Waimakariri District Council

Utilities and Roading Committee

Agenda

Tuesday 15 August 2023
9am

Council Chambers
215 High Street
Rangiora

Members:

Cr Niki Mealings (Chairperson)
Cr Robbie Brine
Cr Philip Redmond
Cr Joan Ward
Cr Paul Williams
Mayor Dan Gordon (ex officio)

WAIMAKARIRI
DISTRICT COUNCIL

AGENDA CONTENTS – UTILITIES AND ROADING COMMITTEE

The Chairperson and Members
UTILITIES AND ROADING COMMITTEE

A MEETING OF THE UTILITIES AND ROADING COMMITTEE WILL BE HELD IN THE COUNCIL CHAMBER, RANGIORA SERVICE CENTRE, 215 HIGH STREET, RANGIORA ON 15 AUGUST 2023 AT 9AM.

Sarah Nichols
GOVERNANCE MANAGER

Recommendations in reports are not to be construed as Council policy until adopted by the Council

BUSINESS

Page No

1 APOLOGIES

2 CONFLICTS OF INTEREST

Conflicts of interest (if any) to be reported for minuting.

3 CONFIRMATION OF MINUTES

3.1 Minutes of the meeting of the Utilities and Roading Committee held on Tuesday 18 July 2023.

8-16

RECOMMENDATION

THAT the Utilities and Roading Committee:

(a) **Confirms** the circulated Minutes of the meeting of the Utilities and Roading Committee held on 18 July 2023, as a true and accurate record.

3.2 Matters arising (From Minutes)

3.3 Notes of the Utilities and Roading Committee Workshop held on Tuesday 18 July 2023.

17-18

RECOMMENDATION

THAT the Utilities and Roading Committee:

(a) **Receives** the notes of the Utilities and Roading Committee Workshop held on 18 July 2023

4 DEPUTATION/PRESENTATIONS

4.1 Flooding Experience along the Cam River – John Cooke

J Cooke will be in attendance to discuss his experience from the recent flood event.

5 REPORTS

5.1 Water New Zealand - National Performance Review NPR 2021/22 – David Paz Lobon (3 Waters Asset Analyst) and Kalley Simpson (3 Waters Manager)

19-71

RECOMMENDATION

THAT the Utilities and Roading Committee:

(a) **Receives** report No. TRIM 230609084727.

(b) **Notes** that the Waimakariri District Council performs relatively well in the key areas of focus identified in the 2021/22 National Performance Review (NPR) compared to other councils.

(c) **Notes** that the areas Waimakariri District Council performs well above other councils in are:

i. Understanding of asset condition and having a low average pipe age.

ii. Having low number of dry weather and wet weather wastewater overflows.

iii. Investing in stormwater capital works upgrades and improvements.

(d) **Notes** that there is room for improvement in the following, which will be considered as part of the Long Term Plan process:

i. Stormwater consenting needs to be progressed and implemented for our remaining urban areas.

ii. Hydrant testing programs needs to transition towards a more proactive approach in the future.

iii. Climate change risk assessment work needs to be completed, an adaptation plan needs to be developed and emissions baseline assessment undertaken for water supply and stormwater to help address climate change challenges.

(e) **Notes** that the NPR provides numerous performance metrics which can be used comparative purposes on specific matters nationwide.

5.2 Avian Botulism Management 2022/23 – Sophie Allen (Water Environment Advisor) and Angela Burton (Water Environment Advisor - Fixed Term)

72-78

RECOMMENDATION

THAT the Utilities and Roading Committee:

(a) **Receives** Report No. 230601080981.

(b) **Notes** the low bird death numbers (24 birds) for the 2022-23 season at coastal Waimakariri District Council Wastewater Treatment Plants (WWTPs), as collected by contractors to check for and contain any avian botulism, with no avian botulism outbreak detected.

(c) **Notes** that there were lower bird death numbers collected at the Councils WWTPs than what was collected by Christchurch City Council at the Bromley Wastewater Treatment Plant in the summer of 2022-23.

(d) **Circulates** this report to the Council, the Waimakariri Water Zone Committee, and the Community Boards for information.

5.3 Private Well Study – Results from 2022 study – Sophie Allen (Water Environment Advisor) and Angela Burton (Water Environment Advisor - Fixed Term)

79-89

RECOMMENDATION

THAT the Utilities and Roading Committee:

(a) **Receives** Report No. 230516070164.

(b) **Notes** the findings of the 2022 study, with no wells above the nitrate-nitrogen Maximum Acceptable Value (MAV) set in the Drinking Water Standards for New Zealand (2022). Of the wells sampled 44% in Eyreton, 67% in Cust, 40% in Carleton and 29% in Swannanoa sampling areas were above half of the MAV (5.65 mg/L).

(c) **Notes** that the median nitrate concentration for the Eyreton and Cust sampling areas, as sampled in the 2022 study, exceed the limit of a median of 5.65 mg/L nitrate-nitrogen set in Plan Change 7 of the Land and Water Regional Plan for private water supply wells. The Swannanoa and Carleton sampling areas did meet this limit.

(d) **Notes** that Waimakariri District Council and Environment Canterbury staff will continue to raise awareness of the health impacts of high nitrates, and to encourage private well owners to test water regularly, including updating and wider distribution of the publication of a 'managing a private well supply' pamphlet for the District.

(e) **Notes** that Waimakariri District Council proposes to repeat this study in spring 2023 (with 10 wells in each of the four sampling areas (40 wells total). Well owners from the previous sample rounds will be approached for repeat annual sampling, to allow for assessment of trends over time. New well owners will be approached to replace those who no longer want to participate in the study. The new well owners will be randomly selected within the sample areas.

(f) **Notes** that trends for nitrate concentration over time are not able to be concluded from data for only four years, or two years of data for Swannanoa and Carleton sampling areas.

(g) **Circulates** this report to the Council, Community Boards and the Waimakariri Water Zone Committee for information.

6 CORRESPONDENCE

Nil.

7 PORTFOLIO UPDATES

7.1 Roading – Councillor Philip Redmond

7.2 Drainage, Stockwater and Three Waters (Drinking Water, Sewer and Stormwater) – Councillor Paul Williams

7.3 Solid Waste– Councillor Robbie Brine

7.4 Transport – Mayor Dan Gordon

8 MATTERS REFERRED FROM RANGIORA-ASHLEY COMMUNITY BOARD

8.1 Transport Choices Project 2 – Approval to go to Consultation – Kieran Straw (Civil Projects Team Leader) and Don Young (Senior Engineering Advisor)

90-109

RECOMMENDATION

THAT the Utilities and Roading Committee:

(a) **Approves** the Revised Scheme Design (Trim: 230726113136) for the purposes of consultation.

(b) **Notes** that feedback from PaknSave on the Revised Scheme Design will be verbally updated at the meeting.

(c) **Notes** that staff will present the approved Scheme Design to directly impacted residents and stakeholders for feedback.

(d) **Notes** that staff will ensure that the directly affected residents and stakeholders along the route are advised that the revised Scheme Plan is still subject to approval of KiwiRail, and that if this is not forthcoming, the Council will need to re-consider its options.

(e) **Notes** that if the recommendations in this report are adopted, then the staff will begin consultation with affected residents and stakeholder, within the following 2-3 weeks. This consultation will include a letter drop including an information pamphlet, at least 1 drop-in session, targeted meetings with the schools and any businesses that request it, and the opportunity to provide feedback either electronically or via hard copy.

(f) **Notes** that feedback from the consultation will be fed into the Detailed Design, and that the Detailed Design will be reported back to the Board prior to going to tender, by which time it is expected that staff will have received the KiwiRail response to the Level Crossing Safety Improvements Assessment (LCSIA), the results of the So Far As Is Reasonably Practical (SFAIRP) assessment and KiwiRail's response, and the results of a detailed design Road Safety Audit for the full route.

(g) **Notes** the scheme design requires the removal of 7 on street car parking spaces as reported in the previous reports, plus the additional removal of 8 informal angle parks on Railway Road outside Allied Concrete.

(h) **Notes** that any parking to be removed as result of the Scheme Design will be communicated directly with the immediate adjacent residents or businesses, and that approval of the draft no-stopping will be sought during the approval of detailed design following consultation.

(i) **Notes** that the scheme design requires the removal of 12 existing street trees. This has not changed from the previous report.

(j) **Notes** that the removal of street trees has been discussed with Greenspaces, who are represented on the Project Control Group. Greenspace are supportive of the removal of the identified trees provided that they are replaced elsewhere along the length of the route.

(k) **Notes** that this project is funded through the "Transport Choices" funding stream which requires that all works is complete by June 2024.

(l) **Notes** that a Technical Note will be sought from WSP to consider any changes to their original road Safety Audit, as a result of the revised Scheme Plan.

(m) **Notes** that the proposed Rangiora Eastern Link road will include cycle facilities to provide connectivity to east Rangiora. This will not negate the requirement for safe cycle access through Southbrook. The approved Walking and Cycling Network Plan shows both routes servicing different areas of Rangiora.

9 QUESTIONS UNDER STANDING ORDERS

10 URGENT GENERAL BUSINESS

NEXT MEETING

The next meeting of the Utilities and Roading Committee will be held on Tuesday 19 September 2023 at 9am.

MINUTES OF A MEETING OF THE UTILITIES AND ROADING COMMITTEE HELD IN THE COUNCIL CHAMBER, RANGIORA SERVICE CENTRE, 215 HIGH STREET, RANGIORA ON TUESDAY 18 JULY 2023 AT 9AM.

PRESENT

Councillors R Brine, P Redmond, J Ward, P Williams and Mayor D Gordon.

IN ATTENDANCE

Councillors B Cairns and T Fulton.

G Cleary (General Manager Utilities and Roading), J McBride (Roading and Transport Manager), K Simpson (3 Waters Manager), R Kerr (Stimulus Programme Delivery Manager), J Recker (Stormwater and Waterways Manager) and E Stubbs (Governance Support Officer).

ELECTION OF CHAIRPERSON

G Cleary opened the meeting and called for nominations for Acting Chair.

Moved: Councillor P Williams Seconded: Councillor Ward

THAT Councillor R Brine be nominated as Acting Chair.

CARRIED

1 APOLOGIES

Moved: Councillor Redmond Seconded: Councillor Ward

THAT an apology of absence be accepted from Councillor N Mealings.

CARRIED

2 CONFLICTS OF INTEREST

Councillor Williams wished it to be recorded that he was a resident of River Road and would be abstaining from the vote on Item 8.1.

3 CONFIRMATION OF MINUTES

3.1 Minutes of the meeting of the Utilities and Roading Committee held on Tuesday 20 June 2023.

Moved: Councillor Redmond Seconded: Councillor Williams

THAT the Utilities and Roading Committee:

(a) **Confirms** the circulated Minutes of the meeting of the Utilities and Roading Committee held on 20 June 2023, as a true and accurate record.

CARRIED

3.2 Matters arising (From Minutes)

There were no matters arising from the minutes.

3.3 Notes of the workshop of the Utilities and Roading Committee held on Tuesday 20 June 2023.

Moved: Mayor Gordon Seconded: Councillor Williams

THAT the Utilities and Roading Committee:

(a) **Receives** the circulated notes of the workshop of the Utilities and Roading Committee held on 20 June 2023.

CARRIED

4 DEPUTATION/PRESENTATIONS

Nil.

5 REPORTS

5.1 Stimulus Programme Close Out Report – Rob Kerr (Stimulus Programme Delivery Manager)

R Kerr advised the report provided a close out summary of the completed Stimulus Programme of works. The programme spent $8.02 million granted from the Crown to upgrade three waters infrastructure as part of the three waters reform process. The Council also spent a further $2.29 million from the Council on the program. The total cost had increased from $10.35 million to $10.92 million with increases at Tuahiwi sewer works and Loburn Lea.

The funding had delivered ten physical works projects and five investigation projects. The majority was internally managed which was a phenomenal effort by staff. The benefits of the program were outlined in the report, of note was it had allowed resolution of long-standing issues for some small schemes that had not been in a position to afford the necessary woks due to a small rating base.

Councillor Redmond commented that there was a typo in paragraph 5.2, and R Kerr agreed that Te Ngāi Tūāhuriri hapū had been interested in the program and the partnership had worked well.

Councillor Cairns referred to the sewer extension in Tuahiwi allowing for future development of Maori owned land and asked the extent of development that it would support. R Kerr explained he did not have information on numbers, however the work resolved existing constraints and setup the system for future development.

Moved: Councillor Williams Seconded: Councillor Redmond

THAT the Utilities and Roading Committee:

(a) **Receives** Report No. 230324040945.

(b) **Acknowledges** the successful completion of the Three Waters Stimulus Programme of works.

(c) **Circulates** this report to all Community Boards for information.

CARRIED

Councillor Williams commented it was good to see the completion of the work. It had solved a number of problems.

Councillor Redmond commented it was a very good report, clear and concise. He congratulated the team for completing the work on time and on budget which was a good achievement at a difficult time.

Councillor Ward reiterated her sincere thanks for the work. She believed the delivery had been well balanced.

G Cleary and the Mayor thanked R Kerr for the significant contribution he had made to Council over the past 2 years in particular leading a number of large projects.

5.2 Zone Implementation Programme Addendum Capital Works Programme – 2023-24 – Sophie Allen (Water Environment Advisor)

S Allen introduced the report which detailed the proposed 2023-24 Council capital expenditure work programme, based on the Zone Implementation Programme Addendum (ZIPA) recommendations. The projects included fish passage improvements, biodiversity and amenity improvements, terrestrial planting, improvement to inanga spawning areas, and improvements for a recreation esplanade strip.

Councillor Williams asked if staff had liaised with the drainage team regarding planting and the ability to get diggers and other machinery in to clear drains as necessary. He provided examples where planting had prevented machinery access. S Allen explained that the planting sites were part of a continuous planting projects and were not new areas. Planting was carried out in consultation with drainage staff and ECan engineers. She asked that Councillors advise her of where planting had created difficulties. The inanga spawning area planting was complimentary to the other work being completed on McIntosh Drain.

Councillor Fulton referenced the use of planting to shade areas preventing the need for mechanical excavation of a stream bank. S Allen replied that staff did look for sites that would be suitable for self-management.

Councillor Fulton asked where members of the public could be directed for funding for planting natives. S Allen advised that the Waimakariri Zone Committee had funds for projects and the Council had some funds, for example the Cam River.

Moved: Councillor Williams Seconded: Councillor Redmond

THAT the Utilities and Roading Committee:

(a) **Receives** report No. 230623094211.

(b) **Approves** the proposed 2023-24 Waimakariri District Council capital expenditure work programme, based on the Zone Implementation Programme Addendum (ZIPA) recommendations.

(c) **Requests** staff liaise with the drainage team prior to planting to ensure machinery access is maintained for mechanical drain clearance.

(d) **Circulates** this report to all Community Boards, WDC-Rūnanga liaison meeting and the Waimakariri Water Zone Committee for their information.

CARRIED

Councillor Williams commented it was a good report and noted the importance of access to allow for drain clearance.

6 CORRESPONDENCE

Nil.

7 PORTFOLIO UPDATES

7.1 Roading – Councillor Philip Redmond

- Continuing joint road inspection with Corde.

- Flood metalling from July 22 event was completed, was ongoing issues grading frequency.
- Attended tour of gravel road network with roading staff member – overall network not too bad, there were some areas that obvious maintenance was required. It was good to see work happening and heading in the right direction.
- Work continuing on Transport Choices Programme including meeting with Kiwirail regarding rail corridor safety assessments, noted update circulated by Don Young.
- Tuahiwi gritted path construction - final tidy-up underway.
- Preparation for Speed Management Plan workshop as part of the upcoming AllBoards briefing.
- Project Delivery unit were closing out the last of items for 2022/23 and about to start survey design for 2023/24.
- The new roundabout construction at Kippenberger Avenue/ McPhail Avenue was underway.
- Footpath renewals were underway in Park Avenue, Oxford.
- A further 4400 m^3 metal to be placed on 11 roads.
- Lees Valley would receive remetalling in July.
- Ice gritting was continuing.
- Footpath inspections had been completed in Morecroft, Kaiapoi looking at tree root damage issues.
- Winter driving advertising was underway.
- Ice scrapers and window cloths were available at service centres.
- Consultation on Transport Choices funding remained on hold until issues were resolved.
- Road Reserve Management Policy had planned consultation the following month.

Councillor Cairns asked when the Morcroft trip hazard program was planned to occur. J McBride advised that grinding would be underway this week, the larger sections that required replacement would follow.

7.2 Drainage, Stockwater and Three Waters (Drinking Water, Sewer and Stormwater) – Councillor Paul Williams

- Noted work on Mandeville Resurgence and workshop.
- Better off Funding – staff were investigating options including tree removal in drains.
- Had attended a number of Drainage Advisory Board meetings, it was the happiest he had seen groups.

7.3 Solid Waste– Councillor Robbie Brine

- Solid Waste staff visited the Selwyn Districts' new education facility at their transfer facility coming away with good ideas for the new facility.
- Council had been approached by Christchurch City Council regarding a regional facility for kerbside organics – the Council was supportive of this proposal.
- Currently the Burwood organics treatment facility could still accept Waimakariri organics however staff were looking at options in case public pressure forced closure of the facility.
- The Draft Waste Assessment had been received and would be brought to the August meeting.
- The initial assessment of non-financial KPIs were looking positive for the last financial year including meeting landfill reduction and diversion increase targets being met. The final quarter had seen an improvement in kerbside collection services.
- Collection drivers were using their 'Contamination App' to let staff know of issues while doing collection rounds. The photos were good evidence for why collections had not been made.

- Kerbside recycling audit statistics: 834 contaminated, 269 letter sent after second contamination, 155 bins identified for removal after third contamination and 124 bins removed. 13 bins had been returned
- Staff were working a number of projects to improve signage around site and advertising campaigns to address ongoing issues such as common items in recycling bins that should not be there.

Councillor Williams asked if a Solid Waste meeting was planned and Councillor Brine advised staff were currently organising.

7.4 Transport – Mayor Dan Gordon

- From a regional transport perspective, were still awaiting the Government Policy Statement to be announced. Was frustrating as much work relied on that.
- Noted some Councils used the Infrastructure Fund Levy for roading projects and had requested staff look into this option to see some projects such as Skewbridge be completed.

8 MATTERS REFERRED FROM RANGIORA-ASHLEY COMMUNITY BOARD

8.1 River Road Upgrade – Approval of Scheme Design

J McBride introduced the reporting noting early engagement had been undertaken with the main feedback being around the need for on-street parking. Further development of the scheme design had made it clear that there was insufficient budget for the full length.

J McBride advised that the report had been taken to the Rangiora-Ashley Community Board to seek endorsement of the scheme design. The Board had considered the report and determined that Option 2 – to upgrade the southern side of River Road for the full urban length was more appropriate than the staff recommendation for Option 3 – to upgrade from Riverview Road to No.61 River Road (an updated recommendation was tabled). J McBride advised that Option 2 required additional budget of $175,000 taking the total to $700,000. This would require a roading rates increase of 0.11% and overall 0.02%. Current advice from Waka Kotahi was that the National Land Transport Fund was fully allocated and there was no ability to secure additional. If there as underspend staff could put in an application at that time.

At the Community Board meeting there had been questions around property connections to the sewer. J McBride advised that sewer connections would extend beyond the path and there would be information on sewer connections in the consultation.

Councillor Redmond asked about cost savings if the full urban length was completed at one time. J McBride advised yes, there would definitely be cost savings if completed at one time. The staff recommendation had been made in order that the work would fit within the budget allocated. G Cleary agreed that from a staff point of view it made sense to complete in full. There was currently a deficiency in level of service in that location, now with the dog park, 'park n ride' and health facilities there was a lot more activity.

Councillor Williams thanked staff for responding to questions around sewer connections. As he lived on the road he was aware of concerns regarding the width of the road considering the presence of buses and need for parking. Some residents had suggested that the current width of the path was adequate and did not need to be increased at the expense of road width and parking. J McBride advised that in terms of a shared path, the minimum recommended width was 2.5m compared to the current width of 1.8m. The reason that this funding had been approved by Waka Kotahi was to assist other modes of transport therefore if the path was not widened, it would not be providing the facilities to meet requirements for funding. The grass berm allowed parked cars to not impede on the path with people entering and exiting cars.

Councillor Williams noted item 4.7 – that 'the Management Team had reviewed the report and supported the recommendations' and queried the process and due diligence of the Management Team as the recommendation in the report was now different to what was presented by staff. G Cleary explained that the Management Team had given the report a lot of consideration and scrutiny. Any situation like this posed challenges weighing up a constrained budget with the best outcome for the project. The process was that the Management Team reviewed the report and recommendations before it went to the Community Board, and it was then the Community Board who gave the recommendation to the Committee and the Community Board could change the recommendation at their discretion. It was not uncommon for Community Board's to change recommendations to Committees or Council. The updated recommendation from the Community Board should have been provided in the agenda however that had been a matter of timing.

Mayor Gordon supported concerns regarding timing, the Community Board meeting had been held the Wednesday prior to the meeting and the Committee agenda should have been updated. He asked if staff supported the recommendation proposed by the Board. J McBride and G Cleary agreed that it made sense in terms of efficiency to complete the work at one time.

Mayor Gordon requested clarification on areas that would be tidied up by the work, particularly areas of informal parking that required shingling, he suggested that as an important entrance to Rangiora it should be improved.

Councillor Fulton noted the cost escalation and asked what changes meant there was not budget to complete the full length. J McBride advised that in terms of street lighting that had been an oversight. Staff did look ahead and provide cost estimate for projects in the National Land Transport Programme. Cost fluctuations were something they tried to manage. Councillor Fulton asked if contingencies were included and J McBride advised that they did have a 20% contingency however cost escalations were at 22% and that was before detailed design.

Councillor Williams referred to the parking bay closest to Ashley Street was it five parks as in the report or the six in the map. J McBride clarified it was five.

Councillor Ward requested clarification on the budget and J McBride advised that the recommendation included a request to Council for additional budget of $175,000.

Moved: Councillor Ward Seconded: Mayor Gordon

THAT the Utilities and Roading Committee:

(a) **Approves** the River Road Upgrade Scheme Design (as per Trim No. 230412051155).

(b) **Endorses** proceeding with Option Two – Upgrading the southern side of River Road for the full urban length, between Ashley Street, and the western boundary of no. 61 River Road, subject to additional funding being approved;

(c) **Notes** this option has an estimated construction cost of $700,000, which results in a budget shortfall of $175,000;

(d) **Approves** the installation of no stopping restrictions a as per the following table.

Town	Street Name	Side of Road	Location	Length (m)
Rangiora	River Road	South	Ashley Street to Riverview Road	175
Rangiora	River Road	South	Riverview Road to Cones Road	285
Rangiora	Riverview Road	East	River Road going South	10
Rangiora	Riverview Road	West	River Road going South	10
Rangiora	River Road	North	Both sides of each Park and Ride entranceway	18

(e) **Notes** that there is currently no formal on-street parking on River Road, and that there is a lack of on-street parking. It is noted that the residential land use on the southern side of the road, with the addition of community facilities and recreational areas on the northern side of the road has created more parking demand in the area. The creation of formalised parking areas therefore fits with the surrounding land use.

(f) **Notes** that staff will proceed to detailed design and tender stage following approval of the Scheme Design.

(g) **Notes** that the recommended option has been through an independent Road Safety Audit and any changes to the design have been completed.

(h) **Notes** that a budget of $40,000 was available in 2022/23 for design and $485,000 is available in 2023/24 to complete this first stage of the work. The budget is therefore $525,000 across both years.

AND

THAT the Utilities and Roading Committee recommends:

THAT the Council:

(a) **Approves** additional budget of $175,000 to allow the full upgrade to be complete on the south side of River Road from Ashley Street to Cones Rd;

(b) **Notes** this option has an estimated construction cost of $700,000;

(c) **Notes** that this will be unsubsidised budget funded from the Roading Strategic account which is loan funded. The rates impact in the 20223/24 Annual Plan year would be a 0.11% increase on the Roading rate and a 0.02% increase overall on rates.

CARRIED

Councillor Williams abstain

Councillor Ward advised the recommendation to upgrade the full urban length had been unanimous from the Board where there had been very good discussion. Whether the extra $175,000 was loan or rates funded, the benefit of completing the whole project at one time had been clear.

Mayor Gordon agreed with the Community Board, the job needed to be done once and done right. He understood staff were trying to ensure savings however this area was well used and it was important to get it looking right. As an important entrance, the area on the northern side also needed treatment so it did not deteriorate and look untidy. During large events at the A&P Showgrounds the area was also regularly parked in. He hoped pricing would could back as competitive.

9 MATTERS REFERRED FROM KAIAPOI-TUAHIWI COMMUNITY BOARD

9.1 Request Approval of No-Stopping Restrictions in Heywards Road

The Chair advised this item was withdrawn prior to the meeting.

10 QUESTIONS UNDER STANDING ORDERS

Nil.

11 URGENT GENERAL BUSINESS

Nil.

12 MATTERS TO BE CONSIDERED WITH THE PUBLIC EXCLUDED

In accordance with section 48(1) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by section 6 or section 7 of that Act (or sections 6, 7 or 9 of the Official Information Act 1982, as the case may be), it is moved:

Moved: Councillor Brine Seconded: Councillor Ward

1. That the public be excluded from the following parts of the proceedings of this meeting:

   Item 12.1 Public Excluded Minutes Utilities and Roading Committee meeting 20 June 2023

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

Meeting Item No. and subject	Reason for excluding the public	Grounds for excluding the public
12.1 Public Excluded Minutes Utilities and Roading Committee meeting 20 June 2023	Good reason to withhold exists under section 7	To protect the privacy of natural persons, including that of deceased natural persons (s 7(2)(a)).

CARRIED

CLOSED MEETING

The public excluded portion of the meeting commenced at 10.05am and concluded at 10.06am.

OPEN MEETING

Moved: Councillor Brine Seconded: Councillor Redmond

THAT open meeting resumes and the business discussed with the public excluded remains public excluded.

CARRIED

NEXT MEETING

The next meeting of the Utilities and Roading Committee will be held on Tuesday 15 August 2023 at 9am.

Workshop

- Mandeville Resurgence Drop-in Session Advertising Strategy – *Jason Recker (Stormwater and Waterways Manager) 45mins*

THERE BEING NO FURTHER BUSINESS, THE MEETING CLOSED AT 10.06AM.

CONFIRMED

_____
Chairperson

_____

NOTES OF A WORKSHOP OF THE UTILITIES AND ROADING COMMITTEE HELD IN THE COUNCIL CHAMBERS, 215 HIGH STREET, RANGIORA ON TUESDAY, 18 JULY 2023, AT 10.20AM.

PRESENT

Councillors R Brine (Chairperson), P Redmond, J Ward, P Williams.

IN ATTENDANCE

Councillors B Cairns and T Fulton.

Community Board Member S Barkle

J Millward (Chief Executive), G Cleary (General Manager Utilities and Roading), K Simpson (3 Waters Manager), J Recker (Stormwater and Waterways Manager) and E Stubbs (Governance Support Officer).

APOLOGIES

Mayor D Gordon, Councillor Mealings.

1. **Mandeville Resurgence Drop-in Session Advertising Strategy** – J Recker (Stormwater and Waterways Manager) and K Simpson (3 Waters Manager)
   PowerPoint (Trim 230718107637)

   Key points:

   - The drop-in was now planned for 11 September 2023 to ensure good attendance. A drop in at Kaiapoi was also being planned to be held in the same week.
   - Provided overview of media campaign and timeline.
   - Provided overview of revised mailout brochure following feedback. The mailout distribution area had increased.
   - Requested delegated authority for brochure signoff.

   Questions:

   - Was Reach media being used?

     No.
   - Was it possible to use the Mandeville Residents Association email list as they had 2000 email contacts.

     Staff would look at option with Councillor Mealings.
   - Did the brochure contain any information on why Silverstream had been included in the mail distribution? Could it explain the perceived impact on Silverstream- ie what the modelling showed.

     Staff agreed information could be included.
   - Wording change was suggested for this section - 'following flooding in June 2014, budget was allocated in 2024/25 for the…' as it made it appear Council had not done anything in the interim years.
   - Suggest change 'options' to 'works'.
   - Was distribution covering Clarkville, Eyreton and Eyrewell (to the south) as they would also be interested.
   - Suggestion to add in a definition of resurgence.
   - On Map 2 suggestion to show where blue line ended. Also, suggestion to improve clarity on green line. Clarity on relationship between dotted green and solid green line. Maybe it could show that water would have to flow backwards.

The line would be a different colour so that it no longer looked related, and labelled as existing resurgence.

- Clarity required on Stage 1 map, how did they terminate, could directional arrows be added. Where was water heading, how did things connect?
- Was the water being guided into the Eyre or Ohoka River?

  Stage 1 – all options into Ohoka Stream.

  Stage 2 – 1m^3/s into the old Eyre River bed below the diversion, there would still be flow through Mandeville.

  It eased the peak of the flow and helped decrease the duration of high flow through Mandeville. The Eyre diversion needed to go into the old Eyre Riverbed and Silverstream, modelling showed no impact, however people would question it.

- It was agreed there was a value in a separate explainer document including – resurgence channel, flow path, directional maps etc on the website so the all the information was available as an addition to the simplified brochure maps. Information could be provided on what an extra cumec looked like with a comparison to flood flows.
- There would be opposition to increased flow to the Ohoka Stream, suggestion there needed to information on the streams ability to take flow and maintenance program to make the stream more resilient.
- Need to include Drainage Advisory Groups in consultation.
- Was there anything in the brochure that provided information on the end goal – eg did the works accommodate a 1 in 200 year event.

  The key benefits could be added – currently the system could take half a cumec and that would be upgraded to a system that could take two cumecs which was a capacity increase of four times. Relating to a return period it was more like returning a five year capacity within channel. It would not alter ground water levels but would provide more capacity.

- It was important to make it clear that this did not solve breakout flooding.
- There was general agreement to delegation of the final sign-off of the brochure to the Mayor on Tuesday 25 July. Members could send in any final comments which could be incorporated.

THERE BEING NO FURTHER BUSINESS THE WORKSHOP CONCLUDED AT 10.50AM

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO:	WAT-03 / 230609084727
REPORT TO:	UTILITIES & ROADING COMMITTEE
DATE OF MEETING:	15th August 2023
AUTHOR(S):	David Paz Lobon, 3 Waters Asset Analyst Kalley Simpson, 3 Waters Manager
SUBJECT:	Water New Zealand - National Performance Review NPR 2021/22
ENDORSED BY: (for Reports to Council, Committees or Boards)	General Manager / Chief Executive

1. SUMMARY

1.1 The purpose of this report is to present the Water NZ 2021/22 National Performance Review (NPR) to the Utilities & Roading Committee and highlight Waimakariri District Council's performance.

1.2 This is the eighth consecutive year that the Waimakariri District Council has participated in the annual survey undertaken by Water NZ, and the third year that Council has obtained a customised report from Water NZ, which is attached to this report.

1.3 Eight key areas of performance (refer below) were assessed as part of the NPR to understand how effectively services are delivered and outcomes on the wellbeing of communities and environment are achieved.

- Public Health and environmental protection
- Resource Efficiency
- Economic Sustainability
- Customer Focus
- Reliability
- Assets
- Resilience
- Workforce

1.4 Generally, Waimakariri District Council performs relatively well in the key areas of focus identified in the 2021/22 NPR. The areas that the Waimakariri District Council performs well above other councils, as identified in the customised report, are:

- Understanding of asset condition – 100% of assets have a grading score.
- Low average pipe age – approximately 20 years compared to 35 years national average.
- Low number of dry weather and wet weather wastewater overflows.
- Investing in stormwater capital works upgrades.

1.5 There is room for continued improvement in the following areas, as identified in the customised report.

- Stormwater consenting – While only 36% of urban stormwater discharges are consented, we have lodged consent with Environment Canterbury for all our main urban areas.

- Hydrant testing – records show 0% of hydrants have been tested in the last five years.
- Emissions baseline assessment – has only been undertaken for wastewater.
- Climate change – currently there is no climate change risk assessment or adaptation plan for 3 Waters, although the climate change risk assessment work is underway.

1.6 The full report and interactive data portal are available from the Water NZ website under the following link:

https://www.waternz.org.nz/ModularPage?Action=View&ModularPage_id=24

Attachments:

i. Water NZ NPR 2021-22 Waimakariri (TRIM 230803117975).

2. RECOMMENDATION

THAT the Utilities & Roading Committee:

(a) **Receives** report No. TRIM 230609084727.

(b) **Notes** that the Waimakariri District Council performs relatively well in the key areas of focus identified in the 2021/22 National Performance Review (NPR) compared to other councils.

(c) **Notes** that the areas Waimakariri District Council performs well above other councils in are:

- Understanding of asset condition and having a low average pipe age.
- Having low number of dry weather and wet weather wastewater overflows.
- Investing in stormwater capital works upgrades and improvements.

(d) **Notes** that there is room for improvement in the following, which will be considered as part of the Long Term Plan process:

- Stormwater consenting needs to be progressed and implemented for our remaining urban areas.
- Hydrant testing programs needs to transition towards a more proactive approach in the future.
- Climate change risk assessment work needs to be completed, an adaptation plan needs to be developed and emissions baseline assessment undertaken for water supply and stormwater to help address climate change challenges.

(e) **Notes** that the NPR provides numerous performance metrics which can be used comparative purposes on specific matters nationwide.

3. BACKGROUND

3.1. The National Performance Review (NPR) serves as a benchmarking tool for organizations that offer public drinking water, wastewater, and stormwater services, including local authorities. Water New Zealand has been conducting this review since 2007, and the Waimakariri District Council has participated in the survey since 2014.

3.2. The primary goal of the NPR is to compare the performance of the different councils and identify areas that need improvement in terms of service delivery. In the latest survey conducted for the 2021/22 period, 33 out of 64 service providers participated.

4. ISSUES AND OPTIONS

4.1. Performance information in the NPR is broken into the following eight focus areas, with associated performance measures, as shown in Figure 1 below:

- Public Health and environmental protection
- Resource Efficiency
- Economic Sustainability
- Customer Focus
- Reliability
- Assets
- Resilience
- Workforce

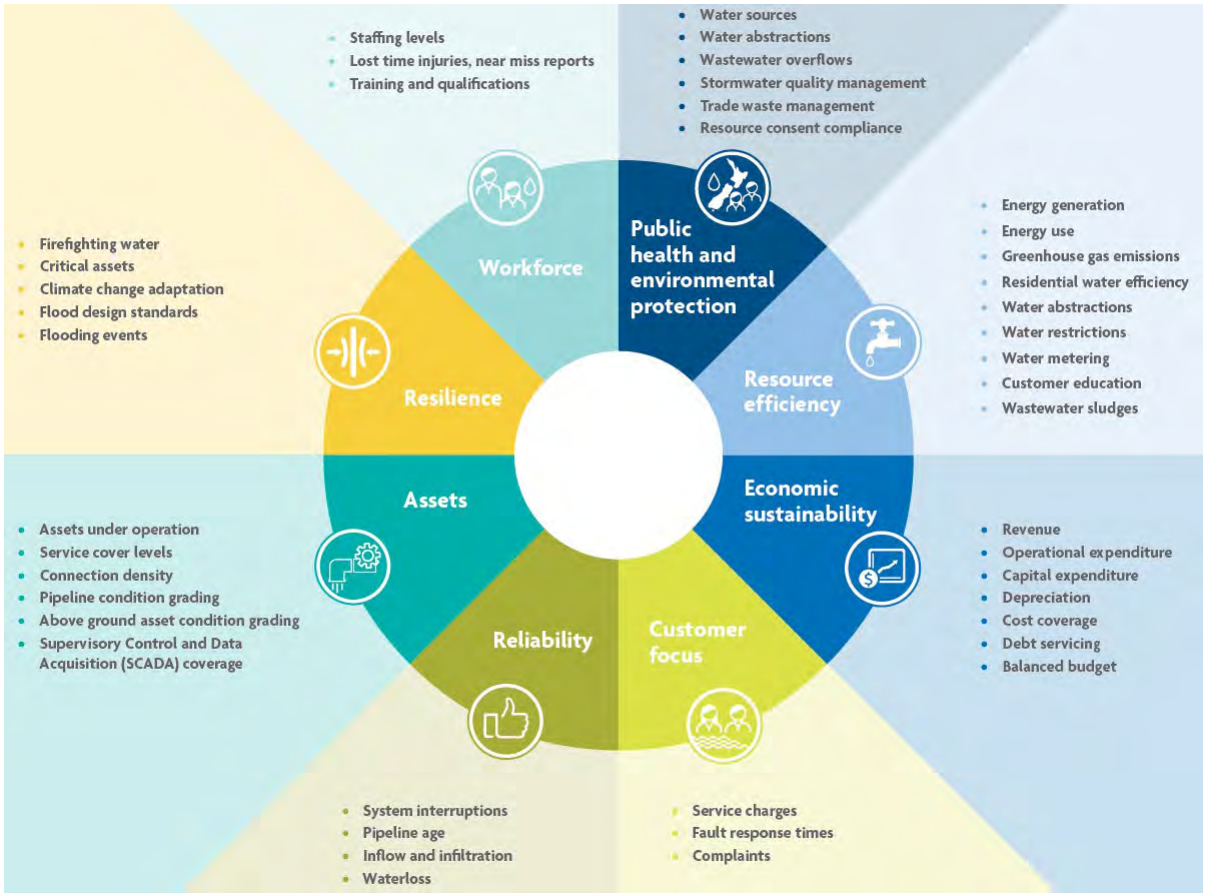


Figure 1 – Performance measures assessed in the NPR

Public health and environment

4.2. The Council performs relatively well compared to other councils in terms of wastewater overflows. It has the fourth lowest number of dry weather overflows (refer Page 11 of Attachment i) and the third lowest number of wet weather overflows for councils that have calibrated wastewater models. There appears to be a trend between extreme weather events and the frequency of wet weather overflow events, with a higher number of overflows in wetter years (e.g.: 2018, 2022) compared to drier years (i.e.: 2020) as shown on Page 13 of Attachment i.

4.3. Waimakariri District Council are working to improve the monitoring and managing stormwater discharges. Currently, 36% of the stormwater discharges are consented (refer Page 14 of Attachment i) and the remaining consents have been applied for but are still being processed by Environment Canterbury. Although the Council's efforts to reduce the environmental impact of its stormwater discharges have positioned it at a comparable level nationally (refer Page 15 of Attachment i), there is still room for improvement in the quality of discharges.

Resource efficiency

4.4. Waimakariri's average daily residential water usage is currently lower than Selwyn District Council and in line with the national average (refer Page 39 of Attachment i). The average daily residential water usage trend suggests a decrease during 2018 to 2022 (refer Page 40 of Attachment i). However, consideration should be given to increase the number of metered connections which are relatively low (24.41% residential and 37.02% non-residential) as this would further assist in reducing leakage (refer Page 34 of Attachment i) and improve the efficient use of water. It is noted that while previous work has indicated that it would be more expensive to implement metering than the savings of reduced water use, a report will be brought to Council in the near future to consider an alternative approach in the future.

4.5. Waimakariri District Council has undertaken the emissions baseline assessment for wastewater (refer Page 29 of Attachment i) and will work on producing an assessment for water supply and stormwater.

Economic sustainability

4.6. Overall, Waimakariri has a strong financial performance, with water and wastewater revenues exceeding costs and maintaining debt servicing at low levels, even though the stormwater sector is slightly behind in covering costs and debt services (refer Page 26 of Attachment i). When comparing Waimakariri with Christchurch and Selwyn, Waimakariri performs better financially in the water and wastewater sectors. Additionally, the financial performance of the stormwater sector in Waimakariri is similar to that of Christchurch and substantially higher than Selwyn.

4.7. Regarding capital expenditure, over the past three years, the district has made significant investments in stormwater and wastewater infrastructure to enhance its level of service. When comparing Waimakariri with Christchurch and Selwyn, Waimakariri District Council has more recently invested more in stormwater capital expenditure (refer Page 22 of Attachment i).

Customer focus

4.8. The average annual residential water, wastewater and stormwater charges are in line with the national average (refer Pages 16 & 17 of Attachment i). A comparison of the water and wastewater charges of Waimakariri, Christchurch and Selwyn shows that Waimakariri charges were 9% higher than Selwyn and almost equal to those in Christchurch.

Reliability

4.9. Overall, the Council delivers a reliable service that meet the standards of level of service in terms of water supply, wastewater, and stormwater.

4.10. There is an error in the planned and unplanned interruptions in the NPR report, which show Waimakariri as an outlier (refer Page 31 of Attachment i). The correct values of frequency for unplanned interruptions and planned interruptions are 19 and 2.74 per 1000 connections respectively, which would bring us back in line with other councils.

4.11. The reporting of fault attendance and resolution had gone through a review that triggered a spike in the attendance time of urgent water supply fault for the period 2021/22. The review highlighted data quality issues and gaps that are being addressed for the oncoming period.

Assets

4.12. Waimakariri District Council has a good knowledge of the condition of its assets (refer Page 9 of Attachment i), allowing for prioritization of resources and budget allocation. This results in timely interventions and reduced risk of failures or disruptions in the water supply. Overall, Waimakariri's infrastructure is in good condition in relation to water supply, wastewater, and stormwater. The Council also has one of the lowest average pipe age for its water, wastewater and stormwater reticulation assets.

Resilience

4.13. Over the past two years, Waimakariri has predominantly taken a reactive approach to hydrant maintenance, however this information is not currently recorded. It is recommended to transition towards a more proactive approach in the future to improve the testing of hydrant (refer Page 41 of Attachment i).

