



Rebuilding the streets of Kaiapoi after the Canterbury Earthquake (s)

Jeanette Ward – IPENZ Transport Conference 2011

Today

- The earthquake (4 September)
- The road damage
- The recovery team & process
- Funding the rebuild
- Scheme design & consultation
- Design outcomes so far
- Conclusions
- Engineers role in the recovery



The earthquake (4 Sept)



The damage



The damage



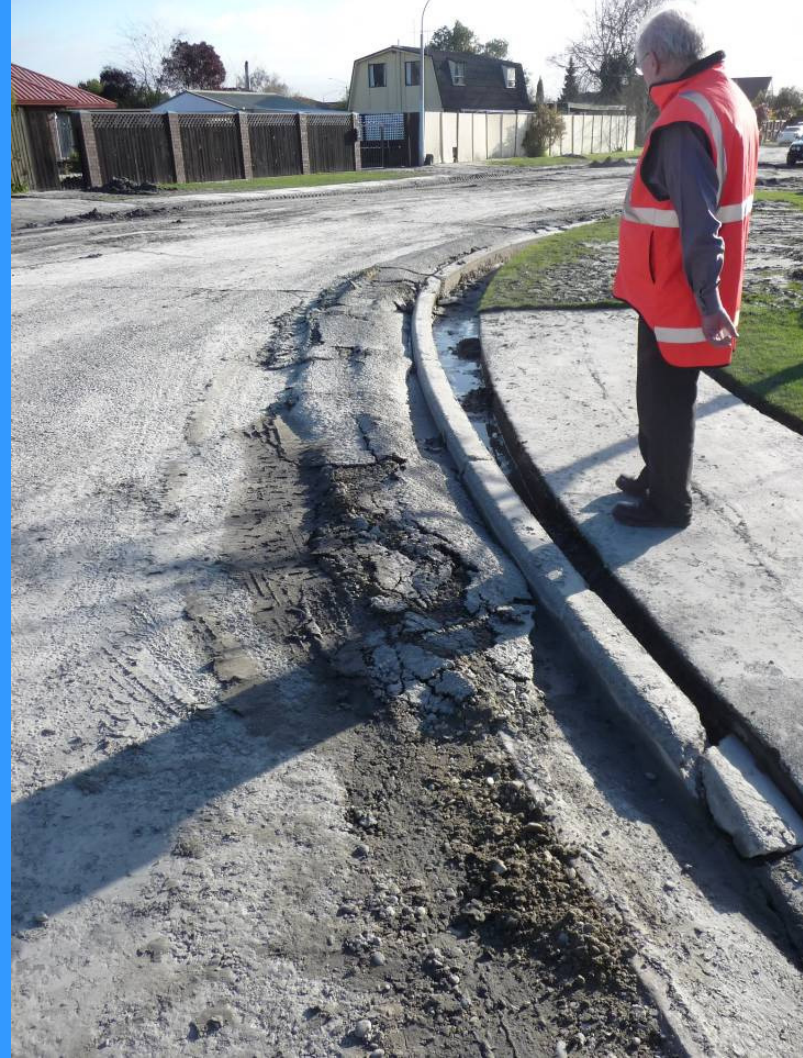
The damage



The damage



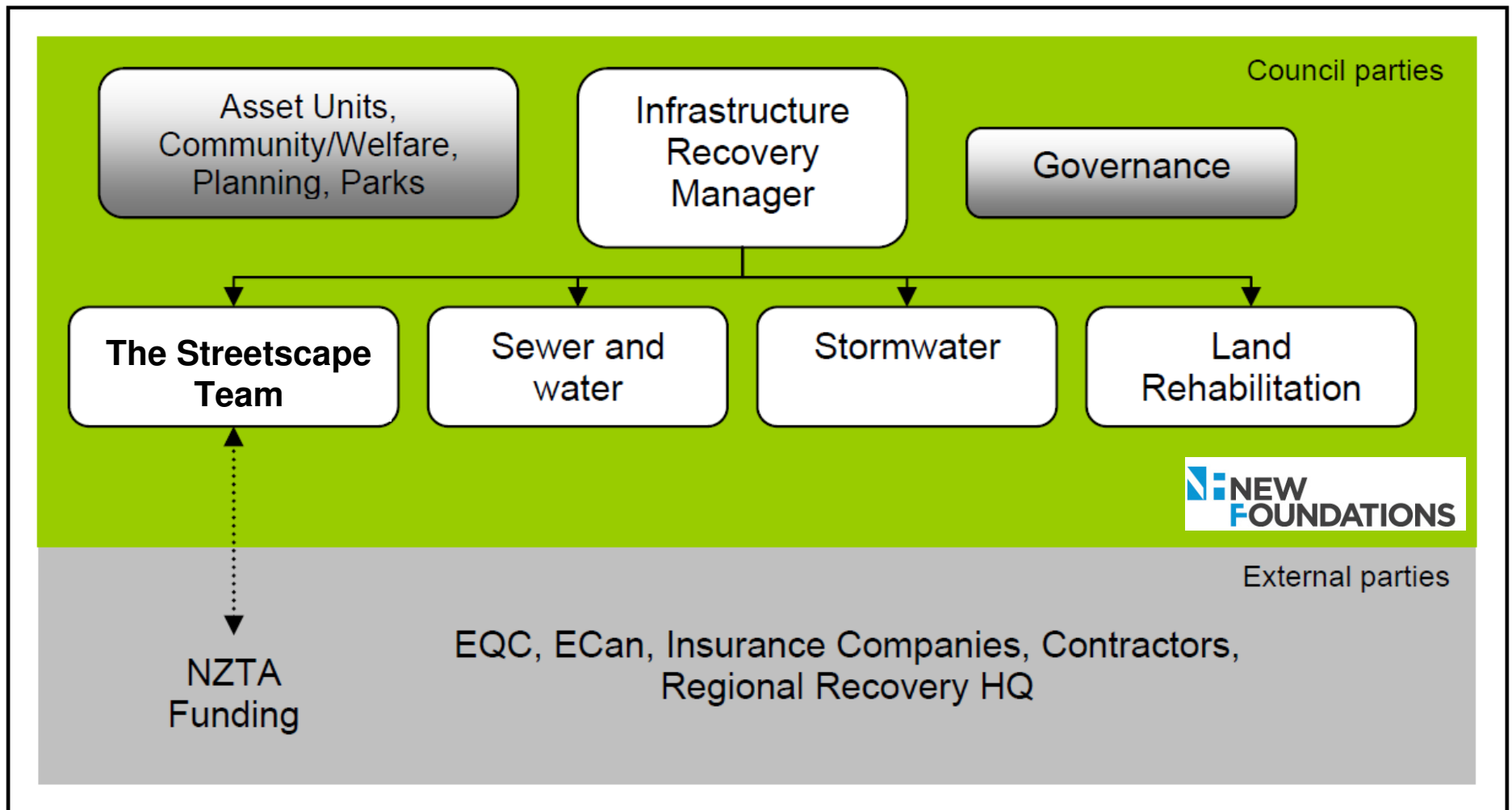
The damage



The damage



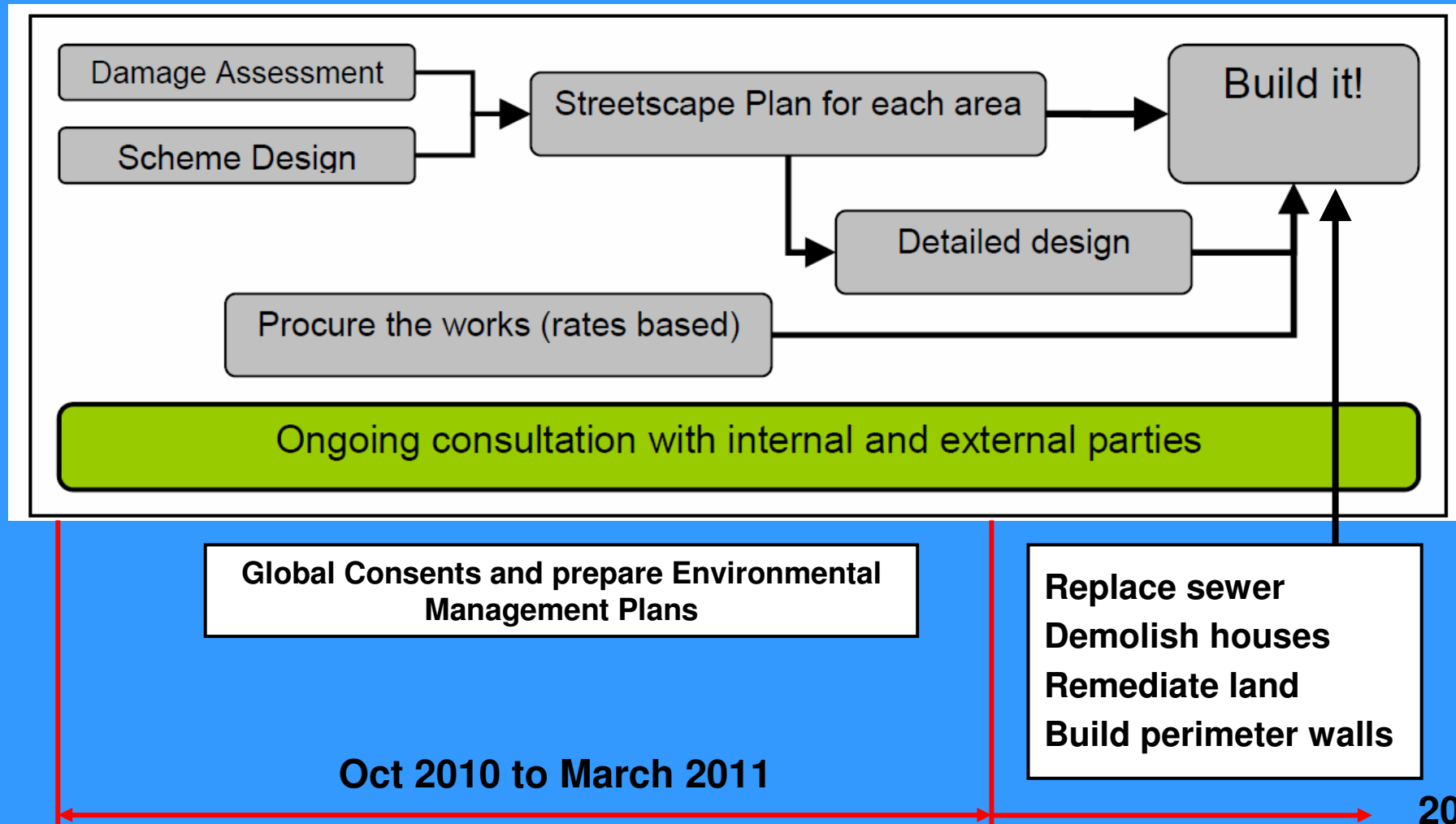
The infrastructure recovery unit



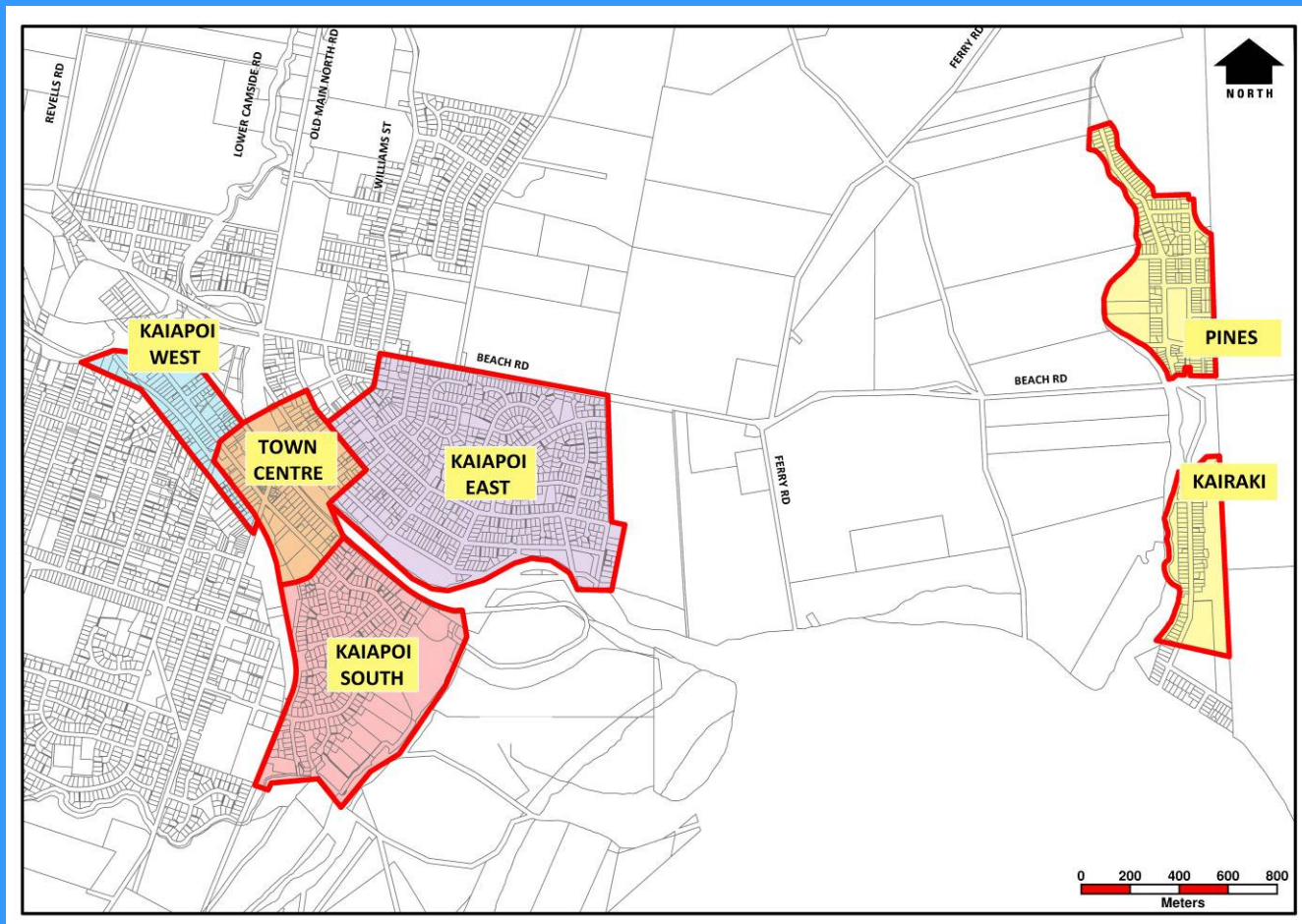
The recovery team at the Hub



The recovery process



