3 => 'Cluster' index of work and accessibility

Traffic Management

- Need for Schedule Accuracy:
 - 3 month Accuracy (only amended due to speed of progression)
 - 3-6 month Accuracy target
 - 6 month + Indicative (best foot forward)
- Consequences of Short term reactive changes
 - Conflict management with other programme holders
 - Pre-booking system used by CTOC
 - Likely to need Governance decisions where Min LOS breached
 - Risk of TMP's not approved
 - Reputation and media issues
 - Business Impact Management (Stakeholder Comms)

Requirements

- Provide schedule accuracy (3 months)
- Meet with dedicated TMC from CTOC
- Planned and early submission of TMP's (3-4 weeks Min)
- Traffic impacts accurate on schedule information
- Support integrated TTM planning with other delivery teams (including diversion routes)
- Minimisation of TTM redundancy
- Work with Central City TTM Supervisor

COMMUNICATION

Delivery Management Plan

How - communication

- Face to face - briefings
- Project overviews
- Work notices
- E-newsletters
- Email/hotlines
- Website.

SCIRT
Rebuilding Infrastructure

SCIRT is rebuilding the city's earthquake damaged roads, water, wastewater and stormwater pipes.

Work notice – Peterborough Street, Central City, manhole installation and trunk main renewal

What We are installing a new manhole and trunk main

Where Peterborough Street, between Madras Street and Durham Street North

When In the week beginning Monday 21 October 2013 for approximately six months

Where we are working

What we are doing

- We are installing a new manhole and renewing 500 metres of wastewater main on Peterborough Street between Madras Street and Durham Street North.
- Work will start in the week beginning Monday 21 October 2013 and will continue for approximately six months.
- Our hours of work are 7.00am to 6.00pm Monday to Friday, with some weekend work if required.
- All work is subject to favourable weather and on-site conditions.
- Work will take place in three stages, see overview.

Logos: SCIRT, Fletcher, Christchurch City Council, New Zealand Government.

SCIRT
Rebuilding Infrastructure

Programme funded by
Christchurch City Council | New Zealand Government

Pipes, roads and bridges
Central City Newsletter | October 2013

With the cobble stones down, work is set to ramp up in the Central City (the area between Dealing, Fitzgerald, Manchester and Deane avenues).

Rebuilding is a huge task on a scale never seen before in New Zealand. Rebuilding historical infrastructure (sewerage, fresh water, storm water, roads and bridges) is the foundation for other rebuild activities.

SCIRT is working fast on infrastructure projects and roads so work can start/continue on key commercial, business and residential projects.

INSIDE:

- Central City rebuild
- What SCIRT is doing
- Living and working
- How we will be working
- Who will be doing the work
- Working in blocks
- What's new
- SCIRT contacts

Logos: SCIRT, CERA, City Care, WDowner, Fulton Hogan, McConnell Dowell, Fletcher.

Central City hard copy newsletter

We're repairing the wastewater system near you

Wastewater system repairs starting soon

Logos: SCIRT, McConnell Dowell Creative Construction, Christchurch City Council, New Zealand Government.

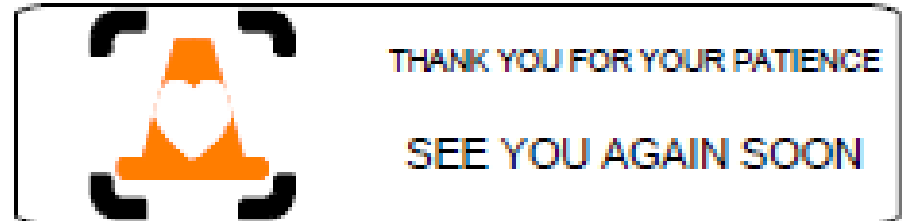
How - business impact support communication

- “Go the extra mile” campaign to raise awareness
 - Advertising
 - Awareness at events
 - Signage at Central City perimeters
 - Supporting collateral (icon, stickers, bags)
- Help businesses keep customers informed
 - Business pack
 - Stickers
 - A5 flyer and poster
 - Onsite signage.