4.14. Regarding climate change (refer Page 44 of Attachment i), it is crucial to develop a climate change risk assessment and adaptation plan to address climate change challenges. Work on a climate change risk assessment for 3 Waters assets is underway. Once this is completed an adaptation plan needs to be developed in conjunction with the wider adaptation strategy for the Council.

Workforce

4.15. There has been an increase in the number of staff employed related to 3 Waters of 54% since 2018 (refer Page 4 of Attachment i) and vacancy is currently at 5%. While there has been a notable reduction in the total number of lost time injuries from 101 to 16 days in the last two years (refer Page 6 of Attachment i), it is important to encourage to report near misses this helps reduce loss time injuries through implementing improvements as a result of near misses.

Implications for Community Wellbeing

There are no implications on community wellbeing by the issues and options that are the subject matter of this report. The NPR gives the community assurance that WDC is performing well relative to other territorial authorities in New Zealand.

4.16. The Management Team have reviewed this report and support the recommendations.

5. COMMUNITY VIEWS

5.1. Mana whenua

Te Ngāi Tūāhuriri hapū are not likely to be affected by in the subject matter of this report, however, they do have a strong interest in water related matters and Council's role in giving effect to *Te Mana o te Wai*.

5.2. **Groups and Organisations**

Water NZ is a membership based water industry body, who represent and advocate for water management professionals and organisations. This year is the last year that Water NZ will be undertaking the National Performance Review of drinking water, wastewater and stormwater services.

No other groups or organisations have been consulted regarding the NPR.

5.3. **Wider Community**

The wider community has not been engaged with on the NPR. The NPR is publicly available on the Water NZ website for the community to access.

This information will potentially be of interest to the community as we engage with the community on important water related matters.

6. IMPLICATIONS AND RISKS

6.1. **Financial Implications**

The Waimakariri District Council pays a fee of approximately $4,000, excluding staff time to complete the survey, to participate in the review. The customised report cost an additional $1,500.

This work is funded from the 3 Waters asset management budget. There are benefits from identifying areas where improvement is needed relative to other councils and in terms of raising the performance of the sector as a whole. It is noted that 3 Waters unit manages over $800 million worth of assets.

6.2. **Sustainability and Climate Change Impacts**

The recommendations in this report do not have sustainability and/or climate change impacts. The report does however identify that there is a need to undertake an emissions baseline assessment for water and stormwater and to develop climate change risk assessment or adaptation plan for 3 Waters.

6.3. **Risk Management**

The NPR does not show WDC to be an outlier in any of the key theme areas identified. WDC is proactive in managing risks associated with our 3 Waters services, as shown by the above average performance across the 8 key focus areas.

6.4. **Health and Safety**

The NPR shows that 14 near miss reports and 16 days of lost time injuries were reported for staff members involved in 3 Waters.

7. CONTEXT

7.1. **Consistency with Policy**

This matter does not hold significant importance in accordance with the Council's Significance and Engagement Policy.

7.2. **Authorising Legislation**

Local Government Act 2002 relates to the provision of infrastructure services.

7.3. **Consistency with Community Outcomes**

The Council's community outcomes relevant to the actions arising from recommendations in this report are:

- There is a safe environment for the whole community.
- Core utility services are provided in a timely and sustainable manner.

7.4. **Delegations**

The Utilities & Roading Committee is responsible for the 3 Waters functions of the Council.

water NEW ZEALAND
The New Zealand Water & Wastes Association Wairora Aotearoa

Waimakariri District Council

National Performance Review
2021 – 2022

Table of Contents

Interpreting information in this report

This report has been developed specifically for your council based on information collected through the National Performance Review. An associated interactive data portal and report on consolidated national information is available from: https://www.waternz.org.nz/NationalPerformanceReview.

Data shown here relates to the 2022 fiscal year (1/7/2021 to 30/6/2022). Definitions for data shown can be identified codes and brackets and accessed here: https://www.waternz.org.nz/DefinitionsGuide.
Limitations associated with data are documented in the report.

Performance outcomes for water services are often subject to influences outside of an organisation's control. Influencing variables that should be considered when evaluating performance include:

- Service area characteristics (density of connected properties, the split of residential versus non-residential users)
- Environmental factors (including topography, quality of source water, and receiving environments, and soil types)
- Weather conditions
- Historic design practices

Performance outcomes are also influenced by data collection and reporting systems. Water service management systems range from pen-and-paper-based data collection to comprehensive data management technologies. The robustness of your own data collection will influence how you rank against others. For example, a comprehensive customer complaints management system is likely to record more complaints than a pen-and-paper-based system, due to more accurate data capture.

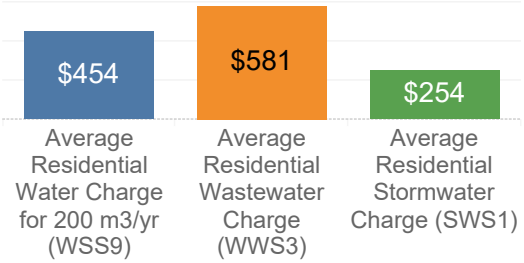
In areas of this report where you identify an opportunity to lift your performance to match that of another council, we suggest you reach out to these water suppliers. Water New Zealand will be happy to facilitate conversations if required.

Feedback and enquiries on this report can be directed to: lesley.smith@waternz.org.nz.

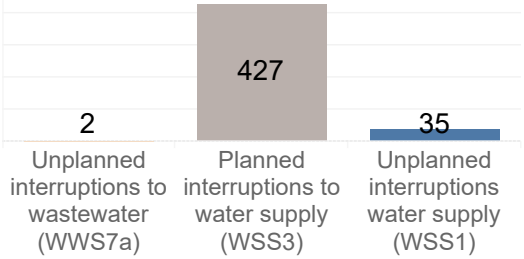
Your Council's data at a glance

This page provides a summary of information that you provided to the National Performance Review.
Trends and comparative performance information are listed in the following pages of the report.

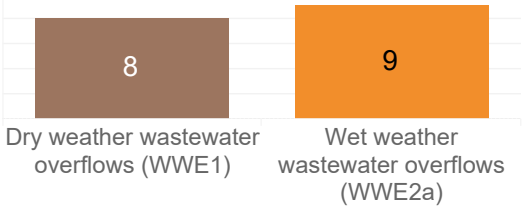
Average charges



Total interruptions



Wastewater overflows



Assets under management

Number of water treatment plants (WSA4)	24
Number of wastewater treatment plants (WWA7)	4
Kilometres of water supply network (WSA1a)	978.2
Kilometres of wastewater network (WWA1a)	397.6
Kilometres of stormwater network (SWA1a)	121.7
Average percentage of residential connections with meters (WSA9a/WSB2)	24%
Water Pump Stations (WSA5)	8
Wastewater Pump Stations (WWA5)	59
Stormwater Pump Stations (SWA7)	11

Finances

Annual three waters revenue	$33,054,709
Total CAPEX (SWF17, WWF21, WSF20)	$28,108,371
Total OPEX (WSF12 + WWF13 + SWF9)	$14,638,395

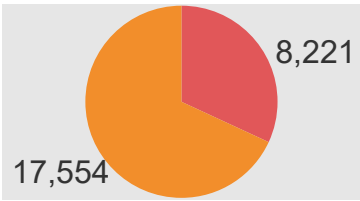
Average peak wet to dry weather flow ratio

4.250

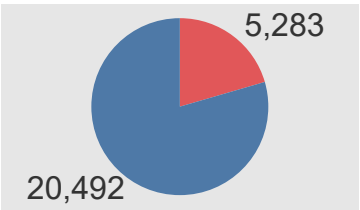
Current annual real water loss (L/connection/day)

263.0

Wastewater serviced residential properties



Water serviced residential properties



Direct employees

77.00

Contracted staff

1.000

Vacancies

4.000

Near miss reports

14

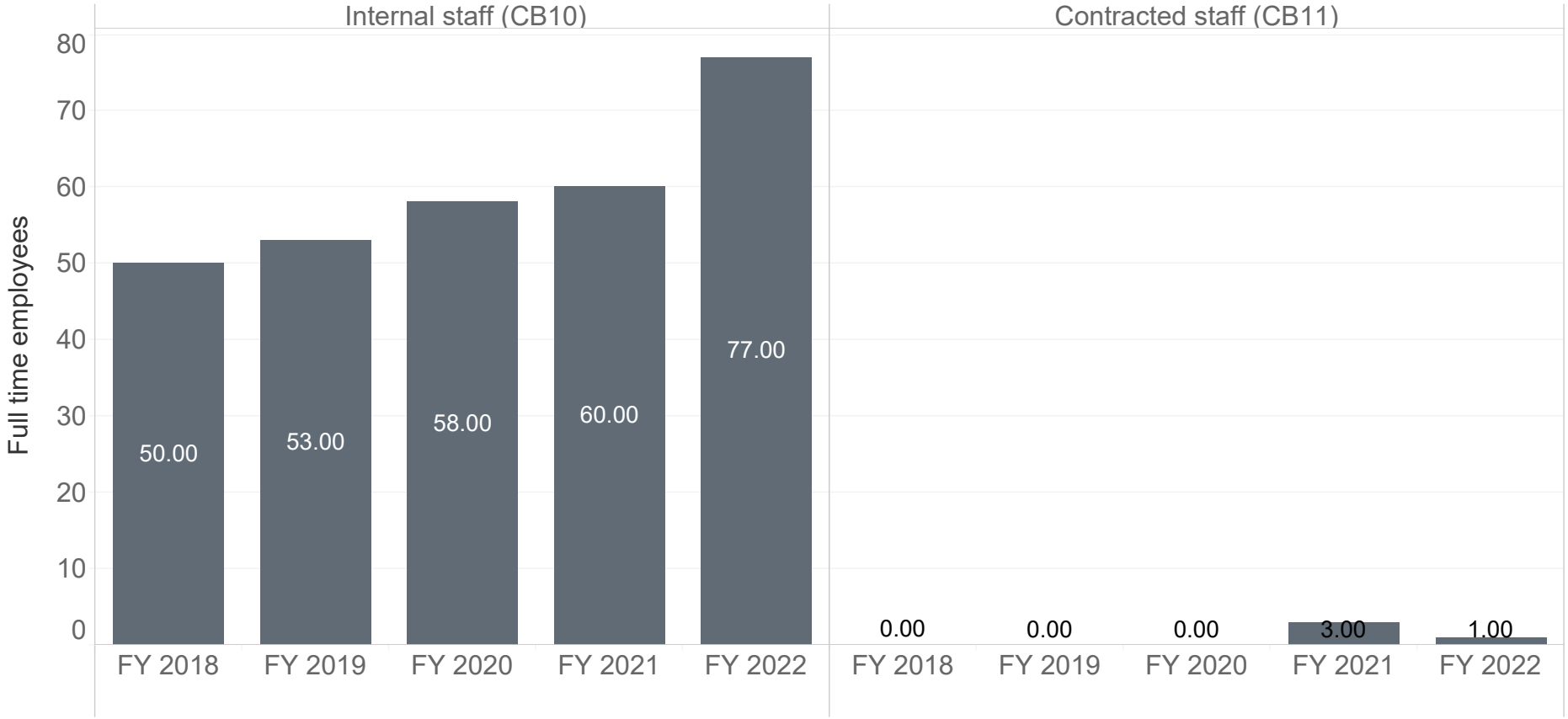
Days off work due to lost time injuries

16

Staff numbers

Permanent staff, contracted staff and staff vacancies per 1000 water and wastewater properties serviced (or stormwater properties in the case of Auckland Council). The number of vacancies is shown on the negative axis. Internal staff numbers were not available for Tararua.

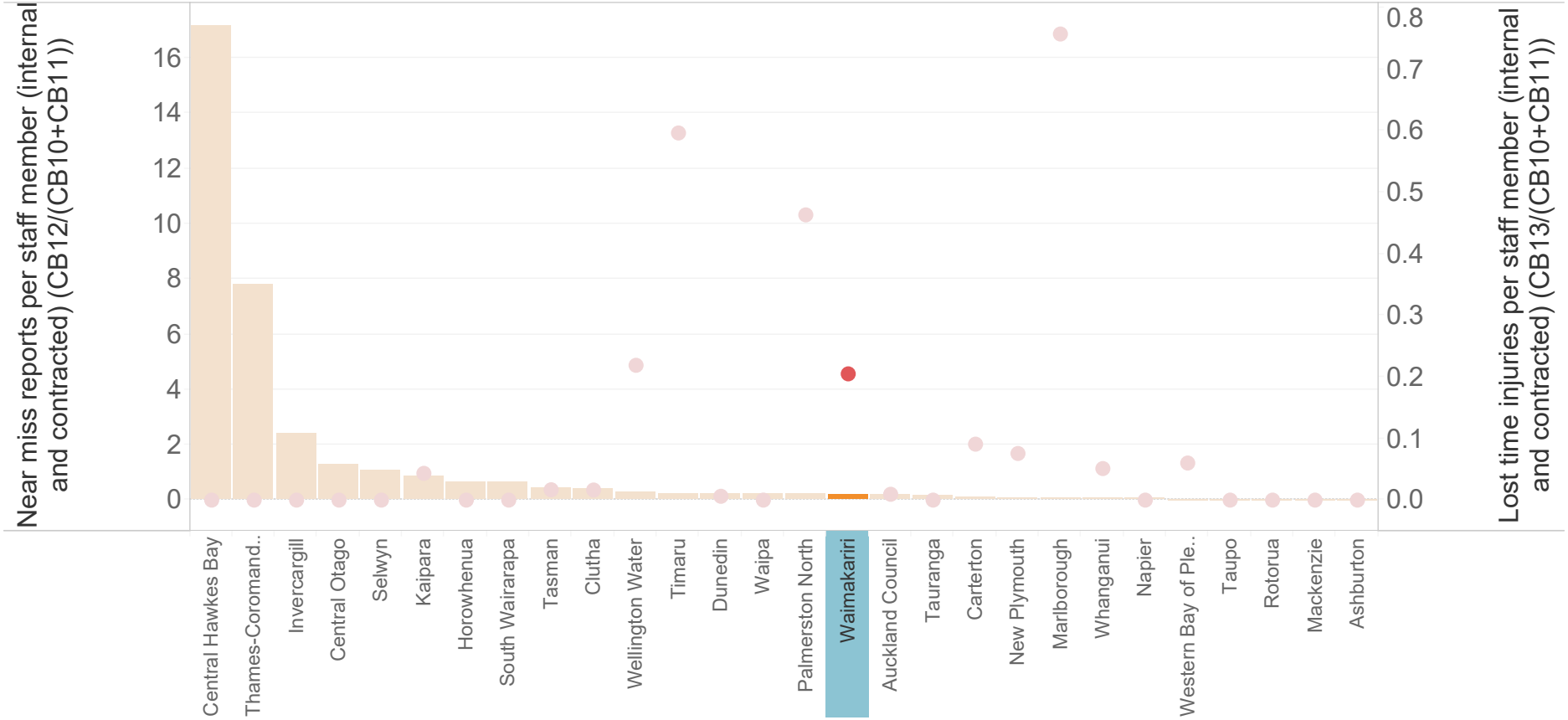
Full-time employees and contractors working in three waters at your council



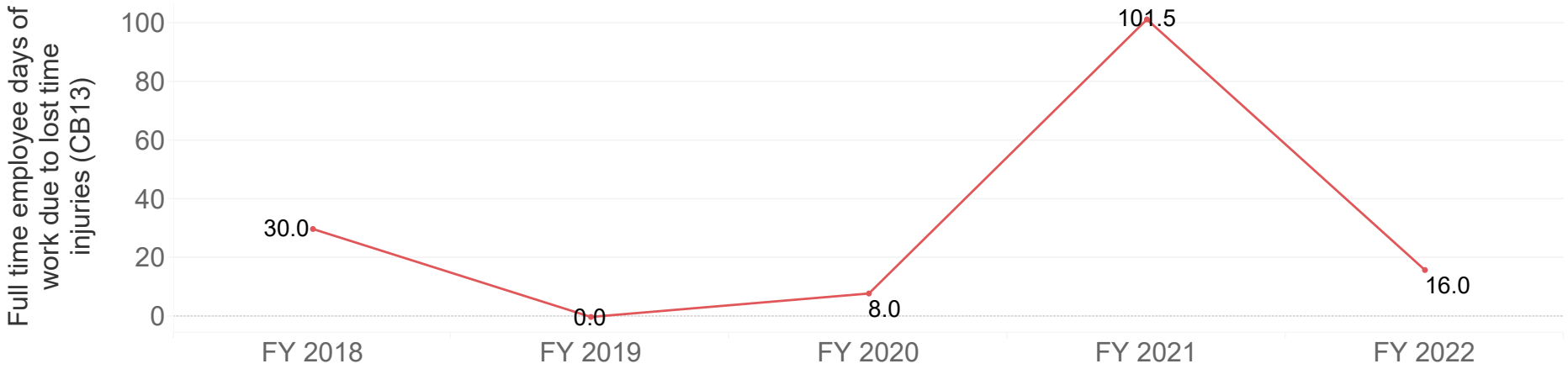
Lost time injuries and near misses per staff member

Figure covers both internal and external staff

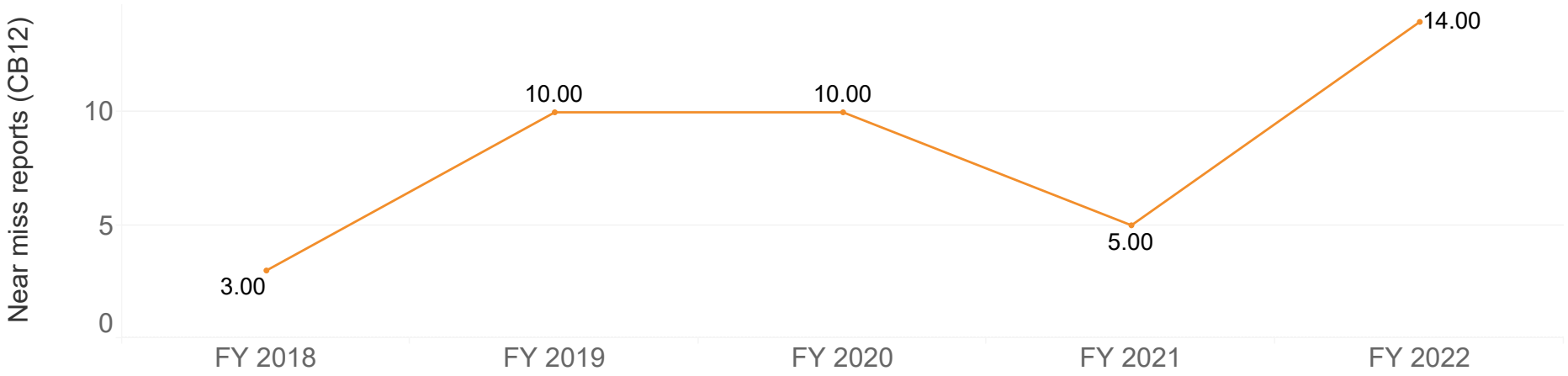
Lost time injuries per staff member (internal and contracted) (CB13/(CB10+CB11))
Near miss reports per staff member (internal and contracted) (CB12/(CB10+CB11))



Lost time injuries at your council

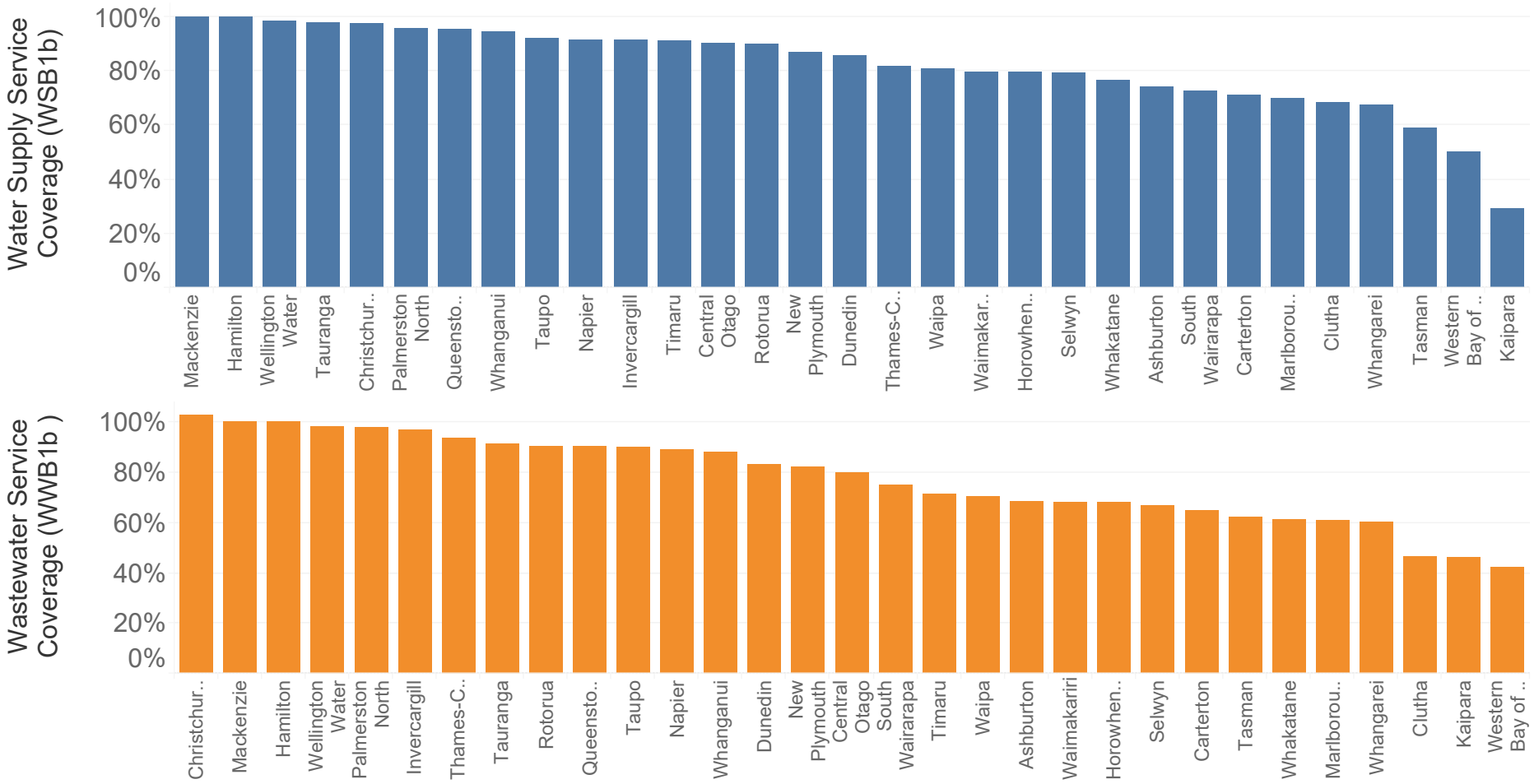


Near misses reported at your council

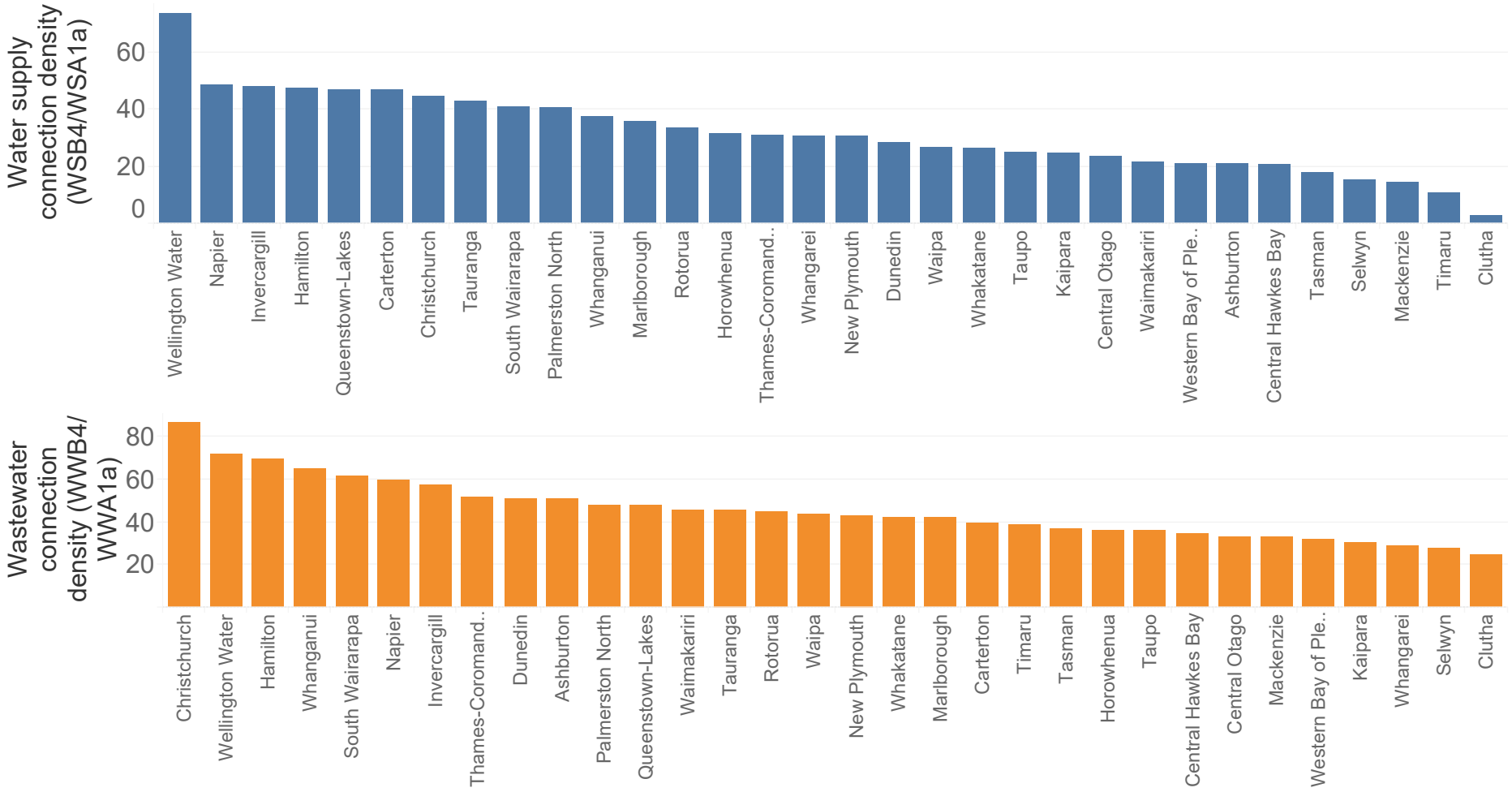


Service coverage levels

Available for water supply (WSB1b) and wastewater (WWB1b)

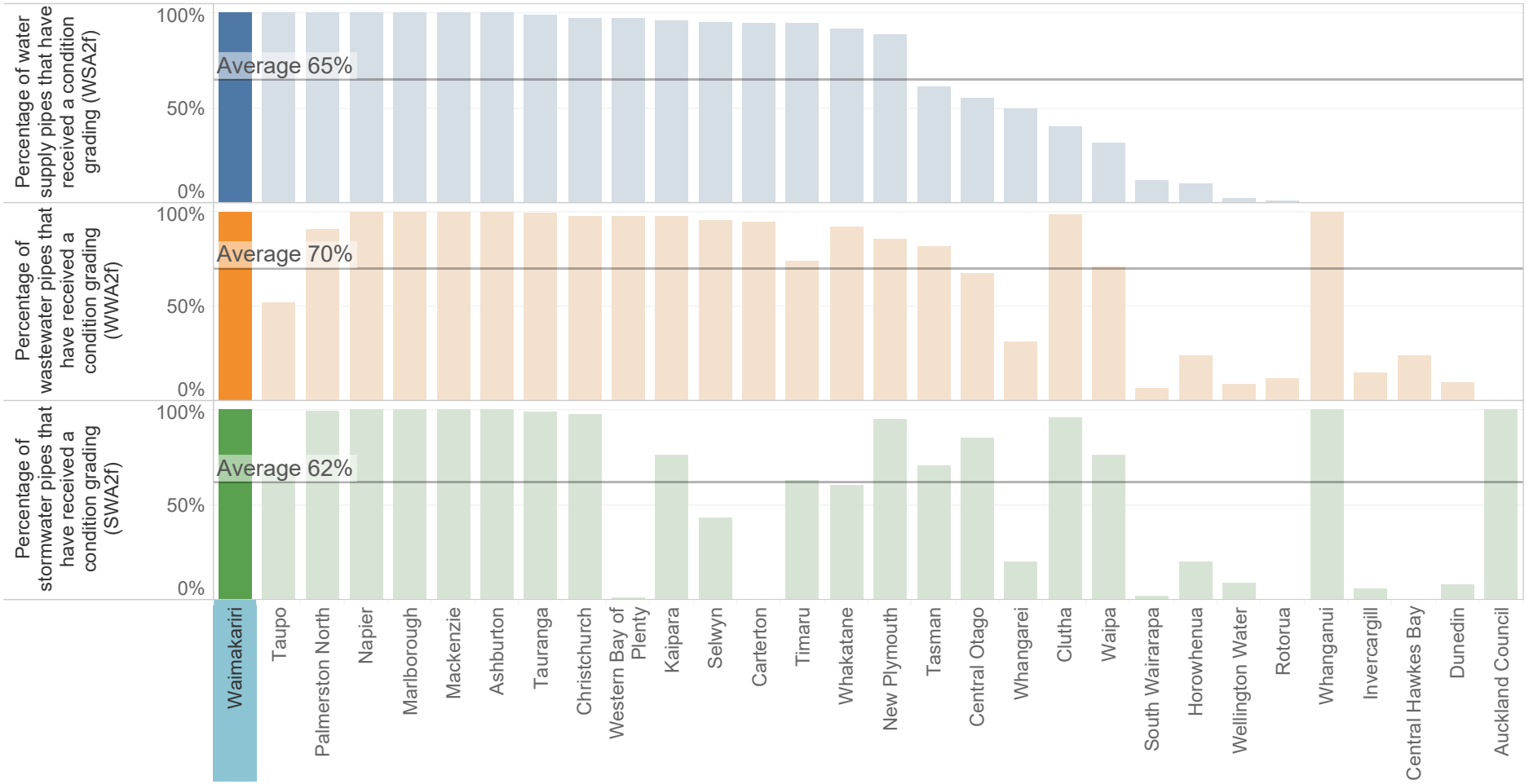


Serviced properties per kilometre of pipe



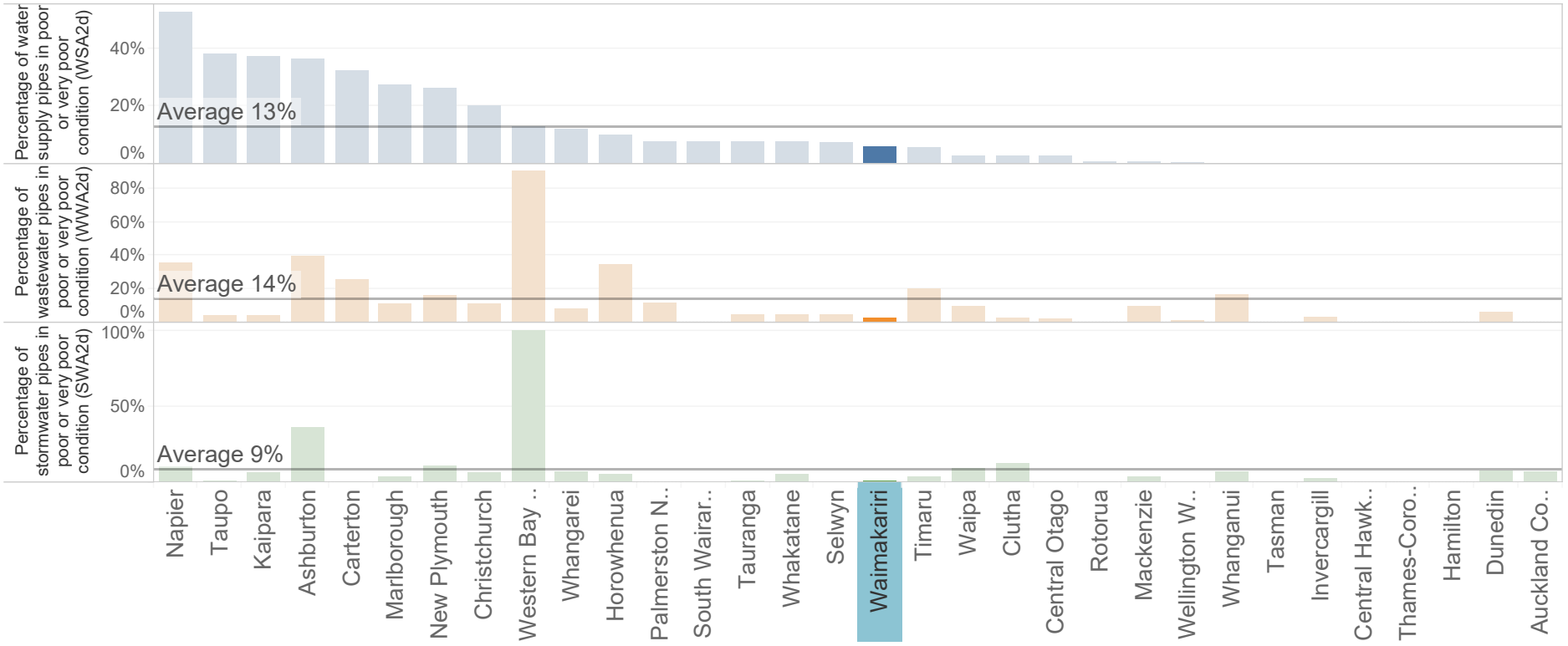
Percentage of pipelines that have received a condition grading

Available for water supply (WSA2f), wastewater (WWA2f) and stormwater (SWA2f)



Percentage of pipelines assessed in poor or very poor condition

Determined by the proportion of pipelines assigned a condition grades 4 and 5.
Not all pipelines are assessed using the same condition grading approach, limiting the comparability of data.
Not all pipelines have received a condition grading. The proportion of pipelines that have yet to receive a condition grading are illustrated in the previous figure.

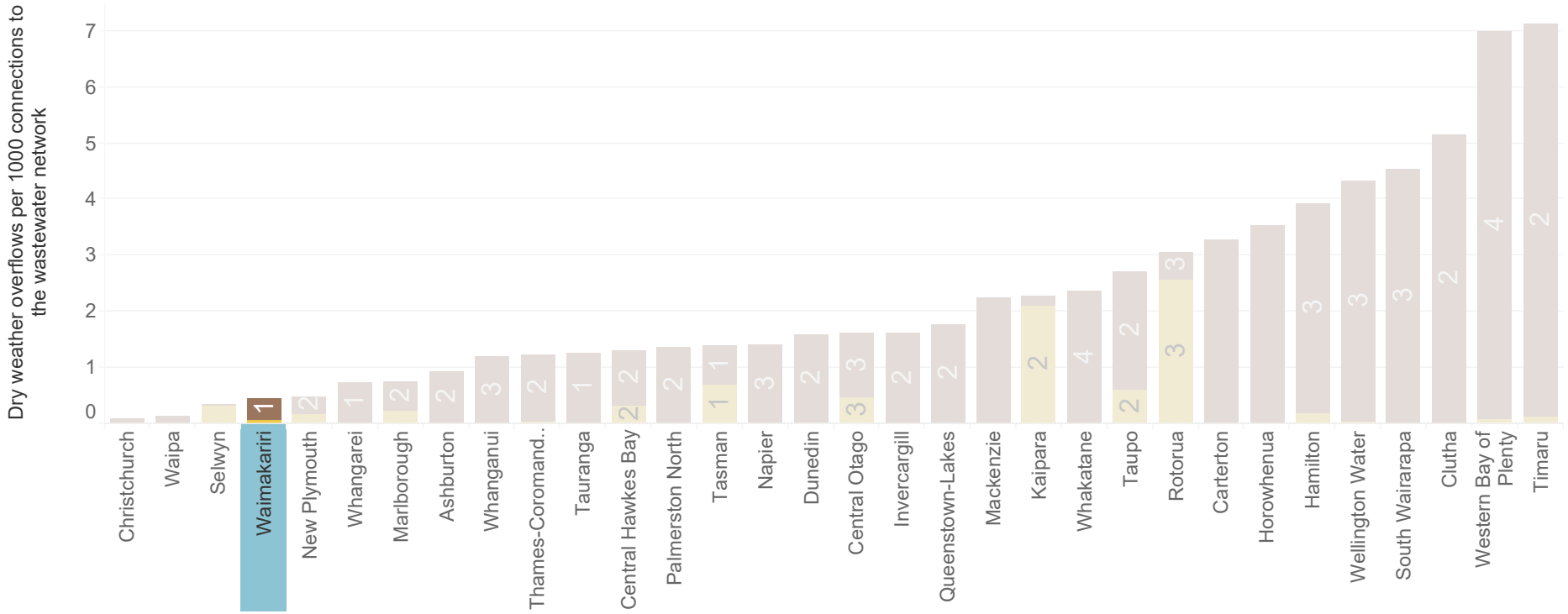


Dry weather wastewater overflows per 1000 connections

The graph shows dry weather wastewater overflows per 1000 connections to the wastewater network. It distinguishes between overflows caused by blockages and those caused by plant failures (including power outages). Where it was not possible to dissagregate these have been assigned to blockages.