The recovery areas



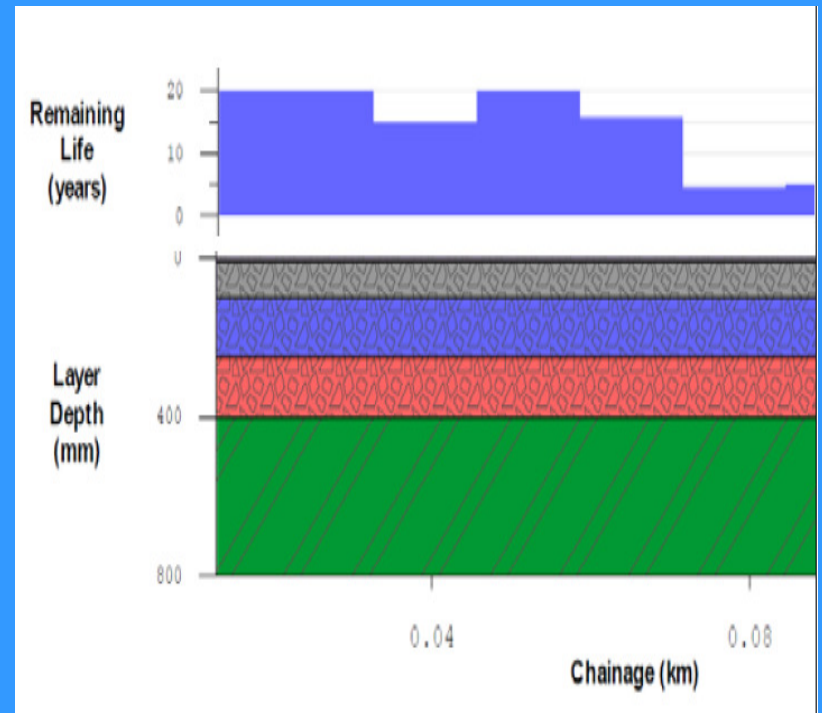
Funding (≈ \$15mill)

- **Damaged roads**
 - NZTA Emergency Reinstatement Funding (≈ 80-90%)
 - Council existing budgets/rates increase (≈ 10-20%)
- **Opportunities within and adjacent to damaged roads**
 - Council Minor Improvements, Drainage renewals etc



Assessing the damage

- Kerb and channel - Topo survey and water tanker
- Pavement – Falling weight deflectometer (FWD)



Scheme design approach

- Why not rebuild as it is now? PROSPERITY!
- How to tackle this given not all damage known?
- Need to be flexible so new will fit with old
- Asset management considerations
- Walking and Cycling Strategy etc
- Town Centre project

