



Officers Report

Appendix 9

WDC Roding Technical Report

Preliminary Draft Waimakariri District Residential Red Zone Recovery Plan

Technical Experts Report on Amendments Sought Through Submissions

Date	16 march 2016
From	Gavin Lake
Subject	Roading

Qualifications and experience

I am the Director of Lake Civil Consulting Ltd, engaged since April 2012 by Waimakariri District Council in the role of Earthquake Infrastructure Roothing Recovery Programme Manager. Prior to that I had been engaged since 2010 as WDC's Roothing Recovery Design Leader.

I hold a tertiary qualification in civil engineering from the UK that was assessed in 1999 by the New Zealand Qualifications Authority as being NZCE equivalent. I have over 25 years' experience in the civil engineering industry, predominantly relating to highways projects across New Zealand, the UK, Australia and the Middle East. I have been a practising roading engineer in New Zealand since 1998, both as a local authority employee and as a consultant. I became a Chartered Professional Engineer (CPEng) in 2006 and hold a current Registration Certificate (#1005000).

Summary of comments

This document is based on the summary provided to me of the submissions received to the Preliminary Draft Waimakariri District Residential Red Zone Recovery Plan. The summary provided records 137 submissions. The following addresses the roading aspects of the points recorded in the summary of submissions.

The vast majority of submissions did not respond to the two specific questions about their preferred roading options for Kaiapoi East and Kaiapoi South and made no other specific reference to roading matters. Those that did express a preference are summarised as follows:

Kaiapoi East (30 preferences expressed)

Option 1	Option 2	Option 3	Option 4
18 (60%)	7 (23%)	4 (13%)	1 (4%)

Kaiapoi South (28 preferences expressed)

Option 1	Option 2
19 (68%)	9 (32%)

Among those that expressed a preference, there was a majority of support for the road options preferred by Council and the Kaiapoi Community Board.

A number of comments were made relating to the access to the Askeaton Park boat ramp, cycle and walkway connectivity, and potential traffic issues. There were also singular comments about the effect on electricity infrastructure from changes in the road network, the absence of the roading options consulted upon in March 2015 and the efficient use of existing infrastructure.

Technical discussion and conclusions

Askeaton Park Boat Ramp Access

A number of respondents have noted the importance of access to the existing boat ramp in Askeaton Park, which is currently accessed from Hall Street. The current proposal is to create a new unsealed (gravel) road, wide enough for boat trailers to pass, as this is appropriate in terms of level of service versus cost. The geometry of this new access road will follow the “paper road” which exists off the eastern end of Sewell Street, although the exact alignment and any land requirements will need to be confirmed through design. The road would be engineered to a standard appropriate to the poor ground conditions.

Five respondents expressed concern about dust and undesirable driving behaviour and suggested that this road be sealed. Consideration should be given to sealing this proposed road.

Cycle and Walking Routes

Two respondents requested a walking link between Moore Street and Feldwick Drive. This would be desirable in terms of improved connectivity through the area. Therefore it is proposed to revise the plan to include a recreational and ecological link between Feldwick Drive and the existing walkway along the eastern boundary of the Regeneration Area.

Five respondents have requested a bridge over the Kaiapoi River to provide a cycle/walking link between Kaiapoi South and Kaiapoi East. This would provide opportunities to connect the pathways and cycleways on each side of the river. However consideration should be given to whether a new bridge is within the scope of the Plan. Further work would be required to assess its feasibility and whether it would provide sufficient benefits to justify the cost. The views of the WDC Greenspace Team should also be obtained to determine how a new bridge might fit in with their reserves plans.

Traffic Behaviour

One respondent has expressed a concern about traffic congestion in the local streets generated by the potential sports facilities in Kaiapoi East. The intention is that off-road parking will be included in the facility and that the main access will be from Cass Street rather than the residential roads to the north.

One respondent has called for the reinstatement of the access road that existed pre-earthquake along the true right bank of the river to the eastern edge of the Regeneration Area. The stopbank repair/raising works have left insufficient width to reinstate this road and instead it is intended that vehicle access to the Heritage and Mahinga Kai area will be from Courtenay Drive.

Three respondents have expressed concerns about vehicle speeds along Courtenay Drive and this is also representative of feedback from earlier consultation. Both roading options presented would include appropriate speed control measures.

Electricity Infrastructure & Other Servicing Requirements

MainPower has made a submission highlighting the need to consider electricity cables and assets underneath the existing road network, particularly where they need to be retained in areas that will become green space. At this stage it is proposed not to uplift the legal status of the existing road

corridors so the legal protection of these services will continue. If road stopping is contemplated then discussions would be held with all service authorities at the planning stage. Road stopping is controlled by the Local Government Act and full consultation is required before roads can be legally stopped.

As with any new roading project, the design development will consider property access requirements (e.g. rubbish collection, emergency services) and will coordinate with underground utilities. Refer also to Recovery Plan sections 4.3.6 and 4.4.9.

Previous Consultation on Roading Options

One respondent is unhappy that options for a new access road in Kaiapoi East, which were consulted upon in March 2015, have been significantly modified for the Recovery Plan. This has been necessary to create areas of sufficient size and layout for the proposed future land uses. The current proposals make better use of the existing road network and seek to optimise the length of new road required to serve the proposed future land uses.

Utilisation of Existing Roads

The Crown has submitted that greater emphasis needs to be placed on efficient and financially responsible use of existing infrastructure. Over the past 5 years Council has carried out a programme of repairs to damaged roads and this is now complete in the Kaiapoi West, Pines Beach and Kairaki Regeneration Areas. The scope and scale of those works have been tailored to the condition of the assets and agreed on a project by project basis with the New Zealand Transport Agency (NZTA).

The roads within the Kaiapoi East and Kaiapoi South Regeneration Areas are heavily damaged and require significant works to restore them to an acceptable standard. The Recovery Plan utilises the existing road corridors and the underlying pavement structure as much as practicable. The project costings allow for road surface reshaping rather than total reconstruction wherever possible, based upon detailed condition assessments of the existing roads. In addition to this, kerb and channel has been omitted from the proposals, where appropriate, in favour of more economical drainage facilities. As with the road earthquake repairs carried out to date, Council will continue to liaise with NZTA to ensure appropriate and economic solutions are implemented.

Changes to Kaiapoi East Proposed Road Layout

As a result of submissions received, the proposed cemetery has been relocated to the south. Access will be via Cass Street and/or the extension of Charles Street that will service the Askeaton Park boat ramp. Relocation of the cemetery and the Crown's acquisition of 7 Nandina Place have provided the opportunity to revise the proposed road layout and maximise the rural land use area. It is now proposed to access 10 Feldwick Drive from Cass Street, removing the need to reinstate most of the damaged section of Feldwick Drive.

Technical recommendation / conclusion

This information is provided to assist the Hearings Panel when they consider the submissions from the community.