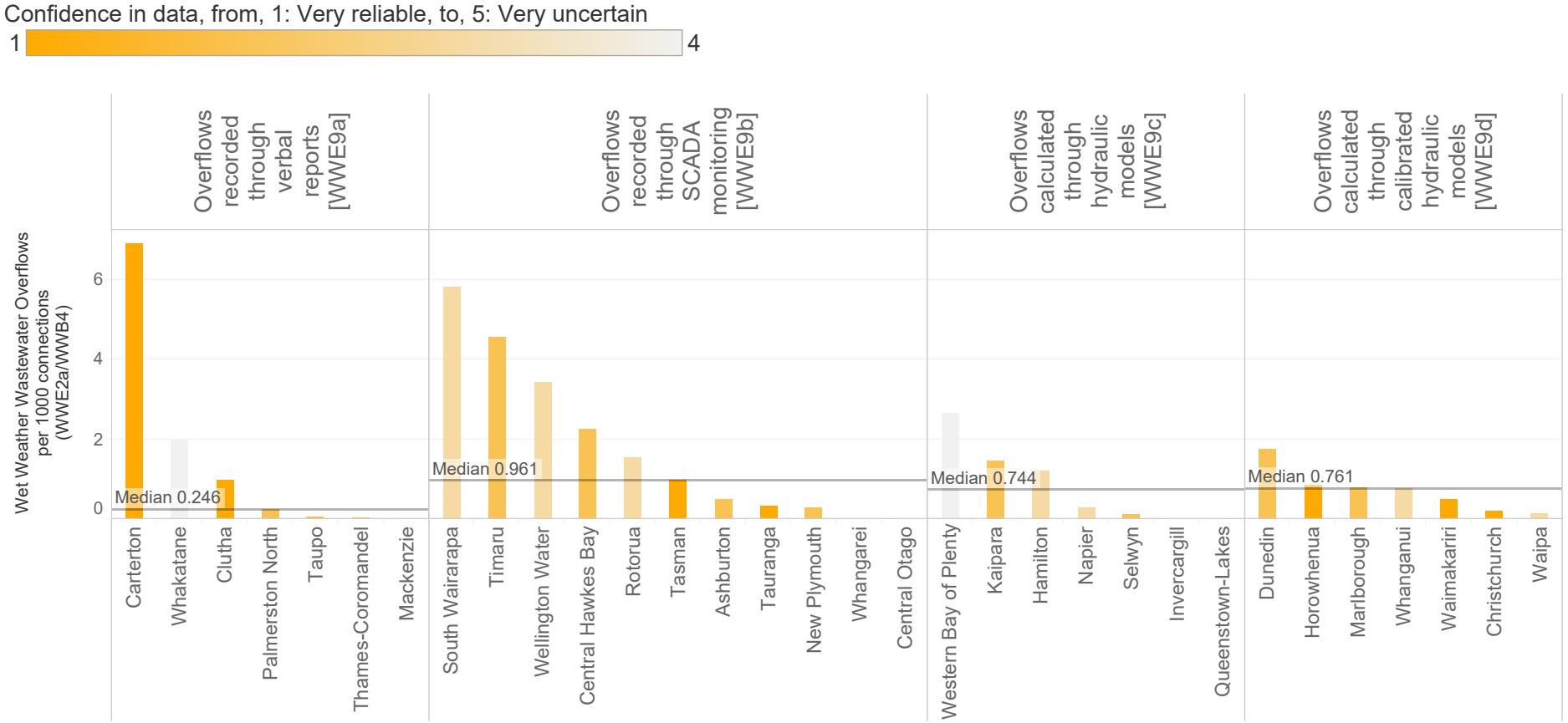
Confidence in data
1 = Highly reliable
2 = Reliable
3 = Less reliable
4 = Uncertain
5 = Highly uncertain

Overflows caused by blockages per 1000 serviced properties (WWE1a/(WWB4/1000))
Overflows caused by mechanical failures per 1000 serviced properties (WWE1b/WWB4/1000))

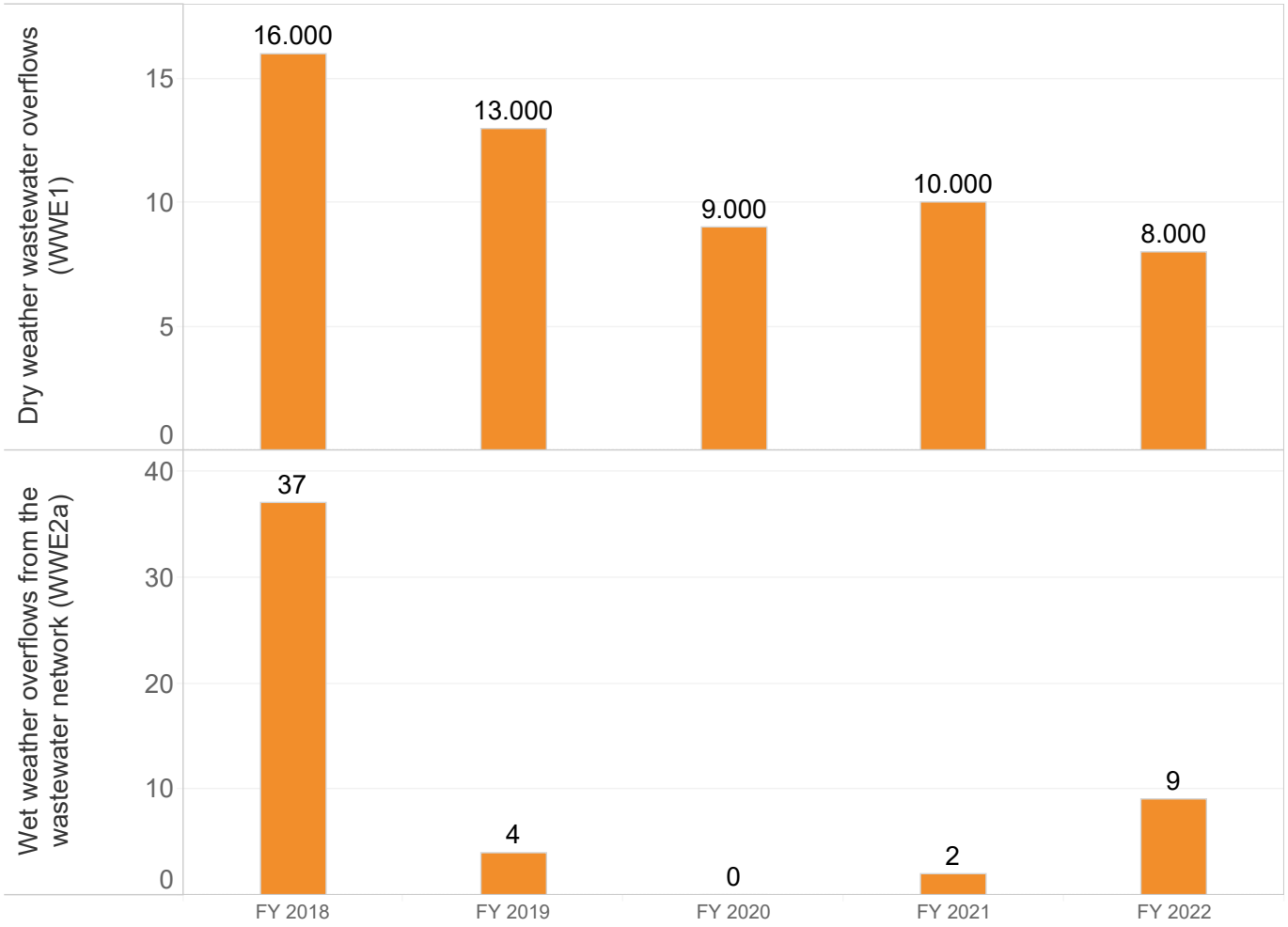


Wet weather wastewater overflows per 1000 connections

The graph shows wet weather wastewater overflows per 1000 connections to the wastewater network, categorised by the most sophisticated approach in place to record them. Participants with higher order approaches (i.e. overflow determination through use of calibrated hydraulic models) generally employ lower order overflow monitoring techniques concurrently (i.e. verbal reports and SCADA monitoring).
The shade of the column indicates participants' confidence in their data.

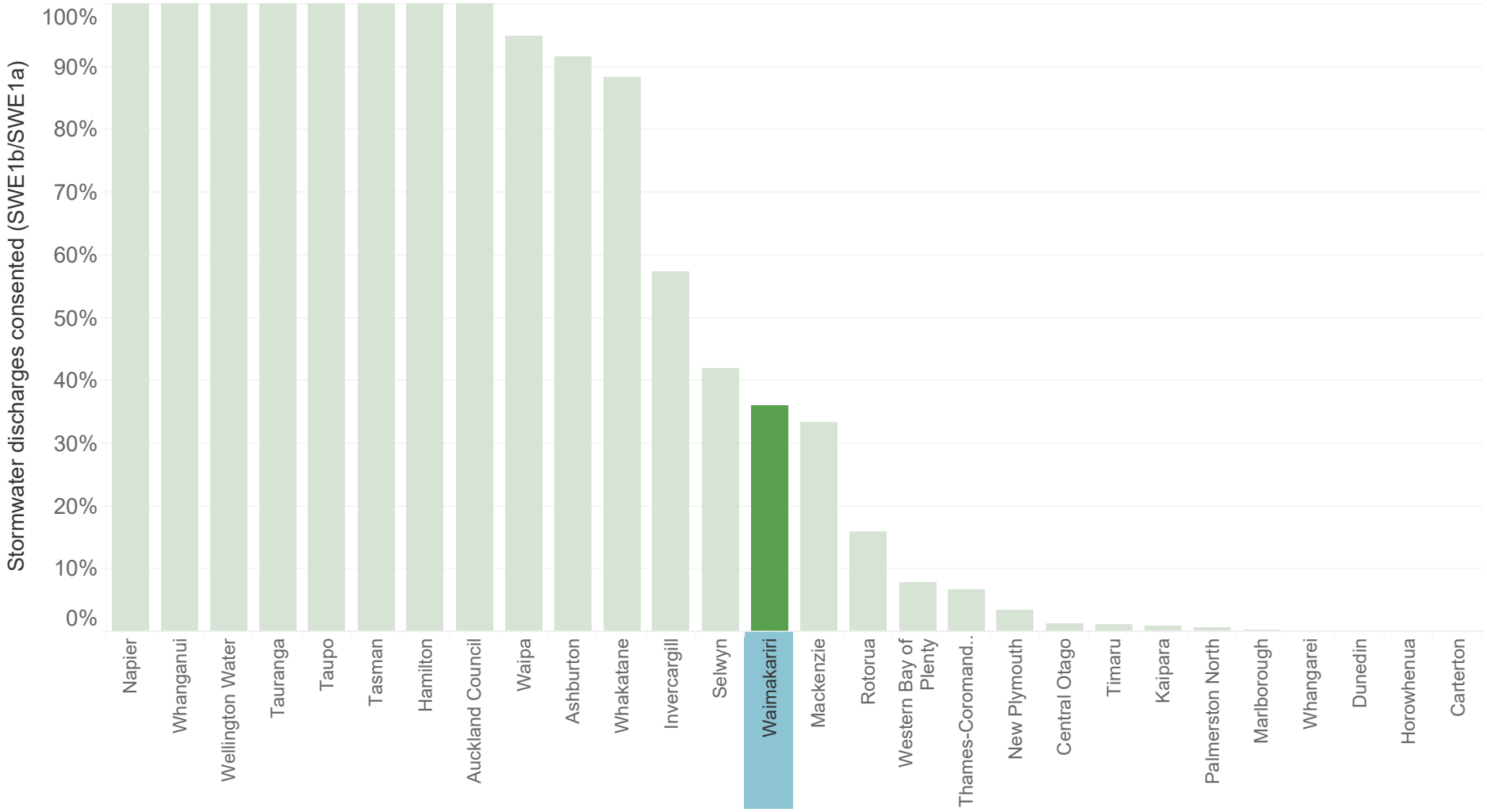


Wastewater overflows per year for your council



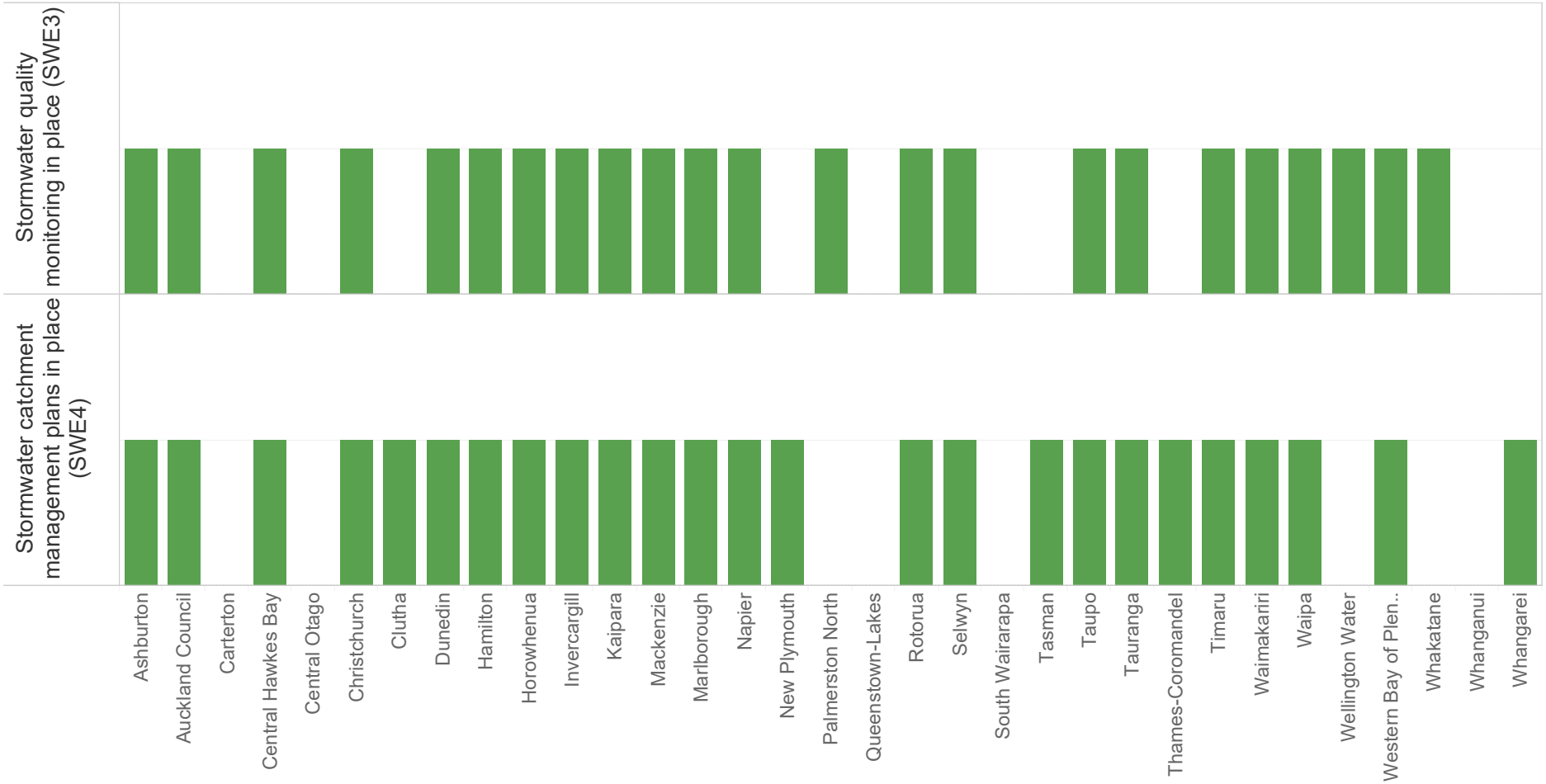
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33

Proportion of stormwater discharges covered by a resource consent



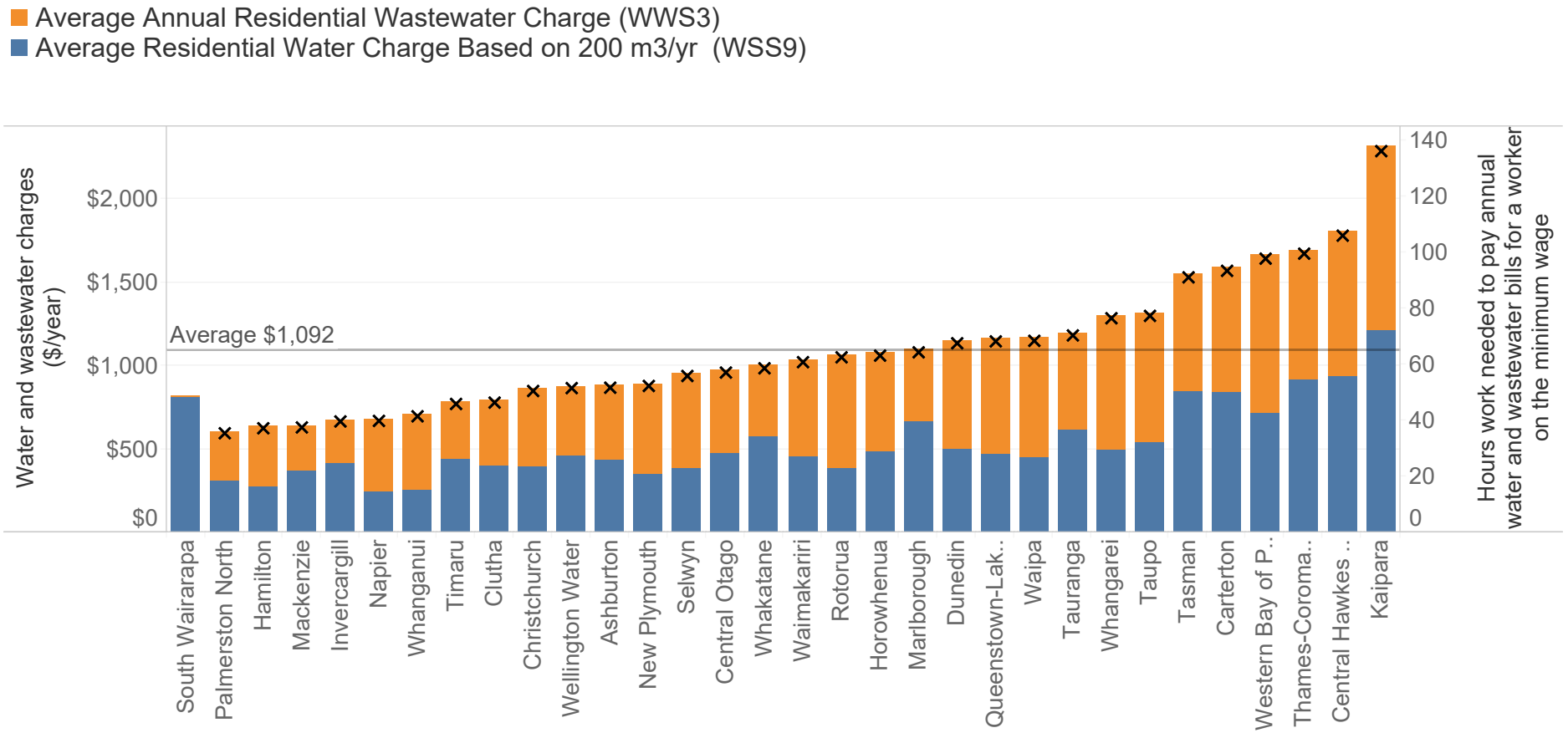
Stormwater quality management actions in place

Rectangles illustrate organisations that have in place stormwater quality management plans and/or stormwater monitoring.



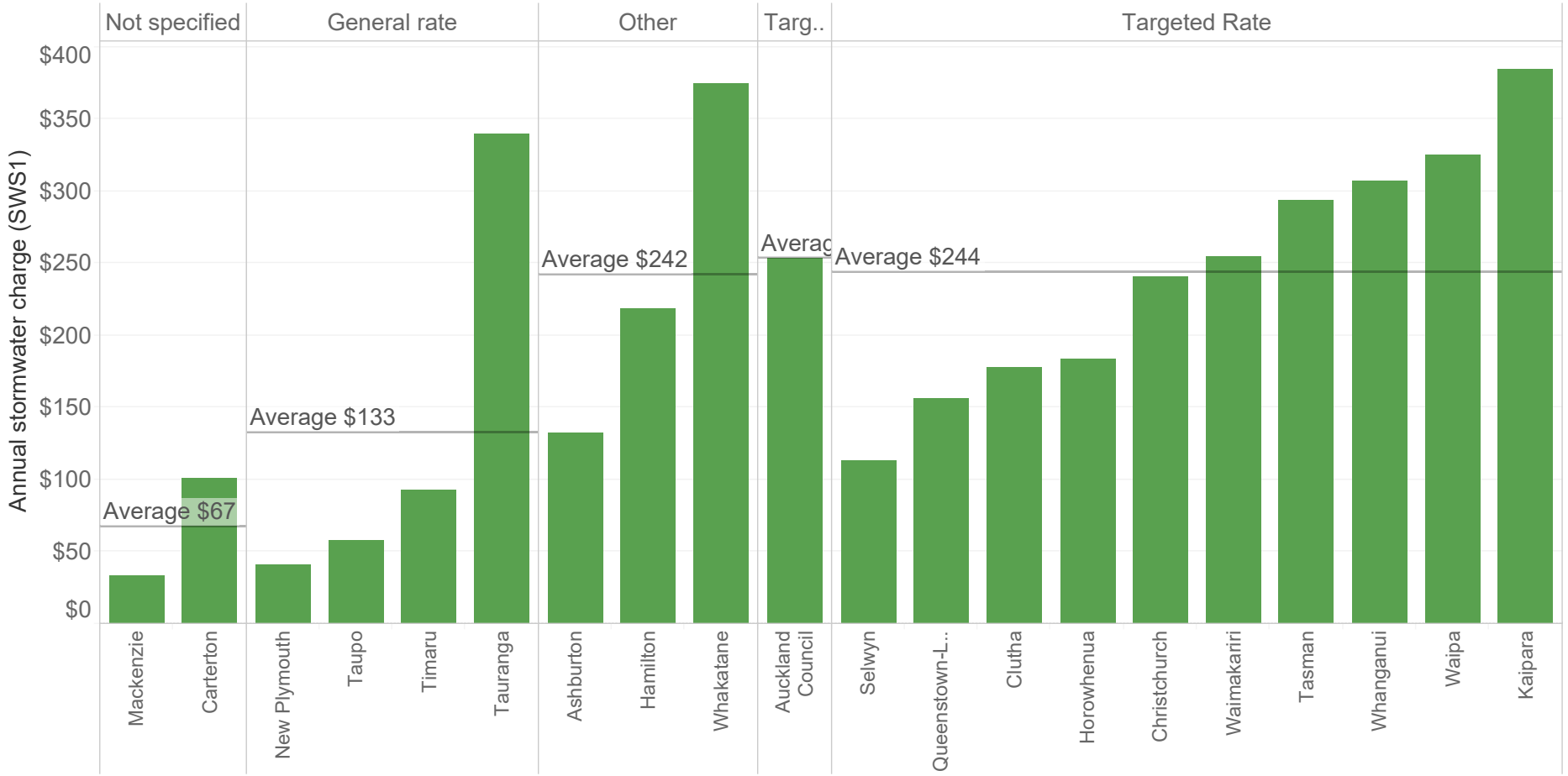
Residential water and wastewater charges

Average annual residential water and wastewater charges for water usage of 200 cubic meters are shown on the primary axis.
The number of hours worked on a minimum wage to finance those charges is shown on the secondary axis, and illustrated by an x.



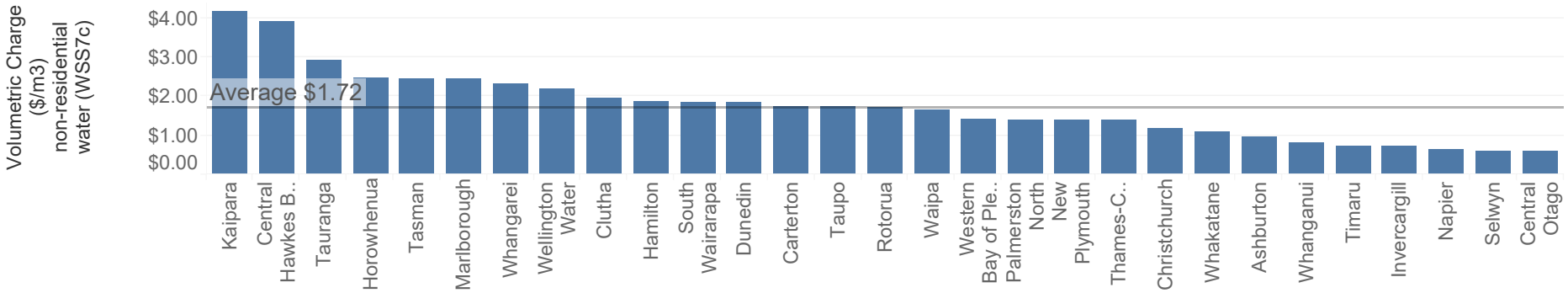
Stormwater charge

Charges have been categorised by the rating approach used to charge for stormwater (SWS2). Where stormwater charges are based on property values average property values for the district as of January 22 have been used to calculate the average charge.

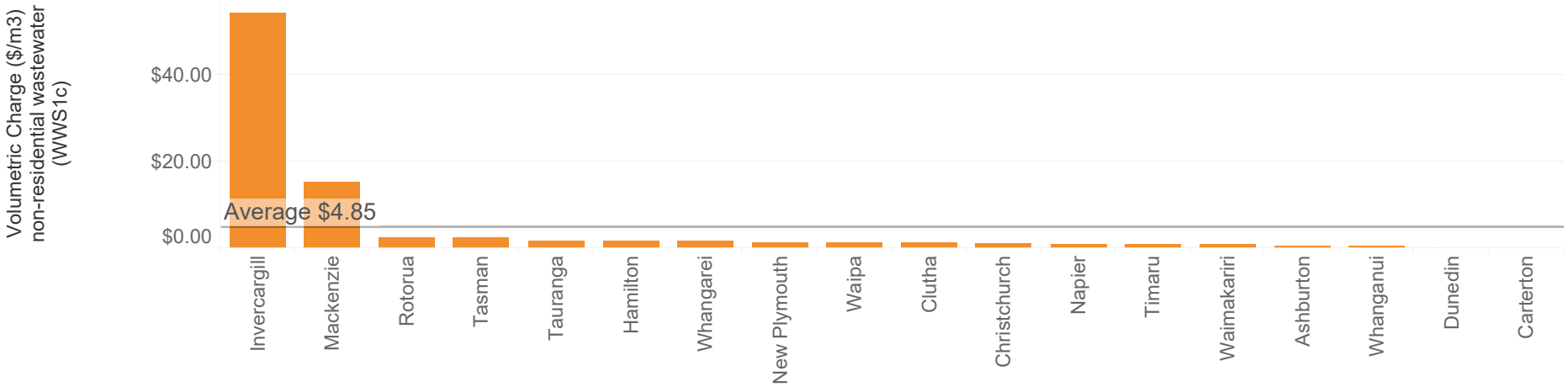


Volumetric charges for non-residential customers

Fixed price components of water charges for non-residential customers are not included here. In some regions, including Waimakariri, fixed prices are the only charge. Other councils non-residential charges have been provided for reference.
In some regions, volumetric charges vary across the district. In those instances, the most commonly applied charge has been selected.



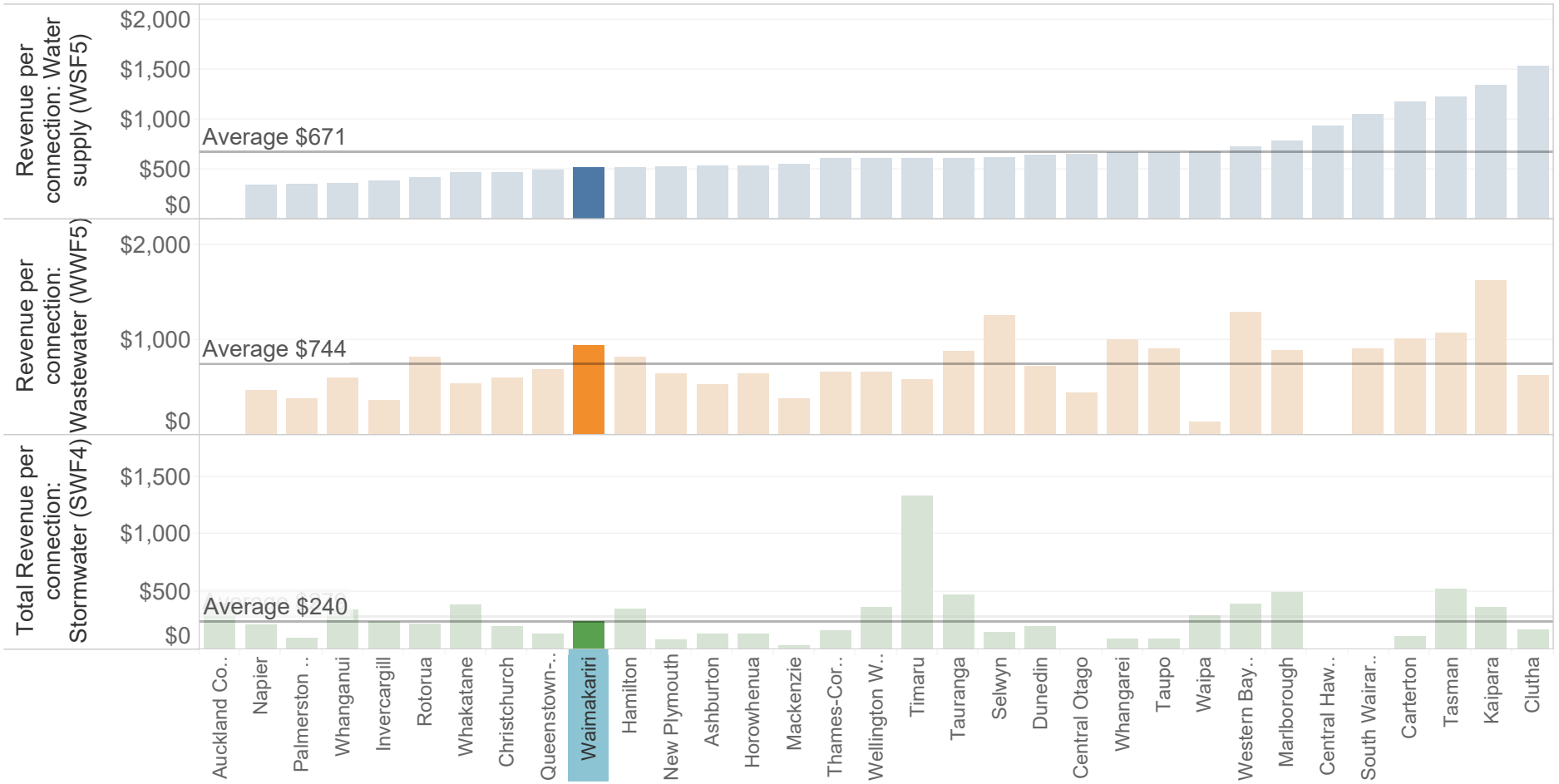
Rates shown here do not factor in contaminant-based charges, or fixed price components of wastewater charge.
In some regions, volumetric charges vary across the district. In those instances, the most commonly applied charge has been selected.



Water, wastewater and stormwater complaints at your council

4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

Annual revenue per connection



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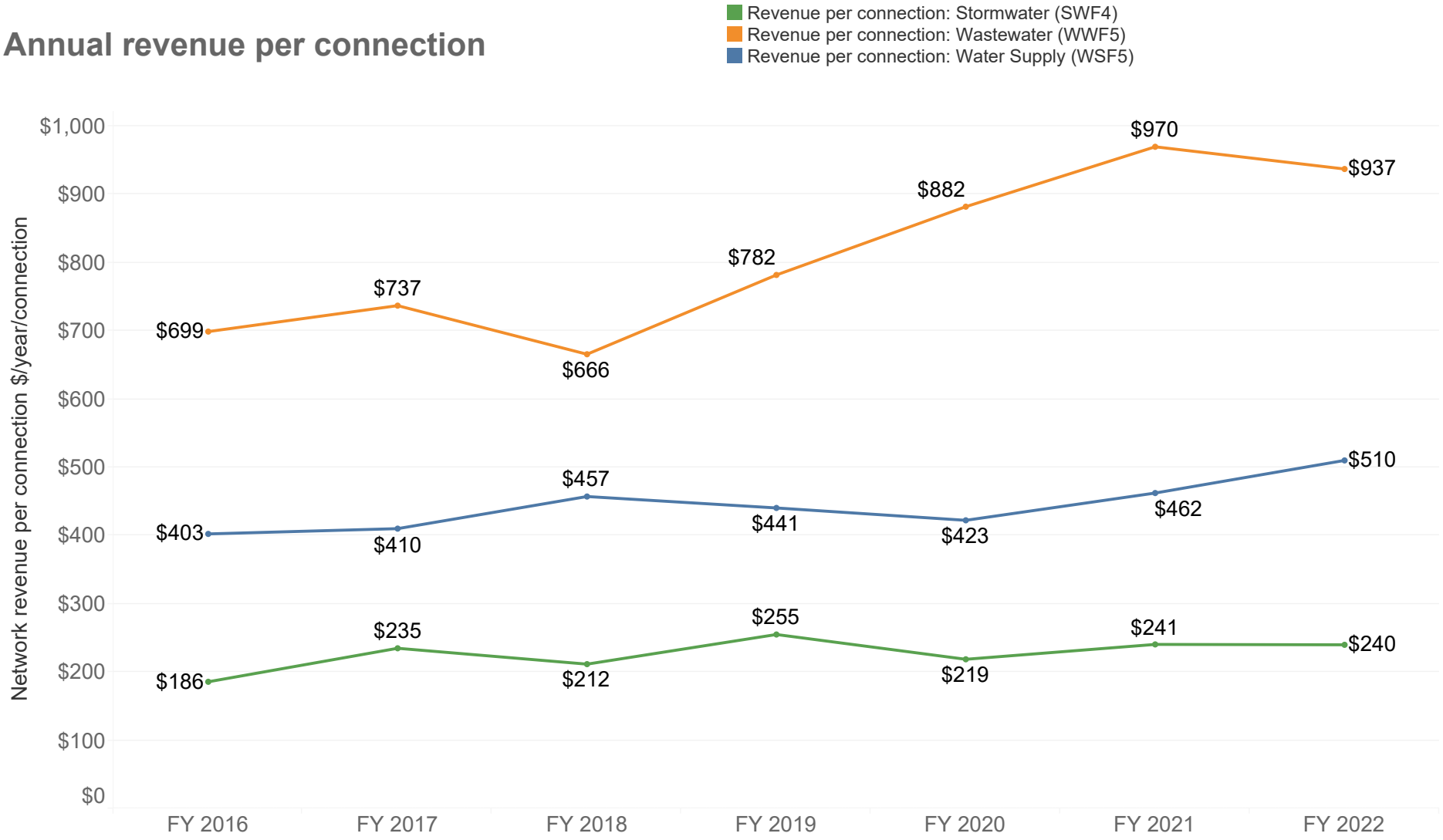
Annual revenue per connection



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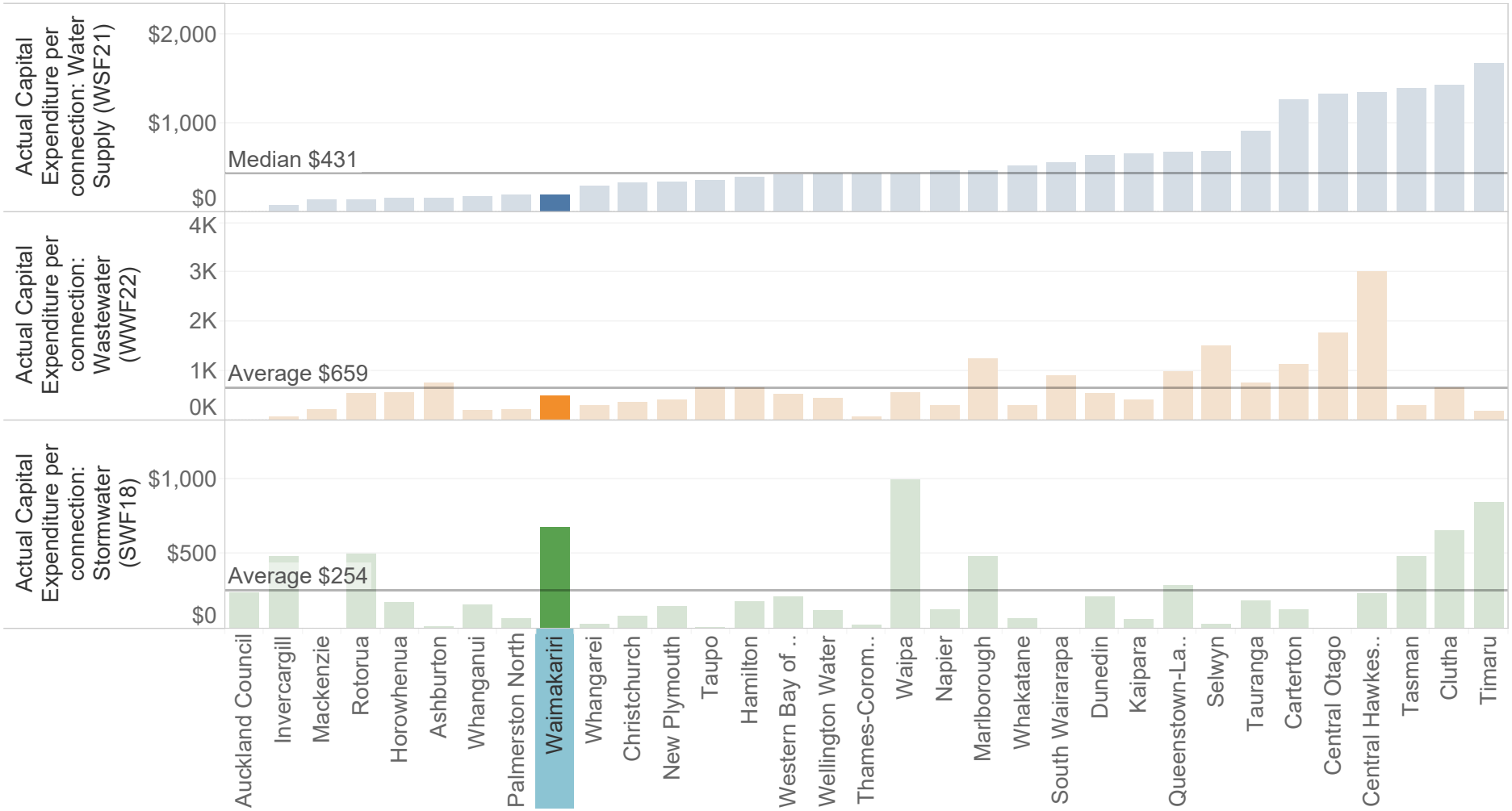
Capital expenditure per connection



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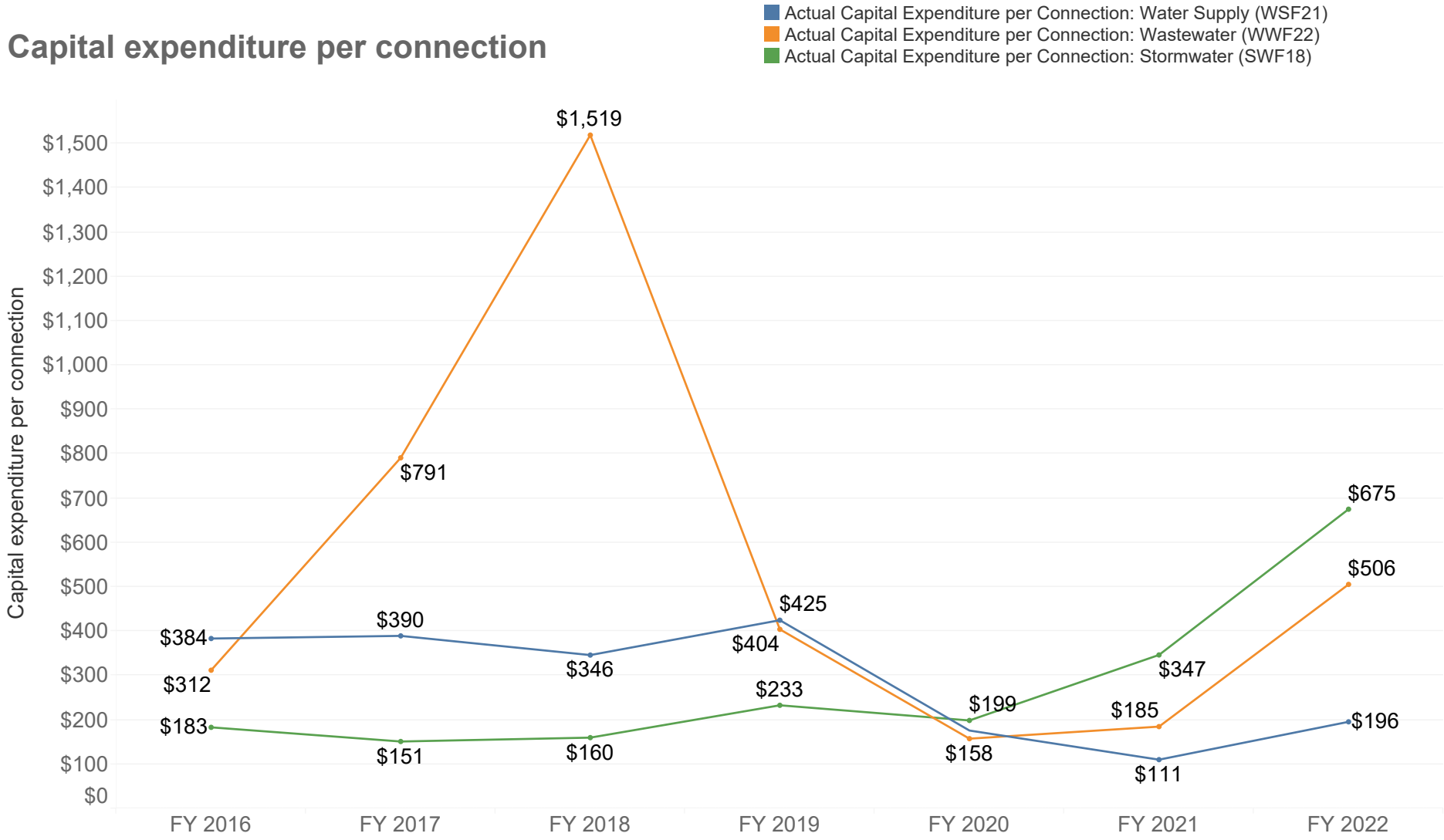
Capital expenditure per connection