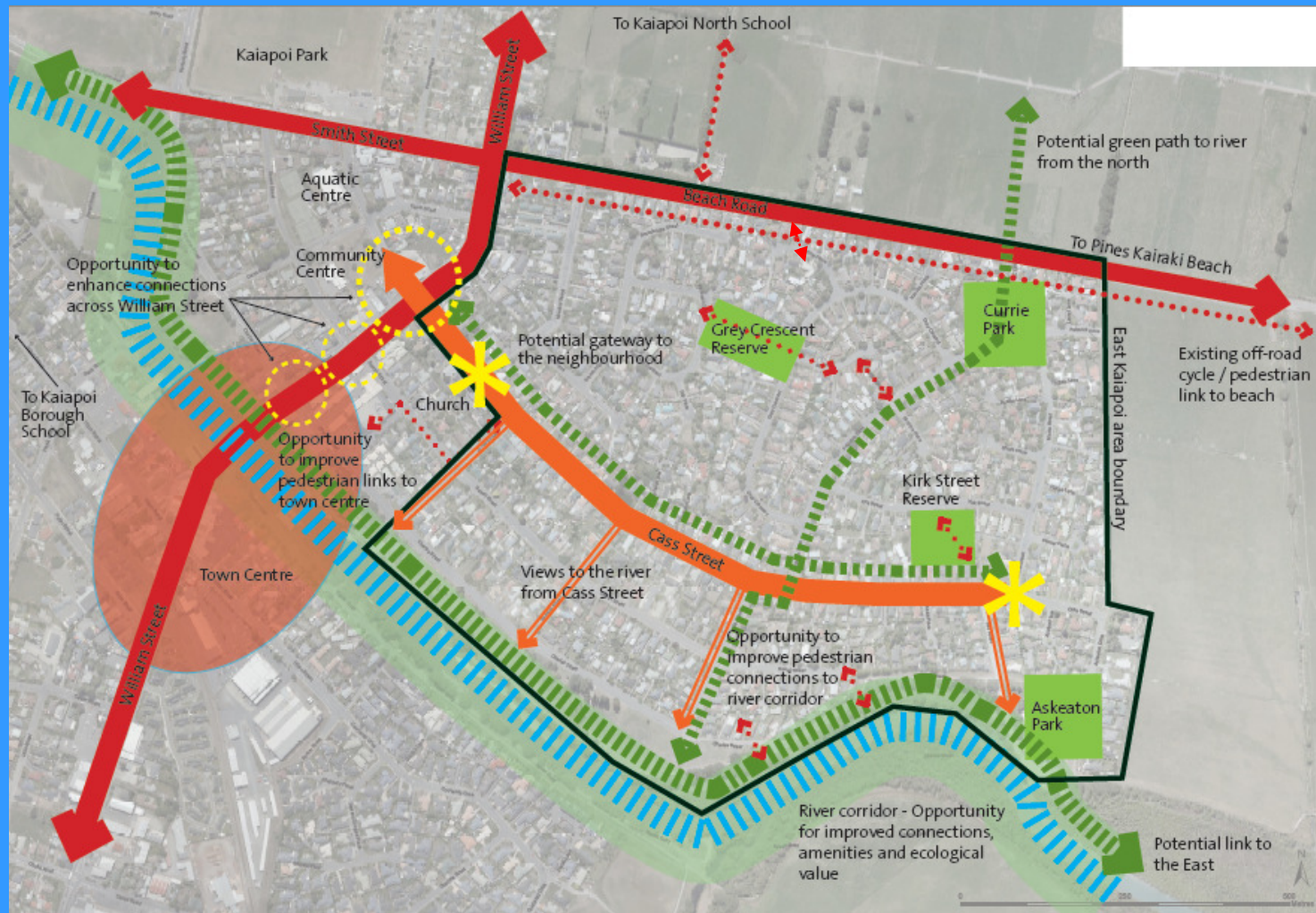


Consultation approach

- Issues with timing– in the right headspace?
- Consultation / information overload?
- Absentee residents because house damaged
- Decided to engage as much as possible



Scheme design – East area



Scheme design – East area



Scheme design – East area



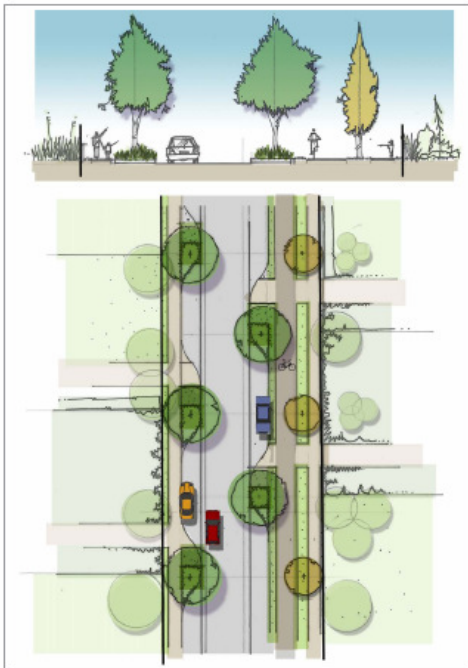