How - communication



Central City perimeter signage – entry



Central City perimeter signage – exit

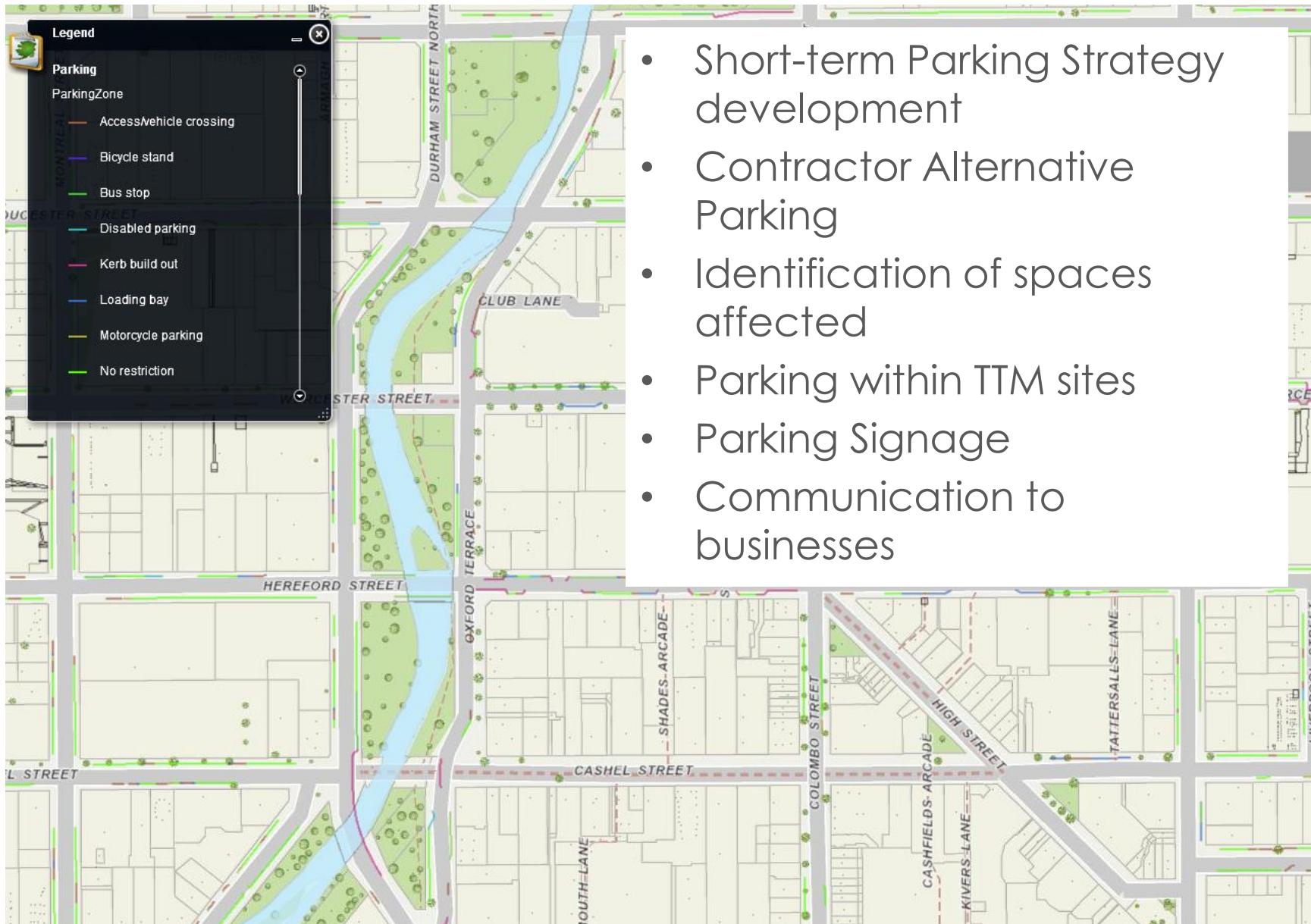


Business signage

PARKING

Delivery Management Plan

Parking



CONSTRUCTION SITE MANAGEMENT

Delivery Management Plan

Site Footprint and Access

- Footprint kept to a minimum
 - Sites waiting for reinstatement are redundant TTM sites – poor public image
 - Reduce the amount of parking spaces affected
 - Access to businesses must be maintained, kept clean and signed appropriately
 - Consider access from alternative parking areas (signage, line of site, safe access – mobility, tripping hazards, detritus etc)