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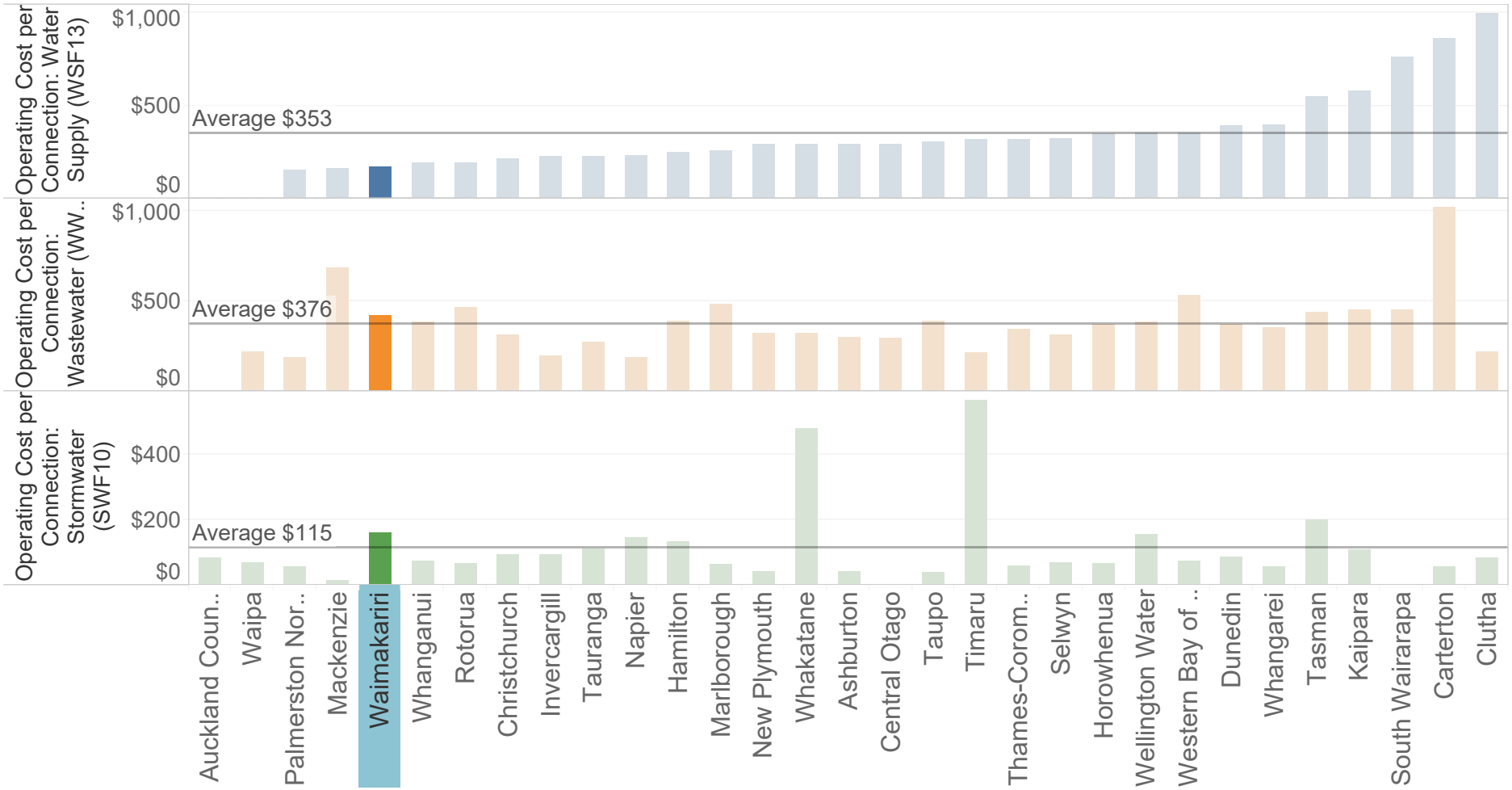
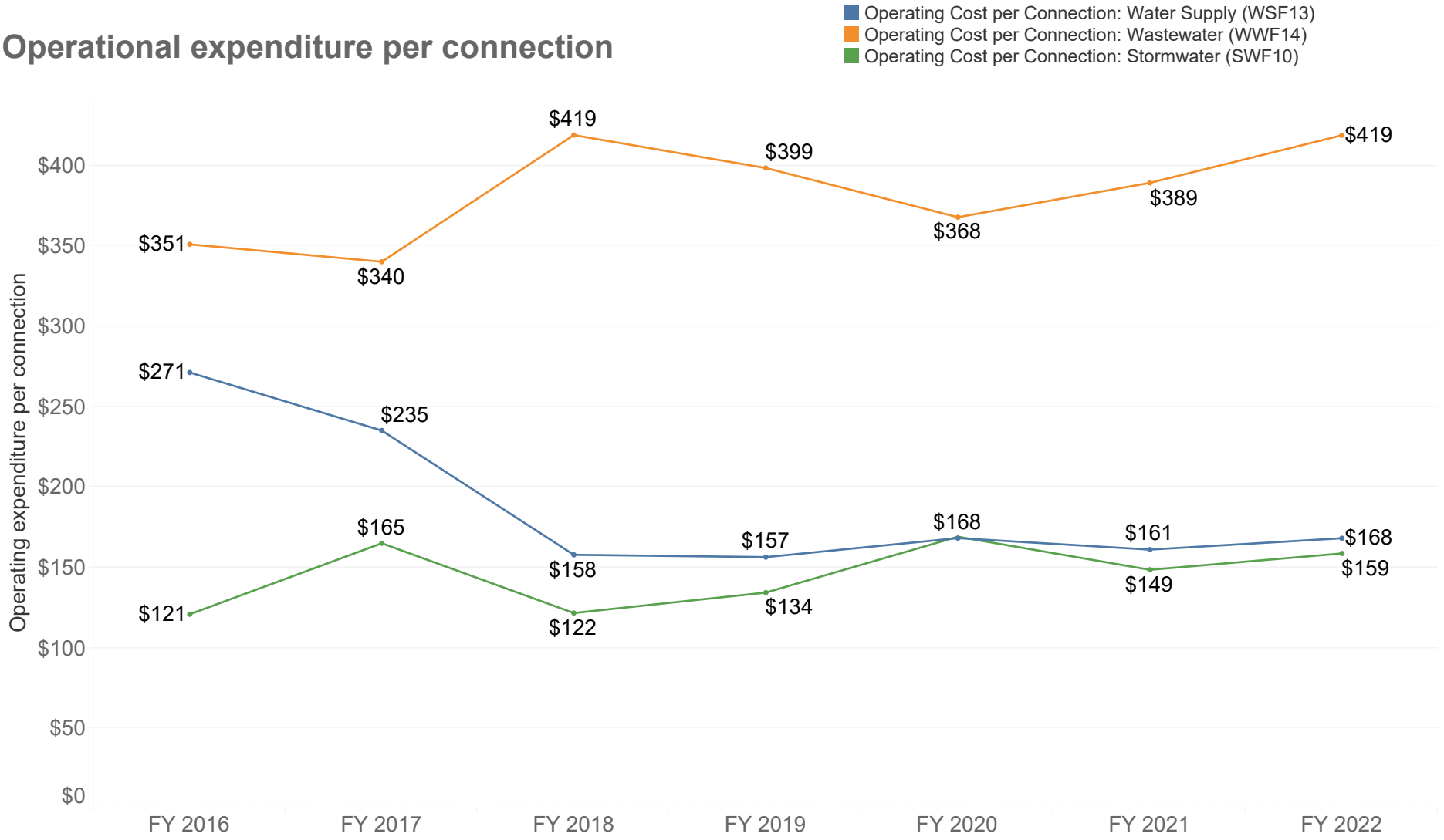
Operational expenditure per connection



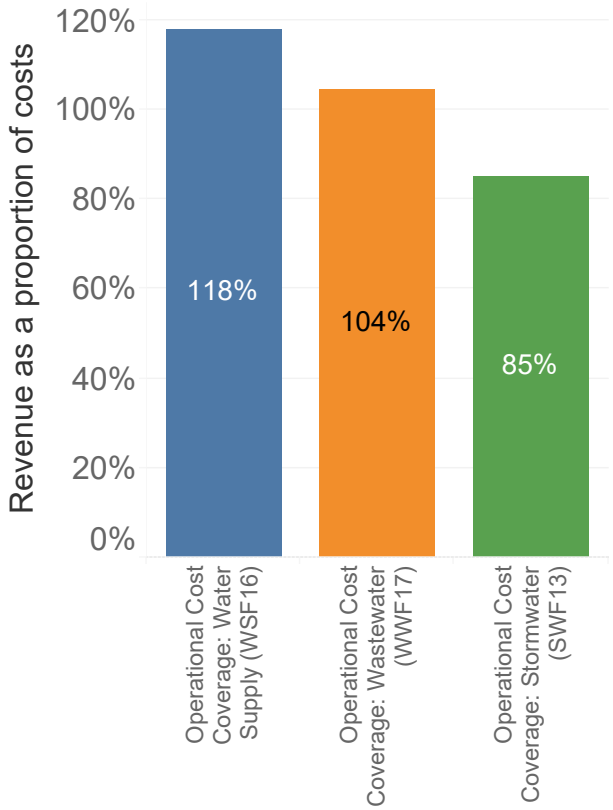
Operational expenditure per connection



Financial benchmarks

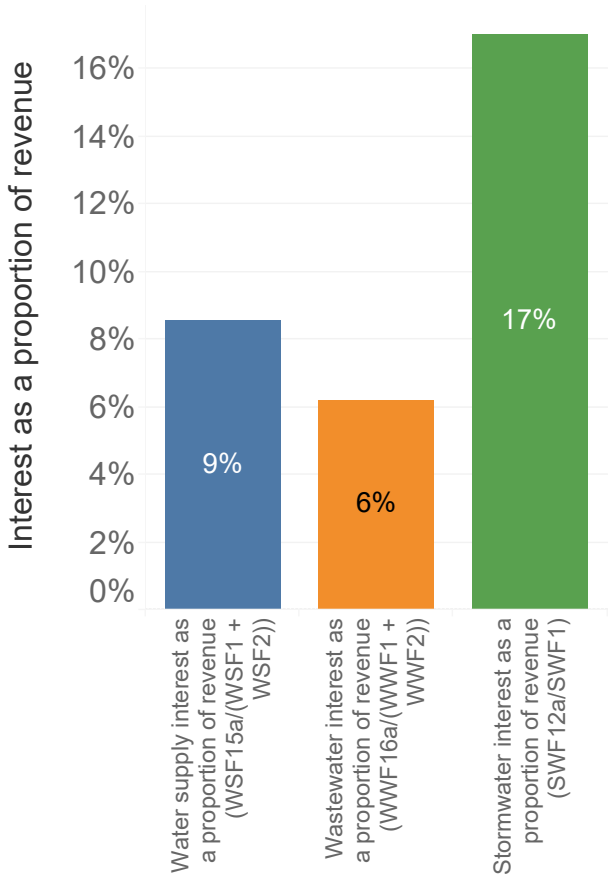
Cost coverage

Revenue over operational costs including interest payments and depreciation. Costs related to capital expenditure have not been included.

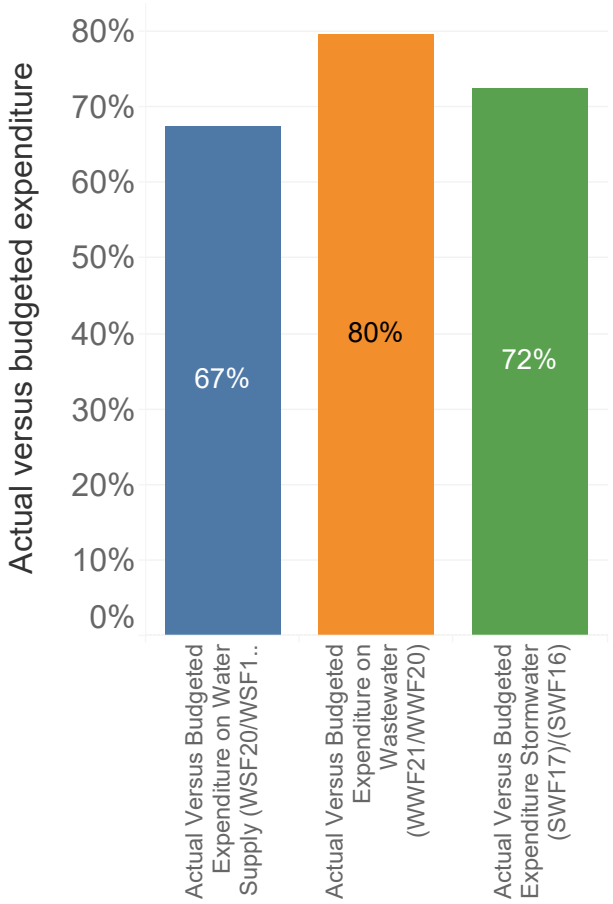


Debt Servicing

Interest as a proportion of revenue.

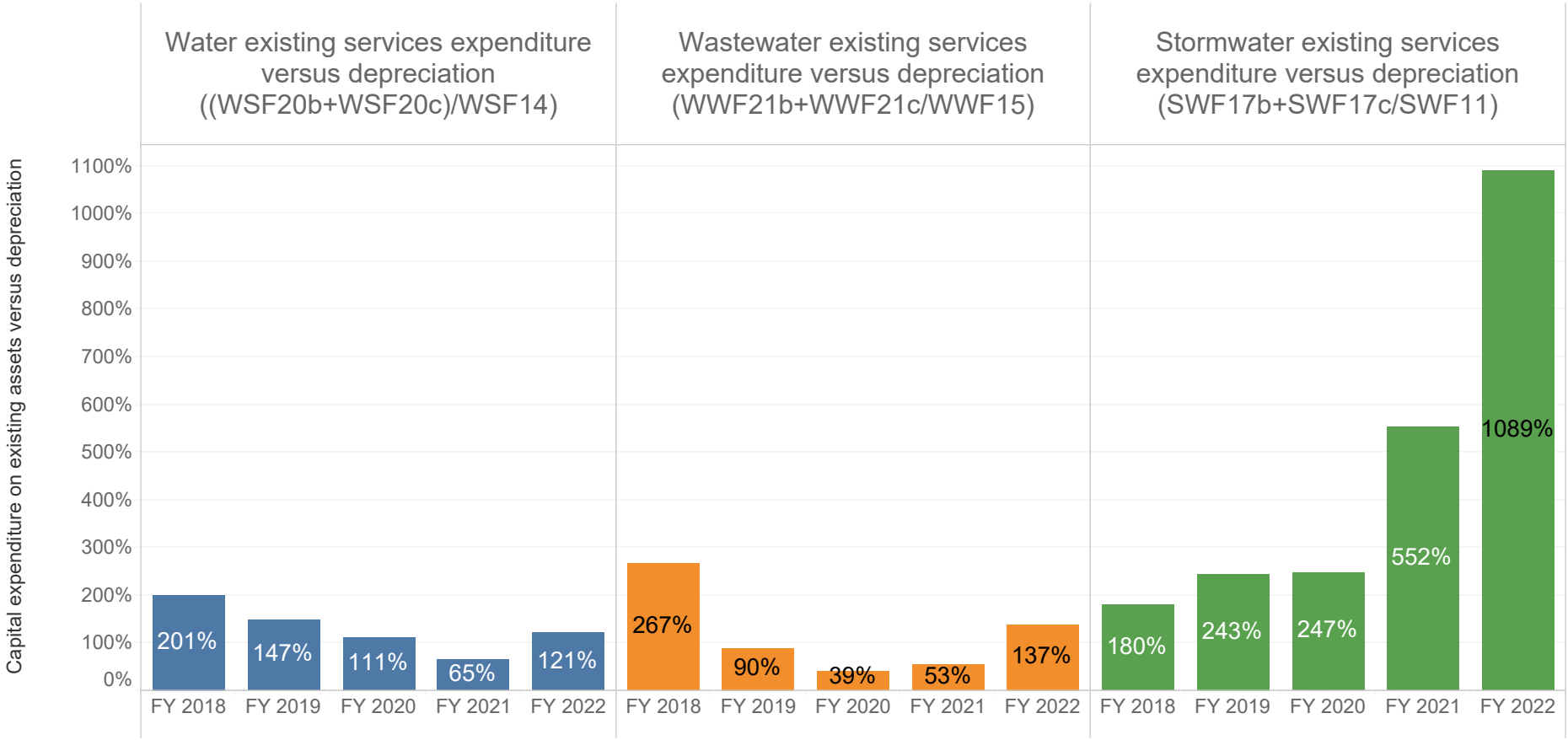


Actual versus budgeted expenditure



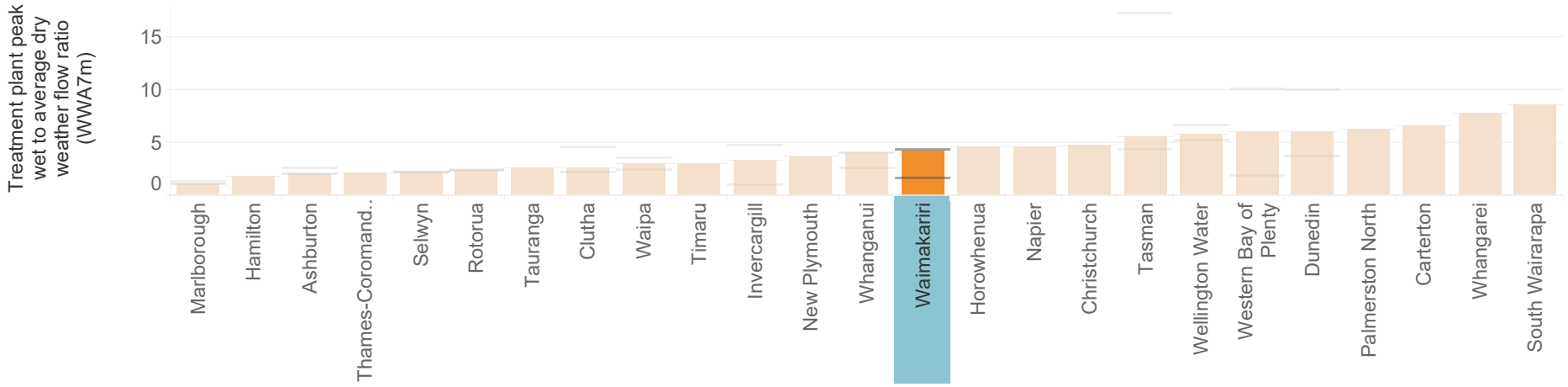
Capital expenditure to replace existing assets as a proportion of depreciation

Capital expenditure on existing assets should equal depreciation over time (i.e. 100%) for service levels to be maintained. Theoretically if capital expenditure on the replacement of existing assets consistently exceeds depreciation costs (i.e. greater than 100%), service levels would be expected to improve. Conversely, where capital expenditure is consistently less than depreciation (i.e. less than 100%) service levels would be expected to decrease.

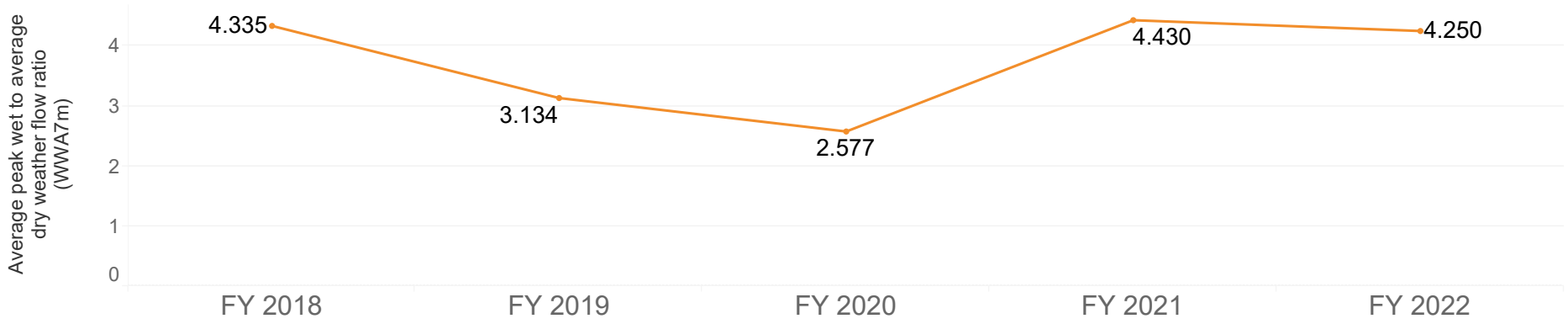


Peak wet to average dry weather flow ratio at wastewater treatment plants

Bars show the flow weighted average across districts with multiple treatment plants. The grey dashes show maximum and minimum values.

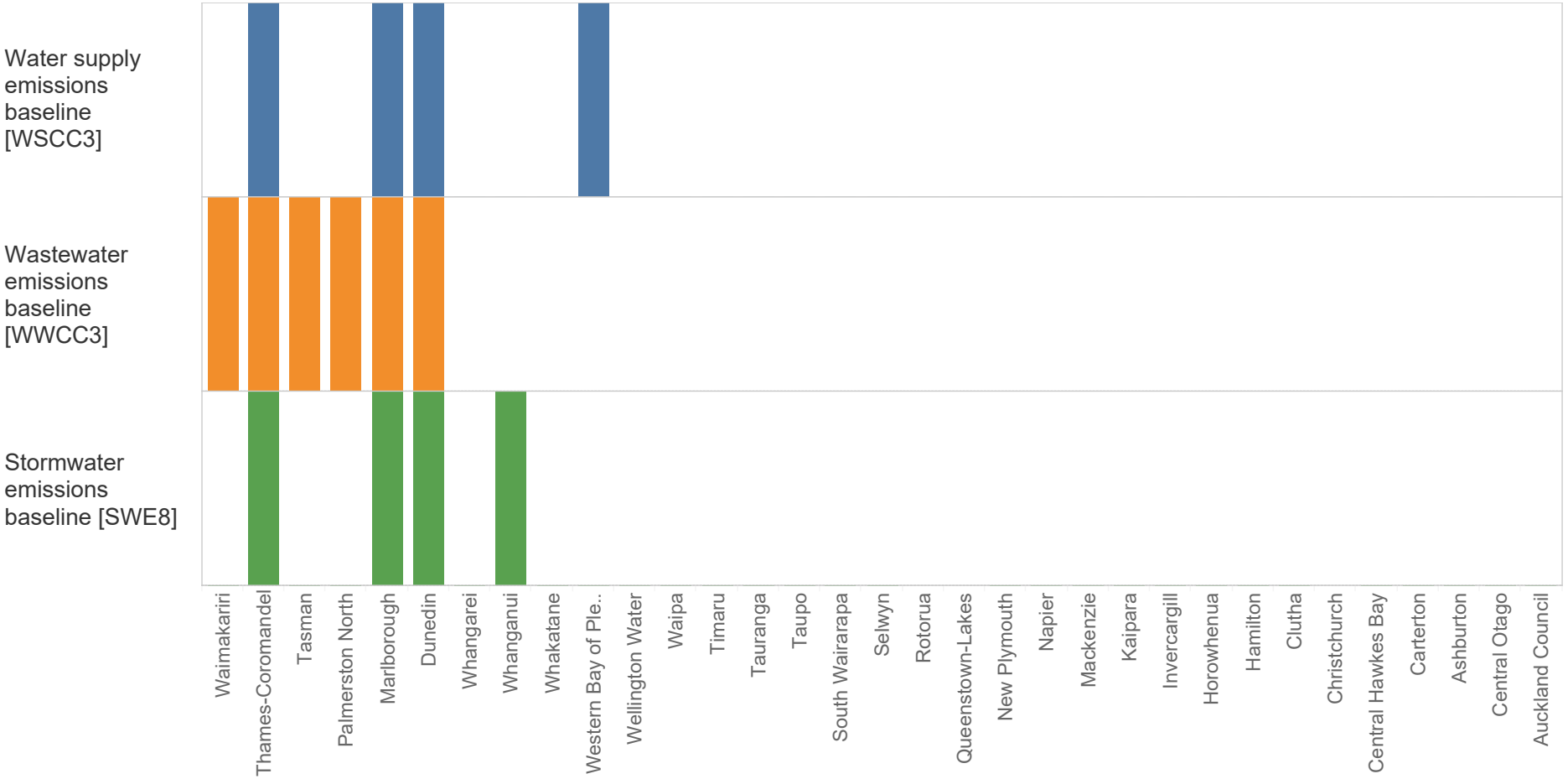


Average peak wet to average dry weather across your council's treatment plants



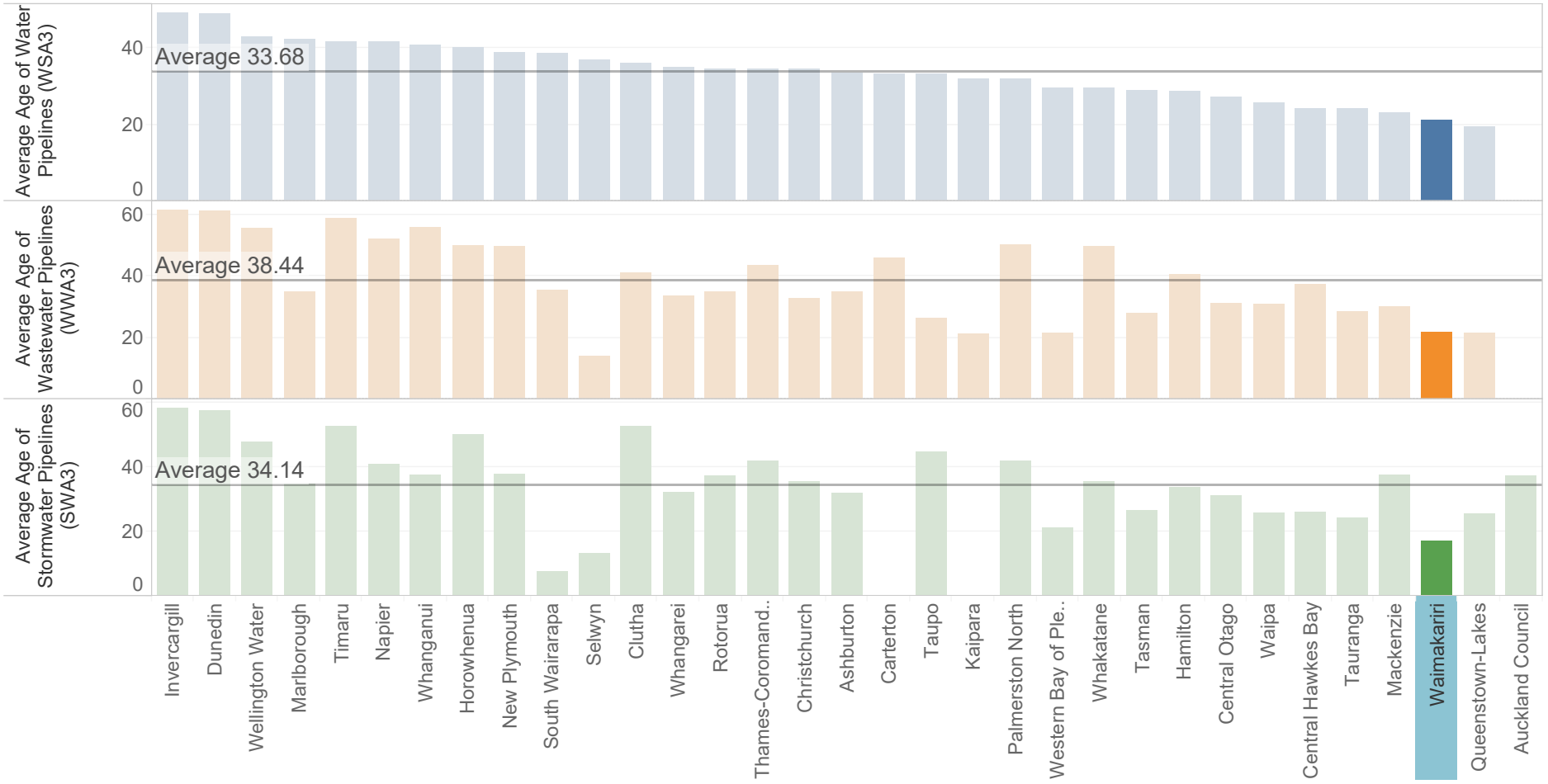
Emissions baseline assessment

Water service providers who have undertaken a greenhouse gas emissions baseline to identify forecast operational and capital expenditure for water supply, wastewater or stormwater assets are shown in bars.



12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44

Average pipe age (years)



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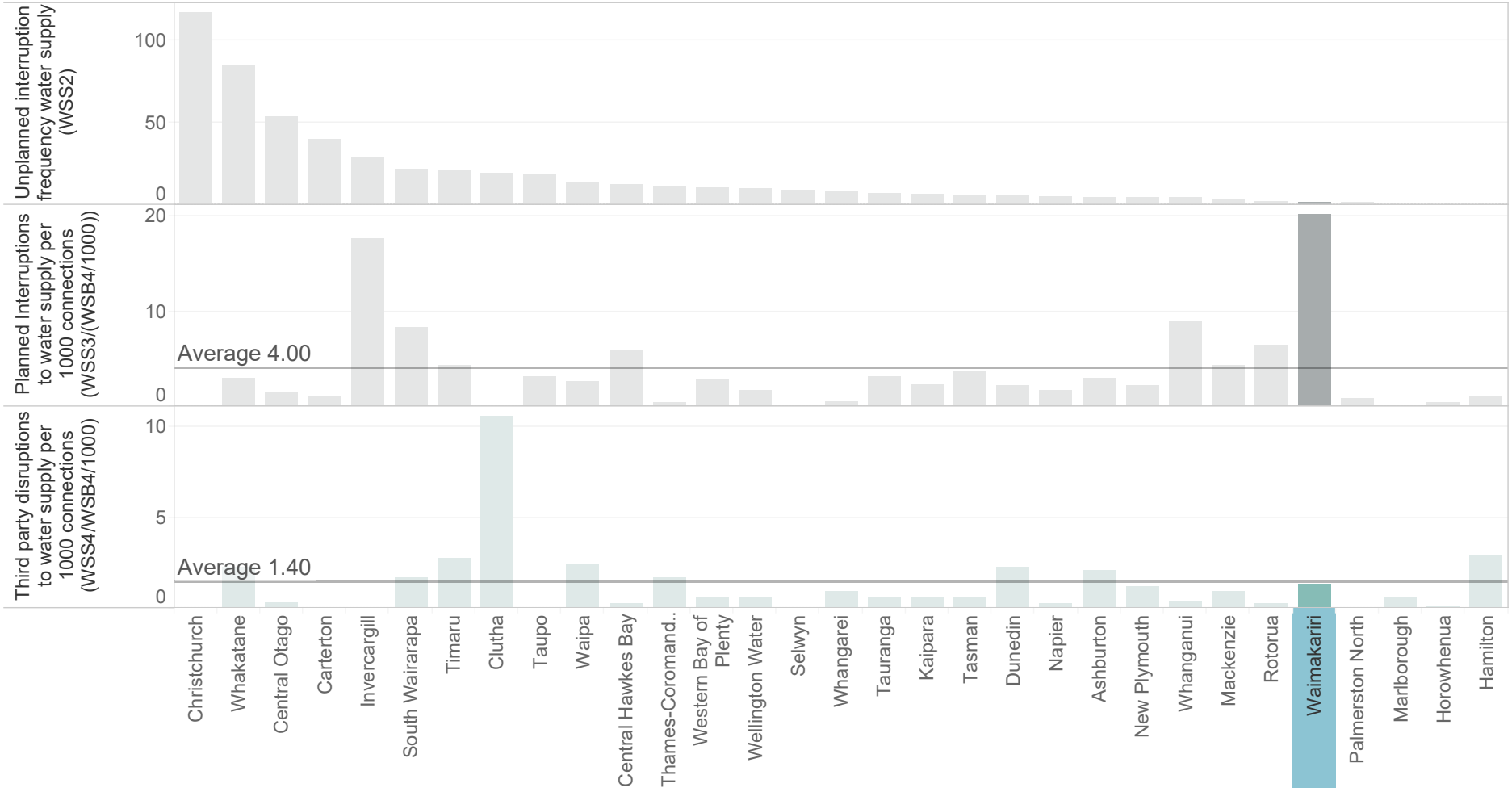
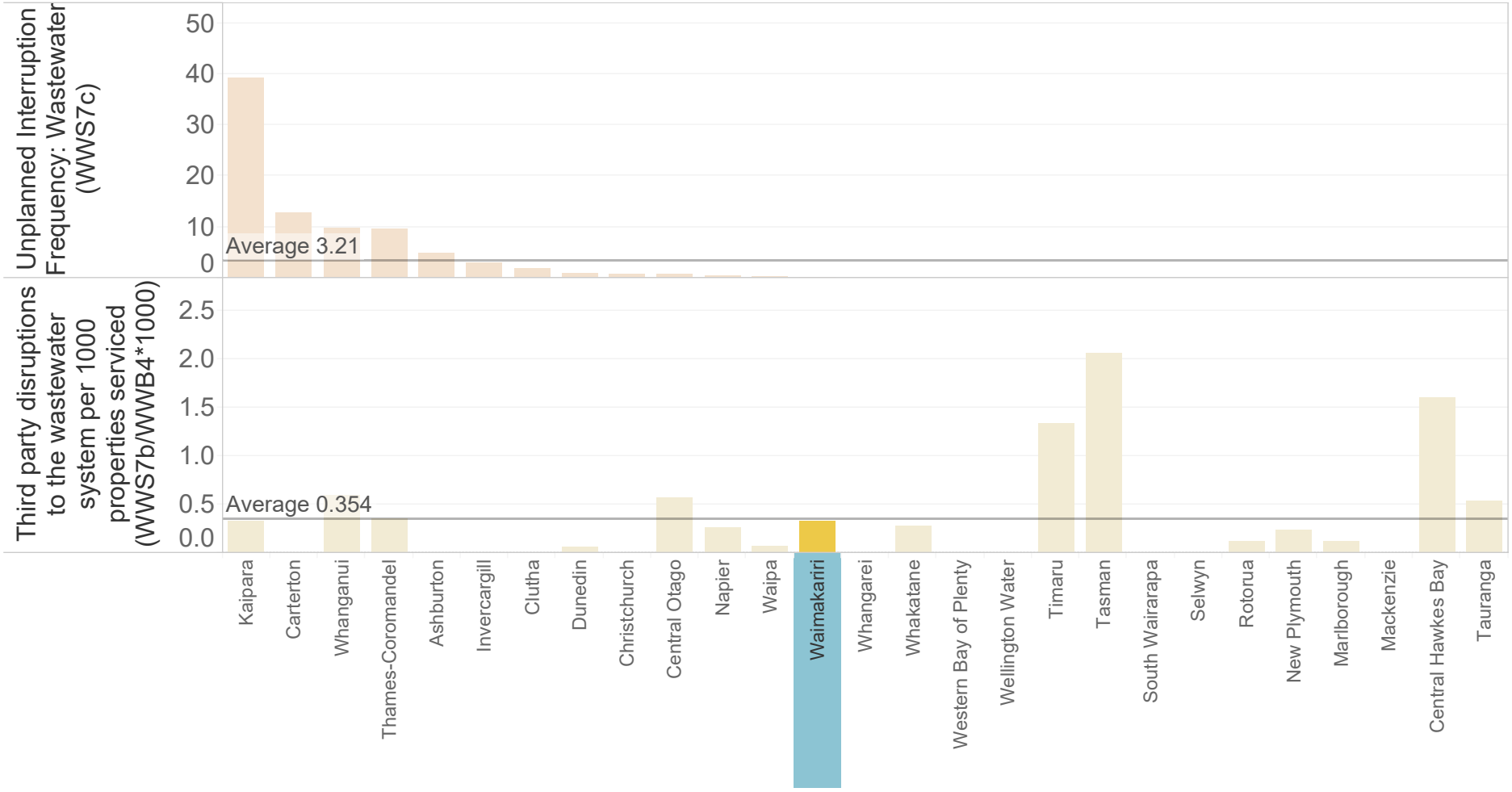
Water supply interruptions per 1000 connections



Wastewater interruptions per 1000 connections



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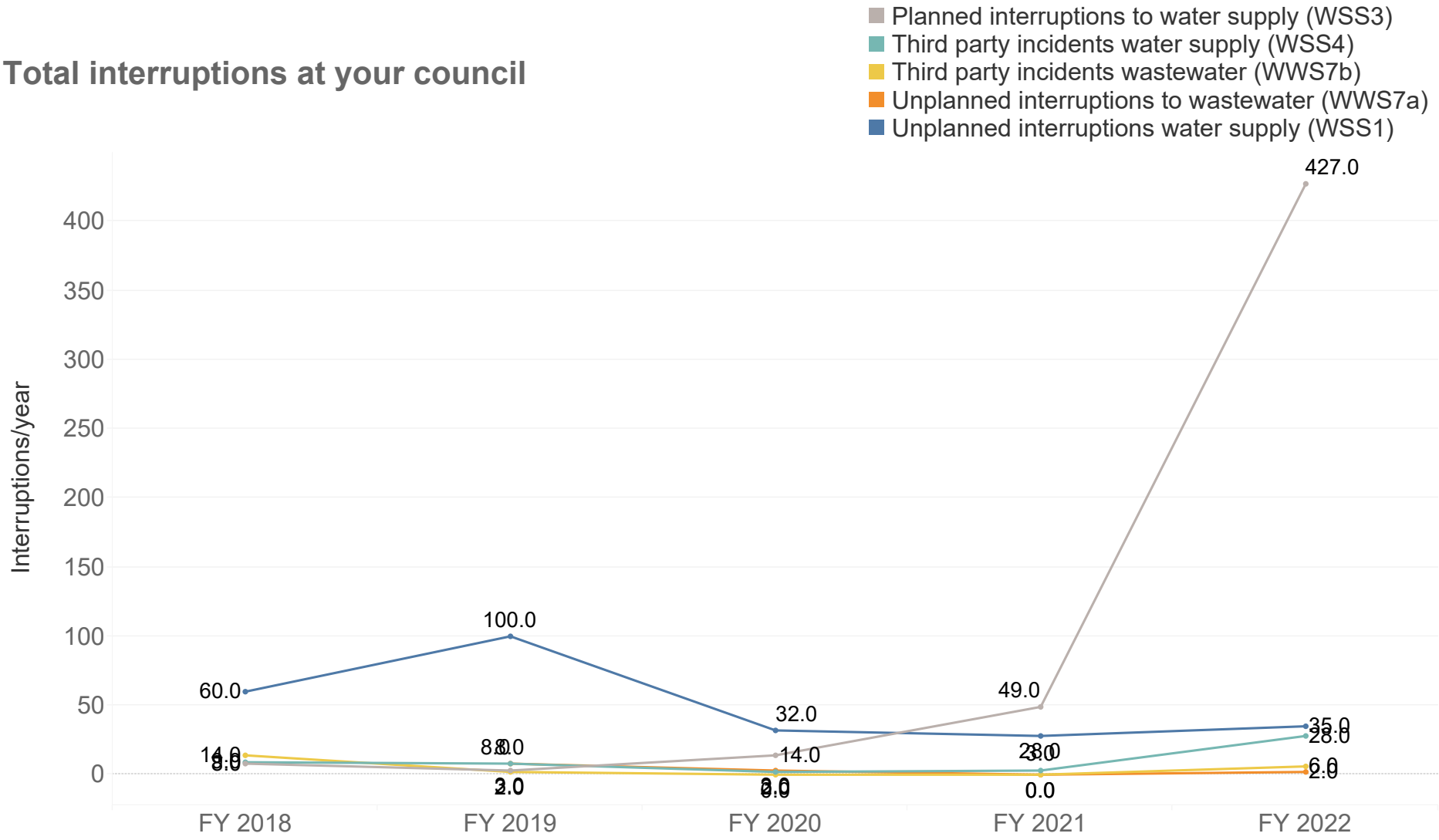
Total interruptions at your council

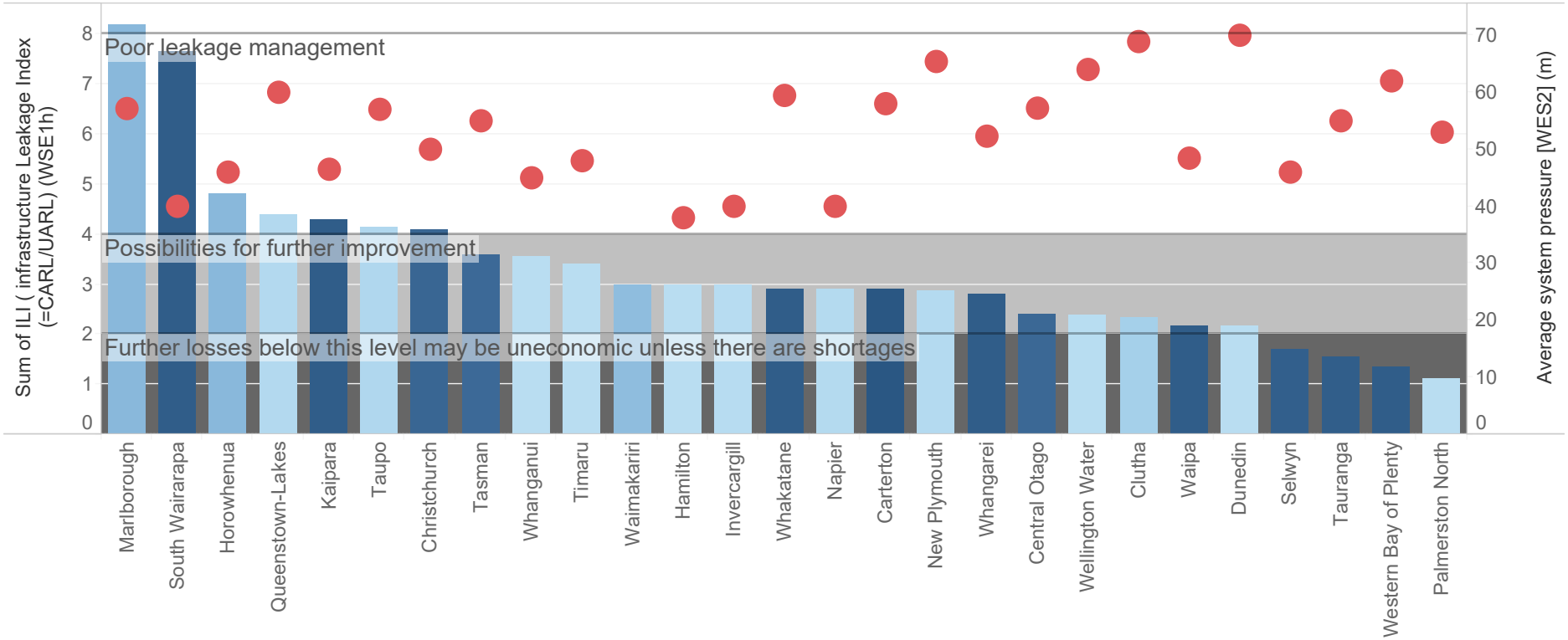


Water loss indicated by the Infrastructure Leakage Index

Percentage of residential connections with meters (WSA9a/WSB2)
0% 104%

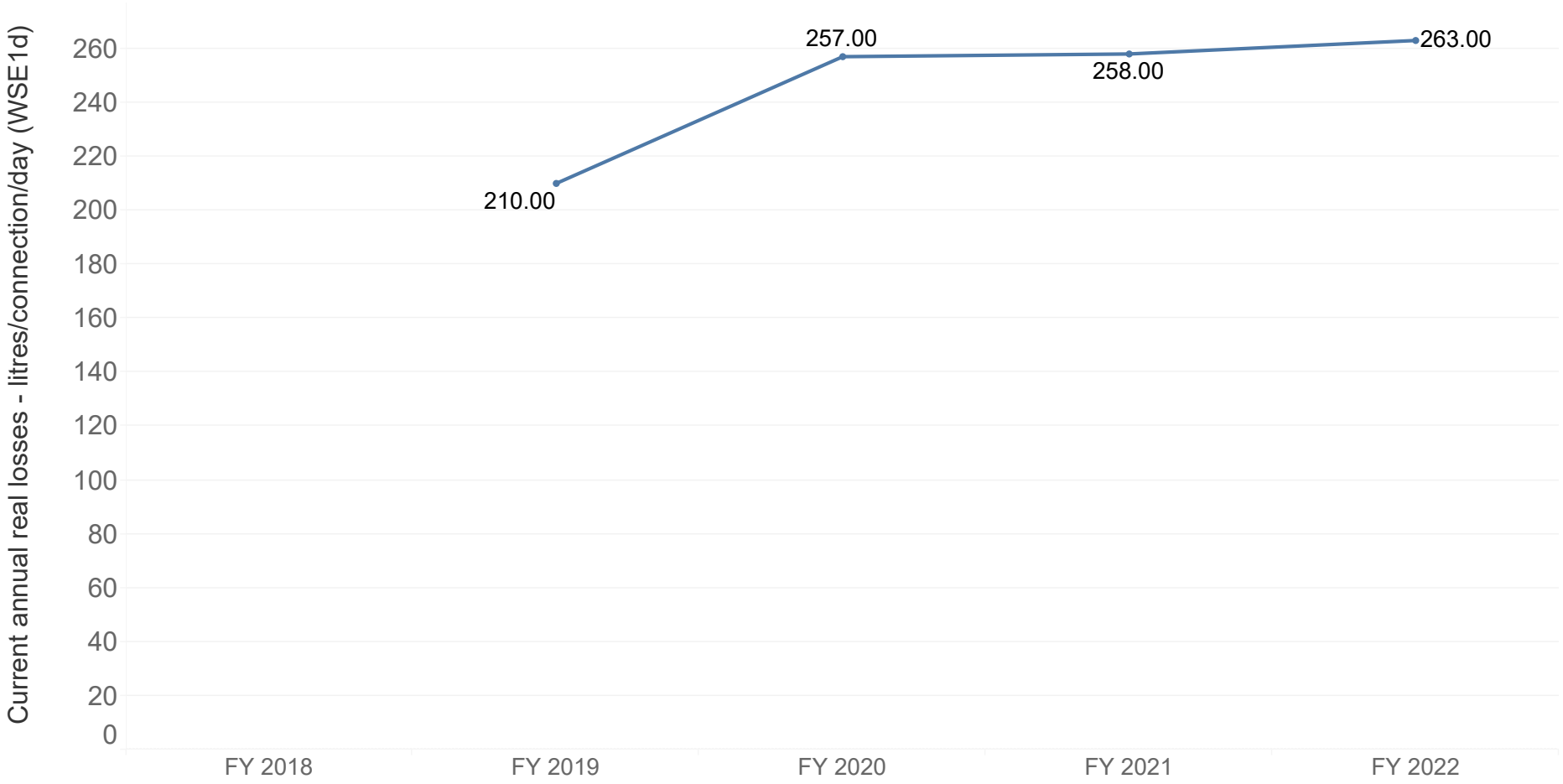
The Infrastructure leakage index is a non-dimensional performance indicator used for comparing the operational management of real water losses. It is the ratio of *Current Annual Real Losses* to *Unavailable Annual Real Losses*. Corresponding performance bands, contained in *Water New Zealand, Water Loss Guidelines, 2010* are shown on the figure.