- Test the proposed Selwyn District local road hierarchy
- Ask the people what they want at Street Ideas BBQs (next slide)
- Develop typical design template for each street type
- Apply template once extent of damage known
- Good alignment with NZS 4404

Scheme design – East area

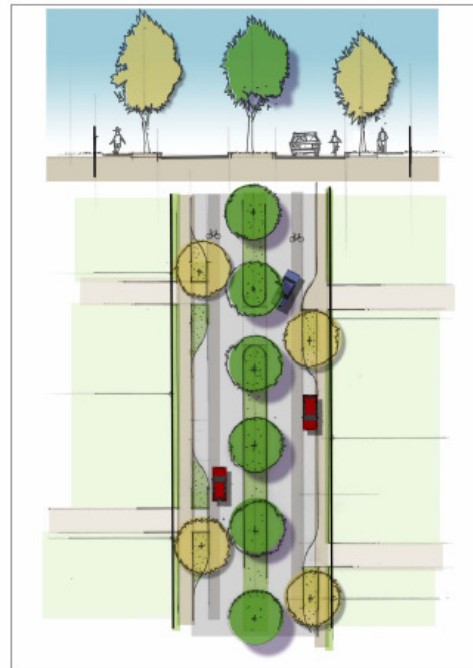
- Asked for preference on ideas for different road types