Flow Diversion and Dewatering

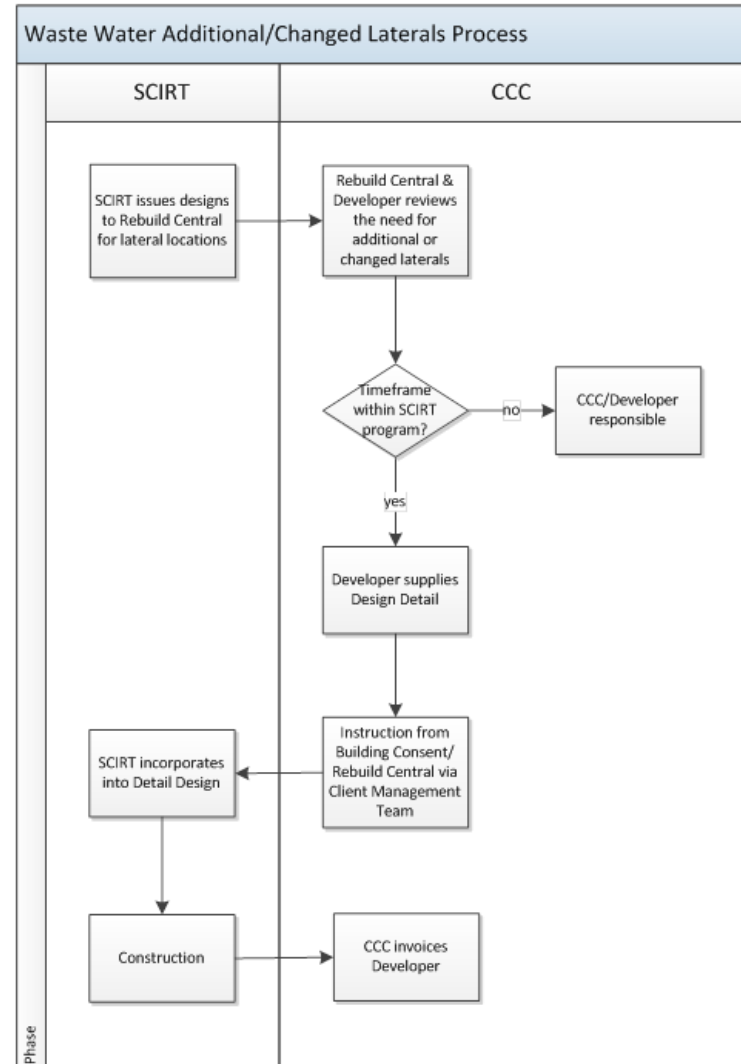
- Flow Diversion:
 - Continuity of service
 - Impact on the network including overflows
 - On-going maintenance & operational requirements Effect on other delivery teams
 - Risk areas/weak points in the network – active control measures such as tagging MH's with bungs, alarms at overflows, visual monitoring points, monitoring draw down of surcharged pipes)
- Dewatering
 - Private developers
 - SCIRT Delivery teams
 - Effect on downstream work
- CCC Operational Support provided in Central City (Tim Ure)

Lateral Investigation & Repair

- Design Approach:
 - No change to the property – repair existing lateral connection
 - Vacant Lot (no building consent) – Repair one lateral connection at the property boundary and where a property is accessible from multiple street frontages (i.e. corner section) provide an on-line capped junction on the additional street frontages
 - Vacant Lot (with building consent) – As above. Rebuild Central liaise with the Developer to support the development in actual requirement. WSC for new connections. HIMT Instruction only.
 - Live as-builts provided to CCC Consent Officers (Mathew Crighton)
 - Abandoned Laterals must be grouted to ensure developer cannot connect into an abandoned pipe.
 - Anchor Projects – Liaison between SCIRT and the Anchor Project team to review infrastructure requirements.

Lateral Change Process

- **Process Name:** Central City WW Laterals
- **Owner:** Richard Topham
- **Frequency:** Ongoing
- **Purpose:**
- **Date:** September 2013



BUSINESS IMPACT MANAGEMENT

Delivery Management Plan

Summary

- A significant reduction to the impact on operating businesses can therefore be made through:
 - Providing Minimum LOS to the Transport network
 - Early and comprehensive communication
 - Minimise the impact on the parking network
 - Effective and considerate construction site management

QUESTIONS & OUTSTANDING ISSUES?