Infrastructure leakage indicators shown on bars have been colour scaled based on levels of residential metering as this affects the accuracy of water loss calculations. Average system pressure, in m head, is indicated using the red dots as this has a large bearing on water loss.



Water loss indicated by current annual real losses (litres/connection/day)

This is a measure of water losses resulting from mains leakage, leakage and overflows at service resevoirs and leakage on service connections up the street boundary.

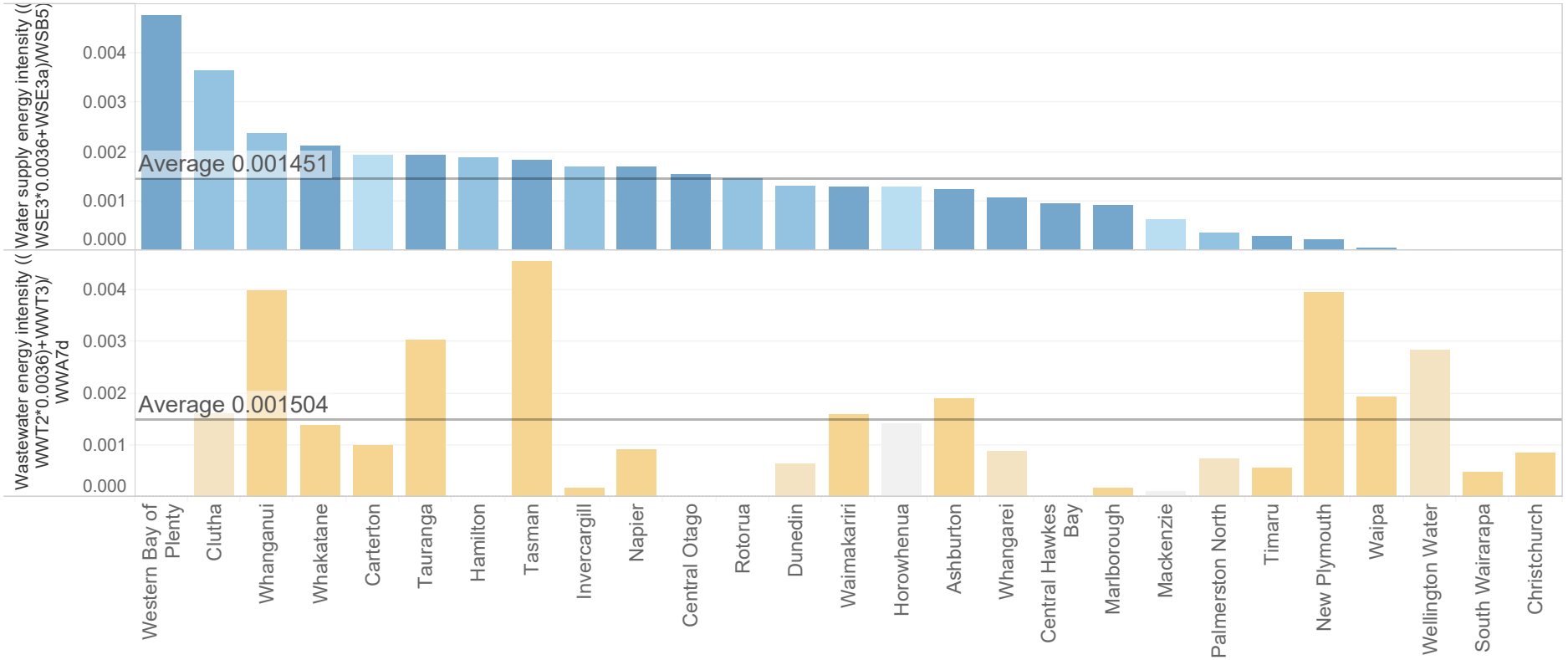


Energy intensity of water and wastewater networks

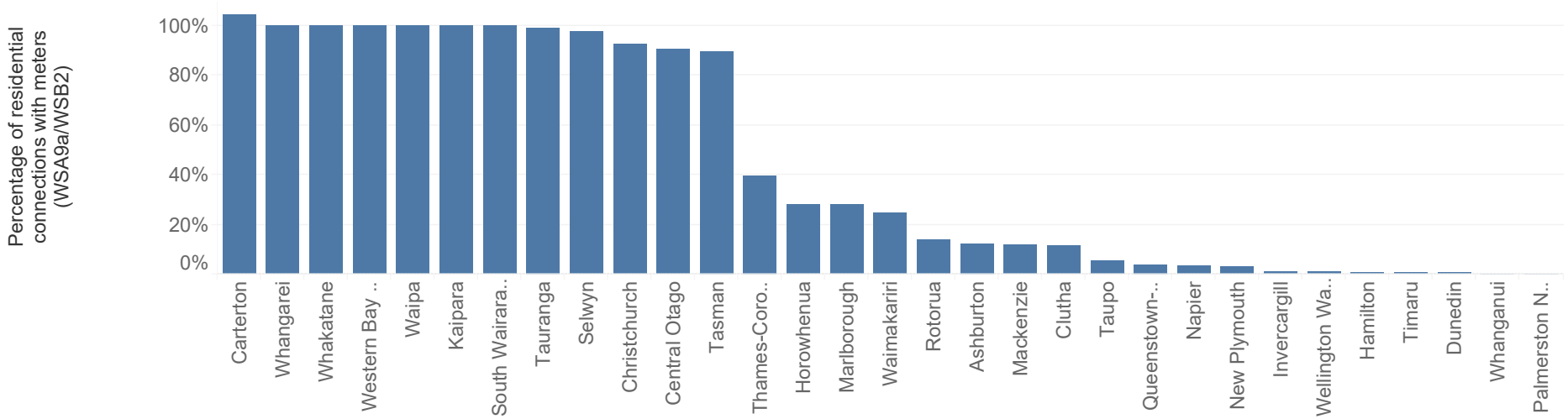
Gigajoules per megalitre of electricity for water supplied (WSE3) or wastewater collected (WWT2) and energy use from other fuels for water (WSE3a) and wastewater (WWT3).
Colour scales indicate confidence in data provided from 1 - very uncertain, to 5 - highly reliable. Not all water service providers have included all treatment plant and pump stations.

Data confidence in water supply electricity use (WSE3:CONF)
0 5

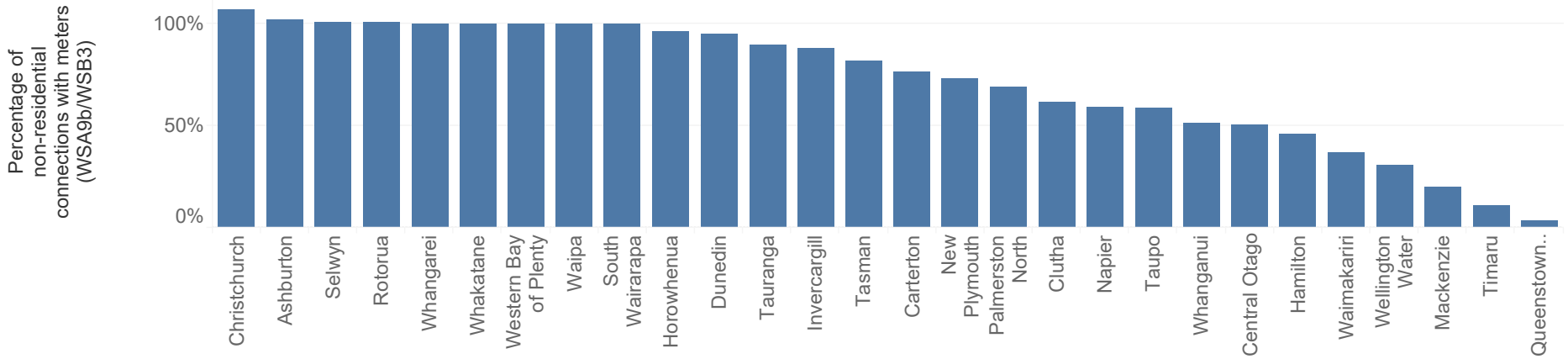
Data confidence in wastewater electricity use (WWT2:CONF)
0 5



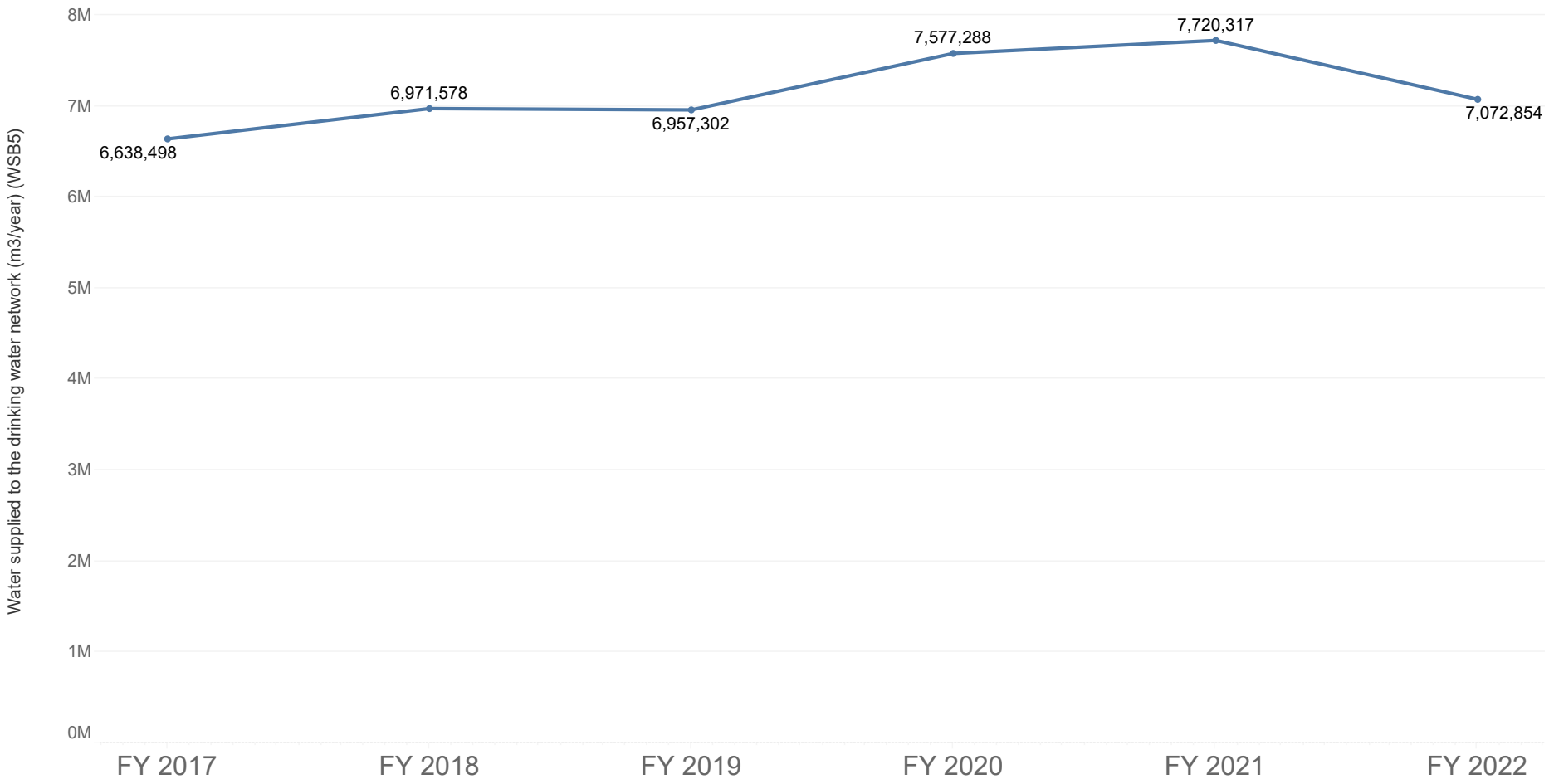
Percentage of residential connections with water meters



Percentage of non-residential connections with water meters

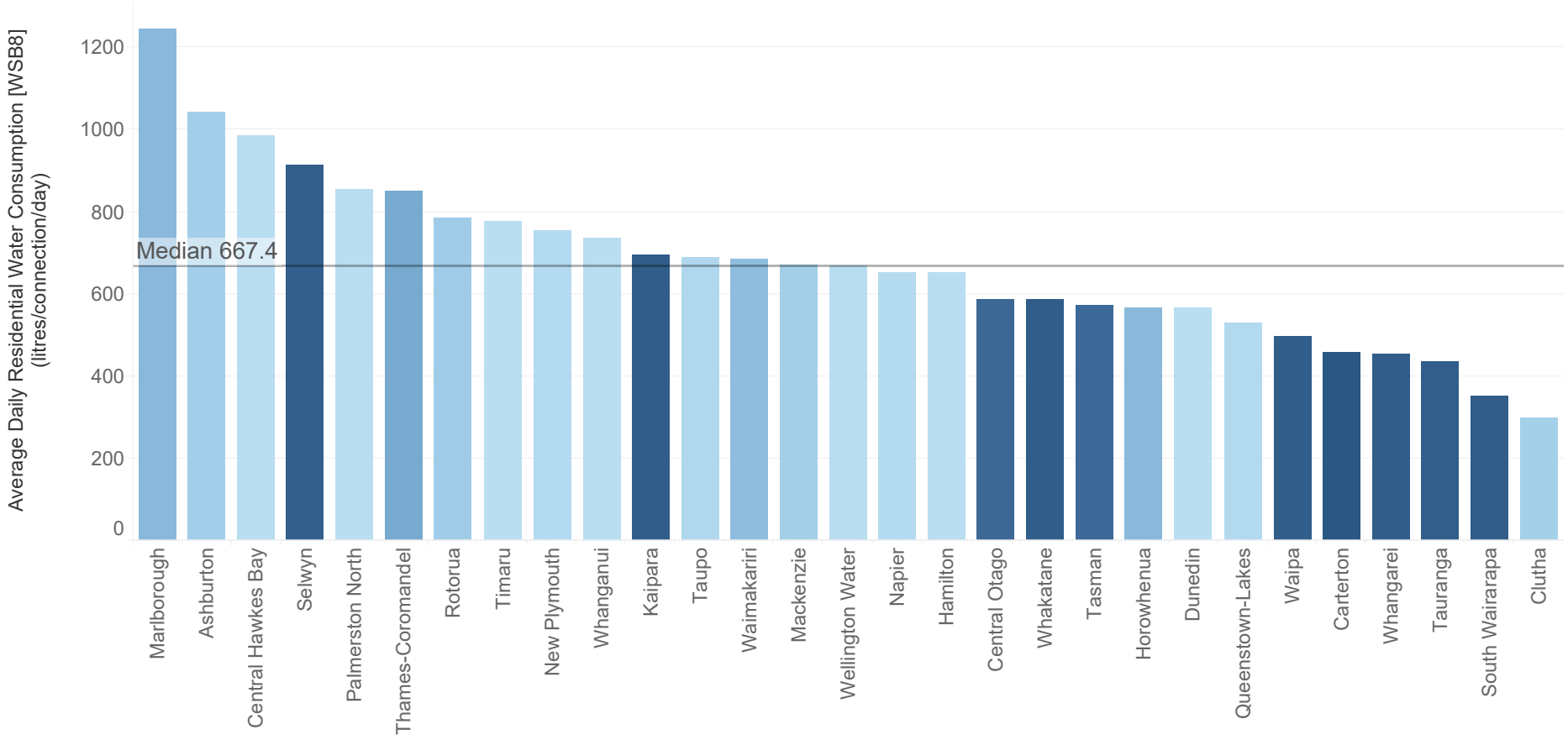


Water supplied to the water network in cubic meters

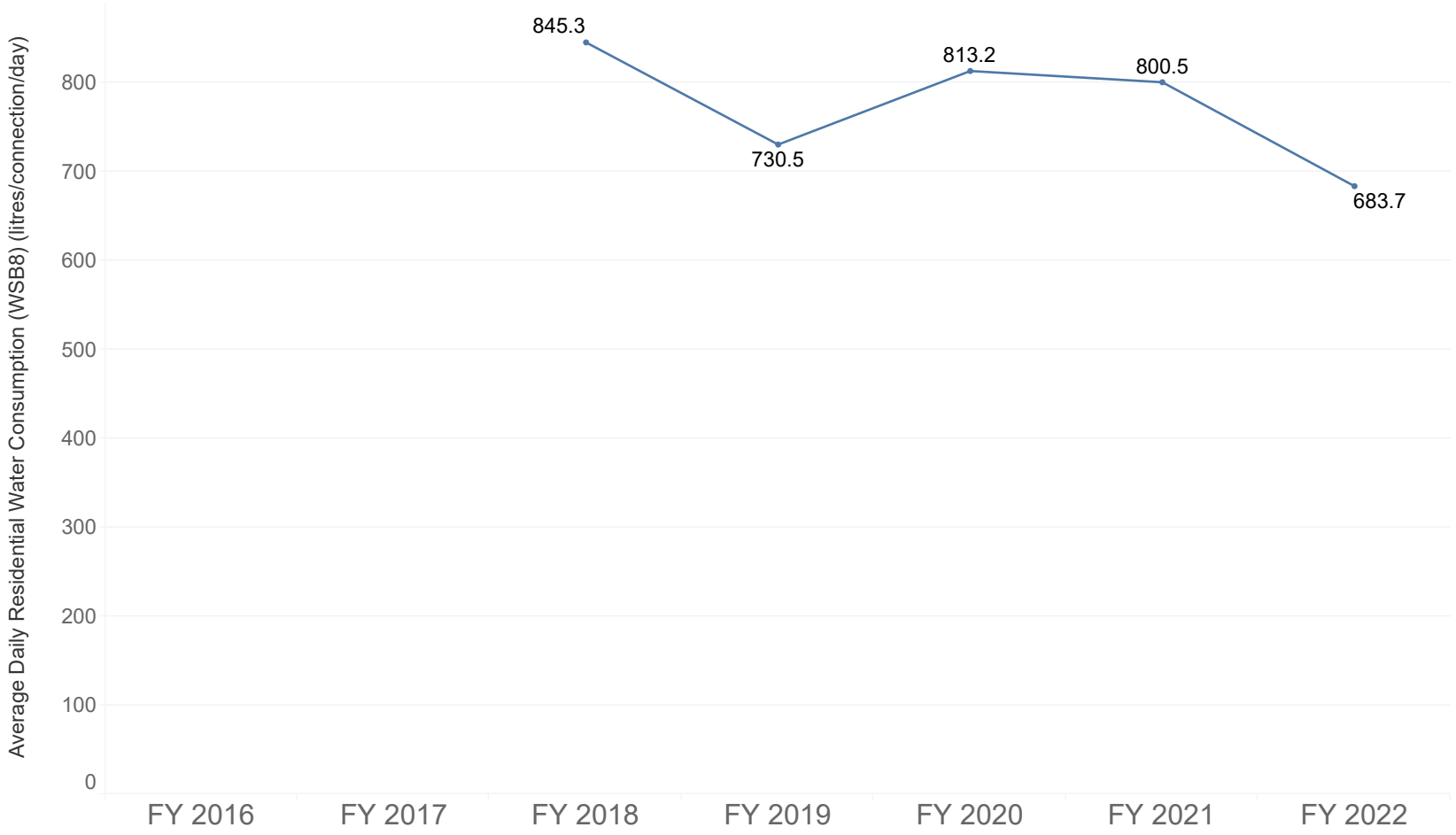


Average daily residential water use (litres/person/day)

Percentage of residential connections with meters (WSA9a/WSB2)
0% 104%

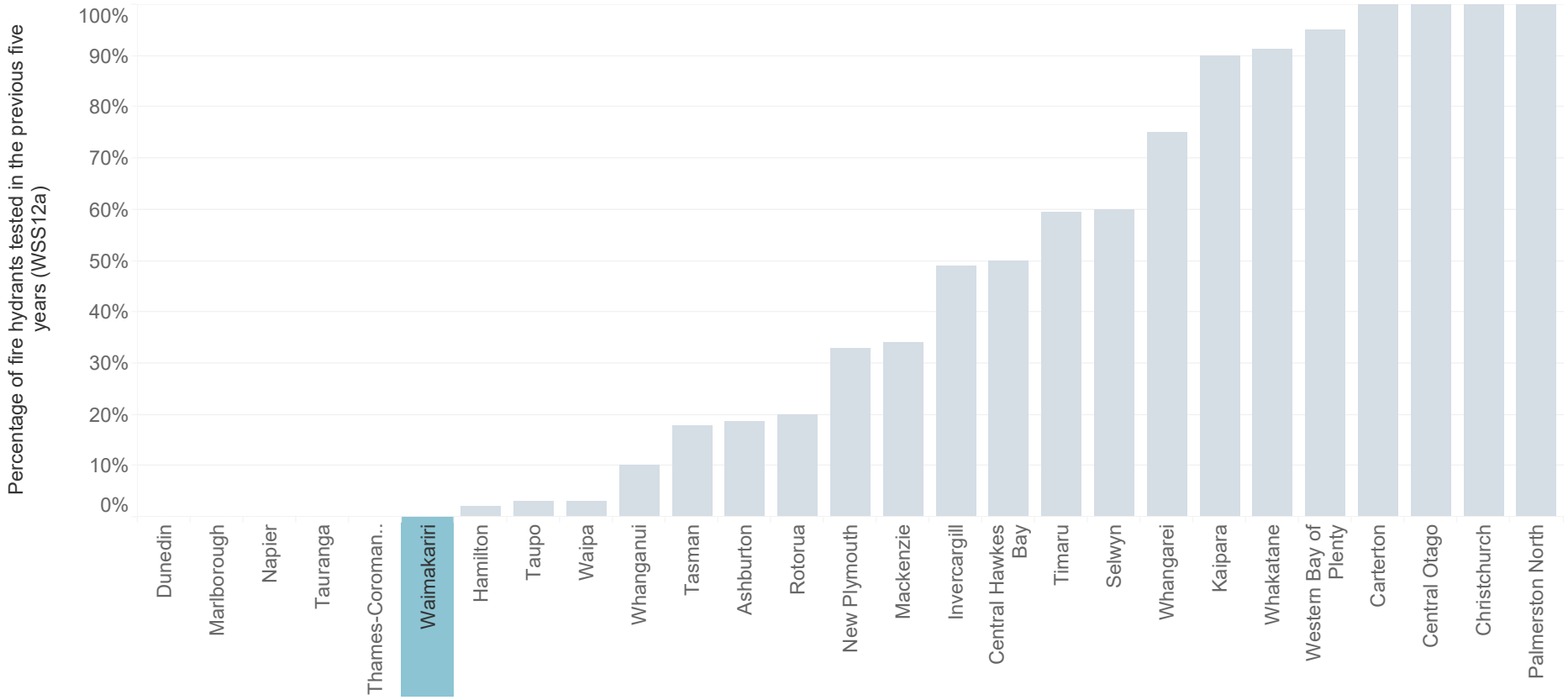


Average daily residential water consumption trend in your district

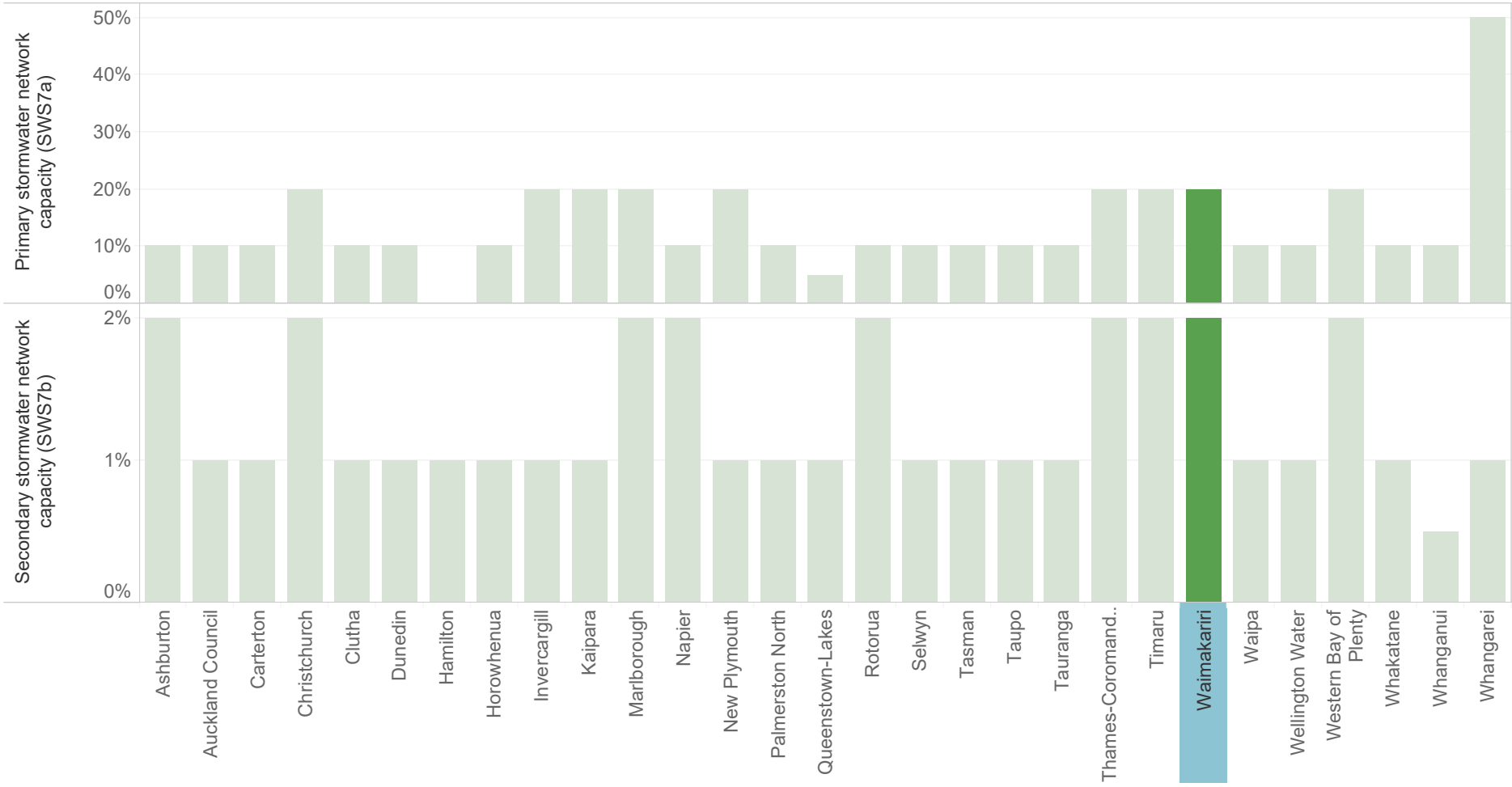


Proportion of fire hydrants tested over five years against the *New Zealand Fire Service Firefighting Water Supplies Code of Practice*

The Code specifies that all hydrants should be inspected and flushed every five years by an approved tester.

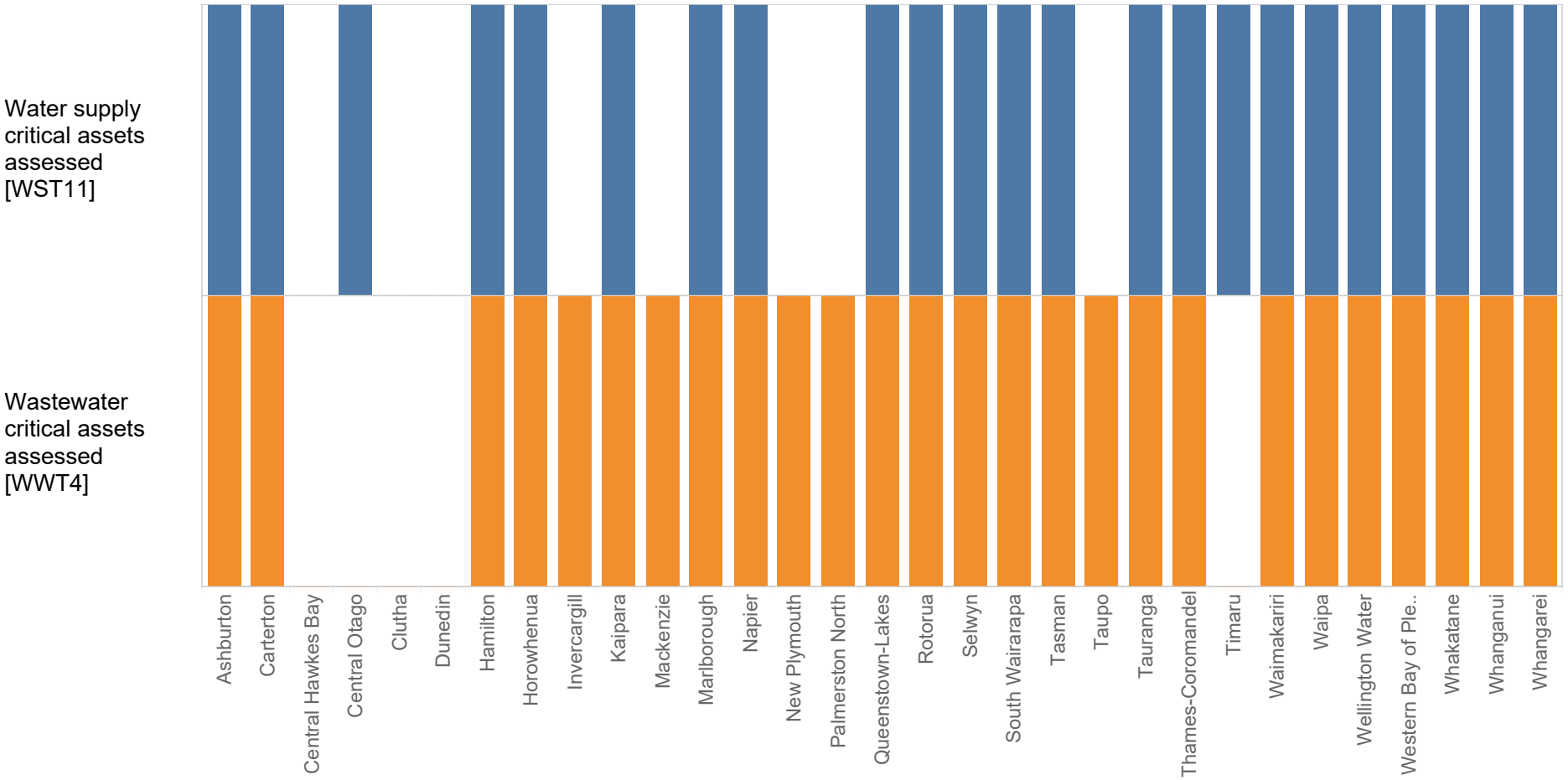


The annual exceedance probability targeted during design of primary and secondary stormwater networks



Critical assets assessment

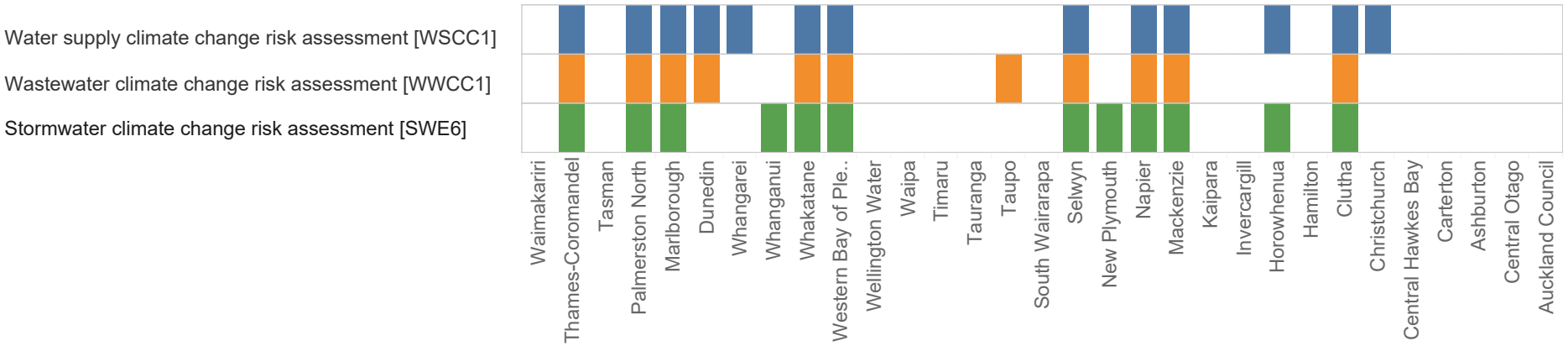
Water suppliers who have undertaken an assessment to identify critical water supply or wastewater assets.



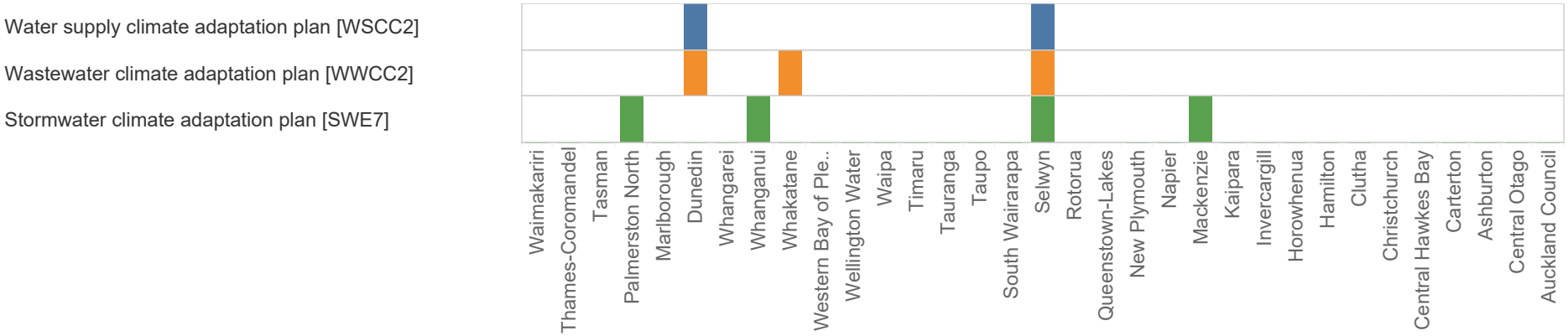
Climate change adaptation

Water suppliers who have undertaken a climate change adaptation risk assessment and/or adaptation plan for water supply, wastewater or stormwater assets.

Climate change risk assessment



Climate change adaptation plan



WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO:	230601080981
REPORT TO:	UTILITIES AND ROADING COMMITTEE
DATE OF MEETING:	15 August 2023
AUTHOR(S):	Angela Burton (Water Environment Advisor - Fixed Term) Sophie Allen (Water Environment Advisor)
SUBJECT:	Avian Botulism Management 2022/23
ENDORSED BY: (for Reports to Council, Committees or Boards)	General Manager / Chief Executive

1. SUMMARY

1.1 This report summarises the occurrence, costs and management of avian botulism during the 2022-23 season at the Waimakariri District Council Wastewater Treatment Plants (WWTP).

1.2 There were low bird death numbers (24 birds) for the 2022-23 season at coastal Waimakariri District Council wastewater treatment plants (WWTPs) collected by ecological contractors, with no avian botulism outbreak detected.

2. RECOMMENDATION

THAT the Utilities and Roading Committee:

(a) **Receives** Report No. 230601080981.

(b) **Notes** the low bird death numbers (24 birds) for the 2022-23 season at coastal Waimakariri District Council Wastewater Treatment Plants (WWTPs), as collected by contractors to check for and contain any avian botulism, with no avian botulism outbreak detected.

(c) **Notes** that there were lower bird death numbers collected at the Councils WWTPs than what was collected by Christchurch City Council at the Bromley Wastewater Treatment Plant in the summer of 2022-23.

(d) **Circulates** this report to the Council, the Waimakariri Water Zone Committee, and the Community Boards for information.

3. BACKGROUND

3.1 An update on avian botulism and its management was presented to Utilities and Roading Committee on 21 June 2022 (220420060318), 24 September 2019, (190905124322[v2]), 21 August 2018 (180719080426) and December 2015 (160301016953). These reports detailed the identification and management response of the disease at the Kaiapoi, Woodend, Rangiora and Waikuku WWTPs, and surrounding waterbodies.

3.2 Avian botulism is a paralytic disease of waterfowl, caused when toxin is released by bacteria commonly found in the substrates of lake and pond beds, including wastewater oxidation ponds. This toxin accumulates in aquatic invertebrates, which are then consumed by birds. The bacterium *Clostridium botulinum* is widespread in soil and requires warm temperatures, a protein source and an anaerobic (i.e. no oxygen) environment in order to become active and produce toxin. Decomposing vegetation and invertebrates combined with warm temperatures can provide ideal conditions for the botulism bacteria to activate and produce toxin.

3.3 Botulism is an intoxication (i.e. food poisoning) rather than an infectious disease. The affected birds show several consistent symptoms including weakness, lethargy and a progressive paralysis, which initially affects the legs and neck. Walking becomes difficult and paralysis of the neck means birds cannot hold their heads erect. For birds sitting on the water this inevitably leads to death by drowning.

3.4 Carcasses of dead birds are subsequently fed on by flies and their larvae, which then concentrates the botulinum toxin within the larvae and the bird-toxic maggot cycle commences. This leads to the deaths of subsequent waves of birds as they feed on the maggots in, and around, the dead bird carcasses.

3.5 Providing mildly affected birds with fresh water, shade and protection from predators may help them recover from the intoxication. Avian botulism antitoxin is available (potentially only overseas, such as in the USA), but requires special handling and must be given early in the intoxication. Birds that survive a botulism outbreak are not immune to future exposure to botulism toxin.

3.6 Avian botulism Type C, as identified at the Kaiapoi Wastewater Treatment plant, is not thought to be a risk to human health. Avian botulism Type E, which has not been identified in the Waimakariri District, does affect humans in rare cases.

4. ISSUES AND OPTIONS

4.1. Figure 1 shows bird carcass numbers that have been collected by contractors at WWTPs and sometimes other ponds managed by WDC from 2013-23. In 2022-2023 24 birds in total were collected from four WWTPs, primarily mallards and paradise shelducks, but also species such as Grey Teal, and a Royal Spoonbill were also collected. Note that cause of death is not confirmed by autopsy. There has been no significant outbreak of avian botulism since 2018-19. However, avian botulism is thought to have caused significant number of deaths in Waimakariri District (i.e. defined as an outbreak) in 2013/14, 2014/15, 2017/18 and 2018/19.