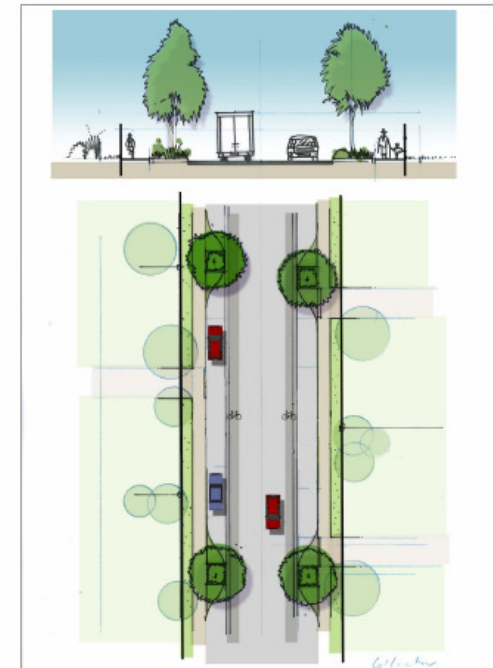
Idea 1 - Greenway



Idea 2 - Boulevard



Idea 3 - Avenue



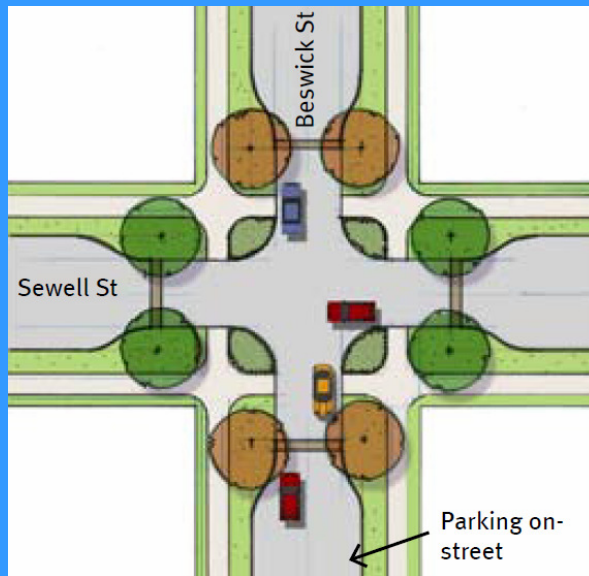
Consultation feedback

- People embraced the chance to be involved
- Education opportunity at Street Idea BBQs
- Desire to address issues through rebuild
 - Sense of 'place' – liveability
 - Speed
 - Severance
 - Walking and cycling environment
 - Lots of mobility scooters
- Allowed design objectives to be set
- Input to 'Streetscape Plans'



Design outcomes so far

- Reinforce low speed environment – narrower roads, better intersections, traffic calming features



- Future proofing potential bus routes and 40km/h speed limit zones, neighbourhood gateways
- Potential link between cul de sac and Kirk St

Design outcomes so far

- Off road cycle paths - better access to schools



Conclusions

- Very rare opportunity to rebuild on such a scale
- Required fast track process – consider risks
- A template approach worked well for Kaiapoi East
- Consulting on concepts rather than detail gets better buy-in
- Key opportunities - addressing speed, better walking & cycling environment, accessibility and attractive streets



Transport Engineers role in the recovery

- Leadership roles?
- Work with other disciplines
- Technical direction - advise
- What about the IPENZ Transportation Group?
- Watch this space!



Any questions?

Contact

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for further information