4.2. The species of each carcass collected is recorded by Keystone Ecology Ltd, who are experienced in bird identification. No species that are listed as rare or threatened by the Department of Conservation threat classification system were collected in 2022/23 or in previous year since species records have been made. Department of Conservation classifies the Spoonbill as naturally uncommon but increasing in range.

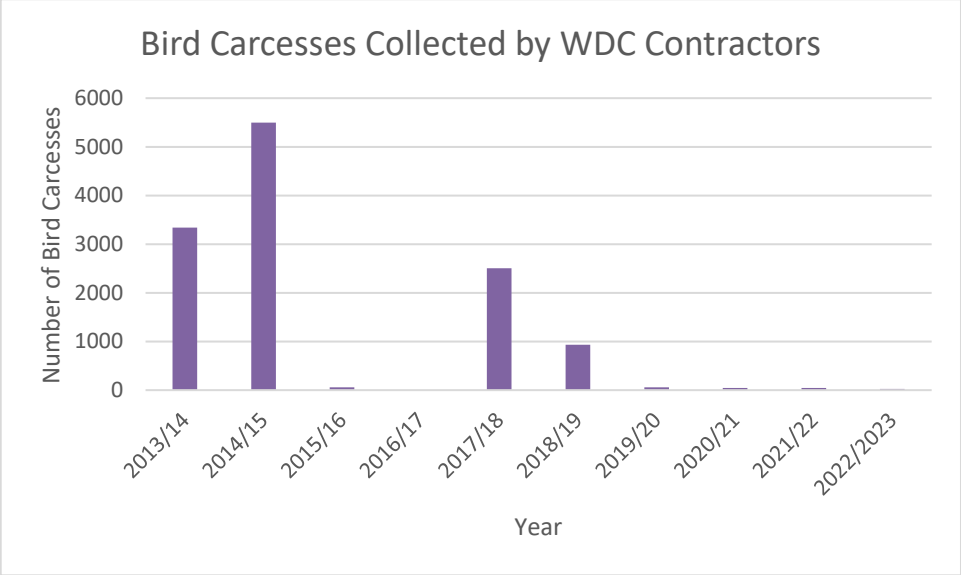


Figure 1: Bird carcasses collected 2013-23 by WDC contractors at all sites. NB data value may be slightly incorrect for the 2015-16 year, due to varying reports.

4.3. The first noted outbreak in the Waimakariri District was at the Kaiapoi Wastewater Treatment Plant (WWTP) in the summer of 2013/14. In total there were 3,336 birds that died at the Kaiapoi WWTP and 7 at Woodend WWTP. Most of the dead birds were paradise shelducks and mallards. The second outbreak in the summer of 2014/15 was more significant with a total of 5,499 dead birds over the summer period. The incidence of avian botulism was also more widespread with birds affected at the Kaiapoi, Woodend, Rangiora and Waikuku Beach treatment plants, at the Kaiapoi Lakes public area, the Pegasus wetlands and the Tūhaitara Coastal Park wetlands (Tutaepatu Lagoon). In 2017/18 there were an estimated 2505 bird carcasses collected by Council contractors. Any outbreaks in the summers of 2015/16, 2016/17, 2019/20, 2020/21, 2021/22 and 2022/23 were negligible, due to likely factors such as weather (temperature and wind direction for example) that have not be analyzed (see Figure 1).

Waterbird Survey results from Kaiapoi WWTP and Brooklands Lagoon/ Waimakariri River Mouth Coastal Wetland System).

4.4. Christchurch City Council undertake annual (late summer) bird surveys at the Brooklands Lagoon/Lower Waimakariri, including at the Kaiapoi WWTP. The 2023 annual bird survey was undertaken on 20/02/2023.

4.5. Figure 2 shows the Kaiapoi WWTP plant bird survey counts for the past four years (including the 2023 count). It is noted that since 2020 bird numbers for Paradise Shelduck have increased from 168 (2020) to 320 (2023), however were higher historically when counts commenced in 1986. Mallard-Grey hybrid ducks have increased from 715 (2020) to 1041 (2023), with some annual fluctuations in between. Royal Spoonbill numbers are low as the species is naturally uncommon, with a small spike in numbers in the 2022 count.

	Date			
Species	**23.2.2020**	**25.2.2021**	**23.2.2022**	**20.2.2023**
South Island Oystercatcher	0	0	0	0
Pied Stilt	5	5	0	5
Black-fronted Dotterel	0	0	0	0
Spur-winged Plover	2	7	0	2
Caspian Tern	0	0	0	0
Black-fronted Tern	0	0	0	1
Black-backed Gull	15	34	33	15
Black-billed Gull	62	87	314	205
Red-billed Gull	0	2	40	40
Mute Swan	0	0	0	0
Black Swan	53	29	81	125
Canada Goose	19	9	5	122
Cape Barren Goose	1	0	1	0
Paradise Shelduck	168	270	214	320
Mallard/Grey/Hybrid Ducks	715	928	550	1041
Grey Teal	514	587	815	724
NZ Scaup	73	55	276	274
Australian Shoveler	2277	2704	1544	1804
Northern Shoveler	0	0	0	0
Pukeko	4	11	8	8
Australasian Coot	0	0	4	0
Marsh Crake	0	0	0	0
Swamp Harrier	2	2	1	3
White-faced Heron	0	0	0	0
Royal Spoonbill	4	4	14	4
Black Cormorant	5	4	0	1
Pied Cormorant	0	0	0	0
Little Cormorant	0	0	0	0
Welcome Swallow	288	89	0	166

Figure 2: Kaiapoi Wastewater Treatment Plant bird survey counts between 2020 and 2023 (Credit Andrew Crossland, Christchurch City Council)

Avian Botulism monitoring at Bromley Wastewater Treatment Plant

4.6. Over the 2022-23 summer, Christchurch City Council confirmed that approximately 321 dead waterfowl were collected from Bromley WWTP wetlands as part of their annual avian botulism monitoring. It was also confirmed that 11 live waterfowl were taken from Bromley WWTP for recovery.

4.7. Since the summer of 2011/12, there have sometimes been avian botulism Type C outbreaks in the Bromley Wastewater ponds in Christchurch. In summer 2012 there was a large outbreak with 6,300 birds collected, with death attributed to avian botulism within the Bromley Oxidation ponds. The actual estimated number of bird deaths was over 7,000 due to a number unable to be recovered.

4.8. In 2013/14, two years after the Bromley WWTP outbreak, WDC experienced the first noted avian botulism outbreak for the District at Kaiapoi WWTP. It was speculated that the avian botulism outbreak at the Kaiapoi WWTP was related to the outbreak at Bromley spreading to the wider area, such as through the movement of sick waterfowl between the two locations.

4.9. The bacterium that causes avian botulism is naturally occurring and is likely always present at all WWTP wetland sites at low levels in sediments, so is not necessarily a new infection that is spread between sites. It is rather that an outbreak at one site, such as Bromley WWTP, leads to concentrated toxins being passed on via the 'carcass-maggot cycle'. This cycle is where birds eat the maggots of a carcass that has passed away from avian botulism, where the toxin has accumulated then moves to another site before dying and producing maggots with the accumulated toxin.

Implications for Community Wellbeing

4.10. There are not implications on community wellbeing by the issues and options that are the subject matter of this report. An information pamphlet on Avian Botulism has previously been prepared (refer TRIM 190204012544) to address the community's concerns regarding the disease.

4.11. The Management Team has reviewed this report and support the recommendations.

5. COMMUNITY VIEWS

5.1. Mana whenua

Te Ngāi Tūāhuriri hapū are likely to be affected by or have an interest in the subject matter of this report as some waterfowl are taonga species, collected for mahinga kai.

5.2. Groups and Organisations

There are groups and organisations likely to be affected by, or to have an interest in the subject matter of this report such as Te Kōhaka o Tūhaitara Trust, North Canterbury Fish and Game, the SPCA, Community and Public Health, Department of Conservation, and Christchurch City Council.

5.3. Wider Community

5.3.1. Although there is no legislative requirement, there is a social expectation of the Council to prevent outbreaks spreading to other wetland and lake areas, such as in the Selwyn District and Hurunui District (e.g. Lake Forsyth/Wairewa, Te Waihora/ Lake Ellesmere).

5.3.2. Gamebird hunters i.e., duck shooters may have reduced opportunities for hunting, and require clear communication on the severity and locations of outbreaks.

5.3.3. Birdwatchers, bird lovers and the general public could be saddened to see sick and dead birds at public locations. Rare or threatened birds could be affected, though no rare or threatened bird deaths have been recorded to date.

5.3.4. Opportunities for mahinga kai (customary food gathering) of waterfowl and tuna (eel) may be reduced. Clear communication is needed with appointed Tangata Tiaki (customary fisheries officers).

5.3.5. The wider community is not likely to be affected by, or to have an interest in the subject matter of this report.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

6.1.1. There are no financial implications of the decisions sought by this report. This report is for information only.

6.1.2. This budget is an existing budget included in the Annual Plan for the operational cost of the wastewater treatment plants.

6.1.3. The cost of avian botulism management for 2022-23 was $11,502 excl GST, however this amount also includes a minimal cost of midge emergence trap monitoring, which is carried out by the contractor Keystone Ecology in the same visit. The cost in 2021-22 was $19,525, 2018-19 was $45,829, and 2017-18 was $41,980 excl. GST for the bird collection by a contractor. The variation in cost per year relates generally to an increased number of visits and/or hours required to retrieve bird carcasses.

6.1.4. The cost for bin rental, collection and disposal in 2022-23 was $826 excl GST. The cost in 2021-22 was $1,070, $3,081 for 2018-19, and $5,773 excl. GST for 2017-18 for the waste disposal contractor.

6.1.5. Costs to-date have come from within WDC Wastewater budgets, including for areas such as stormwater ponds and reserve areas. This may need to be re-evaluated if significant costs arise from outside of WWTP areas.

6.1.6. The cost of management is thought to be reduced by efficient monitoring, quick response and a coordinated response with other parties, such as the Christchurch City Council.

6.2. **Sustainability and Climate Change Impacts**

6.2.1. The recommendations in this report do not have sustainability and/or climate change impacts. However, climate change will have a likely effect on avian botulism outbreaks in the future if there are warmer temperatures for longer durations for example.

6.2.2. WDC staff monitor for weather predictions of warmer winters and summers, to enact management options early, and reduce risk of a larger or widely dispersed outbreak.

6.3 **Risk Management**

6.2.1. There are no risks directly arising from the adoption/implementation of the recommendations in this report.

6.3 **Health and Safety**

6.2.1. There are no specific health and safety risks directly arising from the adoption/implementation of the recommendations in this report.

6.2.2. Health and Safety documentation and practices such as a Site-Specific Safety Plan will continue to be in place and reviewed when appropriate for WDC staff and contractors.

6.2.3. Risks to human health can be minimised by clear communication of risks to staff i.e. promoting the use of gloves when in contact with bird carcasses and implementation of contractors' Health and Safety Plans.

6.2.4. In 2014/15 eels in Tutaepatu Lagoon are thought to have consumed some of the carcasses, which led to over 20 observed eels deaths. This raises a potential health and safety issue, due to the fact eels are gathered as a food source.

6.2.5. Collection of bird carcasses from wetlands is restricted to retrieval of wind-blown birds from the water's edge due to the risk for humans to enter the wetlands with treated effluent. This can reduce the efficiency and timeliness of bird carcass collection, with some areas are unable to be safely accessed for carcass removal.

6.2.6. Outbreaks should be re-confirmed to be avian botulism Type C by the Ministry of Primary Industries at regular intervals, particularly if symptoms presented are atypical.

7. CONTEXT

7.1. Consistency with Policy

7.1.1. This matter is not a matter of significance in terms of the Council's Significance and Engagement Policy.

7.2. Authorising Legislation

7.2.1. The Local Government Act 2002 sets out the power and responsibility of local authorities, including the Council's role in providing wastewater services.

7.3. Consistency with Community Outcomes

7.3.1. The Council's community outcomes are relevant to the actions arising from recommendations in this report.

- There is a healthy and sustainable environment for all.

7.4. Authorising Delegations

7.4.1. This report is for information only. No delegations apply.

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO:	230516070164
REPORT TO:	UTILITIES AND ROADING COMMITTEE
DATE OF MEETING:	15 August 2023
AUTHOR(S):	Angela Burton – Water Environment Advisor (Fixed Term) Sophie Allen – Water Environment Advisor
SUBJECT:	Private Well Study – Results from 2022 study
ENDORSED BY: (for Reports to Council, Committees or Boards)	General Manager / Chief Executive

1. SUMMARY

1.1. Waimakariri District Council (WDC), alongside Environment Canterbury and Canterbury District Health Board, have been recommended in the Zone Implementation Programme Addendum (ZIPA) to develop a programme for testing and reporting of water quality in private drinking water supply wells. This testing is particularly for the contaminant nitrate, due to a developing field of research on the effects of high nitrate consumption.

1.2. This report summarises the findings of the WDC private well study for 2022 and compares to results from 2019, 2020 and 2021. Studies were initially carried out for wells in the Eyreton and Cust sampling areas, with Carleton and Swannanoa as sampling areas that were added to the study from 2021. Nitrate and other chemical parameters were sampled in 27 wells in total: six in Cust (same wells as in 2019, 2020 and 2021), nine in Eyreton (same wells as 2019, 2020 and 2021), five in Carleton and seven in Swannanoa. It is noted that the total amount of samples taken in the 2022 study was less than previous studies due to lower participant turnout.

1.3. The nitrate mean and median for Cust and Eyreton samples has fluctuated over the 2019-22 period. It is not possible to conclude any long-term trend in nitrate levels from only four data points for each well. Note that not all wells were resampled and variability of results could be due to the small sample size.

1.4. Carleton and Swannanoa areas that were sampled for the first time in the 2021 study, with nitrate medians lower than that found for Cust and Eyreton. The 2022 mean and median results for Carleton and Swannanoa decreased when compared to the 2021 study mean and median. Note that not all wells were resampled and variability of results could be due to the small sample size.

1.5. In the 2022 study, no wells measured above the Maximum Acceptable Value (MAV) for Nitrate-Nitrogen of 11.3 mg/L. The MAV is set in the Drinking-water Standards for New Zealand (2022). It should be noted that private wells that are domestic self-suppliers do not need to comply with the standards except at the building consent stage, however, are used for guidance values in this report.

1.6. A median value of half of the MAV (5.65 mg/L) has been set as a target in Plan Change 7 of the Land and Water Regional Plan for private water supply wells. 44% of the wells in Eyreton, 67% in Cust, 40% in Carleton and 29% in Swannanoa were above half the MAV

(5.65 mg/L) for nitrate-nitrogen in the 2022 study. The median nitrate concentration for Cust and Eyreton, as sampled in the 2022 study would exceed the limit of a median of 5.65 mg/L nitrate-nitrogen (half of the MAV). Carleton and Swannanoa median nitrate concentration for the 2022/23 study were less than 5.65 mg/L (half of the MAV).

1.7. In the 2022 study, a weak correlation was found between the increasing well depth and decreasing nitrate levels. In 2021, there was no correlation, however in 2019 and 2020 a weak correlation was found for this relationship. Other factors such as geochemical processes, nitrate recharge sources and date of sampling likely play a larger role than depth.

1.8. Other chemical parameters analysed in the 2022 study are not presented in this report for brevity. Other contaminants that were found to be over a MAV were turbidity and pH. The Aesthetic Value (AV) for iron was also exceeded in some wells. Microbiological testing was not carried out due to the risk of contaminating a sample if not trained appropriately.

1.9. This nitrate study is intended be repeated in spring 2023 to allow for assessment of trends over time. Well owners from the 2019-22 sample rounds will be approached again for repeat annual sampling.

1.10. A pamphlet about managing a private well water supply has been produced by Waimakariri District Council, with the support of the groundwater team at Environment Canterbury. This pamphlet has been updated to add in information about the Water Services Act (2021), and requirements for drinking water suppliers. This includes those who share water supplies or have a commercial premise (i.e. anyone who is not considered a domestic self-supplier).

2. RECOMMENDATION

THAT the Utilities and Roading Committee:

(a) **Receives** Report No. 230516070164.

(b) **Notes** the findings of the 2022 study, with no wells above the nitrate-nitrogen Maximum Acceptable Value (MAV) set in the Drinking Water Standards for New Zealand (2022). Of the wells sampled 44% in Eyreton, 67% in Cust, 40% in Carleton and 29% in Swannanoa sampling areas were above half of the MAV (5.65 mg/L).

(c) **Notes** that the median nitrate concentration for the Eyreton and Cust sampling areas, as sampled in the 2022 study, exceed the limit of a median of 5.65 mg/L nitrate-nitrogen set in Plan Change 7 of the Land and Water Regional Plan for private water supply wells. The Swannanoa and Carleton sampling areas did meet this limit.

(d) **Notes** that Waimakariri District Council and Environment Canterbury staff will continue to raise awareness of the health impacts of high nitrates, and to encourage private well owners to test water regularly, including updating and wider distribution of the publication of a ‘managing a private well supply’ pamphlet for the District.

(e) **Notes** that Waimakariri District Council proposes to repeat this study in spring 2023 (with 10 wells in each of the four sampling areas (40 wells total). Well owners from the previous sample rounds will be approached for repeat annual sampling, to allow for assessment of trends over time. New well owners will be approached to replace those who no longer want to participate in the study. The new well owners will be randomly selected within the sample areas.

(f) **Notes** that trends for nitrate concentration over time are not able to be concluded from data for only four years, or two years of data for Swannanoa and Carleton sampling areas.

(g) **Circulates** this report to the Council, Community Boards and the Waimakariri Water Zone Committee for information.

3. BACKGROUND

3.1 Drinking-water safety is the joint responsibility of territorial authorities, the Regional Council (Environment Canterbury) and Te Whatu Ora Community and Public Health. Environment Canterbury manages the quality at source. Territorial Authorities, such as WDC, manage the quality of water coming out of the tap. For public supplies, this is through management of the supply, storage, and distribution network. For private supplies, this is through the issuing of a resource consent for new developments (which will specify how water is to be sourced) and issuing of a building consent for new dwellings which confirms that the water is potable at the time of issuing the consent. Te Whatu Ora manages the impact of the water quality on public health and can give advice on the health impacts of water quality. Taumata Arowai is the regulator responsible for drinking water regulation-related activities in New Zealand.

3.2 Recent overseas research suggests that the drinking water standard MAV for nitrate-nitrogen could be reviewed to much lower, such as 1.0 mg/L rather than the current 11.3 mg/l. The current 11.3 mg/L value is based on avoidance of Blue Baby Syndrome, however studies also suggest a correlation with colo-rectal cancers from drinking water consumption starting at levels as low as 1.0 mg/L nitrate-nitrogen. Ecological studies have also shown that with increasing nitrate levels, biodiversity begins to decline. New Zealand-based studies by the University of Otago (led by Dr Tim Chambers) are underway.

3.3 Nitrate levels in private wells has been raised by Waimakariri community members, such as at an event hosted by the Mandeville residents and Greenpeace in 2022 where free nitrate testing of water samples was offered.

3.4 A pilot study of nitrate levels in private wells in the Cust and Eyreton areas was carried out in late 2019 and late 2020, by WDC for nitrate and a range of other chemical parameters. Carleton and Swannanoa were added to the study in 2021. Refer to Maps 1-4 for the definition of the Eyreton, Cust, Carleton and Swannanoa sampling areas.

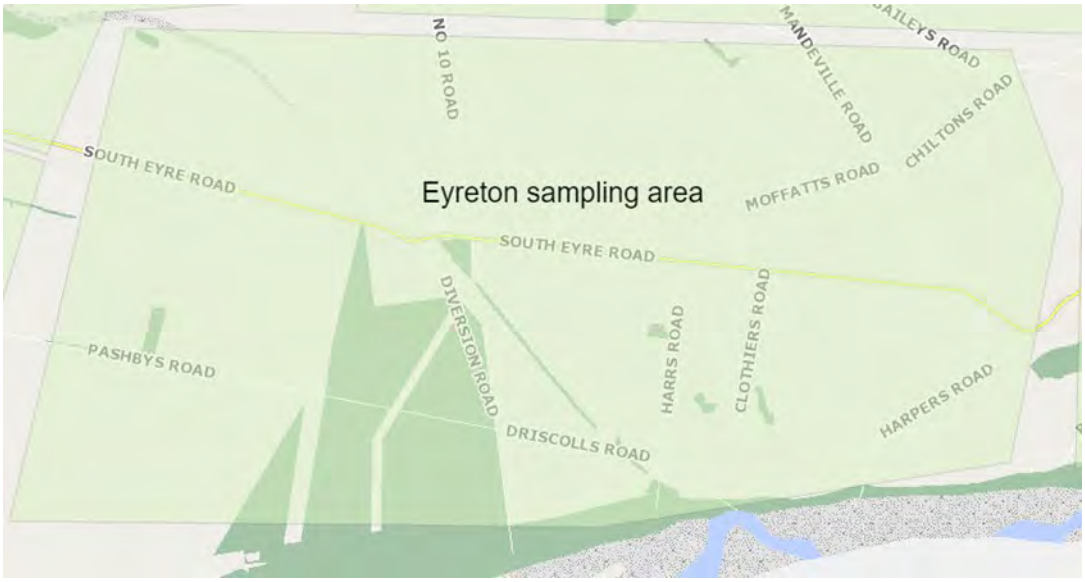
3.5 The purpose of the private well study is to work towards implementing the Zone Implementation Programme Addendum (ZIPA) Recommendation 3.16, adopted by Council in December 2018. Recommendation 3.16 states ‘That Environment Canterbury, Waimakariri District Council and Canterbury District Health Board work together to:

a. Develop a programme for testing and reporting of water quality in private drinking water supply wells, and

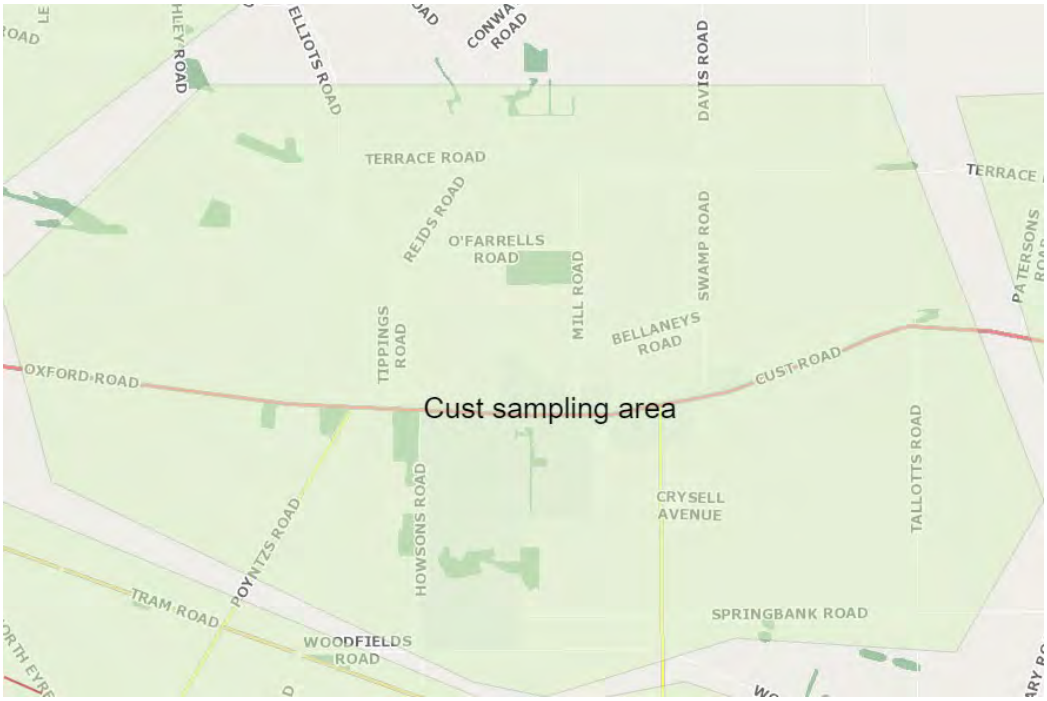
b. Raise awareness of health impacts from high nitrates in drinking water.’

3.6 Cust (Map 1) and Eyreton (Map 2) were recommended as the two areas for the pilot study in 2019 due to previous high nitrate levels reported in Environment Canterbury monitoring wells and reports from private well owners. Nitrate levels had been reported to Council in 2018, by private well owners in the Eyreton area, that were close to the Maximum Acceptable Value (MAV) of 11.3 mg/L of nitrate-nitrogen as defined in the Drinking-water Standards for New Zealand (2022).

3.7 The sampling areas of Carleton (Map 3) and Swannanoa (Map 4) were added to the study in 2021. These areas were selected as areas that will be modelled by Environment Canterbury groundwater scientists in preparation for Plan Change 7 of the Canterbury Land and Water Regional Plan to potentially see the greatest future rises in nitrate-nitrogen levels within the Waimakariri Water Zone.



Map 1: Eyreton private well sampling area for groundwater within the Waimakariri Water Zone, as defined in the Zone Implementation Programme Addendum (ZIPA)



Map 2: Cust private well sampling area for groundwater within the Waimakariri Water Zone, as defined in the Zone Implementation Programme Addendum (ZIPA).

Map 3: Carleton private well sampling area for groundwater within the Waimakariri Water Zone, as defined in the Zone Implementation Programme Addendum (ZIPA).

Map 4: Swannanoa private well sampling area for groundwater within the Waimakariri Water Zone, as defined in the Zone Implementation Programme Addendum (ZIPA).

4. ISSUES AND OPTIONS

4.1. The nitrate concentrations for Cust and Eyreton wells, as sampled in the 2022 study do not meet the limit of a median of 5.65 mg/L nitrate-nitrogen in Plan Change 7 of the Land and Water Regional Plan for private water supply wells. The nitrate-nitrogen median measured for Cust was 7.05 mg/L, a slight decrease from 7.76 mg/L in 2019, 7.11 mg/L in 2020 and 7.76 mg/L in 2021 (see Figure 1). Eyreton wells sampled had a median of 6.27 mg/L, a decrease from 6.96 mg/L in the 2019 study and 6.98 mg/L in the 2021 study but higher than 5.03 mg/L in the 2020 study. The Eyreton median excludes a well that was already known to have a high nitrate level, to avoid sampling bias of results. Carlton wells sampled had a median of 1.33 mg/L which was a decrease from 3.78 mg/L in 2021, and the Swannanoa area median was 4.3 mg/L which was a decrease from 5.62 mg/L in 2021. Note that wells were selected based on a geographic spread over an area and for a range of well depths.

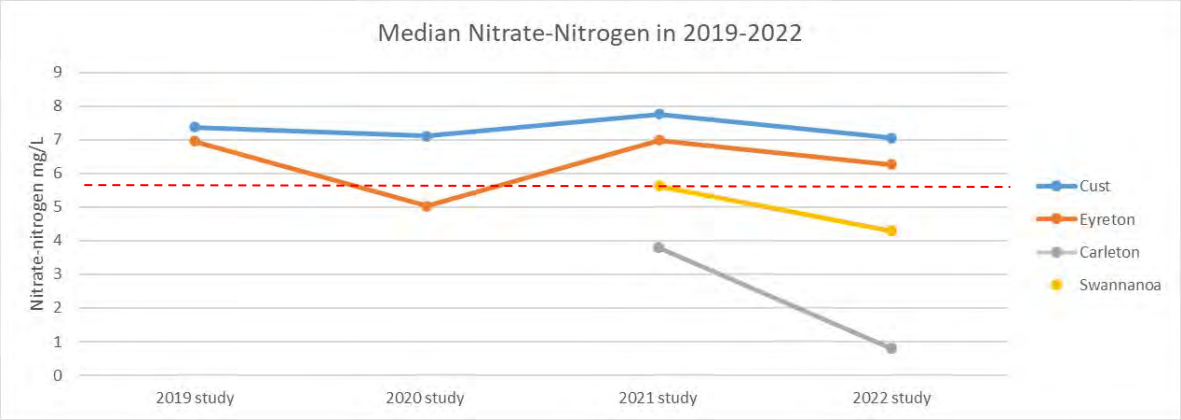


Figure 1: Median nitrate-nitrogen (mg/L) found in wells for the private well study 2019-2022 for Eyreton, Carleton, and Swannanoa. Red dotted indicates ½ MAV for nitrate-nitrogen (5.65 mg/L). One well was excluded from the median calculation in Eyreton as high nitrate levels were already known to be present before the study.

4.2. No wells measured over the MAV of 11.3 mg/L for nitrate-nitrogen. It is likely that there are other private wells, not sampled in this study, that exceed the nitrate MAV in some wells in some wells in the sampling areas, however this proportion has not been estimated in this study. Environment Canterbury released in 2022 an updated risk map for nitrate concentrations in Canterbury Groundwater where Cust, Eyreton, Swannanoa and Carleton are within the 'moderate risk' area. About 10% of the shallow wells sampled in the 'Moderate Risk' area in the last 20 years were found to exceed the nitrate MAV, however specific nitrate MAV exceedances in certain areas cannot be predicted. Due to this risk of nitrate levels over the MAV in private wells, WDC, together with Environment Canterbury and Te Whatu Ora Community Public Health, will continue to raise awareness of the health impacts of nitrate, and the need for regular testing of well water.

Engagement with Private Well Supply Owners

4.3. WDC staff have collaborated with Environment Canterbury to produce a well testing advice booklet, which advises on testing of water, as well as mapping indicative areas where issues such as high nitrate and arsenic could be an issue for proposed new wells. This booklet is in the process of being updated to include information from the Water Services Act (2021) regarding the definitions of domestic self-supplier and water supplier. It is anticipated that an increased number of water suppliers will no longer be defined as domestic self-supplier (i.e. if a water supply is shared, or for commercial use), with duties under the Water Services Act (2021), such as to meet the Drinking Water Standards for New Zealand (2022).

Sample Collection

4.1. Although efforts were made to select private wells randomly based on geographic spread over the sampling areas and for a range of depths, there is likely to have been some selection bias of the wells. Some locations within the chosen sampling areas have reticulated water, and therefore were not included in the sampling area.

4.2. In total, 27 study participants were willing to participate and were able to take and return water samples in the study timeframe. This sample size is smaller than previous years (39 study participants in 2021). Reasons for a smaller sample size include participants requesting to be removed from the study, no response, or sample bottles not returned to the laboratory. It is noted that the value of the study is generally appreciated by the participants. This repetitive sampling of the same wells allows for better assessment of trends over time.

Trend Analysis

4.3. It is not possible to assess trends in nitrate concentration from only four data points for Eyreton and Cust wells, and two data points for Carleton and Swannanoa wells (see Figures 2-5). Nitrate leaching into groundwater is known to increase due to higher precipitation levels. Precipitation records for Rangiora and Kaiapoi show that 2022 was New Zealand's 8th wettest year on record. July 2022 recorded a total of 311 mm in parts of Canterbury. Cust wells appear to have more stability in nitrate concentrations over time than Eyreton wells. In 2022, Swannanoa wells were consistently around 5 mg/L nitrate-nitrogen. The outlier well from 2021 (16 mg/L) was 6.5 mg/L in the 2022 study.

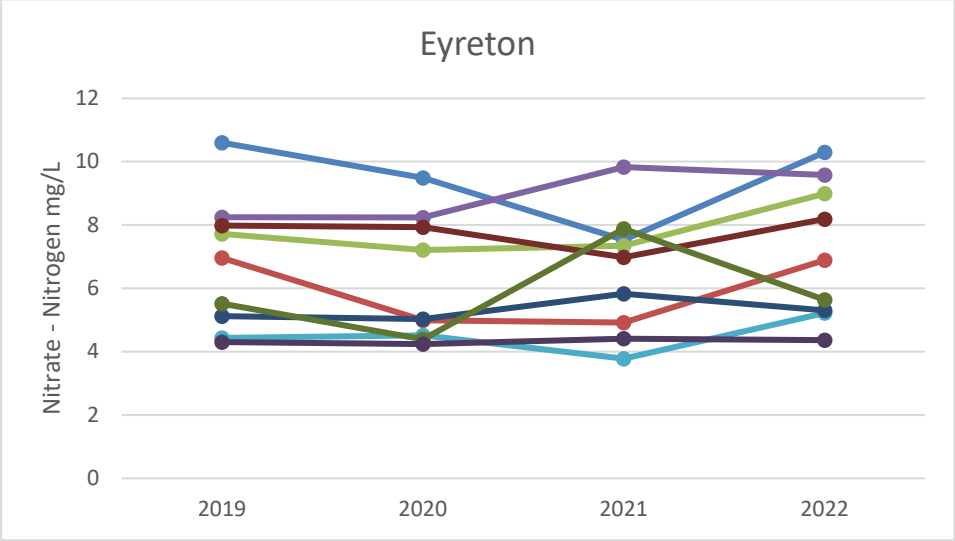


Figure 2: Eyreton well results for 2019-22. Each colour is an individual well in the study.

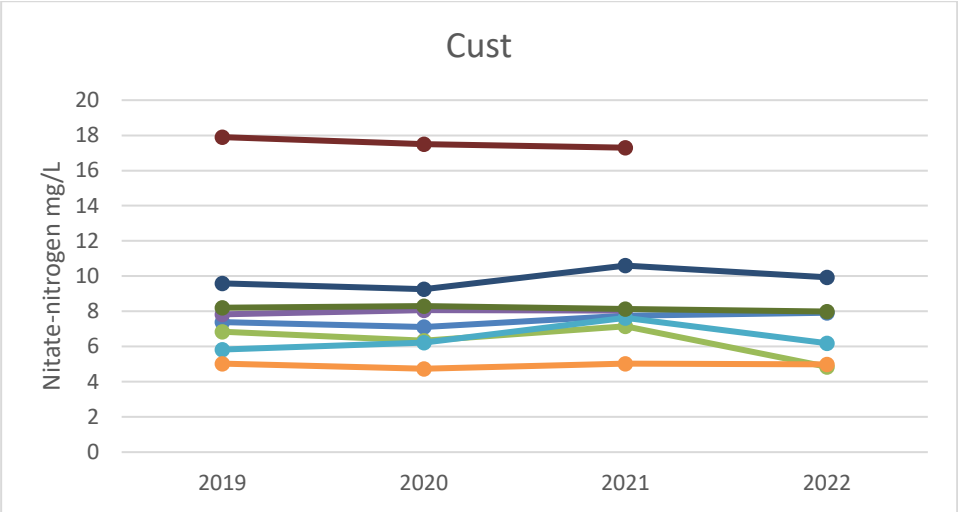


Figure 3: Cust well results for 2019 – 2022. Each colour is an individual well in the study.

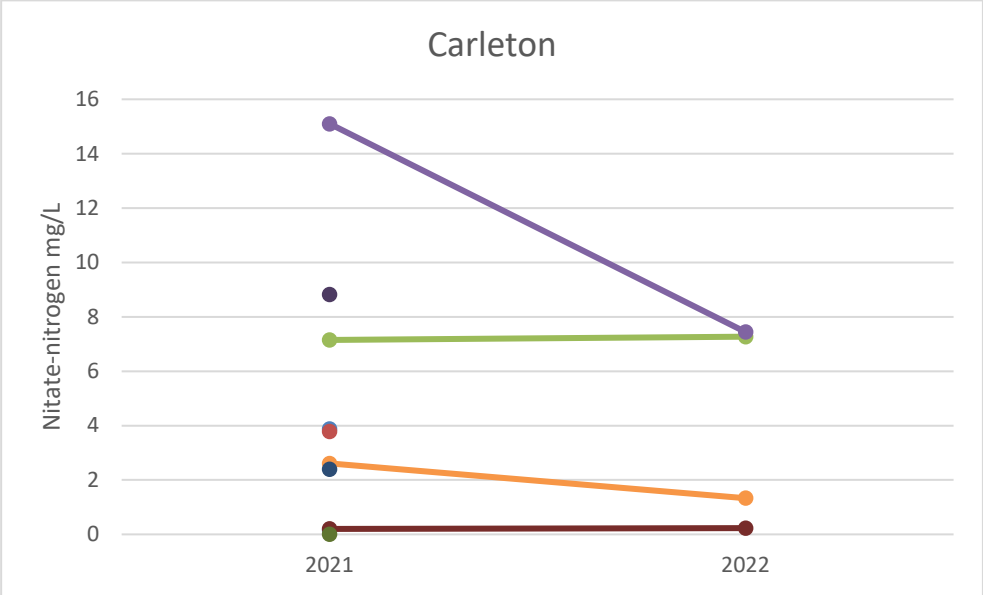


Figure 4: Carleton well results for 2021 – 2022. Each colour is an individual well in the study.

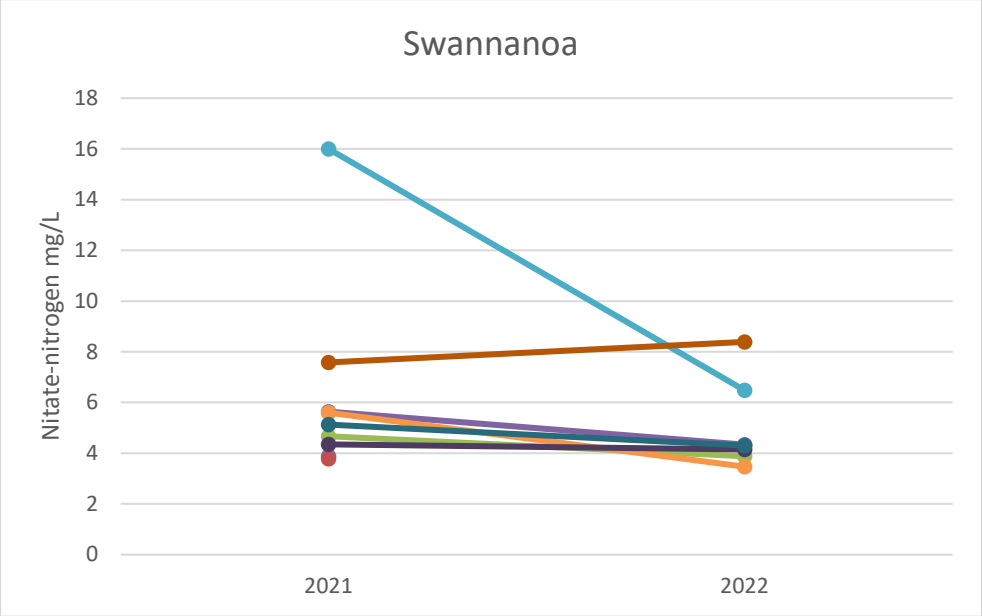


Figure 5: Swannanoa well results for 2021 – 2022. Each colour is an individual well in the study.

Well Depth

4.4. As with the 2019, 2020 and 2021 study results, the highest three nitrate-nitrogen concentrations in 2022 were found in relatively shallow wells (11.3 m, 13 m and 23.8 m deep). Increasing well depth was found to have a weak correlation with nitrate-nitrogen levels in 2022.

Next steps

4.5. Well owners who took part in the study have been contacted by WDC to communicate test results and advised to contact a water treatment specialist if found to be over a MAV in the Drinking Water Standards of New Zealand (2022).

4.6. It was intended that this study would test the sampling methodology for a potential wider and more extensive private well sampling programme of 180 wells (covering all 18 groundwater areas identified for Plan Change 7, with 10 wells from each area). Some refining of sampling methodology was able to be carried out in the 2020 and 2021 studies, however further refinement, and discussion with Environment Canterbury around cost-sharing is required. It is intended for WDC to continue a programme of 40 wells in 2023-24 in the four existing sampling areas. However, if cost-sharing could be obtained, WDC staff could recommend a roll-out of a more extensive programme (i.e., gradually scaling up to 180 wells) from 2023-24 onwards.

4.7. The Water Services Act (2021) has changed the role of Territorial Authorities to take on responsibility to support private well owners with supplies that are shared between households to be compliant with the Drinking Water Standards for New Zealand (i.e any supply that is not a domestic self-supply). Individual water supplies (i.e. domestic self-supplies), remain the responsibility of the landowner under the Water Services Act (2021), and are not required to meet the Drinking Water Standards for New Zealand.

4.8. Waimakariri District Council is working together with other organisations, such as Environment Canterbury, Dairy NZ, and Waimakariri Irrigation Ltd to collate existing District groundwater data in a project led by Waimakariri Landcare Trust (via Aqualinc Ltd). This project intends to give a wider picture of groundwater quality, including areas not covered by the annual WDC private well study.

Implications for Community Wellbeing

4.9. There are implications for community wellbeing by the issues and options that are the subject matter of this report, such as providing guidance on the current and future safety of private drinking well supplies in the Waimakariri District.

4.10. The Management Team has reviewed this report and support the recommendations.

5. COMMUNITY VIEWS

5.1. Mana whenua

Te Ngāi Tūāhuriri hapū are likely to be affected by or have an interest in the subject matter of this report. This study helps enable the vision of Te Mana o Te Wai – prioritising the health of groundwater as a priority.

5.2. Groups and Organisations

There are groups and organisations likely to be affected by, or to have an interest in the subject matter of this report, such as resident associations for the sampling areas.

5.3. Wider Community

The wider community is not likely to be affected by, or to have an interest in the subject matter of this report, unless they are supplied water from a private well.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

There are no financial implications of the decisions sought by this report.

This budget is an existing budget (as part of the Zone Implementation Programme Addendum budget) included in the Annual Plan.

6.2. Sustainability and Climate Change Impacts

The recommendations in this report do have sustainability and/or climate change impacts. The management and safe use of groundwater will sustain rural communities into the future.

6.3. Risk Management

There are no risks arising from the adoption/implementation of the recommendations in this report.

6.3 Health and Safety

There are no health and safety risks arising from the adoption/implementation of the recommendations in this report.

7. CONTEXT

7.1. Consistency with Policy

This matter is not a matter of significance in terms of the Council's Significance and Engagement Policy.

7.2. Authorising Legislation

Health Act 1956 and Water Services (Drinking Water Standards for New Zealand) Regulations 2022 set the Maximum Allowable Value (MAV) for nitrate-nitrogen in drinking water at 11.3 mg/L.

7.3. **Consistency with Community Outcomes**

The Council's community outcomes are relevant to the actions arising from recommendations in this report.

7.3.1. There is a healthy and sustainable environment for all.

7.3.2. Cultural values relating to water are acknowledged and respected.

7.3.3. Harm to the environment from the spread of contaminants into ground water and surface water is minimised.

7.4. **Authorising Delegations**

No delegations apply to this report, as this report is for information only.

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR DECISION

FILE NO and TRIM NO:	RDG-32-115-02 / 230725112801
REPORT TO:	RANGIORA-ASHLEY COMMUNITY BOARD
DATE OF MEETING:	9th August 2023
AUTHOR(S):	Kieran Straw – Civil Project Team Leader Don Young – Senior Engineering Advisor
SUBJECT:	Transport Choices Project 2 – Approval to go to Consultation
ENDORSED BY: (for Reports to Council, Committees or Boards)	General Manager / Chief Executive

1. SUMMARY

1.1. This report is seeking approval to proceed with consultation with the directly impacted residents and stakeholders along the route of the Rangiora Town Cycleway (Stage 1) cycleway planned for Railway Road, Torlesse Street, Coronation Street, Ellis Rd, Country Lane, and short length of South Belt.

1.2. Staff have discussed options with Foodstuffs and local Pak n Save management in developing the scheme plan to present to the wider stakeholders. Pak n Save have seen the plan, and staff are currently awaiting their formal feedback. This will be verbally reported on at the meeting.

1.3. Staff have discussed options with KiwiRail staff, and have completed the Level Crossing Safety Impact Assessment (LCSIA), which has recommended the installation of bells and whistles. Given that the reason for the poor score is due to the layout of the existing intersection, KiwiRail have agreed to a “So far as is reasonably practicable” (SFAIRP) assessment. This separate assessment is a structured evaluation of the financial cost of carrying out the work, compared to the likely reduction in risk. It follows a very structured process that involves several steps of discussions within KiwiRail, and WDC.

1.4. The staff have commissioned this assessment, but the results of the SFAIRP assessment and final KiwiRail endorsement may be up to 3 months away.

1.5. As the Board is aware, the budget for these Transport Choices projects must be fully spent by June 30, 2024. Therefore, waiting until these processes are completed before progressing the project would put the delivery of the whole project at risk. For this reason, staff propose to proceed with the consultation on the revised scheme design in parallel with the SFAIRP assessment in order to ensure that if / when KiwiRail provide their approval that the project can proceed within the Waka Kotahi timeframes.

1.6. The staff have developed a revised Scheme Design, and the purpose of this report is to get the mandate of the Board and the Utilities and Roading Committee to proceed to consultation on that revised scheme design before the final response from KiwiRail is received. The revised Scheme Design has been developed following discussions with Pak n Save, and interim feedback from KiwiRail and is different to the Scheme Design presented to the Board in March 2023. In particular, it includes two substantial changes at the Railway Road / Marsh Road / Station Road intersection, which are:

i. Change in intersection priority (giving east-west traffic priority)

ii. Railway Road (north of Marsh Road) to change to one-way northbound between Marsh Road, and the Railway Road entrance to Pak n Save.

1.7. These changes are in particular to achieve the following:

1.8. Change to east/west priority at Marsh and railway – to simplify the decision-making of travellers using the railway crossing, by eliminating the need to give way to traffic as well as give way to trains, and watch for cyclists.

1.9. Change to one-way in Railway Road passed PaknSave – to provide more space for traffic, trucking parking and manoeuvring and cyclists.

1.10. Beyond the Railway Road / Marsh Road intersection, the revised Scheme Design remains unchanged, and that the subsequent content of this report is specific to the Railway Road / Marsh Road intersection.

Attachments:

i. Revised Scheme Design (of Railway Road / Marsh Road intersection) to go to consultation (Trim 230726113136)

ii. Revised Rangiora Cycleway Scheme Design Drawing Set (overall route) (Trim 230216020650 (v04))

iii. Revised Draft No-stopping schedule (Trim 230221023538 (v02)

iv. Revised Draft Street Tree Removal (Trim 230223024638 (vo2))

2. RECOMMENDATION

THAT the Rangiora Ashley Community Board:

(a) **Receives** Report No. 230725112801.

AND

THAT the Rangiora-Ashley Community Board recommends:

THAT the Utilities and Roading Committee:

(b) **Approves** the Revised Scheme Design (Trim: 230726113136) for the purposes of consultation.

(c) **Notes** that feedback from PaknSave on the Revised Scheme Design will be verbally updated at the meeting.

(d) **Notes** that staff will present the approved Scheme Design to directly impacted residents and stakeholders for feedback.

(e) **Notes** that staff will ensure that the directly affected residents and stakeholders along the route are advised that the revised Scheme Plan is still subject to approval of KiwiRail, and that if this is not forthcoming, the Council will need to re-consider its options.

(f) **Notes** that if the recommendations in this report are adopted, then the staff will begin consultation with affected residents and stakeholder, within the following 2-3 weeks. This consultation will include a letter drop including an information pamphlet, at least 1 drop-in session, targeted meetings with the schools and any businesses that request it, and the opportunity to provide feedback either electronically or via hard copy.

(g) **Notes** that feedback from the consultation will be fed into the Detailed Design, and that the Detailed Design will be reported back to the Board prior to going to tender, by which time it is expected that staff will have received the KiwiRail response to the Level Crossing Safety Improvements Assessment (LCSIA), the results of the So Far As Is Reasonably

Practical (SFAIRP) assessment and KiwiRail's response, and the results of a detailed design Road Safety Audit for the full route.

(h) **Notes** the scheme design requires the removal of 7 on street car parking spaces as reported in the previous reports, plus the additional removal of 8 informal angle parks on Railway Road outside Allied Concrete.

(i) **Notes** that any parking to be removed as result of the Scheme Design will be communicated directly with the immediate adjacent residents or businesses, and that approval of the draft no-stopping will be sought during the approval of detailed design following consultation.

(j) **Notes** that the scheme design requires the removal of 12 existing street trees. This has not changed from the previous report.

(k) **Notes** that the removal of street trees has been discussed with Greenspaces, who are represented on the Project Control Group. Greenspace are supportive of the removal of the identified trees provided that they are replaced elsewhere along the length of the route.

(l) **Notes** that this project is funded through the "Transport Choices" funding stream which requires that all works is complete by June 2024.

(m) **Notes** that a Technical Note will be sought from WSP to consider any changes to their original road Safety Audit, as a result of the revised Scheme Plan.

(n) **Notes** that the proposed Rangiora Eastern Link road will include cycle facilities to provide connectivity to east Rangiora. This will not negate the requirement for safe cycle access through Southbrook. The approved Walking and Cycling Network Plan shows both routes servicing different areas of Rangiora.

3. BACKGROUND

3.1. In October 2022 Council adopted the draft Walking and Cycling Network Plan. This Network Plan included the Rangiora Town Cycleway as "Priority One" site.

3.2. The Waimakariri District Council's "Transport Choices" funding application was approved, so in March 2023 Report 230131011979 sought approval of the scheme design for the Rangiora Town Cycleway for the purposes of consultation. Also present at both the Rangiora-Ashley Community Board, and the Utilities & Roading Meeting were Foodstuff Representatives who presented a deputation outlining their concerns of the proposed scheme design. The resolutions of this meeting were as follows:

a) Requests a Safety Audit of the proposed scheme concept in relation to Southbrook.

b) Requests a reconsideration of alternative routes in the Southbrook area.

c) Notes staff will present a further report to the next Utilities and Roading Committee meeting.

3.3. Staff then re-evaluated alternative alignments and sought a Road Safety Technical note on the proposed scheme design. The outcomes of these were presented in Report 230322039767 where again Foodstuff representatives presented a deputation from their perspective. Following this presentation at the April 2023 meeting, the Utilities and Roading Committee approved the Scheme Design for the purposes of consultation, with the following resolutions being particularly relevant to this report:

(e) Notes that any option that included a level crossing, or alignment within the KiwiRail Corridor would need to follow KiwiRail processes, which they have indicated this could take "years to complete." This was due to staff shortages and a high workload within KiwiRail.

(g) Requests that staff worked collaboratively with PAK'NSAVE, Foodstuffs South Island and their representatives to address their concerns and endeavour to reach a mutual agreement on safety mitigation measures.

3.4. Discussions with KiwiRail have been on-going, and as part of these discussions, staff have commissioned and received a LCSIA from Stantec. The outcome of the LCSIA is that the existing layout fails to meet the required criteria. The proposed design however, with the mitigations as proposed in the revised Scheme Design, achieves KiwiRail's C2 criteria. (Note a C2 criteria equates to 'not worsening the safety situation'). Regardless, the recommendations for the level crossings included the following:

i. Install half-arm barriers to meet KiwiRail's minim protection standard (both Marsh Road and Dunlops Road)

ii. Change intersection priority to give the east-west movement right of way and mark "STOP" on the western approach to the crossing.

iii. Install raised platforms on Station Road and Marsh Road.

iv. Consider "RAIL X" marking on Station Road

The requirement to install half-arm barriers at each level crossing is both cost-prohibitive for the purposes of the addition of the cycleway, and will take up to two years to deliver. This requirement is due to KiwiRail's minimum requirements when works is completed at or adjacent to any level crossing.

As the "Minimum Mitigations" proposed improve the level crossing score, and go on to achieve KiwiRails C2 criteria, KiwiRail have agreed for staff to complete a SFAIRP assessment. This separate assessment is a structured evaluation of the financial cost of carrying out the work, compared to the likely reduction in risk. It follows a very structured process that involves several steps of discussions within KiwiRail, and WDC. The SFAIRP assessment will provide information to assist KiwiRail to determine whether it will accept the proposed minimum mitigation, excluding the half-arm barriers, or not.

3.5. Discussions with Pak n Save have progressed well, and a solution that resolves their concerns on Railway Road (north of Marsh Rd intersection) has been discussed. This option was to one-way Railway Road (north-bound). These discussions were initially broached soon after the April Utilities & Roading meeting, and before the results of the LSCIA were received. Therefore, Pak n Save / Foodstuffs have not yet provided comment on the revised Scheme Design, but this is expected to be provided as a verbal update at the meeting.

3.6. In addition to KiwiRail and Pak n Save, staff also meet with representative of Allied Concrete with a view to discuss the various options with them, and how these options may impact their plans for the site in the future. The Allied Concrete plant is to be recommissioned in the near future, and there was no opportunity to purchase (or part purchase) this site for the purpose of realigning the intersection. Therefore, the intersection designs that have since been considered to not include this land as part of the options.

4. ISSUES AND OPTIONS

4.1. KiwiRail's issues are as follows:

i. Lack of half-arm barriers to meet their minimum level crossing requirements.

As discussed above in section 3.4, this deficiency is present regardless of whether or not the proposed cycleway proceed. However, as a general rule KiwiRail require an upgrade to the barriers whenever a change is made on the adjacent street.

The revised scheme design does not address this deficiency, and relies on the outcome of the SFAIRP assessment to conclude whether or not the proposed

adjacent cycleway makes the existing level crossings worse, when the other minimum mitigations are applied.

ii. Change intersection priority to give the east-west movement right of way and mark "STOP" on the western approach to the crossing.

While it is recognised that this change in priority may make less sense from a roading perspective (by linking two lesser used roads), the revised scheme plan provides for a change in intersection priority which removes the need for west-bound traffic on Marsh Rd to come to a stop on Railway line to give way to traffic on Railway Road. This has been requested by Kiwirail as part of the mitigation as it makes the intersection less complex for users crossing the level crossing, and has therefore been included in the revised scheme design.

Users of the proposed shared-use path will be required to give way to motorists at this location.

iii. Install raised platforms on Station Road and Marsh Road

This mitigation is intended to reduce speed of vehicle on approach to the level crossing. Although the recommendation is for a raised platform on both Station Rd and Marsh Rd, there is significant horizontal deviation on the Station Road approach that may negate the requirement for the platform on the Station Road approach. A raised platform has been included within the revised scheme design on the Marsh Rd approach, and the need for the Station Rd raised platform will be discussed as part of the on-going discussions with KiwiRail.

iv. Consider "Rail X" marking on Station Road

With the proposed change in priority, the addition of this pavement marking is possible, and included within the revised scheme design.

4.2. Pak n Save's concerns with the original scheme design are well documented following their deputations. Their concerns (specific to their freight movements) include:

i. Narrow road width and reduced manoeuvring space on Railway Road (north of Marsh Road)

Pak n Save raised concerns that, particularly immediately north of the intersection, the width of the site was too constrained. This location included a kerb build out on the western side of the road, and total road width of 6.0m (two traffic lanes) and no separation between the traffic lane and the shared use path.

The revised Scheme Design reclaims road space by pushing the kerbing back towards the boundary, and converting the section of Railway Road between Marsh Road and the Pak N Save entrance to one-way north. These two changes allow for more room for the various activities that occur through this stretch.

Note that additional care about markings, islands and signage will be needed at the exit to the one-way stretch, to ensure noncompliance (either accidental or on purpose) is minimised. The staff will be considering this during detailed design.

Note that this matter will be a key part of the consultation with affected residents and stakeholders. It is suggested that the disruption to the residents in Marshall, Torlesse etc will be much less now, due to the Southbrook lights, which now allow efficient travel out of the area, without relying on Railway Rd. Note the one-way section does not include the PaknSave entrance, so residents can still access the car-park.

Creating a 2.0m buffer between the truck parking and the shared path. This additional width will ensure a clear safe distance between these activities. This buffer will have kerbing on the traffic side and will be planted with shrubs and trees (likely transferred from the existing berms) to provide visual separation.

ii. Relocating the truck queuing area further away from the Pak n Save boundary, and widening it.

Pak n Save raised concerns that the recently relocated truck parking area on the western side of Railway Road was relocating further west, making entry into Pak n Save difficult for their larger delivery trucks.

The revised Scheme Design allows the truck queuing area to be relocated to the eastern side of the one-way road and widened to 3.0m, providing for a truck width as well as mirrors and doors opening, and allowing drivers greater manoeuvring width to enter Pak n Save Note this parking is best on the right of the traffic, as it better allows for the required turning circle into the PaknSave entrance. The space will have an edge line around it, with appropriate signage. Care will be needed for trucks pulling across the traffic lane, but the sight distance is such that this should not be an issue.

iii. Conflict between turning vehicles out of Station Road into Railway Road.

Pak n Save raised concerns that their exiting trucks, turning right into Station Road, will be in conflict with users on the shared use path immediately south of the Marsh Road intersection due to the turning radius of these large vehicles. This was due to the location of the limit line on Station Road, and the fence of the Allied Concrete property obstructing the view of truck drivers.

The revised Scheme Design addresses this by incorporating a fully traversable median island on Station Road that is intended to encourage east-bound drivers as far north as possible before making the turn. In addition, due to the change in priority, drivers can then turn right from Station Road into Railway Road without the need to give way to Railway Road traffic. This manoeuvre has been tracked using Pak n Saves largest delivery vehicle.

While it is an unlikely manoeuvre, staff have also tracked the left turning truck out of Station, into Railway (north) This is a tight turn, but the design will ensure mountable kerbs on the islands and surrounding kerbs in case the trucks need additional room.

To ensure that the trucks do not over-run the proposed stop limit line on Railway Road, the kerb quadrant on the south-west quadrant will be re-aligned, and the northbound lane moved to the west. This change will require the removal of the informal parking area in front of Allied Concrete. Allied Concrete are supportive of the removal of these on-street car parks.

4.3. A summary of the changes that make up the revised Scheme Design is as follows:

i. Conversion of Railway Road (Marsh Road to Pak n Save Entrance to one-way north, consisting of:

- 2.5m Shared Use Path
- 2.0m planted buffer garden
- 3.0m truck Parking lane (increased from existing lane of 2.1m)
- 3.5m traffic lane.

This one-way provides the following benefits:

- Reduces conflict points at the Marsh Road / Station Road intersection
- Provides greater width for the truck manoeuvring space into Pak n Save
- Provides greater separation between shared use path users, and truck movements into Pak n Save
- Retains street trees in the planted buffer garden on the eastern side of Railway Road.

ii. Change in intersection priority, giving priority to east-west traffic. This gives the following benefits:

- Removes the need for west-bound drivers to wait on the railway line while giving way to Railway Road traffic
- Means that west-bound drivers only need to watch for trains at the level crossing, rather than trains and other motorists on Railway Road
- Allows for the installation of advanced warning pavement marking on Station Road for the Level Crossing
- Allows for the installation of “STOP” markings on Station Road ahead of the level crossing.
- Simplifies the trucks turning right out of Station Rd into Railway Rd (south) by removing the need to give way to northbound traffic on Railway Rd (south)

iii. Other supplementary changes required to improve safety, and ensure turning movements are catered for:

- Installation of painted median island, and fully mountable splitter island on Station Road is intended to ensure motorists keep left when approaching the chicane on approach to the railway crossing. The need to keep the lane as far left as possible is to ensure that the right turning trucks have adequate manoeuvring space to turn right into Railway Road.
- Installation of painted median island, and fully mountable splitter island on Railway Road (south of intersection) to keep motorists as far left as possible when approaching the intersection. The need to keep the lane as far left as possible is to ensure that the right turning trucks have adequate manoeuvring space to turn right into Railway Road.
- Realignment of the kerb and channel on the south-west quadrant is also required to allow for the relocation of the traffic lane. In order to move this kerb over, the informal parking area outside Allied Concrete will be removed.
- Addition of a footpath on the north side of Station Rd and a crossing point over Railway Rd (north) to join with the new shared path.

4.4. Options available within this report as follows:

i. Approve the revised Scheme Design for the purposes of Consultation, noting that KiwiRail has not yet completed their SFAIRP assessment, and therefore has not agreed to the proposal that excludes half-arm barriers at the two level crossings.

This is the recommended option as it is the only option that will allow for the construction to be complete by 30 June 2024 as required by the Transport Choices funding.

ii. Decline to approve the revised Scheme Design for consultation, pending the result of the SFAIRP assessment. This option is not recommended due to the time lines involved with KiwiRail completing this assessment. Current indications are that we should allow three months to complete the assessment, which would then mean that staff would be unable to deliver the project within the required Waka Kotahi time frames.

iii. There is a third option available, which is to “do nothing”. This option is not recommended at this time as staff have put significant time and cost into working with directly impacted stakeholders to develop an option suitable for wider consultation. “Do nothing” effectively has two sub-options which could be considered in the future should the KiwiRail SFAIRP assessment require the installation of half-arm barriers. These options are:

a. “Do nothing” and send all cyclists down Southbrook Road, noting that this will require cyclists to share road space with 24,463 vehicles per day. Of these there are approximately 1,200 heavy vehicle movements per day. This option would also require cyclists to navigate multiple commercial vehicle entrances, as well as the intersections of Flaxton Road, Todds Road, and Mitre 10.

b. “Do nothing” and send all cyclists down Railway Road, noting that this will require cyclists to share road space with 875 vehicles per day, of which approximately 97 are heavy vehicle movements (including the 30 per day of Pak n Save)

4.5. Implications for Community Wellbeing

There are implications on community wellbeing by the issues and options that are the subject matter of this report.

The addition of walking and cycling infrastructure encourages a greater uptake of walking and cycling, both for commuters and recreation. An uptake in walking and cycling also contributes to improved health and wellbeing of members within the community. Further to this, including infrastructure which caters for a wide range of skill levels encourages less confident cyclists, who may have otherwise chosen to travel via motor vehicle, to use the provided facilities.

4.6. The Management Team has reviewed this report and support the recommendations.

5. COMMUNITY VIEWS

5.1. Mana whenua

Te Ngāi Tūāhuriri hapū are not likely to be affected by, or have an interest in the subject matter of this report.

The cycleway is within the urban limits of Rangiora, and is not passing through (or near to) Māori Reserve land. There is also no Archaeological Authority required for this route.

5.2. Groups and Organisations

There are groups and organisations likely to be affected by, or to have an interest in the subject matter of this report.

Pak n Save

Pak n Save spoke at a deputation at both the previous Community Board meeting, and the subsequent Utilities & Roading Meeting. A full list of their concerns can also be found in the previous report (Trim 230131011979).

The revised design mitigates Pak n Save’s primary concerns regarding conflicts between Trucks and path users, and provides additional manoeuvring space and separation. Pak n Save have not provided comment on the change of priority at the intersection at time of writing due to the short time since they received the revised design. A verbal update will be given at the meeting.

Adjacent residents and businesses

Should the recommendations of this report be accepted, staff will commence consultation with the immediate impacted residents and stakeholders along the full route of Stage 1 of the proposed cycleway.

KiwiRail

KiwiRail have been extensively involved with the development of the revised Scheme Design. However the Council is still waiting for their formal comment on the LCSIA, and has yet to prepare a SFAIRP assessment for KiwiRail comment. This will not be received before the consultation, but will be included in the recommendation to the Board at the time of considering whether the Detailed Design is ready for tender.

5.3. **Wider Community**

The wider community is likely to be affected by, or to have an interest in the subject matter of this report.

Feedback from the wider community was reported on during the consultation of the proposed route selection as part of the Walking and Cycling Network Plan. It is not considered necessary to consult the wider community on the revised Scheme Design of the proposed facilities.

Feedback from the adjacent residents will be reported on when the Detailed Design is presented for approval in prior to tendering.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

There are financial implications of the decisions sought by this report.

The current estimate for this project is $1,531,920, which is 8% above the Transport Choices funding of $1,416,000 signaled for this project. A recent decision of the Council approved the balancing of this (plus other) overspend with funding previously allocated to Project 4 (Rangiora On-Road Cycle Lanes). Waka Kōtahi have also agreed that their funding previously allocated to Project 4 may also be re-distributed to cover the planned overspends for the remaining 3 projects to delivery strategic cycleways.

6.2. Sustainability and Climate Change Impacts

The recommendations in this report do have sustainability and/or climate change impacts.

Creating a safe and accessible walking and cycling network, which comes with improving infrastructure, increases the uptake of these activities for both recreational and commuter users. This results in a subsequent decrease in the number of people using single occupancy vehicles, particularly for shorter trips. This comes with many benefits, including health and the reduction of greenhouse gas emissions.

6.3 Risk Management

There are risks arising from the adoption/implementation of the recommendations in this report.

There is a risk that residents may not favour the inclusion of a facility along their street. To minimise this risk, staff will begin engaging with residents during the design phase of facilities. This will show residents exactly what is proposed along the road corridor and enable them to notify staff early on if there are aspects which they are not in favour of. This feedback will be fed directly into the design process, and reported back to the Board and then the Utilities and Roading Committee.

There is a risk Pak n Save will not support the revised Scheme Design. At time of writing this report, Pak n Save have received a copy of the revised Scheme Plan, however they are yet to provide a formal response.

There is a risk KiwiRail's SFAIRP assessment will not support the project without the inclusion of half-arm barriers, and subsequently KiwiRail may not support the project. If this occurs, then staff will need to bring a further report to the Board outlining their options, which may include abandoning the project.

6.3 Health and Safety

There are health and safety risks arising from the adoption/implementation of the recommendations in this report.

The revised Scheme Design that is included as attachment i of this report was not included within the independent Road Safety Audit previously completed, although aspects of this design have been discussed with the RSA team and they are aware of the options and have not expressed concern specific to these changes. Staff will send the revised design drawings for auditing upon approval of this report, and in conjunction with the consultation phase.

Contractors engaged for the works will be required to be SiteWise registered, and complete Site Specific Safety Plans prior to commencing works on site.

7. CONTEXT

7.1. Consistency with Policy

This matter is not a matter of significance in terms of the Council's Significance and Engagement Policy.

7.2. **Authorising Legislation**

Local Government Act 2002

7.3. **Consistency with Community Outcomes**

The Council's community outcomes are relevant to the actions arising from recommendations in this report.

Public spaces and facilities are plentiful, accessible and high quality, and reflect cultural identity.

- There are wide-ranging opportunities for people to enjoy the outdoors.
- The accessibility of community and recreation facilities meets the changing needs of our community.

Core utility services are sustainable, resilient, affordable, and provided in a timely manner.

- Climate change considerations are incorporated into all infrastructure decision-making processes.

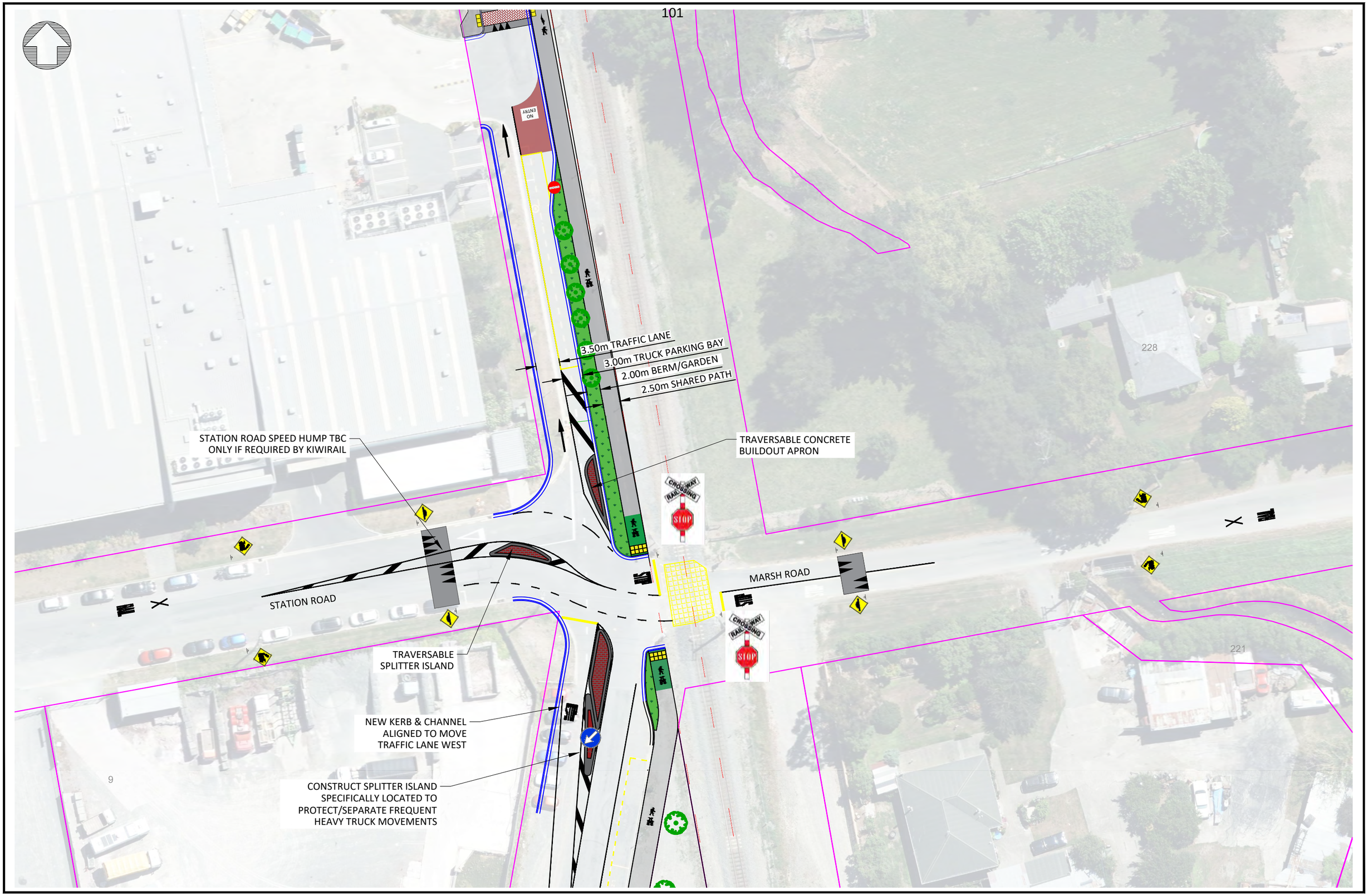
Transport is accessible, convenient, reliable, and sustainable.

- The standard of our District's transportation system is keeping pace with increasing traffic numbers.
- Communities in our District are well linked with each other and Christchurch is readily accessible by a range of transport modes.

7.4. **Authorising Delegations**

The Community Boards are responsible for considering any matters of interest or concern within their ward area and making a recommendation to Council.

The Utilities and Roading Committee have the Delegations to accept this report, and approve the Scheme Design of this cycleway.



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A	FOR INFORMATION	AK	KS	DY	26/07/2023

SURVEYED	---	---	PROJECT No
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DRAWING CHKD	---	---	SCALE (A3) 1:500
DESIGNED	---	---	DATUM ORIGIN
DESIGNED CHKD	---	---	HORIZONTAL NZTM GD2000
APPROVED	---	---	VERTICAL

WAIMAKARIRI DISTRICT COUNCIL

PROJECT

RANGIORA TOWN CYCLEWAY

SHEET TITLE

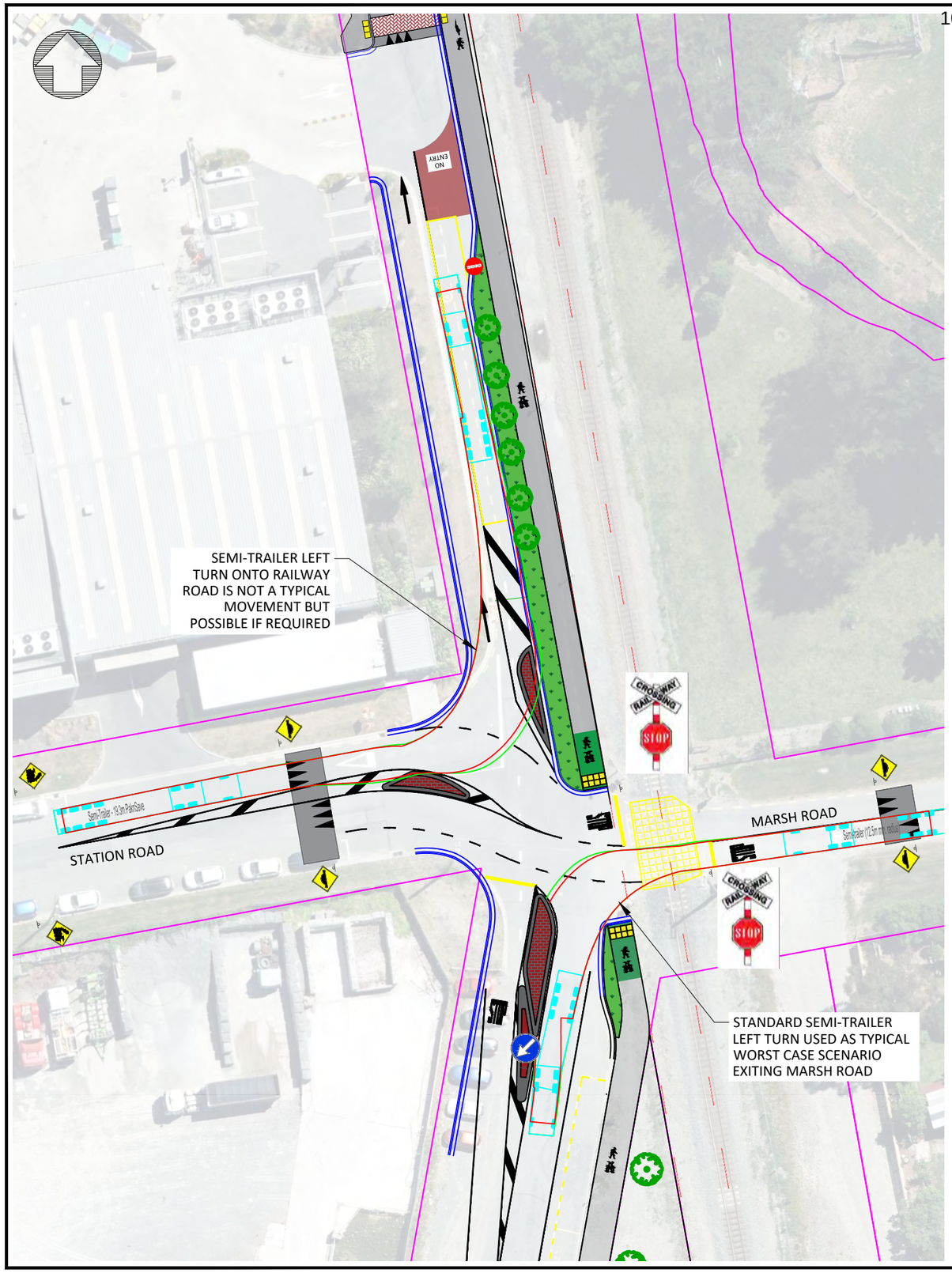
STATION / MARSH / RAILWAY
INTERSECTION LAYOUT
PROPOSED OPTION PLAN

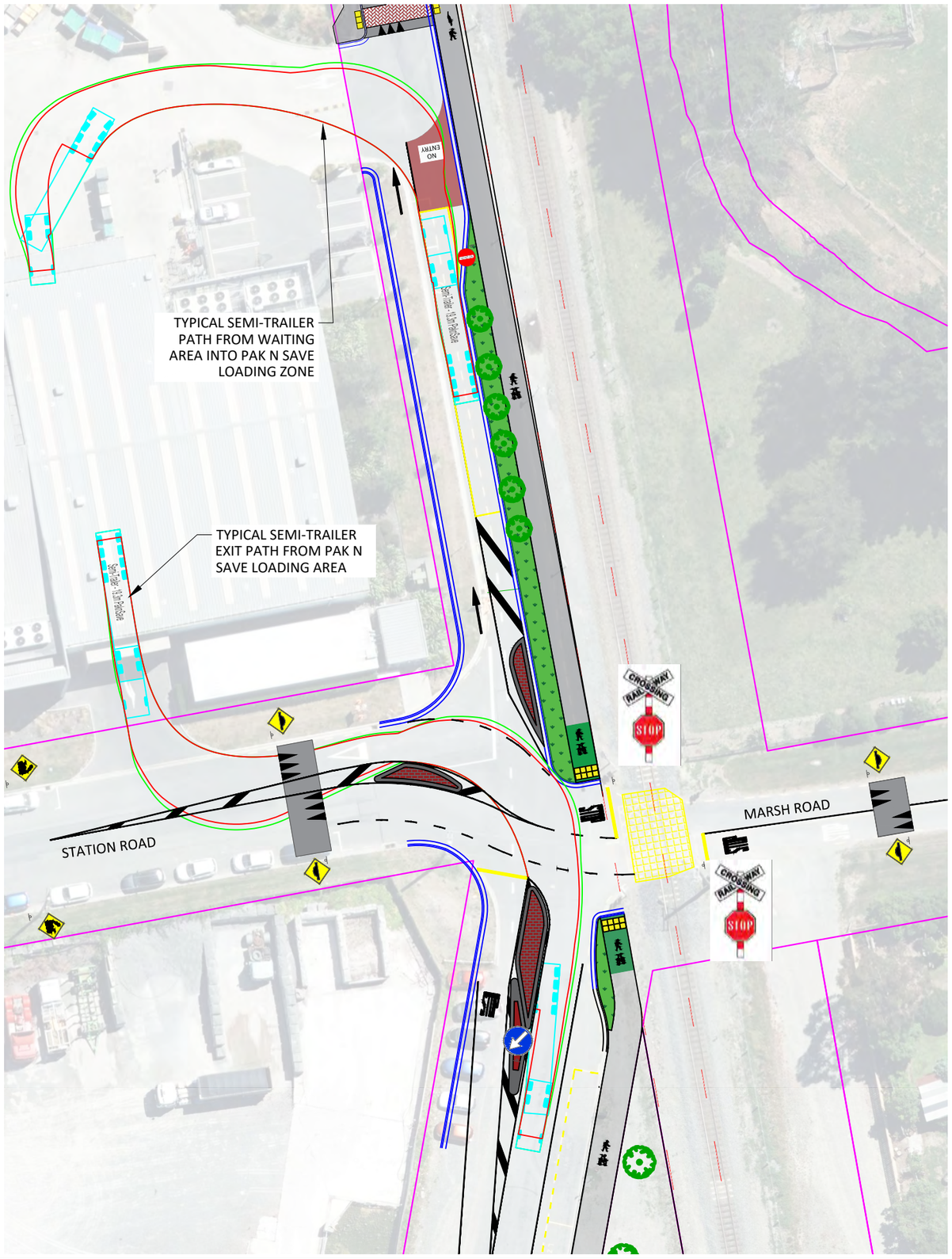
PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING 4388

SHEET	REVISION
1	A

PLOT DATE: 28/07/2023 FILE: S:\PDU\PDU JOBS\PD001900-1999\PD001951 - RANGIORA TOWN CYCLEWAY (STAGE 1)\2 - DESIGN\RANGIORA TOWN CYCLEWAY - SCHEME DESIGN - DEVELOPED OPTIONS.DWG





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DESIGNED	---	---	DATUM ORIGIN
DESIGNED CHKD	---	---	HORIZONTAL NZTM GD2000
APPROVED	---	---	VERTICAL

WAIMAKARIRI DISTRICT COUNCIL

PROJECT

RANGIORA TOWN CYCLEWAY

SHEET TITLE

STATION / MARSH / RAILWAY INTERSECTION LAYOUT PROPOSED OPTION TRACKING CURVES

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING	REVISION
4388	
SHEET 2	A

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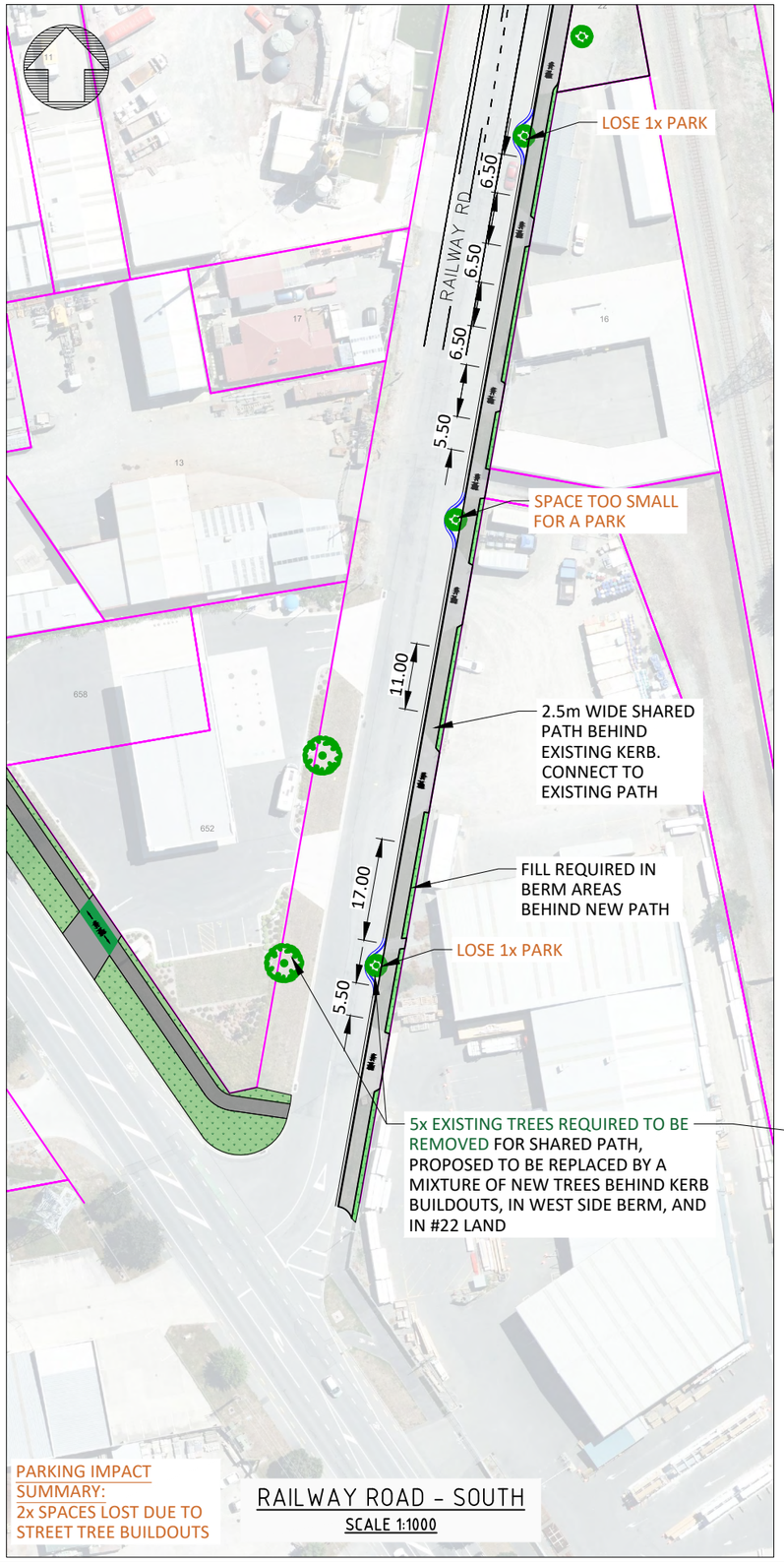
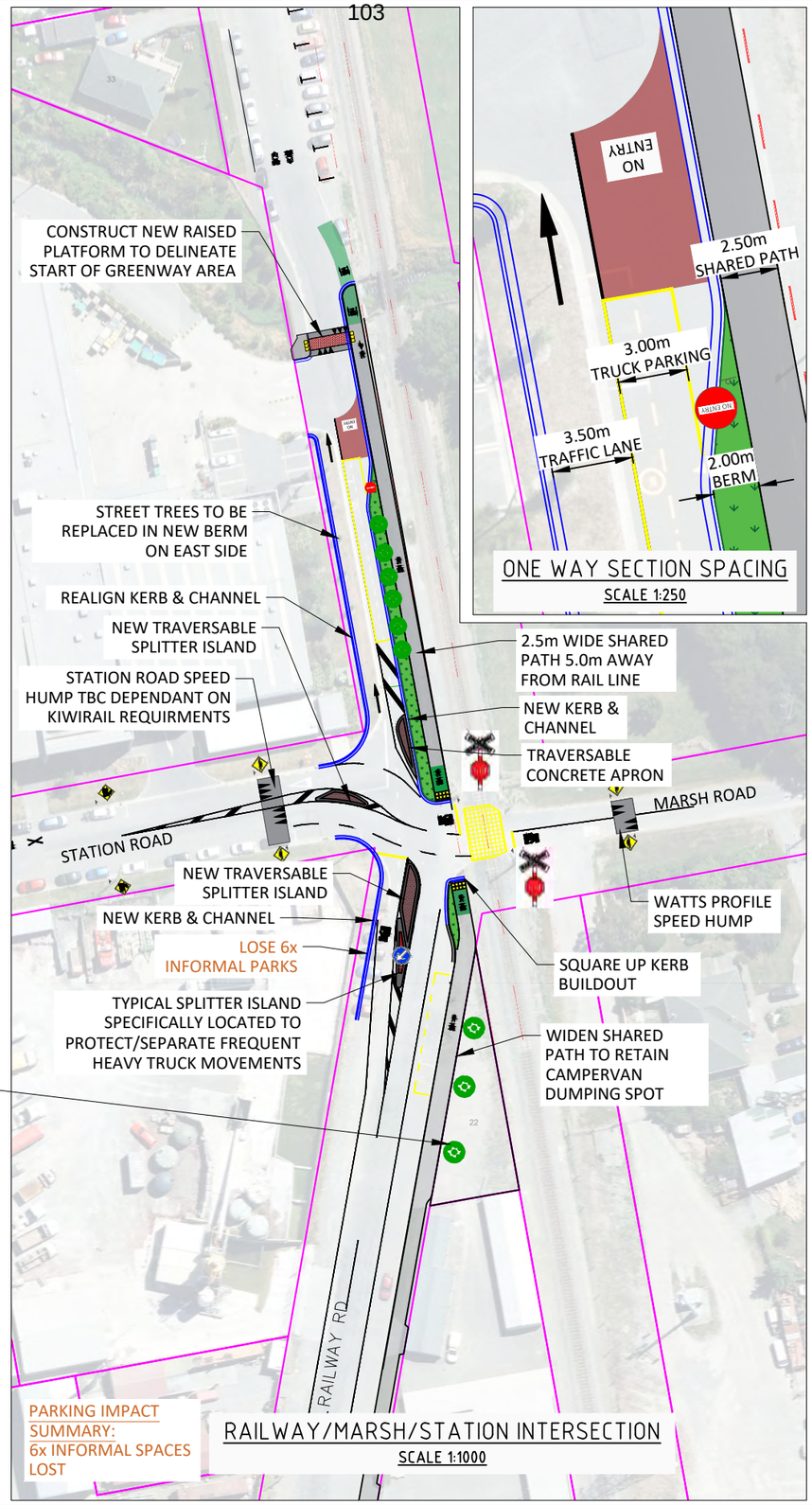


PARKING IMPACT SUMMARY:
2x SPACES LOST DUE TO STREET TREE BUILDOUTS

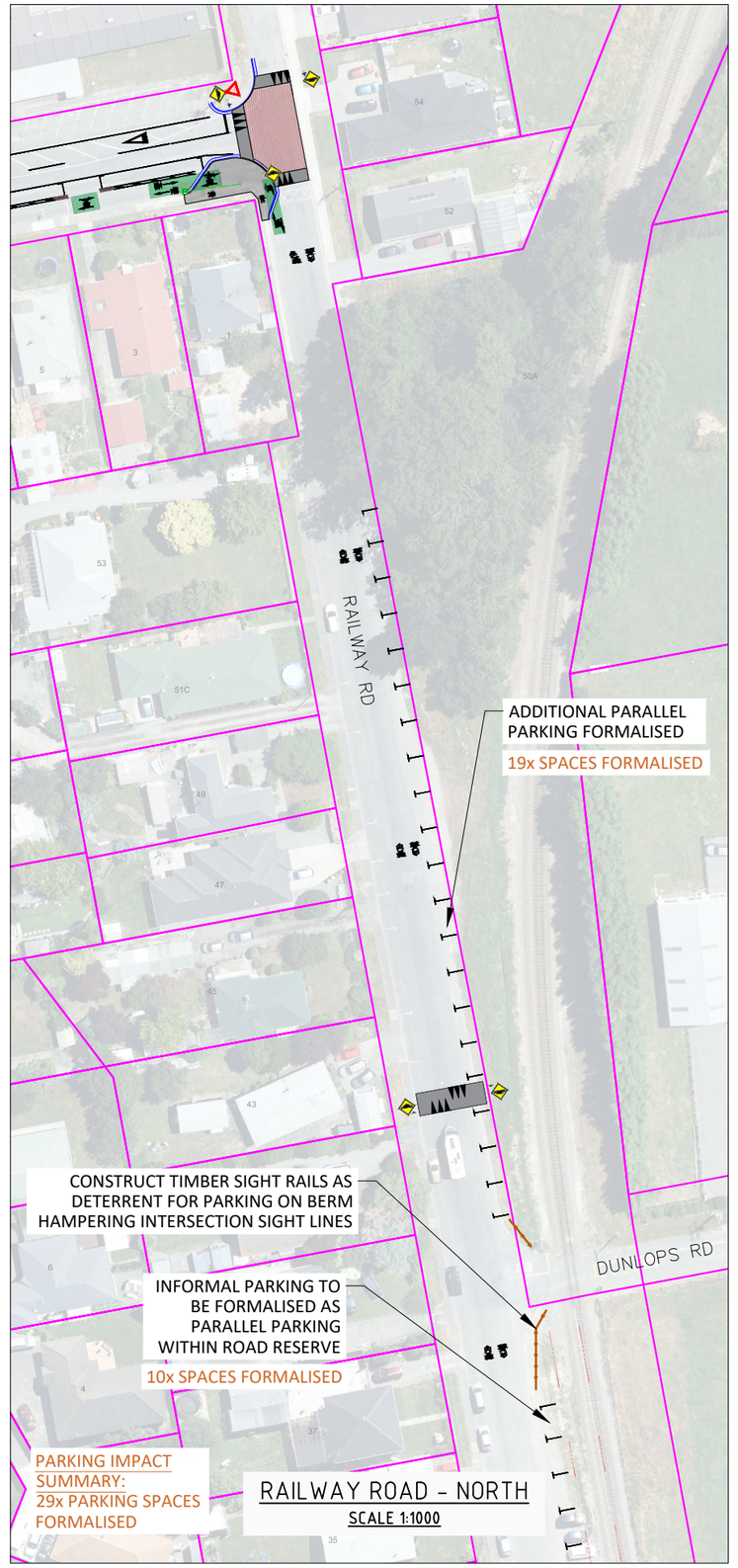
RAILWAY ROAD - SOUTH
SCALE 1:1000



PARKING IMPACT SUMMARY:
6x INFORMAL SPACES LOST

RAILWAY/MARSH/STATION INTERSECTION
SCALE 1:1000

ONE WAY SECTION SPACING
SCALE 1:250



PARKING IMPACT SUMMARY:
29x PARKING SPACES FORMALISED

RAILWAY ROAD - NORTH
SCALE 1:1000

REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	SCHEME DESIGN	AK	---	---	16/02/2023
B	SAFETY AUDIT REVISION	AK	---	---	24/05/2023
C	REVISED SCHEME DESIGN	AK	KS	DY	27/07/2023

SURVEYED	---	---	PROJECT No	
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DESIGNED	---	---	DATUM ORIGIN	
DESIGNED CHKD	---	---	HORIZONTAL	NZTM GD2000
APPROVED	---	---	VERTICAL	

WAIMAKARIRI DISTRICT COUNCIL

PROJECT
RANGIORA TOWN CYCLEWAY

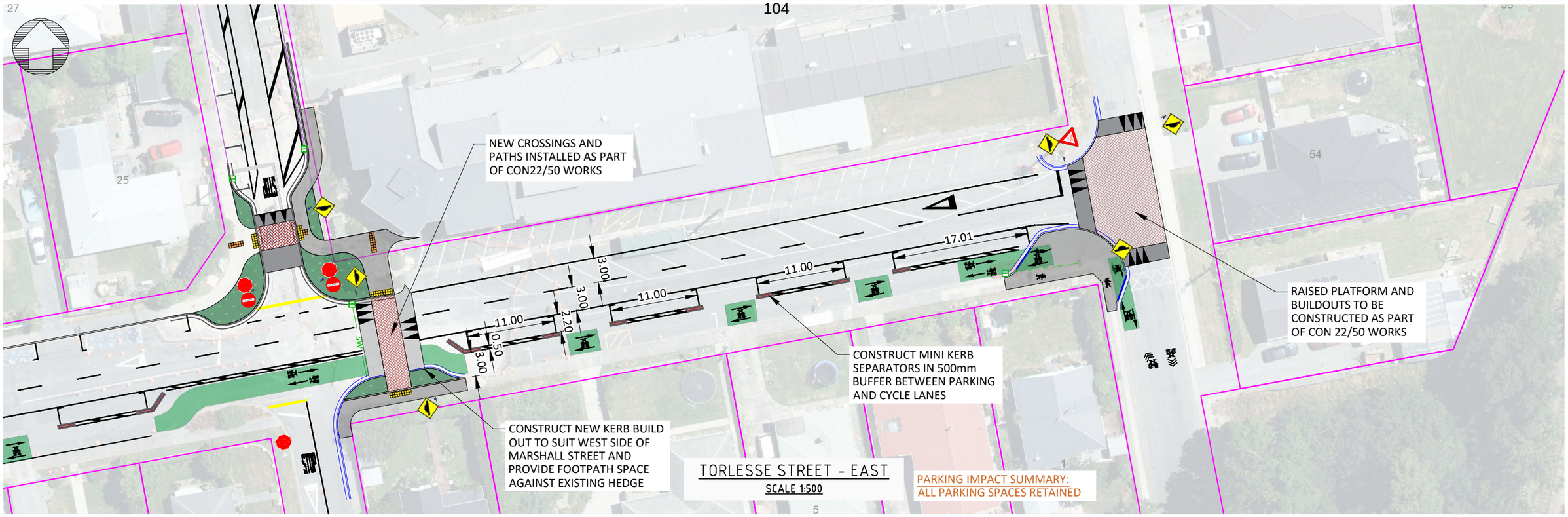
SHEET TITLE
RAILWAY ROAD
SCHEME DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING 4354

SHEET 1 | REVISION C

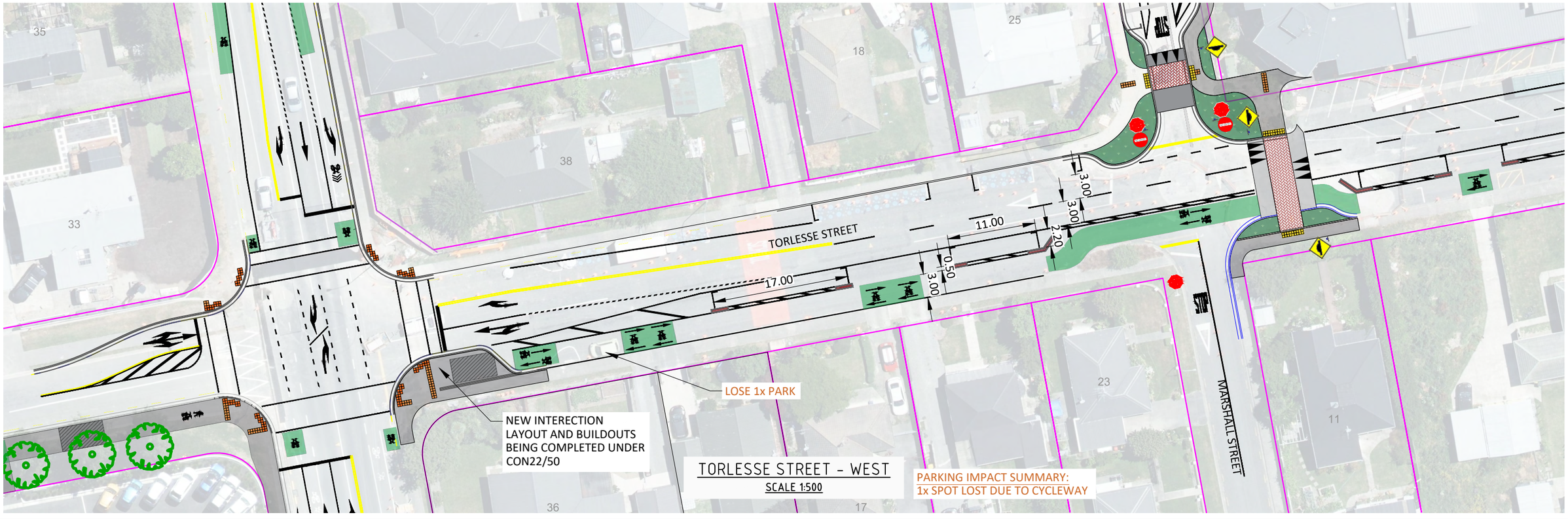
PLOT DATE: 28/07/2023 FILE: S:\PDU\PDU JOBS\PD001900-1999\PD001951 - RANGIORA TOWN CYCLEWAY (STAGE 1)\2 - DESIGN\RANGIORA TOWN CYCLEWAY - SCHEME DESIGN - DEVELOPED OPTIONS.DWG



TORLESSE STREET - EAST

SCALE 1:500

PARKING IMPACT SUMMARY:
ALL PARKING SPACES RETAINED



TORLESSE STREET - WEST

SCALE 1:500

PARKING IMPACT SUMMARY:
1x SPOT LOST DUE TO CYCLEWAY

REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	SCHEME DESIGN	AK	---	---	16/02/2023

SURVEYED	---	---	PROJECT No
DRAWN	AK	17/02/2023	CON No 22/50
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DESIGNED CHKD	---	---	HORIZONTAL NZTM GD2000
APPROVED	---	---	VERTICAL

WAIMAKARIRI DISTRICT COUNCIL

PROJECT: RANGIORA TOWN CYCLEWAY

SHEET TITLE: TORLESSE STREET

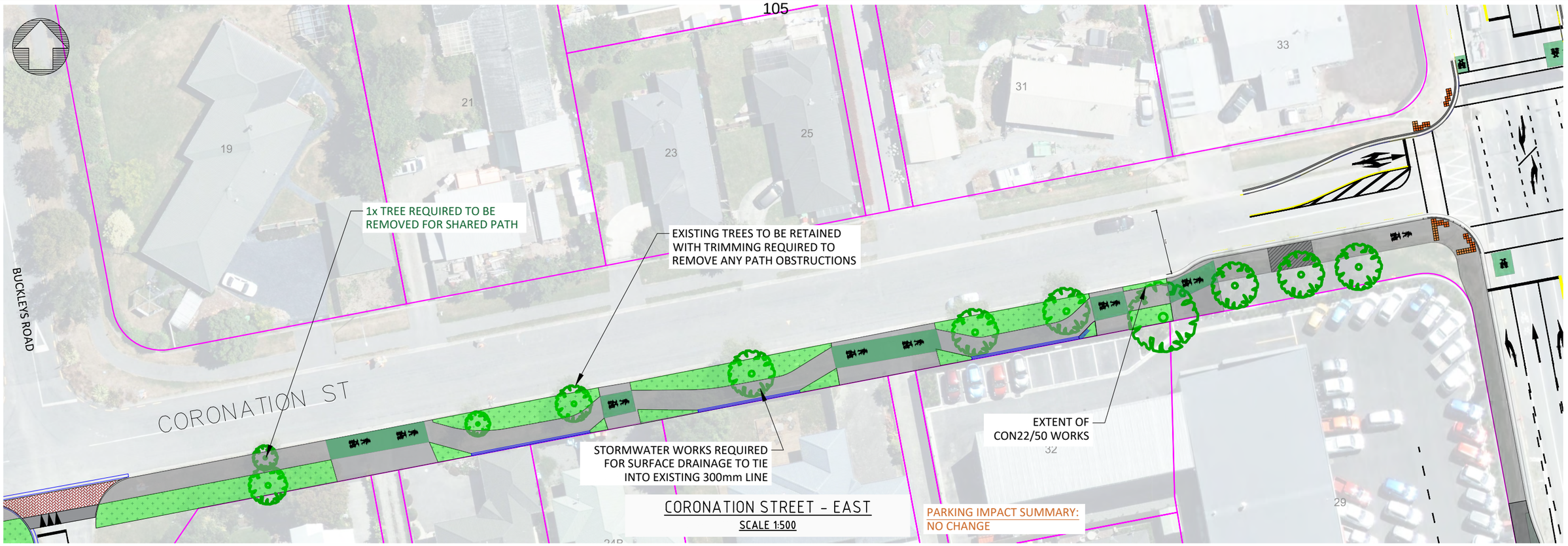
PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING 4354

SHEET 2

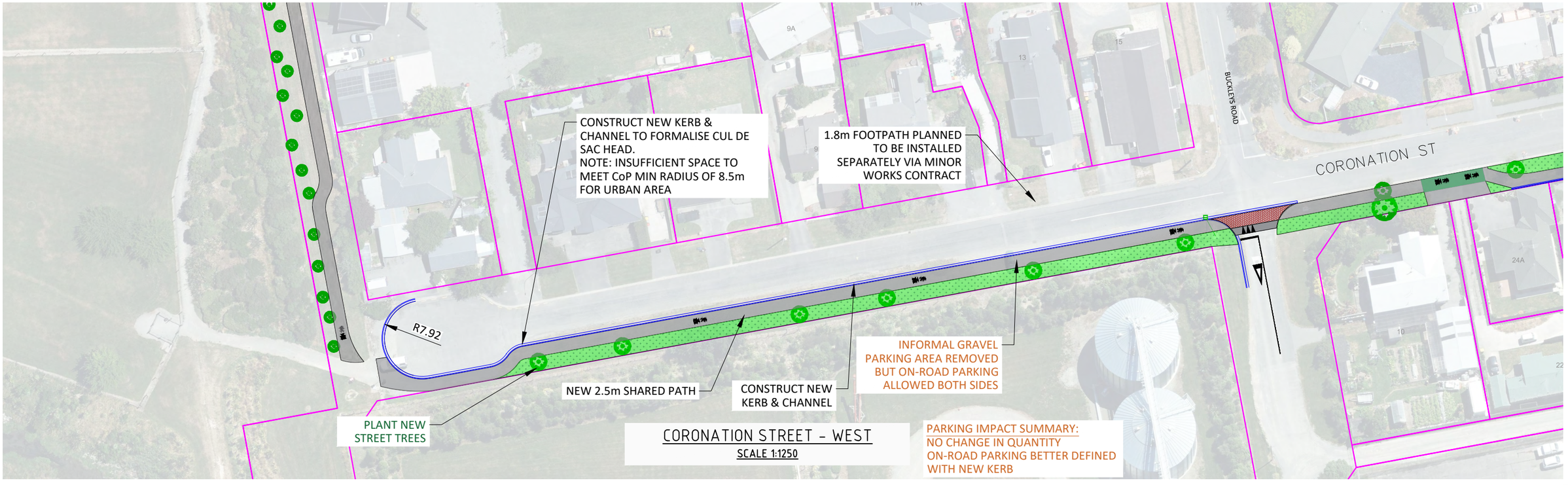
REVISION A

PLOT DATE: 28/07/2023 FILE: S:\PDU\PDU JOBS\PD001900-1999\PD001951 - RANGIORA TOWN CYCLEWAY (STAGE 1)\2 - DESIGN\RANGIORA TOWN CYCLEWAY - SCHEME DESIGN - DEVELOPED OPTIONS.DWG



CORONATION STREET - EAST
SCALE 1:500

PARKING IMPACT SUMMARY:
NO CHANGE



CORONATION STREET - WEST
SCALE 1:1250

PARKING IMPACT SUMMARY:
NO CHANGE IN QUANTITY
ON-ROAD PARKING BETTER DEFINED WITH NEW KERB

REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	SCHEME DESIGN	AK	---	---	16/02/2023

SURVEYED	---	---	PROJECT No	
DRAWN	AK	16/02/2023	CON No	22/50
DRAWING CHKD	---	---	SCALE (A3)	NTS
DESIGNED	---	---	DATUM ORIGIN	
DESIGNED CHKD	---	---	HORIZONTAL	NZTM GD2000
APPROVED	---	---	VERTICAL	

WAIMAKARIRI DISTRICT COUNCIL

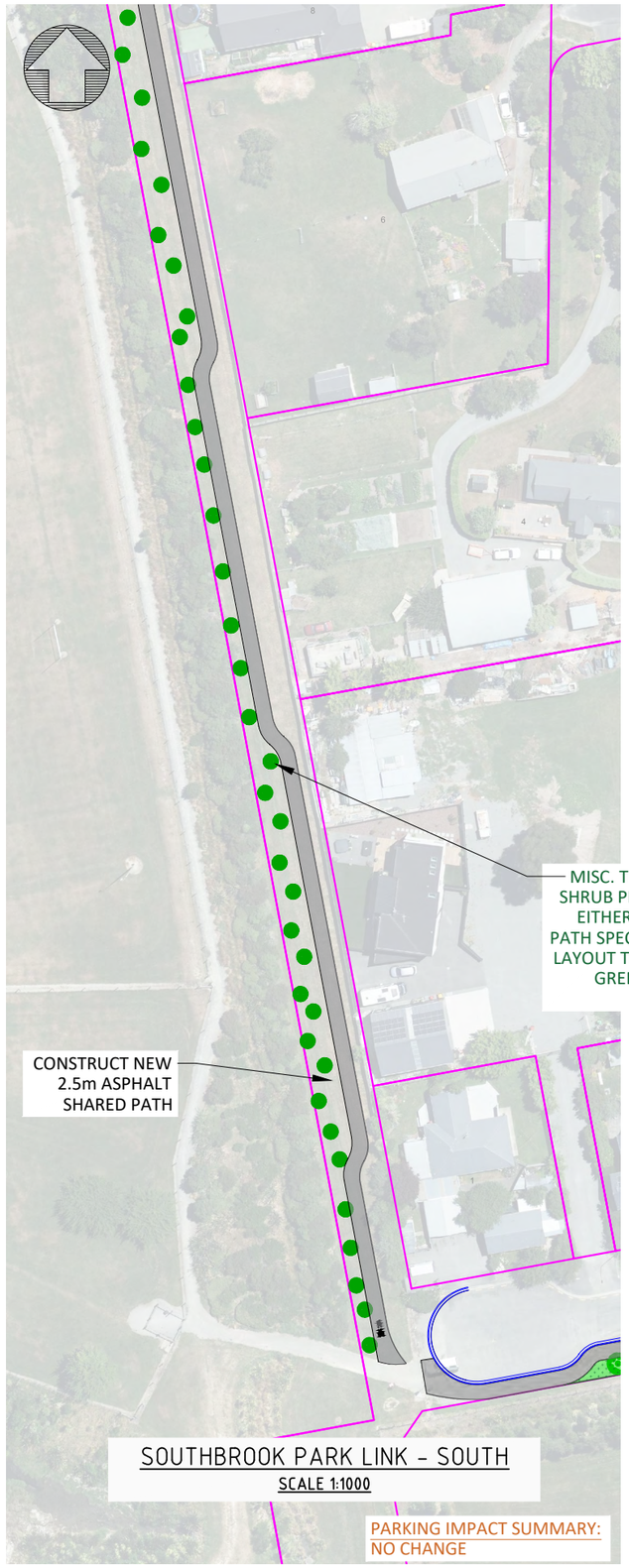
PROJECT
RANGIORA TOWN CYCLEWAY

SHEET TITLE
CORONATION STREET

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING	
	4354
SHEET	REVISION
3	A

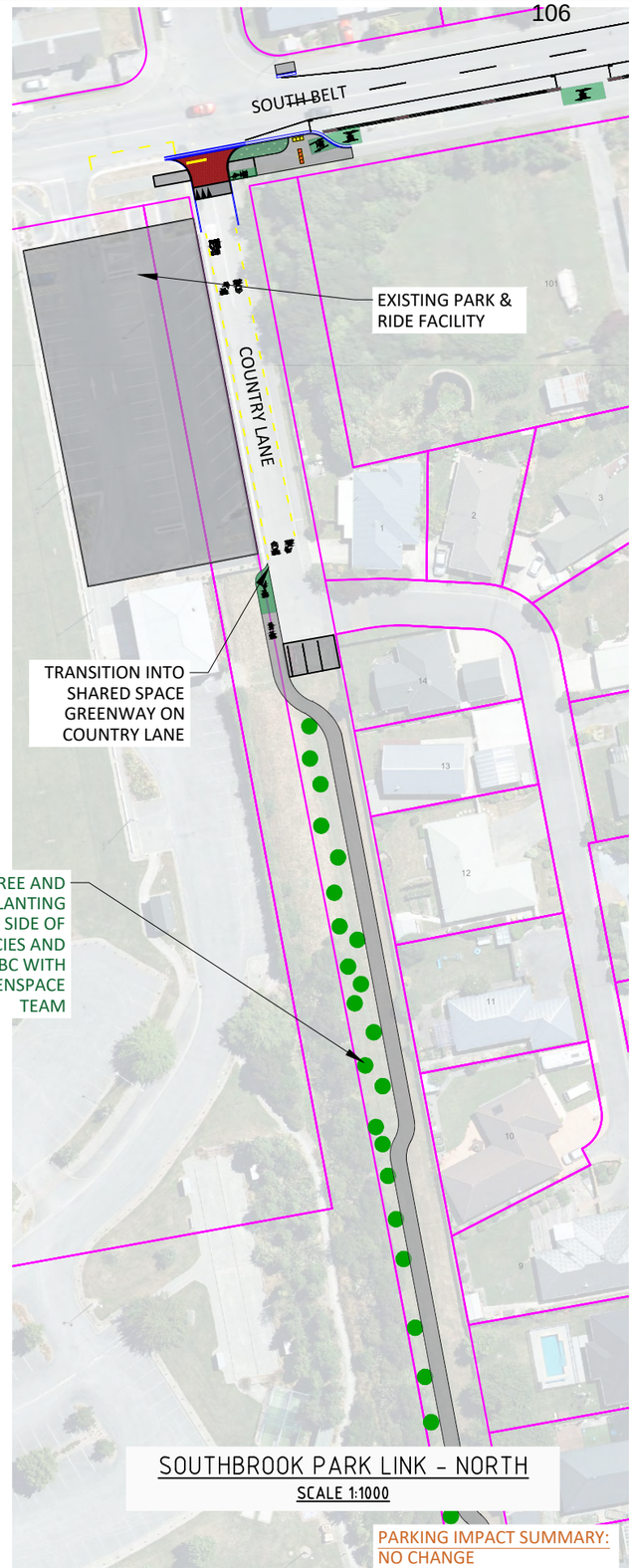
PLOT DATE: 28/07/2023 FILE: S:\PDU\PDU JOBS\PD001900-1999\PD001951 - RANGIORA TOWN CYCLEWAY (STAGE 1)\2 - DESIGN\RANGIORA TOWN CYCLEWAY - SCHEME DESIGN - DEVELOPED OPTIONS.DWG



SOUTHBROOK PARK LINK - SOUTH

SCALE 1:1000

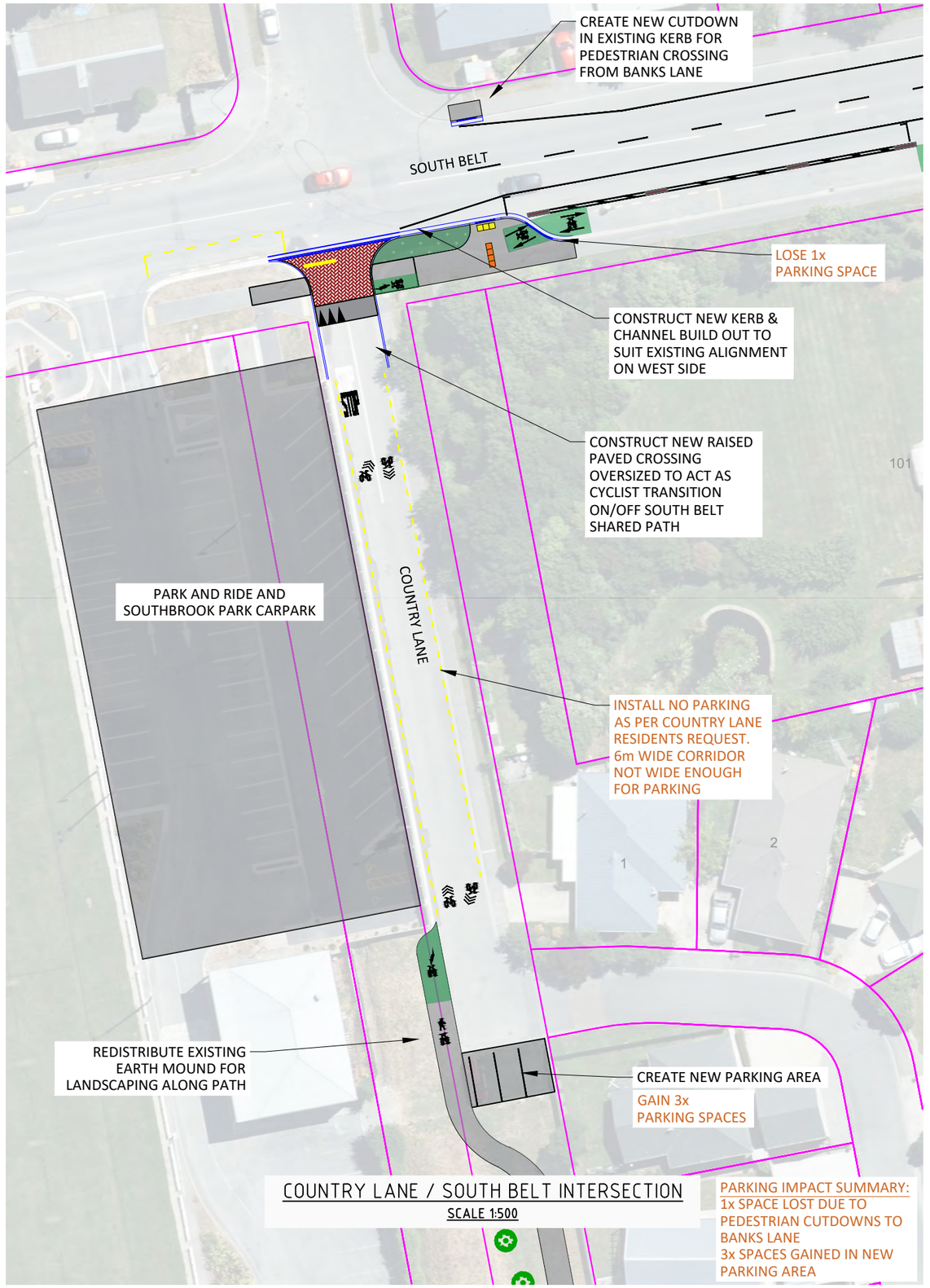
PARKING IMPACT SUMMARY:
NO CHANGE



SOUTHBROOK PARK LINK - NORTH

SCALE 1:1000

PARKING IMPACT SUMMARY:
NO CHANGE



COUNTRY LANE / SOUTH BELT INTERSECTION

SCALE 1:500

PARKING IMPACT SUMMARY:
1x SPACE LOST DUE TO PEDESTRIAN CUTDOWNS TO BANKS LANE
3x SPACES GAINED IN NEW PARKING AREA

REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	SCHEME DESIGN	AK	---	---	16/02/2023
B	ADJUSTMENTS MADE FOLLOWING RESIDENT STREET MEETING	AK	---	---	08/03/2023

SURVEYED	---	---	PROJECT No
DRAWN	AK	08/02/2023	CON No 22/50
DRAWING CHKD	---	---	SCALE (A3) AS SHOWN
DESIGNED	---	---	DATUM ORIGIN
DESIGNED CHKD	---	---	HORIZONTAL NZTM GD2000
APPROVED	---	---	VERTICAL

WAIMAKARIRI DISTRICT COUNCIL

PROJECT: RANGIORA TOWN CYCLEWAY

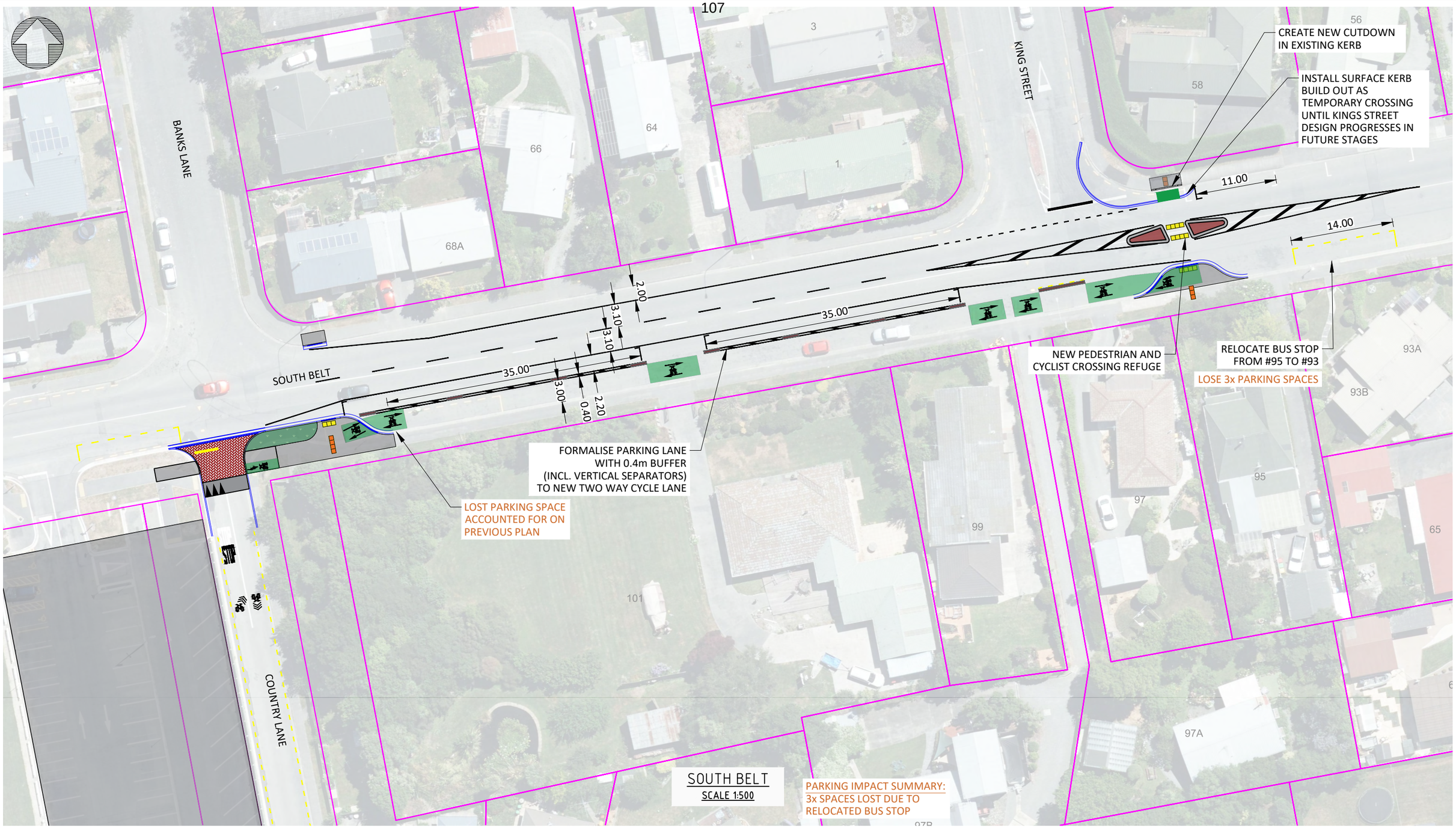
SHEET TITLE: COUNTRY LANE / SOUTHBROOK PARK

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING 4354

SHEET 4 | REVISION B

PLOT DATE: 28/07/2023 FILE: S:\PDU\PDU JOBS\PD001900-1999\PD001951 - RANGIORA TOWN CYCLEWAY (STAGE 1)\2 - DESIGN\RANGIORA TOWN CYCLEWAY - SCHEME DESIGN - DEVELOPED OPTIONS.DWG



SOUTH BELT
SCALE 1:500

REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	SCHEME DESIGN	AK	---	---	16/02/2023

SURVEYED	---	---	PROJECT No
DRAWN	AK	16/02/2023	CON No 22/50
DRAWING CHKD	---	---	SCALE (A3) 1:500
DESIGNED	---	---	DATUM ORIGIN
DESIGNED CHKD	---	---	HORIZONTAL NZTM GD2000
APPROVED	---	---	VERTICAL

WAIMAKARIRI DISTRICT COUNCIL

PROJECT
RANGIORA TOWN CYCLEWAY

SHEET TITLE
SOUTH BELT

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING	
	4354
SHEET	REVISION
5	A

PLOT DATE: 28/07/2023 FILE: S:\PDU\PDU JOBS\PD001900-1999\PD001951 - RANGIORA TOWN CYCLEWAY (STAGE 1)\2 - DESIGN\RANGIORA TOWN CYCLEWAY - SCHEME DESIGN - DEVELOPED OPTIONS.DWG

Waimakariri District Council: No-Stopping Restriction Schedule associated with Rangiora Town Cycleway Project

Item	Locality	Street	Side of Street	Location	Distance [m]	No. of spaces impacted	Notes
	Rangiora	Railway Road	West	Outside 642 Lineside Road (southern end)	4	1	Planted kerb build out (i.e not no stopping lines)
	Rangiora	Railway Road	West	Outside 642 Lineside Road (northern end)	4	0	Planted kerb build out (too small for parking currently)
	Rangiora	Railway Road	West	Outside 16 Railway Road	4	1	Planted kerb build out (i.e not no stopping lines)
	Rangiora	Railway Road	West	Outside Allied Concrete	20	8*	Informal angle parking outside Allied Concrete
	Rangiora	Railway Road	East	Angle parking south of Dunlops Rd	65	10*	Informal angle parking converted to formal parallel parking spaces. Additional on-road spaces will be added north of Dunlops to balance this.
	Rangiora	Torlesse Street	South	Outside No 36 Southbrook Rd (Torlesse St side)	6	1	Required to fit off-road cycle facility in conjunction with traffic signals
	Rangiora	Coronation Street	West	Cul-de-sac head	45	0	Alters parking to remove parking from turn around area. No formal existing spaces lost
	Rangiora	South Belt	South	No. 95	20	0	Existing bus stop to become kerb build out
	Rangiora	South Belt	South	No. 93	20	3	Relocate bus stop outside No. 93
	Rangiora	South Belt	South	No. 101	8	1	New pedestrian cutdown to Banks Lane

Waimakariri District Council: Schedule of Trees to be removed

Item	Locality	Street	Side of Street	Location	Asset ID	Notes
	Rangiora	Railway Road	East	Outside Carters	TR009715	To be replaced in kerb build out within carriageway
	Rangiora	Railway Road	East	Outside Carters	TR009713	To be replace in berm on western side of road
	Rangiora	Railway Road	East	Outside Carters	TR009712	To be replaced in kerb build out within carriageway
	Rangiora	Railway Road	East	Outside Carters	TR009711	To be replace in berm on western side of road
	Rangiora	Railway Road	East	Outside Carters	TR009714	To be replaced in kerb build out within carriageway
	Rangiora	Railway Road	West	Outside Pak n Save	not recorded	To be replaced with new on Coronation Street
	Rangiora	Railway Road	West	Outside Pak n Save	not recorded	To be replaced with new on Coronation Street
	Rangiora	Railway Road	West	Outside Pak n Save	not recorded	To be replaced with new on Coronation Street
	Rangiora	Railway Road	West	Outside Pak n Save	not recorded	To be replaced with new on Coronation Street
	Rangiora	Railway Road	West	Outside Pak n Save	not recorded	To be replaced with new on Coronation Street
	Rangiora	Railway Road	West	Outside Pak n Save	not recorded	To be replaced with new on Coronation Street
	Rangiora	Coronation Street	South	No. 10 Coronation St	TR007688	To be replaced west of Buckleys Road